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Criminal Behavior

The Underlyings, and Contemporary
Applications

Edited by Sevgi Güney



Criminal Behavior - The Underlyings, and Contemporary Applications

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Contributors

Samuel Fikiri Cinini, Sazelo Michael Mkhize, Kingsley Chigbu, Jon Reiersen, Samantha Perussich, Murat Ozer, Halil Akbas, Kübra Demirci, Gizem Turgut, Dilek Baysal, Anni Hesselink, Ali Açikgöz, Halide Nihal Açikgöz, Ragip Baris Erman, Dilan Aktaş, Deniz Çelik, Melike Çakır, Orkun Karabatak, Sevgi Güney, Sinem Çetin

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Meet the editor



Sevgi Güney, Ph.D., an academic with 30 years of experience in mental health at Ankara University, Turkey, was involved in establishing an intervention and research center and played a key role in setting up two mental health units. She worked for two academic terms at the School of Psychology, Cairnmillar Institute, Melbourne-Australia, as an international replacement status in accordance with the Turkish Higher Education Act 2547. She obtained a BA degree in Psychology from Ege University, an MSc in Clinical Psychology from Middle East Technical University (METU), Turkey, a Postgraduate Certificates in Trauma Therapy and Marriage and Relationship Therapy from Cairnmillar Institute, and a Ph.D. from Ankara University, Turkey. Dr. Güney's research includes disaster intervention, psychological trauma, suicidal and self-injurious behavior, homicide, criminal behavior, and personality. She is a member of several international professional associations and has several national and international publications to her credit.

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Preface

Managing and regulating crime and criminal behavior is crucial in creating and protecting social well-being. Throughout history, societies have established social order rules that have been passed down through generations to maintain their social order. Only the legal rules within a society carry material sanctions and are used to control, correct, and prevent crime and criminal behavior.

This book addresses the psychological, psychosocial, and legal dimensions of crime and criminal behavior.

The information it contains is presented in a way that can be used as needed by professionals working in the mental health and forensic sciences and easily integrated into their workflows.

Beginning with the origins of human behavior, in which information derived from the environment is shaped through the stages of information processing so that it is integrated with prior knowledge in the central nervous system, this book addresses criminal behavior, its underlying components, and contemporary practices. It was created from clear, concrete, and operational definitional information. The chapter authors, who are experts in their respective fields, present their researched topics in detail. Chapters include current information that professionals in the field can use to frame criminal behavior, distinguish what is and is not a crime, choose intervention methods to regulate and correct criminal behavior, and apply these methods in practice.

The first section of the book consists of five chapters that introduce crime and criminal behavior and provide certain considerations for daily functioning.

The second section provides information on the factors that can be a potential source of criminal behavior. Chapters in this section discuss the relationship between personality, psychosocial developmental stages, sociocultural context, and psychopathological elements and criminal behavior.

The third section contains chapters describing current methods for rehabilitation, correction, and neutralization of criminal behavior, with emphasis on ease of implementation in a professional setting.

The problem of self-actualization, which is one of the most serious side effects of modernization, is one of the factors leading to an increase in criminal behavior. I hope that this book will prove useful for professionals in the field to come together to organize and cure the criminal behavior of people who, due to modernization,

have become alienated from themselves and from the social structures into which they were born, while trying to realize themselves in utilitarian and opportunistic conditions.

Sevgi Güney, Ph.D.
Ankara University,
Ankara, Turkey

Section 1

Criminal Behaviors

Chapter 1

Criminal Behavior and Youth Crime: A Juvenile Delinquency Perspective on Adverse Childhood Experience

Samuel Fikiri Cinini and Sazelo Michael Mkhize

Abstract

The chapter aims to explore whether the various forms of early adversity are risk factors for criminal behavior among young adults leading to youth crime and juvenile delinquency. The objective of this study is to take into consideration adverse childhood experiences (ACEs) in understanding youth crime and juvenile delinquency from a criminal behavior perspective among the youths. Through secondary qualitative data, this study demonstrates numerous risk factors associated with a youth's probability of joining a gang, revealing that the process of entering a gang begins in childhood and progresses through district development stages. Negative life events and fear or experiences of victimization have been linked to joining a gang. Certain family circumstances have been shown to significantly predict gang involvement, including a lack of health insurance, the jailing or imprisonment of a household member, and foster care placement—all of which are considered ACEs. The results of this study suggest that a focused effort on early identification of ACEs, and intervention for ACEs to improve youth life circumstances and prevent criminal behavior, may reduce the likelihood of and costs related to juvenile criminal activities. Primary prevention efforts should be tailored to meet the needs of parents, teachers, health professionals, and law enforcement.

Keywords: adverse childhood experiences, criminal behavior, environment, family, juvenile delinquency, youth crime

1. Introduction

Adolescents' criminal behavior is a substantial social problem worldwide with negative physical and mental health effects on both victims and offenders [1]. Familial and peer criminal behavior are considered to be important risk factors for the development of adolescents' criminal behavior [2]. Because family is the most enduring and central setting of child development [3], points out that similarities between family members' levels of criminal behavior have often been reported.

However, Farrington [4], suggests that social learning mechanisms are assumed to play an important role in these similarities. According to social learning theory, criminal behavior is learned and maintained by observing criminal behaviors and the social consequences attached to those behaviors [5, 6]. The learning and acquisition of antisocial behavior are substantially more likely to occur during early development stages, particularly if the observed behavior is committed by people who are part of the individual's intimate social circle [6].

It can be stated that early adversity is particularly detrimental when it occurs within the family unit, suffice it to note that family members are the leading role models during child development. Children may view dysfunctional and violent experiences as effective coping mechanisms for difficulties, especially if the people who engaged in the violent behavior were never brought to justice or, worse still, if the violence was supported by other family members [5]. It has been shown that children who have been around violence or who have gone through traumatic events like physical or sexual abuse are more prone to commit violent crimes as adults. Research suggests that children who are exposed to abuse, neglect, or a chaotic home environment during childhood are at a greater risk of serious, violent, or chronic delinquency. It is also reported that they are involved in the juvenile justice system and criminal persistence during early adulthood, compared with youth who did not experience ACEs [7, 8].

Several studies suggest that severe adversity during childhood is linked to the development of psychopathic traits and it is a known risk factor for the development of antisocial personality disorder during adulthood. In fact, from a psychological perspective, children continuously facing dangerous environments, such as persistent physical or sexual abuse, may develop a low responsibility to stress to adapt to persistent severe stress [9].

Negative experiences such as anger, rage, and sensation of entrapment can also be generated from physical and sexual abuse, creating the desire for retaliation and revenge increasing the likelihood of delinquent behavior among the youth as a coping mechanism [10]. Also, children, when abused by perpetrators who appear to be meaningful role models may learn those behaviors as acceptable ways to respond to the similar situation later in life [5]. According to Boullier and Blair [11], the three types of ACEs included abuse: physical, emotional, and sexual abuse; neglect: physical, and emotional; household dysfunction: mental illness, mother-treated violently, divorce, incarcerated relative, and substance abuse.

1.1 Significance of the study

Adolescence is undeniably a time of transition. It is a period when the self, basic personality is still enduring a transformation and is vulnerable to a host of external determinants as well as internal physiological changes. During this time, many young people are subject to emotional instability, experiencing stress, shame, and mood swings. They go through a phase of biological development that happens far more quickly than at any other point in their life, except for infancy. Their weight, height, and sexual preferences all significantly alter within a short period [12].

Youths may go through a life crisis in late adolescence (between the ages of 16 and 18) known as the conflict between ego identification and role dissemination, as described by renowned psychologist Erik Erikson. Youths build their ego identities when they have a complete sense of who they are, which combines how they see themselves and how they fit in with other people. Role diffusion happens when

individuals experience personal insecurity, overextend themselves, and depend on others to provide them with an identity they are unable to create for themselves [13]. Additionally, according to psychologists, the desire for independence from parental dominance predominates in late adolescence [14].

It is not surprising that the teenage years are a time of disobedience and conflict with authority at home, in school, and in the community given this explosive combination of biological change and yearning for autonomy [12]. Hence the need to formulate effective strategies that demand a solid understanding of delinquency's causes and prevention. Nevertheless, this study stands for the view that youth are still lacking some mental capacity to measure the benefits of crime and its consequences. The notion of free will cannot be applied to youth offenders, on the contrary, we can consider referring to adverse childhood experiences (ACEs) as a concept that might well explain criminal behavior among youth and how it ends in youth committing crimes.

1.2 Youth and modern society

The problems of youth in modern society are a major national concern especially when they are linked to juvenile delinquency or criminal behavior committed by minors. About 750,000 youths are now arrested each year for crimes ranging in seriousness from loitering to murder. While this number seems high, juvenile arrests have been in decline; more than a million youths were arrested annually just a few years ago [12]. Some young offenders are extremely dangerous and violent despite the utmost juvenile law violation is minor. Egley Jr et al. [15] report that about 850,000 youths belong to more than 30,000 gangs in the United States. Therefore, it can be agreed that violent street gangs and groups can put fear into an entire city.

Youths who commit multiple significant crimes are increasingly understood to be serious social problems. They are known as lifestyle, repeat, or chronic delinquent offenders. Along with addressing a variety of other social issues like child abuse and neglect, school crime and vandalism, family conflicts, and drug misuse, state juvenile authorities also have to deal with these criminals. ACEs are described as "potentially traumatic events that occur in childhood (0–17 years)" by Felitti et al. [16]. One can endure "sexual, physical, and emotional abuse; physical and emotional neglect; witnessing violence at home; living with someone who has a mental illness; parental separation or divorce; parental incarceration; and household alcohol or illicit drug problems" as examples of these unfavorable events. ACEs have been linked to a higher probability of future criminal behavior [8].

Children who are exposed to domestic abuse and who reside in impoverished nations or in nations where victims of domestic violence receive less social assistance may feel more negative emotions and be more vulnerable to victimization [17]. These unfavorable feelings, such as wrath, helplessness, and extreme suffering, might lead to an increase in aggressive and externalizing behavior [10]. Sexual abuse, physical abuse, and physical neglect appear to be important drivers for perpetuating the cycle of violence. Youths who are dabbling in various forms of dangerous conduct such as drug abuse, alcohol use, and precocious sexuality are those considered at risk. Because of the economic, health, or social problems they are living in, their families are unable to provide adequate care and discipline. Siegel and Welsh [12], concede that those living in a single-parent, female-headed household are expressively more likely to suffer poverty than those in two-parent families.

Mary et al. [18] point out that child poverty can have negative effects on mental achievement, instructive attainment, sustenance, physical and mental health, as well as social behavior in the long run. In addition, Mary et al. [18], concede that educational achievement scores between children in affluent and low-income families have broadened over the years, and the earnings and wealth of families have become gradually important determinants of adolescents' high school graduation, college attendance, and college perseverance and completion.

In particular, studies have found that ACEs increase the likelihood of youth substance use and other delinquent acts [19, 20]. ACEs have been linked to a variety of externalizing behavioral issues, including bullying, physical violence, dating violence, property-related crimes, and carrying a weapon [19, 20] as well as internalizing behaviors, like depression, anxiety, and self-mutilation [21].

According to Walters [22], qualitative research involves the collection and interpretation of subjective data that often is shaped by social, cultural, and political realities that are evident at the time of data collection. According to Johnston [23], secondary analysis is an empirical activity that uses the same fundamental research tenets as studies that use primary data and has similar processes to be followed as with any other research methodology. Large secondary data sets are a good substitute for original data gathering because they frequently give the researcher access to more information than primary data sets do [24]. Although secondary data presents many opportunities for researchers, there are still good reasons for using primary data. One of the problems with using secondary data is the lack of control over the framing a wording of survey items [24]. Through a systematic process, a qualitative secondary data approach was utilized to gather information for this study.

This study used a qualitative technique to address the study's research questions since this type of research focuses on how individuals learn about and make sense of themselves and others, as well as how they organize and provide meaning to their daily lives. This could imply that crucial questions for your study are not covered by the data. According to [25], the greatest drawback of secondary data is also the major benefit—the data have already been gathered. This study used secondary data from accredited journals and books by the institution for which this research will be conducted, the University of KwaZulu-Natal. The objective of this study is to take into consideration ACEs in understanding youth crime and juvenile delinquency leading to criminal behaviors among the youths. To ascertain the triggering factors of criminal behavior and delinquency among the youth, by exploring the impact of adverse childhood consequences on the youth and to describe possible interventions that can reduce crime among the youth. This study seeks to answer the following questions: (1) What are the triggering factors of criminal behavior and delinquency among the youth? (2) What is the impact of adverse childhood consequences on youth? (3) What are the possible interventions to reduce crime among the youth?

The purpose of this chapter is to demonstrate different triggering factors of youth crime from an adverse childhood consequences point of view that influence criminal behaviors among youth leading to juvenile delinquency. In addition, the chapter seeks to assess the effectiveness of law enforcement, court, and correctional agencies designed to treat youthful offenders who fall into the arms of the law—known collectively as the juvenile justice system, by suggesting more intensive and effective measures to treat and prevent future criminal behaviors among the youths. The study focuses on social issues associated with delinquent behavior, including substance abuse, child abuse and neglect, education, and peer relations.

2. Method

2.1 Scope

According to the objectives of the study, a total of 53 studies were subjected to the analysis. These included published studies on ACEs, youth crime, and juvenile delinquency.

2.2 Procedure

The inclusion criteria were the studies conducted between the years 1995 and 2020 with the following keywords Adverse childhood experiences, Criminal Behavior, Environment, Family, Juvenile Delinquency, and Youth Crime.

The following methods were used to locate studies for inclusion of publish studies; computerized search of the following journals: *American Journal of Psychiatry*; *Psychology of Men & Masculinities*; *Columbia University Press*; *Crime and Public Policy*; *Routledge*; *Aggressive Behavior: Official Journal of the International Society for Research on Aggression*; *Journal of Criminal Justice*; *Child Abuse & Neglect*; *Child Maltreatment*; *Roxbury Publishing Company, Los Angeles, California*; *Pediatrics and Child Health*; *Cengage Learning*; *Psychology Today*; *Office of Juvenile Justice and Delinquency Prevention*; *American Journal of Preventive Medicine*; *Journal of Adolescent Health*; *Child and Adolescent Social Work Journal*; *Pediatrics*; *The Journal of Early Adolescence*; *Child Abuse & Neglect*; *Australian Journal of Social Issues*; *Qualitative and Quantitative Methods in Libraries*; *Oxford University Press*; *American Psychological Association*; *Child Abuse & Neglect*; *Journal of Juvenile Justice*; *American Journal of Preventive Medicine*; *Pediatrics*; *Justice Quarterly*; *Journal of Family Psychology*; *Developmental Psychology*; *Social Science Quarterly*; *Journal of Child Psychology and Psychiatry*; *Aggression and Violent Behavior*; *An International Journal of Theory & Practice*; *Journal of Criminal Justice*; *Child Abuse & Neglect*; *Crime & Delinquency*; *Child Abuse & Neglect*; *Criminology*; *Archives of Pediatrics & Adolescent Medicine*; *Journal of Family Psychology*; *Duke University Press*; *Child Abuse & Neglect*; *JAMA Pediatrics*; *Youth Violence and Juvenile Justice*; *Youth Violence and Juvenile Justice*; *Journal of Crime and Justice*. To find the above journals, a computerized search was done via google scholar and Jstor search engines.

Through the use of Google Scholar, Jstor.org, as well as some official websites, the researcher developed a search strategy to gain access to the data. This allowed for the collection of potentially relevant articles, books, and other web-based resources from which secondary data were extracted to address the goal of this study. Articles that protect human subjects in their analysis were described while taking ethical procedures into account. Before the secondary data analysis could be done, such data had to be identified.

2.3 Coding

To summarize the reached studies and to constitute the potential moderator variables for future meta-analytic research, the studies were coded under the four main headings as Adverse childhood consequences and Youth Crime; Violent and Juvenile Offenders; Moral Insanity and Crime among Child; and Common crimes committed by Youth. These codes are described deeply in the discussion session of this chapter.

3. Results

It is found that sexual abuse, physical abuse, and physical neglect appear to be important drivers for perpetuating the cycle of violence from 53 studies. After carefully having analyzed different articles read for this study, it can be argued that childhood adverse events are related to youth delinquent behavior. Indeed, the findings of this study demonstrate that both childhood neglect and exposure to family violence are recognized as important predictors of later involvement in criminogenic behaviors across the life course of the youth.

The analysis points out that the accumulation of ACEs during childhood can be linked to posttraumatic stress disorder (PTSD), depression, criminal behavior, as well as abusive and conflict-ridden adult intimate relationships. The findings show that the family represents the best environment for the development of the personality of the individual. It is the foundation of the community, thus contributing to laying the basis of a well-structured society where each individual can enjoy a safe and sound atmosphere. The analysis demonstrates that between family and society, an inseparable and interdependent relationship is created that should be assured, in a positive way, by generally promoting human values. The findings go on to state that society and family transformations give birth to challenges that the individual has to face.

In addition to the above, this study shows that within the psycho-behavioral construction of the individual, education embodies the dialectic function, as the family offers the first guiding marks on life, with all its patterns. The analysis points out that the living environment is the one that influences the individual since childhood when we learn how to live and how to adapt to society, and to immunize against it, as it is in a permanent change, imposing stereotype patterns of thinking and action. This study adds significantly to the literature linking physical and sexual abuse neglect to criminal behavior. The findings further demonstrate that early exposure to ACEs is significantly related to a greater risk of serious or violent offending as well as later involvement in the juvenile justice system. The analysis concludes that unless the factors that control the onset and termination of a delinquent career are studied in an orderly and scientific manner, developing effective prevention and control efforts will be difficult.

4. Discussion

The objective of this study is to take into consideration ACEs in understanding youth crime and juvenile delinquency from a criminal behavior perspective among the youths. Emotional abuse, physical abuse, sexual abuse, emotional neglect, physical neglect, violent treatment toward mother, household substance abuse, household mental illness, parental separation or divorce, and having an incarcerated household member were identified as risk factors for chronic disease in adulthood by researchers [26]. They were first described in 1998 in the seminal study “Relationship of childhood abuse and dysfunction to many of the leading causes of death in adults: The Adverse Childhood Experiences (ACE) study” [16].

Empirical evaluation has shown that ACEs are common, highly interrelated, and exert a powerful cumulative effect on human development [27]. High ACEs score has been linked to several sexually risky behaviors, such as having 50 or more sexual partners, having intercourse before age 15 and getting pregnant while still in high school [28]. According to research by Bellis et al. [29], individuals with higher

cumulative ACE scores are more likely to smoke, drink excessively, be locked up, be morbidly obese, have poor educational and career results, and have recently engaged in violent behavior.

In the field of criminology, we are aware that, even after controlling for prior delinquent behavior, experiencing physical abuse as a child and other types of maltreatment are associated with higher rates of self-reported total offending, violent offending, and property offending among offenders [30]. The strong correlation between parental divorce and criminality has also been widely established, with meta-analyses on the subject revealing moderate impact sizes [31].

Using adoptive and biological families, [32] were able to show that the connection with delinquency was driven by the experience of parental divorce rather than mediated by common genes. Delinquency and other maladaptive behaviors have been linked to exposure to parental incarceration, according to research by Geller [33]. Murray and Farrington [34] found that parental imprisonment, above and beyond other types of separation, predicted antisocial and delinquent outcomes, even after controlling for other childhood risk variables, up to age 32, by looking at 411 males in a longitudinal study. According to the results, exposure to domestic violence was a predictor of referral to a juvenile court. These findings support prior research, including meta-analyses, indicating that exposure to domestic violence leads to a range of internalizing and externalizing behavior problems [35].

Criminologists and psychologists have found that individuals who commit serious violent crimes tend to have high rates of trauma, abuse, and other harmful experiences in childhood, even when controlling for other environmental and biological factors [36]. Increased traumatic exposure and childhood maltreatment have been demonstrated to be associated with a higher likelihood of substance use and substance use disorder. Additional literature has indicated that ACE exposure increases the risk of drug and alcohol use/abuse among juveniles and adults.

4.1 Adverse childhood consequences and youth crime

ACEs are proposed to children stressors affecting health and well-being across the lifespan [16]. ACEs include abuse and household dysfunction in childhood, family mental health, domestic violence, and family criminal behavior [16]. Leban and Gibson [37] concede that high exposure to ACEs in childhood is related to “health-risk behaviors,” including drug use, alcoholism, violence, and crime. A study conducted by Mersky et al. [38] conducted a study aiming to examine the relationship between ACEs and substance use in a sample of minority Chicago youth and found that higher ACE scores were associated with increased substance use (tobacco, alcohol, and marijuana use), worse mental health, and overall health in adulthood [37].

Childhood abuse, neglect, and household dysfunction have demonstrated implications for adolescent development ranging from negative consequences for neurological development and self-regulation deficits to exponentially increasing the likelihood of suicidal behavior, substance use [39], human trafficking victimization, and antisocial and criminal behavior. That youth in already disadvantaged neighborhoods are differentially exposed to such childhood maltreatment [40] is entirely relevant. Deficiency of access to physical and mental health services as well as social services are widespread in areas such as socioeconomically disadvantaged and are at an amplified exposure to community violence, which worsens the insinuations of traumatic exposure and limits the probability of youth who are exposed to receive the help that boosts their resilience.

4.2 Violent and juvenile offenders

One of the most significant and recurring findings in the literature is that Serious, Violence, and Chronic (SVC) juvenile offenders are unreasonably victims of trauma, abuse, neglect, and maltreatment during childhood, as compared to the less severe or non-offending juvenile population [41]. According to research, 90% of juvenile offenders in the United States had some type of traumatic event as children, and up to 30% of justice-involved American juveniles fit the criteria for post-traumatic stress disorder as a result of childhood trauma [41].

Additional research has demonstrated that those who experienced abuse or neglect as children are far more prone to engage in violent behavior than people who did not [42]. Even after gender, ethnicity, financial level, and family structure were taken into account in the Rochester Youth Development Study, maltreated children had a considerably higher risk of committing violence between the ages of 14 and 18 [43]. The ground-breaking studies on child abuse by Maxfield and Widom [44] also discovered that exposure to trauma and abuse as a kid raised the likelihood of juvenile aggressive conduct by more than 200% [41]. Similarly, Howes et al. [45], are of the view that abusive families also have difficulty regulating anger in their children. Fox et al. [41], are of the view that “these effects can produce dramatic changes in the emotional development of the child and may be connected to higher levels of externalizing violent behavior.” Geller et al. [33], concede that the experience of parental imprisonment is also linked to delinquency and other maladaptive behaviors.

4.3 Moral insanity and crime among children

When adults possess the following impetuous passions of children, psychiatrists call them moral madmen, and we call them born criminals. The desire for revenge: The child frequently shows a desire for revenge. Even at the age of 7 or 8 months, a child may scratch his nurse when she withdraws her breast and return the slaps he receives. Children who become jealous through love or possessiveness react violently. Most children prefer breaking a toy and giving it to someone else.

Lying: According to Montaigne, children’s bodies expand in proportion to how obstinate and lies people are. Bourdin claims that “all children are liars, particularly foundlings, who lie for fun” in a similar vein. Children may tell lies to get something that is forbidden or to get away with something bad. Sometimes they tell lies to get more candy by saying they have not eaten it yet or to appear to be in a lot of pain when they fall. For instance, if they do not want to go somewhere, they may lie about being sick [46]. Children start to lie when they are 3 or 4 years old because of a fear of punishment brought on by the way we question them and wait for their response. And frequently, they just lie for amusement or to appease their vanity [46].

Children’s impulsivity and an underdeveloped or imperfect sense of the truth are two factors that contribute to lying. They dissimulate in ways that we would not think were feasible among more mature people, easily altering the truth like savages and criminals. In addition, during their first few months or even their first year of life, children lack any moral sensibility. Whatever their parents allow or forbid is good or bad in their eyes. They are incapable of recognizing wrongdoing on their own; they only begin to develop a sense of justice and ownership after being punished and informed of their transgressions [46].

Children also do not have any natural affection. They are drawn to attractive people or pleasurable objects, particularly small creatures that can be tortured,

and they are put off by strange or violent things. Although children can forget a mother they seemed to admire even at the age of 7, they do not experience affection. Nevertheless, one of the most prevalent traits of kids is harshness. As Broussais has noted, there are very few boys who do not bully others who are weaker. Children typically prefer bad to good. He feels tremendous emotions and feels he has boundless power; thus, he is crueler than gentle. Intellectual laziness is another trait that both children and born criminals share. Children avoid monotonous tasks and anything that does not appeal to them. When they wet their mattresses rather than get out of bed, for example, their actual bodily laziness might sometimes make their cerebral laziness worse. Gambling, obscenities, and alcoholism. People from higher social classes are unaware of children's fervor for booze. Children are also known to have a propensity for gambling, but it is not necessary to focus on this. Despite the insufficient development of their sexual organs, toddlers aged three to four do not lack obscene tendencies.

Anomalous and monstrous sexual tendencies, like criminal behavior, begin in childhood. Because moral insanity is both a trait of children and the equivalent of criminality, we can see why great criminals reveal their tendencies at an early age.

4.4 Common crimes committed by youth

According to earlier research [7], children who experience abuse, neglect, and/or a chaotic home environment as children are more likely to engage in serious, violent, or chronic delinquency, as well as involvement in the juvenile justice system and criminal persistence during early adulthood.

A growing body of research has examined the effects of ACEs on life outcomes across the life course and has concluded that early ACE exposure is linked to a variety of health, psychiatric, and behavioral issues in adolescence and adulthood [16, 47]. Felitti et al. define ACEs as potentially traumatic incidents that happen to kids between the ages of 0 and 17. One can encounter "sexual, physical, and emotional abuse; physical and emotional neglect; witnessing violence at home; living with someone who has a mental illness; parental separation or divorce; parental incarceration; and household alcohol or illicit drug problems" as examples of these unfavorable events. Researchers have discovered that ACEs are widespread, with 25% of adult samples showing exposure to three or more different types of ACEs and nearly two-thirds of samples reporting exposure to at least one [48]. Sociologists and criminologists have recently utilized ACEs as an organizing research framework and show that ACEs are associated with delinquency, violence, and more chronic/severe criminal careers [49]. Indeed, recent studies consistently show that early exposure to ACEs is significantly related to a greater risk of serious or violent offending as well as later involvement in the juvenile justice system [7].

Prior research has found numerous risk factors associated with a youth's probability of joining a gang, revealing that the process of entering a gang begins in childhood and progresses through district development stages [50]. From the peer domain, low prosocial peer association/commitment and early initiation into delinquent behavior were consistent predictors of joining a gang [50]. More generally, negative life events and fear or experiences of victimization have been linked to joining a gang [51]. Certain family circumstances have been shown to significantly predict gang involvement, including a lack of health insurance, the jailing or imprisonment of a household member, and foster care placement—all of which are considered "adverse childhood experiences" [52].

5. Conclusion

Childhood adverse events are related to youth delinquent behavior as suggested by previous literature. Indeed, both childhood neglect and exposure to family violence have been recognized as important predictors of later involvement in criminogenic behaviors across the life course. The accumulation of ACEs during childhood has also been linked to post-traumatic stress disorder (PTSD), depression, criminal behavior, as well as abusive and conflict-ridden adult intimate relationships. Family represents the best environment for the development of the personality of the individual. It serves as the community's cornerstone and lays the groundwork for a well-organized society where everyone can live in safety and security. An unbreakable and inter-dependent bond is formed between the family and society, and this link should be ensured positively by generally supporting human values. Changes in society and families create difficulties that each person must overcome.

As the family provides the earliest guiding markings on life, with all its patterns, education embodies the dialectic role within the psycho-behavioral formation of the individual. Since we learn how to survive, how to adapt to society, and how to immunize against it as it is constantly changing, the living environment is the one that has the most influence on an individual, even from an early age. It imposes stereotyped ways of thinking and doing. This study adds significantly to the literature linking physical and sexual abuse neglect to criminal behavior. Sexual abuse, physical abuse, and physical neglect appear to be important drivers for perpetuating the cycle of violence. Early exposure to ACEs is significantly related to a greater risk of serious or violent offending as well as later involvement in the juvenile justice system. Unless the factors that control the onset and termination of a delinquent career are studied in an orderly and scientific manner, developing effective prevention and control efforts will be difficult.

ACEs not only increase the chances of involvement in the juvenile justice system but also increase the risk of re-offense. A focused effort on early identification of ACEs, and intervention for ACEs to improve youth life circumstances and prevent criminal behavior, may reduce the likelihood of and costs related to juvenile criminal activities. The needs of parents, teachers, health professionals and law enforcement must be personalized as the primary prevention efforts. For parents, an effort can be to improve public awareness of adult behaviors, which can optimize or hamper children's brain development. Parenting skills and early childhood brain development have to be emphasized during the prenatal period and well-child checkups after birth. Successful interventions in childhood have the potential to stop the intergenerational risks of ACEs, thereby multiplying cost savings. Early childhood intervention programs addressing ACEs have demonstrated significant benefit-cost ratios. Youth development programs for children, parents, and teachers should integrate activities that build resilience and address ACEs so that children develop confidence, self-control, and responsibility. Very little research has examined the link between ACE scores and criminal behavior. By understanding the impact that trauma and adversity in childhood have on the increased risk of serious, violent, and chronic juvenile offending, a more proactive stance on the prevention and reduction of childhood abuse and SVC offenders should be developed.

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Author details

Samuel Fikiri Cinini* and Sazelo Michael Mkhize
Department of Criminology and Forensic Studies, School of Applied Human Science,
University of KwaZulu-Natal, Howard College Campus, Durban, South Africa

*Address all correspondence to: samuelfikiri@gmail.com

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Exploring the Correlates of Arrest for Violent and Serious Crimes in Children and Adolescents: Mental Health Implications

Kingsley Chigbu

Abstract

Existing studies point to relationships between child abuse and crime perpetration in adulthood. Child abuse and trauma are strongly connected to mental health. In this study, the relationship between child abuse and neglect (AN), out-of-home placement (OP), lead poisoning (LP), and arrest for serious offenses including murder and homicide AC, prior to adulthood was explored. Findings showed that AN significantly predicted arrest for violent and serious crimes. OP did not have a significant relationship with arrest for serious and violent crimes AC. LP was not significantly associated with arrest for serious crime AC. Implications on child protection, mental health, and social work education are discussed.

Keywords: abuse, arrest, child abuse, lead poisoning, mental health, neglect, out of home placement

1. Introduction

Some children and adolescents do engage in serious crimes ranging from animal cruelty [1, 2] to homicide [3]. Existing evidence also highlights associations between mental health problems such as psychosis and conduct disorder, and criminal involvement [4]. Recently, in a study of adult male rats exposed to lead poisoning, Ghaderi, Komaki, Salehi, Basir, and Rashno [5] documented evidences of links between lead exposure and cognitive decline, which can be a correlate of aggression [5]. White and Gala [5] have called attention to the need to mitigate lead exposure. Lead poisoning occurs when a child (for the purpose of this study) who is under the age of 6 has “had blood levels of 10 micrograms per deciliter or above”. A case of lead poisoning is confirmed with venous blood test ≥ 5 mcg/dl or 2 capillary tests within 72 days both ≥ 5 mcg/dl [6]. Lead poisoning exposure is well documented as an environmental justice issue [7] with numerous mental health and criminal justice implications. According to Mayo Clinic ([8], para 1–2), lead poisoning occurs when there is a buildup of lead in the body. It takes several months or years for the build-up to occur. According to Mayo Clinic [8], even minimal levels of lead may result to serious health challenges.

Particularly children below the age of 6 years are vulnerable to lead poisoning, which can severely affect their mental and physical development. Death could occur where the level of lead poisoning is very high. Sources of lead poisoning include lead-based paint and lead-contaminated dust in older buildings. These are the main sources of lead exposure and poisoning in children [8]. According to Mayo Clinic [8], additional sources of lead exposure and poisoning include water, soil, and contaminated air.

This study adds to the current conversation on environmental and policy factors that are related to mental health and criminal offending. The study applied an exploratory design and used a county-level data because: Counties play significant roles in administering and addressing issues related to the study's key variables. Second, counties provide a unit of authority from which careful comparisons could be made regarding the variables under study.

2. Background

In 2012, 25,839 cases of child maltreatment were assessed by Minnesota's counties and tribal agencies. Of these reports, 30% of the children were offered services [9]. About 43% of all cases of maltreatment reports in the state involved children aged 5 years or younger, 22% involved children aged 3 years or younger, while 9% involved children under the age of 1. Of the children who were abused, 171 were in out-of-home facilities such as foster homes [9]. In the same year, 8 children died from maltreatment, while 52 children suffered life-threatening injuries. Of the total maltreatment reports in the State in 2012, 60% related to non-medical neglect, 35% alleged physical abuse, and 10% alleged sexual abuse while medical neglect and emotional or mental abuse were alleged by 1%. Families and caregivers accounted for perpetrators of 4309 cases of abuse and neglect in 2012 with more than 50% of the cases requiring protective services, which are provided at the county level. Also, birth parents accounted for 77% of child victimization while other relatives such as adoptive parents, stepparents, grandparents, and siblings were responsible for 12% of the total child maltreatment, with parental companions accounting for 7% of the offenses. According to Minnesota Department of Human Services (DHS) [9], families in which child maltreatment occurred most were characterized with mental illness, domestic violence, substance use, poverty, housing needs, and parenting issues. According to Minnesota DHS [10], child protection agencies in Minnesota received a total of 85,917 reports of child abuse and neglect. About 43% of the investigated maltreatment cases were assessed to have occurred. Of the maltreatment reports, in 2019, 17 child deaths occurred, while 13 life-threatening physical injuries were determined to have occurred because of child maltreatment [10].

2.1 Child abuse and criminal offending

Child abuse and neglect can be defined as offensive parenting, such as beating a child, sexually molesting a child, and withholding necessities or care from a child. As demonstrated in the literature, child abuse and neglect (AN) remains a serious problem across the world. It is well-documented as a risk factor for poor health outcome, poor academic performance [11, 12], poor attachment with parents and caregivers [13–15], substance abuse [16], employment and relational problems, physical aggression, and future criminal offending [16, 17]. Several studies have assessed the impact of AN on criminal offending during adulthood [18, 19]. Of interest is that

AN has remained a risk factor for future crime involvement, specifically, arrest for serious crimes [11, 20]. Widom and Maxwell [21] assessed the associations between child abuse and adult criminal involvement in a metropolitan area and found that victims of AN were more likely to be arrested for crimes in their adulthood (42%) compared to those who did not have such experience (about 33%). Graff, Chihuri, and Blow [22] found that the effects of adverse childhood experiences on a victim could lead to multiple criminal offending in adulthood. Widom et al. [23] also found that AN was a predictor of externalizing problems (mental health issues that could manifest in use of physical force) which is a strong correlate of criminal involvement [16, 17, 22, 24–29] have also documented associations between physical abuse and externalizing behaviors in the male children. Sexual abuse was reported as a predictor of relational aggression in females. But despite that several studies have highlighted linkages between AN and future criminal offending during adulthood [14, 29–31] associations between AN and involvement in serious criminal offenses *vis a vis* lead poisoning prevalence, at the county level seem to have remained understudied.

2.2 Out-of-home placement, mental health, serious crime, and lead poisoning

According to the Minnesota Department of Health Services, DHS (2015), out-of-home placement (OP), is a form of family assessment program that is implemented by the child protective system as an intervention to protect a child from potential or further maltreatment. OPs may include foster homes, adoptive homes, and shelters. Children in OPs often carry emotional burdens such as severe poverty, dysfunctional family situations, mental health issues, abuse, and neglect [32]. Studies have suggested that these background legacies may hinder a child's capacity to become successful [33, 34]. OPs, particularly foster care, have become a usual means used by child protective systems to prevent further maltreatment of children. Hence, nationally, use of foster care increased more than 50% (from 276,000 to 568,000) between 1985 and 1999 [35]. As of 2006, about 3.6 million children in the USA were in the child protective system, within which more than 300,000 were in OPs [36]. Some studies have examined the links between foster care placement and criminal involvement. In a study that examined correlations between exit from foster care typology and entry into the correctional system, among 10,000 Wisconsin youth, Font et al. [37] found that about 13% of the study sample experienced incarceration as young adults. The authors echoed a need to enhance efforts to reduce risks of imprisonment among foster care youth. Lindquist and Santavirta [32] assessed the associations between placement in foster care as a child and criminal involvement during adulthood. Findings showed that being placed in a foster care predicted higher criminal involvement as an adult among boys (aged 13–18).

It is important to note that all OPs do not result from child maltreatment and do not result to criminal involvement. Sometimes, children may be in OPs due to their parents being incarcerated, due to a crime of their own, or due to not having an adult to care for them. According to the National Conference of State Legislatures [38] as of 2007, there were about a total of 1.7 million children of incarcerated parents in the USA. One in 110 white non-Hispanic children ($n = 484,100$) had their parents incarcerated. One in 15 black non-Hispanic children ($n = 767,400$) had their parents incarcerated, while one in 41 Hispanic children ($n = 362,800$) had their parents incarcerated. Further, more than 50% of the incarcerated males across race (Black and Hispanic) are more likely to be a parent compared to white parents (45%). Surprisingly, mothers of minor children accounted for 62% of inmates in state prisons

and 56% of inmates in federal prisons. Because OP is associated with important baseline risks [36], it is necessary to continue to explore its relationship with serious criminal offending, especially in maltreated children [39] from a prevention and care standpoint.

2.3 Conceptual considerations

The social learning theory integrates cognitive and behavioral explanations in examining human behavior. It posits that learning occurs within a social milieu. It further posits that human behavior is a result of the interplay between cognition and environmental exposures or inputs ([40], p. 155). Thus, people learn through observation, imitation, and modeling. Learning by modeling implies the existence of a role player (an actor) or a symbolic model. It is such modeling that leads to replication of behavior through mimicking or practice [40]. With this understanding criminal behaviors are not the results of hereditary factors ([40], p. 204) only. Instead, involvement in serious crime and violence is considered as a learning outcome that has been possible due to previous exposure to a similar situation in which there is a teacher and a learner. It is thus the prevalence of these individual exposures and replication of such inputs that account for high or low prevalence of serious crimes in a county or a setting. Social learning theorists posit that the first process through which the transmission of a learned behavior occurs is 'observation'. They argue that such learned negative behavior or serious violence or crime can be maintained or eliminated with the use of positive or negative reinforcements ([40], p. 155). Positive and negative reinforcements can be deterring factors such as local law enforcement, policies, and other tools that are available at a county level including police presence and mental health services. Within this understanding, punishment decreases undesired behavior. Social learning theorists further argue that the type of reinforcements received by a learner, and in this case a child or youth (either by a positive influencer or a negative influencer) determines whether the learned behavior will be imitated, mimicked, or avoided by the learner. These assumptions have been empirically tested through the Bobo doll experiment ([40], pp. 206, 208) in which exposure to violence predicted secondary violent behaviors by the learner.

Applying a social learning lens to this study will mean harnessing the components of effective learning, attention, which is the first step in learning ([41], p. 139), retention (the coding of the information and its transfer to conscious memory), reproduction of modeled behavior (the ability to reproduce a particular learned behavior), and motivation or reinforcement ([40] p. 245). Hence, policies and tools to prevent perpetration of crime during childhood would have to address all the dimensions mentioned above. Social learning theorists also postulate that reciprocal causation (or two-way communication) occurs at three different levels. These levels are the individual level, the behavioral level, and the environmental level. They also consider the construct of *self-efficacy* to be vital in social learning. For example, they argue that youth will replicate behaviors that they have learned only if they are convinced that they have self-efficacy to engage in such behavior ([40], pp. 49, 163). The explanation for arrest for serious offenses is that criminal behavior must have been previously modeled to the child ([41], p. 139; [40], p. 115). All these result to higher propensity to engage in serious crimes that were modeled by an abuser, moderated by the child's attention, retention, and self-efficacy or self-reinforcement ([40, 42], pp. 316–317). Hence, participation in serious crimes may be a way that a child uses to test the child's self-efficacy. Building on a social learning lens and the studies reviewed above, the

author hypothesizes that prevalence of child abuse and neglect, and out-of-home placement, and child lead poisoning exposure, will predict serious crime perpetration [11, 37, 43, 44]. Hence, the goal of an intervention will be to ensure that children and adolescents do not get exposed to delinquency, and that there is enough tool to mitigate such delinquencies when they occur so that re-perpetration of violence and serious crime can be stopped.

3. Method

3.1 Sample

Data for the study were specifically derived from Minnesota indicators for 2011: Safety and risky behavior indicators (child abuse and neglect), juvenile justice (children arrested for a serious crime), and out-of-home placement totals for 2011, derived from the Annie E. Cassie Foundation [44]. The Kids Count data were derived from Minnesota Department of Human Services, Minnesota's Child Welfare Report. This study considered the entire counties in the State of Minnesota, and the unit of the analysis is the county. There are a total of 87 counties in Minnesota, excluding tribal territories, and the dataset considered each county as a datapoint (see **Figure 1**).

3.2 Procedure

This cross-sectional study relied on secondary data from The Annie E. Casey Foundation (Kids Count Data Center). The study relied on 2011 data because it is the dataset with complete variables for the kind of analysis that was required. This study focused on the entire counties in the state of Minnesota. All the counties in the state (N = 87) excluding tribal territories were included in the analysis, hence, the county was the study's unit of analysis.

3.2.1 Operationalization of study variables

According to Minnesota Department of Human Services ([6], para 1–5), child abuse comprises three categories: (1) physical abuse, comprising “any physical injury or threat of harm or substantial injury, inflicted by a caregiver upon a child other than by accidental means,” (2) mental injury: refers to harm to a child's psychological capacity or emotional stability evidenced by an observable and substantial impairment of the child's functioning, (3) sexual abuse: involves subjecting a child to a criminal sexual act or threatened act by a person responsible for the child's care or by a person who has a significant relationship to the child or is in a position of authority. Neglect involves the failure of the child's caregiver to: “Supply the child with necessary food, clothing, shelter, medical or mental health care, or appropriate supervision, protect the child from conditions or actions that endanger the child, take steps to ensure that a child is educated according to the law. Exposing a child to certain drugs during pregnancy and causing emotional harm to a child may also be considered neglect” [9]. For this study, the term, child abuse and neglect and child maltreatment are used interchangeably.

The variable, AN reflects the number of children “of whom a report of child abuse or neglect was substantiated by a county child protection worker” [6]. The variable, AC reflects individuals under the age of 18 who were incarcerated due to homicide,

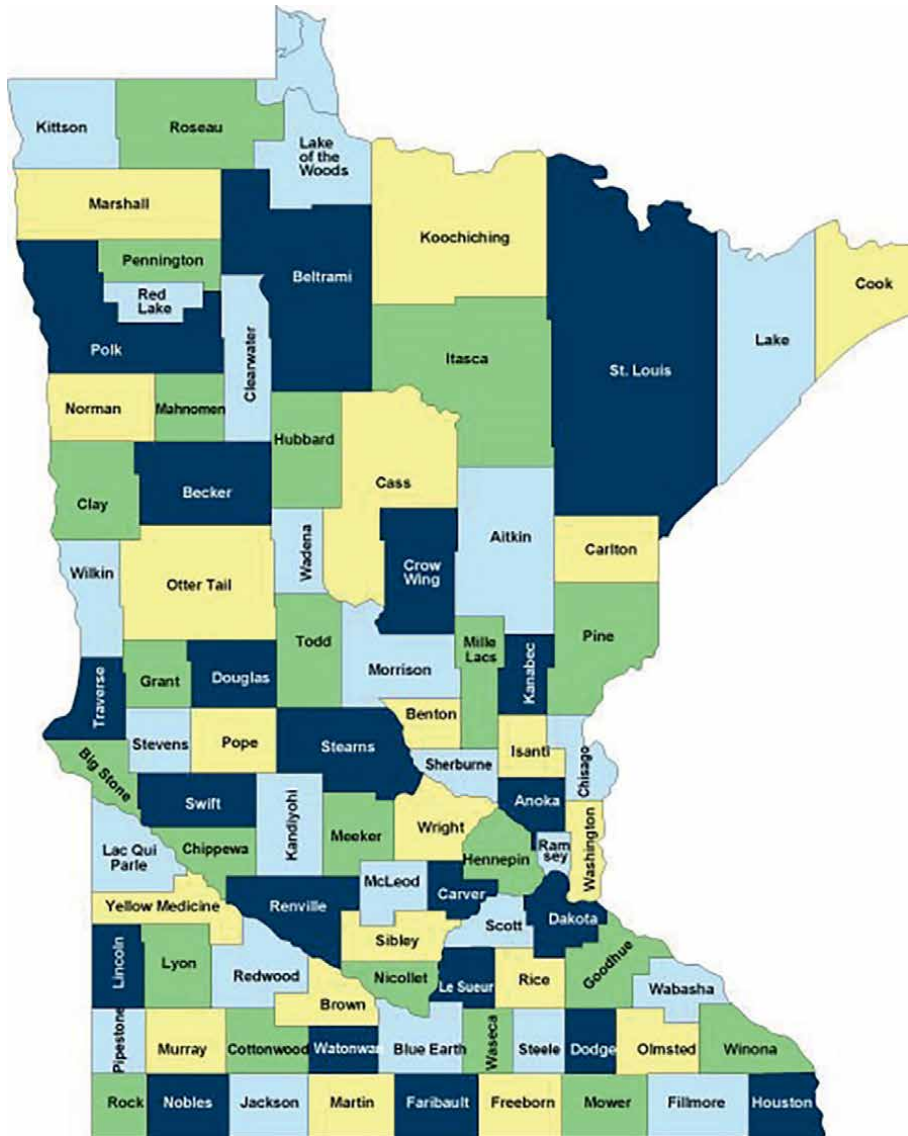


Figure 1.
Map of Minnesota Counties. Minnesota Employment and Economic Development. Minnesota County Profiles.
<https://mn.gov/deed/data/data-tools/county-profiles/2023>

murder, robbery, rape, aggravated assault, vehicle theft, rape, larceny, and arson. The source of this data is Minnesota Bureau of Criminal Apprehension. The variable, OP is the number of children who had been in group homes, foster care, residential treatment facilities, foster care, including children who were placed with their relatives. The source of this data is Minnesota Department of Human Services, Minnesota Child Maltreatment Report [6]. The variable, LP, is the number of children under the age of 5 who tested and were confirmed to have “had blood levels of 10 micrograms per deciliter or above. Cases that were confirmed are those with venous blood test ≥ 5 mcg/dl or 2 capillary tests within 72 days both ≥ 5 mcg/dl.” [6]. The year 2011 was used as the focal point of the study because it contained complete data matching the rest

of the variables of interest in this study. This study is unique in that it looked at child welfare from the macro-level perspective, which is an important lens for social work.

3.2.2 Data analyses

Data were cleaned and examined for suitability with the different analyses that were conducted. The analysis focused on prevalence or the sum of incidences of AN, OP, LP, and AC. The number of counties in Minnesota is finite and small, in comparison with other states in the United States. For this reason, the sample size for the analysis was small (given that each county represented one sample). However, that is the maximum number that the state has, at the county level. To address the challenge of sample size, bootstrapping method was applied, which is an acceptable method for dealing with studies with small sample size [45]. Data was analyzed using SPSS and intellectus statistics. Findings from the bootstrapping analysis were compared with findings from the raw sample, and they showed similar results. Logistic regression is very robust to violation of assumptions of multiple regression. Logistic regression was applied in exploring the multivariate relationships within the study variables. Descriptive analyses of the key variables were conducted, which showed the distribution of the key study variables, and the data was subjected to further probing which showed high levels of skewness and kurtosis. For point biserial correlation analysis, a preliminary analysis of the data using the predictor variables in their original form led to fitted probabilities that were numerically close to 0 or 1, suggesting that there was possible minimal overlap in the variability of some of the predictor variables between low and high prevalence of AC. The association between the variables was assessed using Cohen's standard, where 0.1 represents a small effect size, 0.24 represents medium effect size, and 0.37 represents large effect sizes [46], given the assumption that both the low (0) and high (1) values in AC might equally occur [47, 48]. Findings from the analysis were reviewed using Holm corrections, which is applied in adjusting for numerous comparisons using an alpha value of 0.05. For this reason, the logarithm of the variables was taken. This solution seemed to address the problem of minimal overlap in the variability of some of the independent variables. The predicted variable, AC was re-coded into a binary form, using the mean value of the original distribution of the variable as the lower cut-off. Hence, values that fell below the mean were assigned 0 while those that went above the mean were assigned 1. For the logistic regression analysis, the reference category for prevalence of AC was (0, low arrest incidence). The most frequently observed category of AC was 0 ($n = 44$, 50.57%), while the least frequently observed category of AC was 1 ($n = 43$, 49.43). The data was assessed for multicollinearity by examining the variance inflation factors (VIFs). All predictors in the regression model had VIFs below 10. Prevalence of OP had a VIF of 1.40, prevalence of abuse and neglect had a VIF of 1.41, prevalence of LP had a VIF of 7.36, and the interaction between prevalence of abuse and neglect and prevalence of lead poisoning had a VIF of 7.40. High VIFs indicate increased effects of multicollinearity in the model. VIFs greater than 5 are cause for concern, whereas VIF of 10 is the maximum upper limit [45].

4. Results

Summary statistics were calculated for the key variables, in their untransformed form: LP, AN, AC, and OP. The observations for OP had a range of 6–2399 and a median score of 55. The observations for LP had a range of 0–162, with a median score

of 2.00. The observations for AN had a range of 0–3058, with a median score of 21. The observations for AC had a range of 0–2949, with a median score of 13. Upon transformation, the observations for OP had an average of 1.76 (SD = 0.50, Min = 0.78, Max = 3.38). The observations for LP had an average of 1.13 (SD = 1.06, Min = 0.00, Max = 5.09). The observations for AN had an average of 1.26 (SD = 0.60, Min = 0.00, Max = 3.09).

4.1 Point biserial correlation

A point biserial correlation analysis was conducted for the variables—AC (converted to binary) of OP (log value), AN (log value), and LP (log value). A point biserial correlation is a special case of the Pearson correlation. The observed correlations, along with the bootstrapped results for the standard error and the 95% confidence interval of each correlation, are presented in **Tables 1** and **2**.

The biserial correlations indicated that there was a statistically significant correlation between AC and LP with a correlation coefficient of 0.50 ($p < 0.001$; 95.00 % CI [0.32, 0.64]) indicating a large effect size. The analysis for AC and AN found that there was also a significant positive correlation between AC and AN with a correlation coefficient of 0.61 ($p < 0.001$, 95.00% CI [0.46, 0.73]), indicating a large effect size. Dealing with AC and OP, it was found that there was a significant positive correlation between AC and OP with a correlation coefficient of 0.60 ($p < 0.001$, 95.00% CI [0.45, 0.72]), indicating a large effect size.

The analysis with the bootstrapped sample showed that there was a statistically significant correlation between AC and LP ($N = 2000$) with a correlation coefficient of 0.50 (SE = 0.07, 95.00% CI [0.36, 0.63]), indicating a moderate effect size. For AC and AN, it was found that there was a significant positive correlation between AC and AN ($N = 2000$) with a correlation coefficient of 0.61 (SE = 0.06, 95.00% CI [0.48, 0.72]), indicating a large effect size. Dealing with AC and OP, the analysis indicated that there

Combination	<i>r</i>	95.00% CI	<i>n</i>	<i>P</i>
AC-LP	0.50	[0.32, 0.64]	87	<0.001
AC-AN	0.61	[0.46, 0.73]	86	<0.001
AC-OP	0.60	[0.45, 0.72]	86	<0.001

Note. p-values were adjusted using the Holm correction.

Table 1.
Point biserial correlations for AC and LP, AN, and OP.

Combination	<i>r</i>	SE	95.00% CI
AC-LP	0.50	0.07	[0.36, 0.63]
AC-AN	0.61	0.06	[0.48, 0.72]
AC-OP	0.60	0.06	[0.48, 0.71]

*Point biserial correlations for AC (0,1) and OP (continuous), AN (continuous), LP (continuous), and observed correlations with bootstrapped results for the standard error and the confidence interval. Note. $n = 87$; Holm corrections used to adjust *p*-values for the calculation with the original sample. **Table 1** = raw analysis ($n = 86-87$). **Table 2** = bootstrapped analysis ($n = 2000$).*

Table 2.
Observed correlations with bootstrapped results for the standard error and the confidence interval.

was a significant positive correlation between AC and AN (N = 2000) with a correlation coefficient of 0.61 (SE = 0.06, 95.00% CI [0.48, 0.72]), indicating a large effect size. For AC and OP, the analysis pointed out that there was a statistically significant positive correlation between AC and OP (N = 2000) with a correlation coefficient of 0.60 (SE = 0.06, 95.00% CI [0.48, 0.71]), indicating a large effect size (**Table 3**).

4.2 Logistic regression

Logistic regression was conducted to examine whether prevalence of OP, prevalence of abuse and neglect, and prevalence of LP had a significant effect on the odds of observing higher prevalence of AC. The following equations were applied:

$$\ln(p/1-p) = \beta_0 + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \beta_1x_1 * \beta_2x_2 \quad (1)$$

$$\ln(p/1-p) = \beta_0 + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \beta_2x_2 * \beta_3x_3 \quad (2)$$

Where $\ln(p/1-p)$ = outcome: arrest for serious crime, β_0 = constant, β_1x_1 = lead poisoning, LP, β_2x_2 = out-of-home placement, OP, β_3x_3 = abuse and neglect, AN; $\beta_1x_1 * \beta_2x_2$, and $\beta_2x_2 * \beta_3x_3$ are interaction terms that were applied to see how they affected the models (in comparison).

The first model was assessed based on an alpha of 0.05. The overall model was significant, $\chi^2(4) = 49.82$, $p < 0.001$, showed that LP, OP, and AN had a significant effect on the odds of observing high level of AC. McFadden's R-squared was applied in assessing the model fit. The McFadden R-squared value calculated for this model was 0.41. The effect of the LP was not significant, $B = 0.25$, OR = 1.28, $p = 0.067$, which indicates that LP did not have a significant effect on the odds of observing the 1 category of AC. The effect of the OP was not significant, $B = 0.01$, OR = 1.01, $p = 0.091$, indicating that OP did not have a significant effect on the odds of observing the 1 category of AC. The effect of the AN was significant, $B = 0.04$, OR = 1.05, $p = 0.037$, indicating that a one-unit increase in AN increase the odds of observing the 1 category of AC by approximately 4.60%. The interaction between LP and OP was not significant, $B = -0.0003$, OR = 1.00, $p = 0.077$, indicating that a one-unit increase in LP does not change the effect of OP on the odds of observing the 1 category of AC.

Table 4 summarizes the results of the model.

For the second model (replication with different interaction terms), they mimicked that of the first model with an alpha of 0.05. The overall model was significant,

Variable	B	SE	χ^2	p	OR	95.00% CI
(Intercept)	-2.64	0.59	20.01	<0.001	—	—
OP	0.01	0.008	2.55	0.110	1.01	[1.00, 1.03]
LP	0.24	0.13	3.22	0.073	1.27	[0.98, 1.64]
AN	0.05	0.02	4.59	0.032	1.05	[1.00, 1.09]
LP:AN	-0.0006	0.0002	7.60	0.006	1.00	[1.00, 1.00]

Note. $\chi^2(4) = 49.95$. $p < 0.001$, McFadden $R^2 = 0.41$.

Table 3.
 Logistic regression results with OP, LP, and AN predicting AC.

Variable	B	SE	χ^2	P	OR	95.00% CI
(Intercept)	-2.65	0.59	19.90	<0.001	—	—
LP	0.25	0.14	3.36	0.067	1.28	[0.98, 1.67]
OP	0.01	0.008	2.86	0.091	1.01	[1.00, 1.03]
AN	0.04	0.02	4.35	0.037	1.05	[1.00, 1.09]
LP: OP	-0.0003	0.0002	3.12	0.077	1.00	[1.00, 1.00]

Note. $\chi^2(4) = 49.82$, $p < 0.001$, McFadden $R^2 = 0.41$. *Note: Some of the fitted probabilities for this model were near 0 or 1. For this reason, the interpretation of this analysis is exploratory.*

Table 4.

Logistic regression results with LP, OP, and AN predicting AC.

$\chi^2(4) = 49.95$, $p < 0.001$, suggesting that OP, LP, and AN had a significant effect on the odds of observing the higher category (1) of AC. McFadden's R-squared was used to assess the model fit. Values that are 0.2 are indicative of models with good fit [49]. The McFadden R-squared value calculated for this model was same as the original model, 0.41.

5. Discussion

The present study has explored how prevalence of AN, OP, and LP were linked to prevalence of arrest for serious offenses, including the most serious forms of violence (murder, rape, and aggravated assault). Bivariate and multivariate analyses were applied in exploring such relationships. In discussing the findings of this study, it is important to highlight that the findings for both the bivariate and multivariate analyses were re-examined through bootstrapping of 2000 samples (resampling). This approach was applied due to the limited number of cases that were involved in the original analysis. Findings from this study highlight important considerations and variables that should be looked further into, in terms of violence prevention.

Findings from the point biserial correlations were examined with Holm correction to adjust for multiple comparisons based on a probability value of 0.05 for the raw data without bootstrapping. There was a significant positive correlation between AC and LP with a correlation coefficient of 0.50 ($p < 0.001$, 95.00% CI [0.32, 0.64]), indicating a large effect size. This suggests that moving from the 0 category to the 1 category of AC is associated with an increase in LP. Therefore, the 1 category of AC tends to be associated with higher values of LP. There was also a significant positive correlation between AC and AN with a correlation coefficient of 0.61 ($p < 0.001$, 95.00% CI [0.46, 0.73]), indicating a large effect size. This suggests that moving from the 0 category to the 1 category of AC is associated with an increase in AN. Therefore, the 1 category of AC tends to be associated with higher values of LOG_AN. There was a significant positive correlation between AC and OP with a correlation coefficient of 0.60 ($p < 0.001$, 95.00% CI [0.45, 0.72]), indicating a large effect size. This suggests that moving from the 0 category to the 1 category of AC is associated with an increase in OP. Therefore, the 1 category of AC tends to be associated with higher values of OP. **Table 4** presents the results of the correlations.

The analysis with the bootstrapped sample: The result of the bootstrapped point biserial correlations was examined based on a probability value of 0.05. There was

a significant positive correlation between AC and LP ($N = 2000$) with a correlation coefficient of 0.50 ($SE = 0.07$, 95.00% CI [0.36, 0.63]), indicating a moderate effect size. This indicates that moving from the 0 to 1 category of AC is associated with an increase in LP. Therefore, the 1 category of AC tends to be associated with higher values of LP. There was a significant positive correlation between AC and AN ($N = 2000$) with a correlation coefficient of 0.61 ($SE = 0.06$, 95.00% CI [0.48, 0.72]), indicating a large effect size. This indicates that moving from the 0 to 1 category of AC is associated with an increase in AN. Therefore, the 1 category of AC tends to be associated with higher values of AN. There was a significant positive correlation between AC and OP ($N = 2000$) with a correlation coefficient of 0.60 ($SE = 0.06$, 95.00% CI [0.48, 0.71]), indicating a large effect size. This indicates that moving from the 0 to 1 category of AC is associated with an increase in OP. Therefore, the 1 category of AC tends to be associated with higher values of OP. **Table 3** presents the observed correlations, along with the bootstrapped results for the standard error and the 95.00% confidence interval of each correlation.

While findings from the point biserial correlation analysis showed strong associations between OP and AC, indicating that while OP increased, arrest for serious crime also increased, a further analysis (logistic regression) showed that prevalence of OP did not have a significant effect on the odds of observing higher prevalence of AC. This finding is slightly consistent with previous findings. For example, [50] found that OP only had slight positive association between child abuse and criminal offending during adulthood. The authors had rather found that placement inconsistency was more influential than just out-of-home placement. Also, Font et al. [51] found that only 13% of criminal offenders had been placed in foster care in a comparison study the authors conducted, recently. In fact, [50] findings as well as that of Hall et al. [52] may expose some reasons OP in isolation, might not be a significant predictor of AC. In support of this, Hall et al. [52] found that adverse childhood experiences were associated with OP of individuals who had engaged in sexually violent behaviors. It is also important to note that a previous study has highlighted high prevalence of abuse among children placed in out-of-home situations [53], which may further exacerbate criminal offending and violence perpetration among the children. In short, it does seem that the pathway to serious crime through OP is through other variables which could include abuse that occurred while in OP.

While there was strong positive correlation between LP and AC, indicating that increase in prevalence of LP is linked to AC, further analysis through logistic regression showed that LP was not a predictor of AC. This finding is interesting because it is established in the literature that LP is linked with poor academic performance and delinquency [54] as well as neurological and behavioral challenges. In fact, a recent study [55] had found that lead concentrations in the human body (after age 6) had arrest consequences. Wright et al. [55] did not find a link between lead poisoning in childhood and violence, which is comparable to the findings of Beckley et al. [56] but contrary to Nevin [57].

The most important statistically significant finding was between AN and AC. The correlation analysis showed strong positive correlation between AN and AC. Specifically, the finding showed that increase in AN was associated with increase in AC. In other words, increase in prevalence of AN was associated with increase in prevalence of AC.

Regarding the logistic regression, for the non-bootstrapped model, the effect of the LP was not significant, $B = 0.25$, $OR = 1.28$, $p = 0.067$, which indicates that LP did not have a significant effect on the odds of observing the 1 category of AC. The effect of the OP was not significant, $B = 0.01$, $OR = 1.01$, $p = 0.091$, indicating that OP did

not have a significant effect on the odds of observing the 1 category of AC. The effect of the AN was significant, $B = 0.04$, $OR = 1.05$, $p = 0.037$, indicating that a one-unit increase in AN increases the odds of observing the 1 category of AC by approximately 4.60%. The interaction between LP and OP was not significant, $B = -0.0003$, $OR = 1.00$, $p = 0.077$, indicating that a one-unit increase in LP does not change the effect of OP on the odds of observing the 1 category of AC. **Table 4** summarizes the results of the model.

For the bootstrapped model of the logistic regression, the effect of the OP was not significant, $B = 0.01$, $OR = 1.01$, $p = 0.110$, indicating that OP did not have a significant effect on the odds of observing the 1 category of AC. The effect of the LP was not significant, $B = 0.24$, $OR = 1.27$, $p = 0.073$, indicating that LP did not have a significant effect on the odds of observing the 1 category of AC. The effect of the AN was significant, $B = 0.05$, $OR = 1.05$, $p = 0.032$, indicating that a one-unit increase in AN increase the odds of observing the 1 category of AC by approximately 4.83%. The interaction between LP and AN was significant, $B = -0.0006$, $OR = 1.00$, $p = 0.006$, indicating that a one-unit increase in LP changes the effect of AN on the odds of observing the 1 category of AC. **Table 3** summarizes the results of the regression model.

Studies have documented links between different forms of child abuse and neglect and externalizing problems and other forms of crimes or correlates of criminal offending such as poor school performance and mental health and substance use issues [16–18, 24, 26–28, 58]. In fact, Grafet al.'s [18] recent findings uncovered causal links between child abuse and criminal offending. It is important to note that, while a few indications of causal links between child abuse and neglect and criminal offending are present, the non-direct pathways through which abuse can associate with criminal offending, for example, through externalizing problems [23] are also worth considering. In fact, that child abuse and neglect is a predictor of subsequent criminal offending as an adult is established in the literature [19, 29–31] and that it is the significant predictor of arrest for serious crime including violence, highlights the social learning consequences of aggression and maltreatment in the home setting [40], thereby justifying the theoretical reasoning for this study. In the end, one of three main hypotheses of the study were supported, thereby accentuating the need to lay emphasis on prevention of violence and maltreatment of children.

5.1 Mental health implications

Findings from this study speak to the combined importance of addressing crime and violence from environmental [7], policy, criminogenic [1, 2], and mental health [4] standpoints. Findings from this study and existing studies on the topic are a call for action to the mental health community, especially at the county level. All aspects of child abuse and neglect victimization, some reasons for out-of-home placement, and some reasons for arrest for serious offenses [1–3] have been linked with mental health problems [4]. These are also connected to the wellbeing of children and adults in terms of their education and quality of life. Ghaderi et al.'s [59] study's highlight of a link between cognitive decline and lead poisoning is a direct connection between lead poisoning and mental health issues because cognitive decline reduces quality of life. Moreso, the connection is also highlighted in Mbonane et al. [5] wherein such could lead to aggressive tendencies. As victims of abuse and neglect have been found to have a high propensity to re-enact abuse or be engaged in crime [18, 21, 23, 60], it is important to bear in mind that mental health issues could play out in the form

of aggression and crime [16–18, 24, 26–28, 58] . It is therefore important to consider the milieu and environment where children and adolescents live in making policies that address safety and wellbeing. Given the transgenerational burden that may be associated with poverty (which can be a reason for lead poison exposure) and other negative outcomes, it is important to also engage and continue to highlight the person-in-environment perspective from which social workers operate, in enacting policies, and in allocating funds to address preventive measures such as crime prevention—to reduce the counts of abuse and neglect, lead poisoning, out-of-home placement, and arrest for serious crimes at the county levels. Such thinking, in addition to including other areas of the human ecology, will make way for a better future.

Again, findings from this study uncovered important considerations and variables that should be looked further into, in terms of violence prevention. Specifically, the relationships between child abuse and neglect and arrest for serious crimes are important. This finding speaks to the need to pay close attention to the criminogenic consequences of child abuse and violence in children. At the community and policy levels, findings from this study accentuate a need to examine and enhance child protective efforts at the county levels in terms of decreasing its prevalence by adapting evidence-based measures. In doing so, violence against children might be minimized as well as the current challenge of the childhood prison pipeline. Findings from this study emphasize the need for social workers in practice, research, and education, to, in concert with other disciplines and agencies, and come up with evidence-based means to decrease the prevalence of child abuse and neglect. It is also important to point out certain limitations that are associated with this study. First, the study is exploratory in nature, given its sample size. The data that was used is also somewhat dated but was used in this analysis because it is the available, complete data, given the variables that were of interest in this study. To attend to the small sample size, bootstrapping was applied. Yet, findings from the logistic regression, although with two models, ought to be interpreted with caution, given that some of the fitted probabilities were close to zero or 1. With these in mind, the current study underscores a need to continue to explore the combined relationships of the variables, especially among social work educators.

6. Conclusion

The links between mental illness, child abuse and neglect, including lead exposure, and involvement in serious criminal activities call for continuous attention. This is because the health and wellbeing of any society largely depends on its youth. This study explored uniquely, the combined relationships of key variables that are important to study at the county level, given that a county has many resources and some level of authority to administer interventions of safety within its jurisdiction. The study uncovered several interesting findings, prominent of which is that abuse and neglect was associated with crime involvement. This study provides an additional voice to the call to end child abuse and neglect and to begin to build new pathways for child and youth transition to adulthood. It is also a call to adopt policies that are capable of preventing and mitigating pathways to crime, mental illness, child abuse and neglect, and other preventable adverse childhood experiences. It is also a call for policy analyst to become more interested in using models that are comprehensive in doing such. One of the models that canvasses for a comprehensive approach is the multiphasic policy analysis model [61] which has been applied in evaluating an

international program that is aimed at addressing the needs of vulnerable children. The call to action following this exploration is not only to policymaker: it is for educators, police officers, child protection workers, civil organizations, family systems, and other agencies of government. Simply put, efforts should continue to be made to ensure that children and adolescents are protected against all forms of abuse and neglect including exposure to environments that may have cognitive and other mental health consequences on them.

Conflict of interest


The author has declared no conflict of interest in this study.

Author details

Kingsley Chigbu
School of Social Work, Morrison Family College of Health, University of St. Thomas,
St. Paul, USA

*Address all correspondence to: kchigbu@stthomas.edu

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Perspective Chapter: Serial Killers – The Severest of Criminal Behaviors

Ali Açıkgoz

Abstract

A serial killer is a person who kills three or more victims for a specific reason and at regular intervals (for a few days, weeks, months, or years). Serial murders are committed in all parts of the world. In the literature, serial killers are generally defined as having a faint character, being mostly white and heterosexual, suffering psychotic disorders, being sexually abused most of them as children, belonging to low socioeconomic status families, having a bad childhood with domestic violence or oppressive mother's violence. The modus operandi of a serial killer can only be murder or sexual abuse, torture, domination, and humiliation. The leading cause of the increase in serial murders all over the world is the collapse of the traditional family structure. Following this, women became a target with the desire to own their own lives, immigration, the isolation of individuals brought about by urbanization, can be counted. Although the idea that approximately one out of every six serial killers is a woman contradicts the elegant nature of women, it is a fact. The belief that there would be no threat from women initially misled the researchers. However, both genders have a structure that can perform the same action. In this chapter, information about serial killers is given and their criminal behavior and patterns are revealed.

Keywords: criminal behavior, modus operandi, psychotic disorder, serial killer, forensic sciences

1. Introduction

Arising from the commission of another serious crime or deliberate homicide counts as murder in legal systems around the world. The murderer is defined as who is a person committing a murder or responsible for killing someone.

Although definitions of murder and murderer are clear, when trying to explain concepts of serial murder and serial murderer different definitions emerged among the authors of the subject. Numerous publications on this subject demonstrate a universal consensus on efforts to determine the definition, classification, epidemiology, clinical, and psychopathology [1].

By using psychiatric, psychological, sociological, and biological approaches, the classification of serial murders, prevalence, causes, characteristics, and behaviors

of the murderers were tried to be understood. Especially after the change in earth's geopolitics structure, especially common in North America, all over the world, serial murders started to increase. Due to the increasing number of serial murders, the Behavioral Science Unit was set up in the Federal Bureau of Investigation (FBI). FBI trying to create a kind of serial killer profile and study on "behaviors of criminals and causes of those behaviors" works in this field since 1970 in order to detect serial killers before committing murder. The term serial killer is used in the 1980s by FBI criminologist Robert Ressler for the first time.

2. Definitions of serial murder and serial murderer

Although the definitions of murder and murderer are clear, different definitions emerge between authors and researchers when explaining the definitions of serial murder and serial killer. As a general definition, serial murder means two or more murders in different places and time intervals. These time interval changes from hours to years [2].

The definition by FBI is three or more cases at different time and locations from each other falls under the classification of serial murder. Generally, common in the definition is two or more murders occurring at different time and locations is serial murder. People who kill more than one person for a specific reason and at regular intervals are called serial murderers.

For more than a century, murders and murderers killed many people have been mentioned in a variety of books. However, the closest definition to today's definition is made by Cormier in 1972 as multiple kills [3]. After that, the definition by Ressler in [4] and the definition by Burgess in [4] came. Holmes and De Burger mention victims and attackers are strangers from each other or are little acquaintances and for attackers some relative signs motivate to kill [5]. Keeney and Heide [6] in 1995, Hickey [7] in 1997, made definitions that are like each other. According to those writers, there are at least three different times and locations.

The National Center for the Analysis of Violent Crime (NCAVC) divides serial murders into two classes. The first is complex, the second is classical. Despite in complex serial murders, there are geographic differences; the quiet period is usually very little. The main causes of those murders are monetary and excitement impulses. Besides geographic differences and the quiet period, sexual-sadistic impulses that trigger killing in classical serial murders and traces of them are found at the crime scene.

Classification made by Ressler et al. is based on the examination of evidence at the crime scene. They classified serial murders as organized and disorganized according to the status of the crime scene and the evidence that is found there. In organized serial murders, when the crime scene has been investigated, we can see the incident was planned masterly, to habitual repetitions and cleverly performed, in disorganization, we witness traces of spontaneous happened and turmoil in the crime scene [4]. This classification method is widely followed by police forces all over the world today. The fact that the FBI is the most effective institution in crime scene investigation and homicide investigations training all over the world and the methods it uses in this direction may be the reason for its prevalence [8].

Mass murders that result in the killing of people more than once, occurring fire or bombing, mafia murders by professional killers in different times and locations, murders committed by politically dedicated people in recent years, murders with religious motives, also, alcohol, drug usage or murders involving two or more victims

and different crime scenes as a result of family conflicts such as jealousy are outside of the serial murder definition [9].

3. Categories

Holmes and De Burger used characteristic features of attracter with attraction impulse According to these features, serial murderers should be divided into five categories. These are:

3.1 Visionary

In this category, crime committed by the aggressor is related to psychotic symptoms that can be seen himself/herself there are distinctive features related to the race, gender, age and occupation of the victim. Attractors are people, seeing hallucinations, having delusions, and having wrong beliefs.

3.2 Missionary

People in this group, dedicate themselves to this task, believing that they must be rescued from those whom they believe are degrading society (such as drug dealers and prostitutes). Psychotic states are usually absent in these individuals.

3.2.1 Hedonistic

This group is divided into two subgroups. These are:

3.2.2 Lust murderers

They kill to get sexual pleasure. For those sexual sadistic killer phrases are also used.

3.2.3 Thrill-oriented killers

People in this group kill too because they seek the excitement in novels.

It is possible to find evidence of sadistic methods, sexual behavior before and after killing, mutilation, and cut the victim, in both subgroups.

3.3 Comfort-oriented killers

They focus on tools that they use to commit murder than the process of killing the victim. Stimulating causes may be psychological or monetary satisfaction.

3.4 Power and control

In this aggressor group, the stimulant is the impulse of showing power to the victim. Although they show sexual activity, its degree is not clear as those who kill for primary sex entertainment.

There are also those who, like Turvey, make profiling studies about the attacker based on the characteristics of the victim and the evidence found at the crime scene. Turvey asserts that victimology is the most important part of profiling accused [10].

Despite, this type of approach is important for police investigators, there are authors who argue that there are drawbacks of getting away from objectivity and not giving importance to other profiling techniques as Holmes and Holmes [11, 12].

4. Prevalence of serial murder

Difficulties in defining serial murders and serial murderers, multitude of unsolved murders cause to encounter difficulties in determining the numbers of serial murder cases and serial murderers in the USA as well as in other countries of the world. In the USA, the number of serial killers is about 35 identified for certain by the FBI. Nevertheless, this number is found according to approximately 360–500 determined serial murder victims. However, unsolved murders in the USA is about 3500–5000 per year, in this instance number of a serial killer can be much more. A total of 75% of serial murders committed all over the world are committed in the USA.

5. The way the crime was committed and the behavior of the serial killer

5.1 Aura or fantasy period

This process begins when killers, who appear absolutely normal on the outside, enter the private world of perverted fantasies. The weakening of killer's grasp of reality leads to a marked increase in dreams of destruction and killing.

5.2 Search period

Serial killer starts to search victim like a fisherman throwing his/her fishing rod and pulling it slowly. Usually, vicinity of schools, areas with prostitutes, wanders the dark and narrow streets where lovers go [11].

5.3 Courtship period

In some cases, the murderer simply catches and kills anyone out of the way, in a dead-end street or a house he/she broke into. With this, too often, the murderer will get sickly satisfaction from luring in his/her victim by giving them a false sense of security, from deceiving them into giving up their safety [13–17].

5.4 Capture period

Next step is part of the murderer's sadistic game to see the terror-filled reactions of the victims after they are suddenly confronted with the horror of their situation.

5.5 Murder

As with some serial killers, killing is almost like sex, the moment of killing can be substituted for orgasm. Serial killers who have an antisocial personality disorder and act sexual impulses, after killing his/her victims are quite common to experience orgasm. Serial killers prolong the fun by using methods such as beating with a heavy object, whipping, and killing by slow torture among their murder preferences [13, 15–17]. During, before, and after these murders homosexual behaviors are not rare [18, 19].

5.6 Totem period

Murder is intense but temporary pleasure for serial killers like orgasm. In the recession period until the next murder, in order to prolong the pleasure and help to live again in his/her fantasies, they take a memory of the victim or a totemic object. It can be anything from a wallet to an organ.

5.7 Depression period

At the end of murder, serial killer often disappointed. It is equivalent to the situation called as postcoital tristesse (post-coital stagnation) in French. This situation can be so severe that it leads the murderer to attempt suicide. However, behavior in this situation of most of them is a growing desire for fresh blood and a renewed desire to kill again.

6. Etiology of serial murder

In the etiology of serial murder, we faced with different approaches. These are shortly socio-cultural, psychiatric, developmental and psychological, biological, evolutionary, and animal behavior approaches.

6.1 Socio-cultural approach

Could it be the environment or social environment that makes a person a serial killer? According to Durkheim, getting lonely a person because of mechanistic societal structure, encounter contradictions with the rules of society increase the amount of crime in society. People may have thoughts of suicide or murder with this approach, which is called as Structural/Functional Approach [20]. Especially this approach explains the causes of the emergence of female serial killers [21]. According to genealogical theory, children growing up in illegal environments, committing crimes, and being abused in childhood can lead them to serial murders. The fact that 60% of serial killers were convicted in childhood explains the approach of this theory [22]. The reasons put forward according to the differentiation connotation are that the crime can be learned from and carried out on television, in the press, or from other prisoners in prison. According to Masters, crime rates are low in traditional societies and communities with strong ties between the people [22]. Serial murders are started to spread out among African American citizens belonging to subculture and with different socio-economic structures in the USA. It is understood by investigating the social worlds of mass or serial killers from case studies of Reinhardt [22], they never have had reliable communication experience. Women are very rare in serial killers and those are usually comfort-type serial killers. According to this theory, the main cause of women is fewer serial killers than men is since brutal behavior is a behavior learned from the family, society, and the media, it results from the fact that in all societies, men learn to take and strive for power, while women teach and learn to docile and obedient behavior. Ratner [22] explains the causes of serial murders as a rupture in the linkages of the ideology of supremacy that maintains the status quo [22]. The efforts of the media to present new news and create a sensation have led to changes in serial murder motives. The film has created a sort of hero image in society, with films such as “Silence of the Lambs”, “Henry: Portrait of a murderer” through

the marketing efforts of the book industries. The very intelligent, mocking police behavior of the heroes of this movie is perceived by some people as a symbol, a feeling of exaltation. These types of false heroes become exemplary idols for serial killers. Serial killers may emerge as a result of psychological deficiencies such as symbols, rituals, devil worship, feeling like the son of a demon, hearing voices about evil, being motivated to commit murder and this motivation persists [22–24].

6.2 Psychiatric approaches

Science of psychiatry pointed out illnesses when explaining serial murders. However, it is so hard to accept them as sick except for the real psychotic symptoms of visionary serial killers and those showing sexual sadistic behavior. It may be more appropriate to accept those who except for these two groups as lapse from normal behavior. Multiple personality disorders: although personality dissolutions sometimes show schizophrenic symptoms and two or more personalities appear in the person, it is one of the most discussed issues in psychiatry and is accepted by many as a disorder, not a psychiatric disease, but emerges during serial murders [23, 25–27]. Symptoms related to neurotic and psychotic diseases are seen more in murderers than in other criminals. Depression, psychological disorders, fluctuations in mood are associated with serial murders [27]. It is known that people having anti-social personality disorder show excessive aggressive behavior and commit serial murders with causes such as excitement and sexual exaltation, to show their efficiency. Ressler et al. demonstrated by their studies that 81% of committing serial murders are interested in pornography. These writers, listed necrophilia, sadism, exhibitionism, transvestism, voyeurism, zoophilia (animal-loving), pedophilia (child-loving), coprofile (use of feces during sex) among serial killers' perversions. It is known that sexual identity disorder, symptoms such as homosexuality and sexual dysfunction increases the tendency of committing serial murder. This type of serial killer has difficulty in having normal sexual intercourse during critical periods of their evolution have erection difficulties against living persons or has been sexually abused and/or raped in their childhood are remarkable [26–28]. It has been suggested by many authors that alcohol, medicine, and drug abuse are seen in almost half of serial killers, their families have alcoholism and drug abuse as well.

6.3 Developmental and psychological approaches to serial murders

Models of psychiatry is explained by diseases, models of psychology is explained based on behaviors. Psychological theories to explain serial murder are difficult to separate from sociological and psychiatric theories and are rarely preferred. While trying to explain these theories, usually human and animal behavior models are used. The main ones of these theories are psychodynamic theories dealing with mental activities, aggression hypothesis, developmental approaches, personality analysis approaches, habit approach, behavioral processes, cognitive approaches explain the distortions related to the psychological development and comprehension of the person similar to those discussed in sociocultural approaches such as child maltreatment [29–33].

6.4 Biological approaches to serial murder

Although serial killers are not different from other people in physical appearance, biological structure, and these data should be increased with the studies in this field, which are molecular, genetic, and neurobiological [34].

6.5 Evolutionary and animal behavior approach

From Darwin to now, studies are conducted about evolution. Experiments on animals, especially on rats, explanations have been made about human behavior by trying to grow up animals physiologically different and by examining the differences in the behavior of animals a few generations later. However, these similarities how useful it will be is debatable.

6.6 Neurological contributions

In electroencephalography (EEG) of some aggressive inmates, different patterns and foci were seen compared to the others. One of the abnormalities of EEG is excessive theta activity; this abnormality is consistent with the arousal theory of psychopathy suggesting that psychopaths seek overstimulation through antisocial behavior to compensate for their structurally low brain levels.

6.7 Biochemical approaches

As in all kinds of mental illnesses, the first neurotransmitter studied to obtain biochemical findings about serial killers was serotonin. In cerebrospinal fluids of aggressive and anti-social people, the level of 5-hydroxyindoleacetic acid (5-HIAA) which is a metabolic product of serotonin is abnormally low. There are biological aspects that are not genetic but affect the development of personality. For example, more aggressive behavior can be related to higher testosterone levels and less serotonin levels. With this, increased serotonin levels can cause more social behaviors [34].

6.8 Role of genetic

While in monozygotic twin's crime rate of both siblings is 35.8%, in dizygotic twins this rate is found as 12.2%. Witkin et al. in subjects, which have XYY chromosomes, found 41.7% crime rate but the number of cases they can study ($n = 12$) is so low as regards subjects having XY chromosomes that show criminal behavior with a rate of 9.3% ($n = 4111$). Various studies confirmed the presence of genetically determined personality features. Studies making with identical twins show very similar behaviors in terms of personal, social, and professional choices, even in individuals brought up in different vicinity [35]. There is no significant difference between race and serial murders based on ethnicity.

The purpose of sociocultural, psychiatric, psychological, and biological approaches, which are tried to explain shortly above, is to explain what affects human behavior, how it is able to deviate, and how it developed. There are aspects trying to explain the behavior of serial killers in all the theoretical, experimental, and observational studies dealing with human behavior from one aspect. However, it is impossible to explain a complex structure like serial murder with individual models. Therefore, it would be more accurate to examine deviation from the normal behavior of people committing serial murder in the light of all these theories.

7. A few examples of the most famous serial killers in the world

Killers are caught since they make mistakes at some points. The words of serial killer Ted Bundy are extremely interesting. "Killing is like changing car wheel, you

should learn details. First, you act highly carefully but when you change wheel for thirtieth time, you do not pay attention to where you put the wrench or whether you tighten the nut enough.” These words explain how they are caught.

The most taking attention serial killer in the USA is Ted Bundy. He was held responsible for the killing of more than thirty people. A notable feature in the selection of victims is that there are young and beautiful women similar to the woman Bundy had been with before and wanted to marry. He kills his victims after being raped and he left some unique traces in the crime scene. Detectives, who went to investigate a murder reminiscent of Ted Bundy’s style, did not find any traces to incriminate Bundy at the crime scene. After the detailed investigation, police who thought the bite mark on the hip of the corpse might belong to Bundy moved to get Bundy’s tooth molded. Although it is told he is going to a normal dental examination, Bundy noticed the situation and he tried to break his teeth, but he did not succeed it. Compared bite marks and tooth mold are the same as with each other. This fact shows why dental records should be recorded carefully and how much Forensic Odontology is important.

John Wayne Gacy (Clown Killer) likes to entertain children wearing clown dresses. He likes to clamp his victims, anal rape, to buy them sandwiches, to read verses from the Bible, and to suffocate their victims. In 1978, he was caught in Chicago by the police. Thirty corpses were found buried in the basement of his house where his wife constantly complained of a strong odor. Until he was executed by a needle in prison in 1994, he wore multi-color dresses, and drawn clown pictures. According to the news of Chicago Tribune Newspaper in 1998, detectives found human remains in his mother’s house.

Jeffrey Dahmer was enjoying torture to little animals and kill them when he was a child. He killed 17 people. He had sex with the people he killed and used condoms. He says he does not like having sex with living people because they left him in a few minutes. He eats his victim by breaking into pieces and he was burning with acid some pieces. It is pointed out that 55 gallons of acid were found in his bedroom when he was caught. In addition, cut heads in a small room of his house, seven skulls, and skeletons were found by the police.

Another bloody serial killer is Colombian Pedro Alonso Lopez called And Monster. It is guessed that he killed more than 300 people. He was kicked out of the house by his mother who is a prostitute, and was raped, at the age of 18 he killed a gang member three attackers gossiping about himself. He killed 100 young girls in Peru in 1978. On the unrest of the townspeople, he left Peru and continue murders in Colombia and Ecuador. He said that he prefers Ecuadorian girls since they are kind, reliable, and more innocent. According to police recordings, all of the missing girls belonged to the call-girl community. He was caught in 1980 and convicted of murdering 57 children but the point that experts agree 300 is the low quantity for Lopez. They focus on the possibility of he is the killer of at least 50 people.

When the demographic information, motives, methods, mental health and victims of 64 female serial killers who committed murder in the USA from 1821 to 2008 were investigated, it was seen that they had a caring role like a health worker and were generally white, educated, married and mothers [36].

The motives behind serial murders committed by women are mostly for financial gain or excessive attention. An exception can be Aileen Wournos who targeted male victims for revenge and control. Aileen Carol Wuornos, the subject of many movies, was born on February 29, 1956. It is known that she was abused physically and sexually and raped in her childhood. Although it is claimed that she killed seven people, two of corpses could not find she has been convicted to death for killing five people.

She is accepted as the most famous female serial killer in the USA. Female serial killers are more likely to use poison as a lethal tool and kill people they know, including family members, spouses (“black widow” cases), or dependents (“angel of death” cases). It includes “angel of death” cases often involving nurses who murder by suffocation or drug overdose sick or elderly people mostly in hospitals or nursing homes. This group contains probably the highest number of female serial killers. A historical example is “Jolly” Jane Toppan who is a nurse and killed at least 31 hospital patients in Massachusetts from 1895 to 1901.

8. Discussion

There exist different definitions of serial murder and serial murderer by authors working in this field. It can be understood that there is an agreement on definitions, classification, epidemiology, clinical, and psychopathology of serial murder and serial murderer. Classification, prevalence, cause of serial murders, and characteristic behavior of killers are defined by using psychiatric, psychological, sociological, and biological approaches. The general definition of serial murder is two or more murders in different places and time intervals. The time interval has a variety from hours to years. FBI defines serial murder as “three or more case different from each other as time and place falls under the classification of serial murder”. The common point in the definitions is that there are two or more murders, and these murders take place in different places and times. In this case, serial killer can be defined as people killing one or more people with a specific reason and in a certain time interval.

There are some instances, which are outside of the definition of serial murder. These situations are mass murders done by fire or bombing, mafia murders including more than one person and committed by professional killers, murders committed for political reasons, murders committed by the reason of religious in late years, massacres in schools or similar places, also under the influence of alcohol and drugs or because of jealousy and other family problems are out of the definition of serial murder.

Increment of serial murders started after the change in the geopolitical structure of the world. Serial murders which are seen mostly in North America are phenomena that are faced all over the world. Having many different definitions of serial murder and serial murderer makes making a clear definition difficult. The difficulty in making definition, large number of unsolved murders, not only created difficulties in determining serial murder cases and the number of serial killers in the USA but also in other countries over the world. The number of serial killers determined clearly by the FBI until the 2010s in the USA is about 35. When determining this number approximately 360–500 certain serial murder victims were considered. However, if it is taken into consideration that there are about 3500–5000 unsolved murders in the USA, the number of serial killers should be more than determined. A total of 75% of known to have committed serial murder are happening in the USA.

In addition, notwithstanding being a serial killer is seen in the white race, the increment of black serial killers stands out. FBI defines the profile of a serial killer as age is between 20 and 40, usually a faint type, mostly white and heterosexual, the main cause activating killing motives is sexual problems, most of them are raped when their childhood or have a bad childhood. Another feature of serial killers is to sign to the murder. This sign not only demonstrate the characteristic behavior of serial killer but also constitutes the common point of the murders [37]. Main causes of those

murders are monetary, excitement, and sexual-sadistic impulses triggering killing. Also, evidence of these impulses is found in the crime scene. Holmes and De Burger by using characteristic behaviors of aggressors classified serial killers. This classification consists of five groups as Visionary, Missionary, Hedonistic, (subgroups of Hedonistic are Lust murderers and Thrill-oriented killers), comfort-oriented killers, and power and control. According to the method of crime committed and the behavior of serial killer, in serial murder phases exist such as the aura period, fantasy period, search period, courtship period, capture period, murder, totem period, and depression period.

9. Conclusion

There are different approaches to the etiology of serial murder. These approaches are sociocultural, psychiatric, developmental, psychological, biological, evolutionary, and animal behavior approaches. All of these approaches aim to explain what affects human behavior, what causes deviation in this, and how it developed. Serial murder is such a complex thing that cannot explain with individual models. Thus, deviation in human behavior who is committing serial murder should be examined with all of these theories.

First serial killer appearing in the late 19th century in London is Jack the Ripper. The most know serial killers in the USA are Ted Bundy who is held responsible for more than 30 people, John Wayne Gacy (Clown Killer) who killed 33 people, Jeffrey Dahmer killing 17 people. For female serial killers, there is a historical example, “Jolly” Jane Toppan who is a nurse and killed at least 31 patients in Massachusetts from 1895 to 1901, and Aileen Carol Wuornos who is a subject of many movies.

Causes of the increment in serial murder are the collapse of traditional family structure, getting lonely people due to urbanization, the increment of movies and games with the same type of violent themes all over the world, the prevalence of pornography, praising violence even in cartoons, the portrayal of serial killers as heroes in the media and cinema. The reason for the prevalence of these developments first in the USA and all over the world is the spread of American popular culture all over the world.

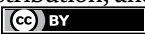
Author details

Ali Açıkgöz

Ministry of Health, Ankara Provincial Health Directorate Havacılar Family Health Center, Ankara, Turkey

*Address all correspondence to: aaliacikgoz6@gmail.com

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Perspective Chapter: Rationality, Social Norms, and Dishonesty in Everyday Life

Jon Reiersen

Abstract

Many forms of unethical behavior are social in character. We are often heavily influenced by what others do. The social characteristic of dishonesty and crime nevertheless does not contradict that there is a rational element in people's behavior. But people usually act within social conditions that are not determined by themselves. Inspired by recent findings in experimental economics, this chapter combines the standard economic model of crime, which emphasizes individual rationality, with more criminologically oriented approaches, which emphasize norms, social context, and peer influences. The aim of the chapter is to develop a framework for analyzing social interaction and how situational factors influence the spread of crime and other types of unethical behavior. It is demonstrated that various crime-preventing interventions can have effects that deviate significantly from what the standard model of rational crime predicts. Finally, it is argued that the distance between the theory of rational crime and more criminological approaches to crime is not as great as many make it out to be.

Keywords: crime, dishonesty, experimental economics, social contagion, thresholds

1. Introduction

Fifty-five years have passed since Gary Becker published the article *Crime and Punishment: An Economic Approach* [1]. The paper has been highly influential and has inspired much theoretical and empirical work on the problem of crime. The theoretical framework developed by Becker was soon given the name 'the standard economic model of crime' and has since dominated the field of law and economics. At the time when Becker published his work, the theory of rational choice was the most consistent and systematic framework for describing and predicting human behavior. For Becker, the idea of rational choice was also a natural starting point for understanding criminal behavior. He argued that there is nothing special about the decision to involve oneself into something criminal. It is a question of costs and benefits, as it is in all areas in life that involve choosing between alternatives according to rational choice theory. Hence, the economic model of crime holds that a potential criminal rationally weighs expected benefits of crime against expected costs.

While Becker's work quickly gained recognition and popularity among economists, the economic model of crime has been hotly debated and criticized in other academic fields such as psychology, sociology, and criminology. The model's lack of empirical relevance is one type of criticism that has been raised [2]. The main policy implication of the economic model of crime is that the government can reduce crime by increasing the cost of committing crime, where the probability of detection and the penalty if detected are the most important factors. Increasing the cost of crime will lead to a decrease in the number of crimes, an effect known as the 'deterrence hypothesis'. However, despite a huge empirical research effort, there is no consensus on the validity of this hypothesis [3]. Some have also pointed out that in many settings, the probability of detection is extremely low, while the payoff from an offense is high. This should lead to a very high crime rate, but this is often not the case. The economic model of crime therefore seems to predict much more crime than what we actually observe [4]. Others hold that the theory of rational crime oversimplifies the decision-making process by not considering the many complex factors that can influence an individual's behavior, for instance, different social and environmental factors. There are also those who simply reject the model because of its underlying behavioral assumptions, in particular the idea of rationality. Various cognitive biases strongly influence people's behavior, and these biases are difficult to reconcile with the idea of rationality.

During the past few decades, the theory of rational choice has also been questioned by the economics profession itself. Experimental economics is a field of economics that uses controlled laboratory experiments, field experiments, or online experiments to study economic behavior. An important goal of experimental economics is to test the theory of rational choice to better understand how people make decisions [5, 6]. The methodology in experimental economics allows researchers to test economic theories by manipulating certain variables and observe how these changes affect the decision making of participants in a controlled environment. Experimental methods have particularly been used to test different hypotheses on how people make decisions under uncertainty and risk, how they respond to incentives, how they bargain, and how they interact and cooperate with others [7].

Experimental economics has also made significant contributions to the field of crime and dishonesty by providing insights into how people make decisions related to these issues in experimental settings. Dan Ariely is a leading researcher in this field. By providing insights into how people make decisions related to stealing, cheating, and lying in controlled environments, Ariely and colleagues have made several significant contributions to the study of dishonesty and unethical behavior [4, 8–12]. All in all, Ariely's research provides little support for the economic model of rational crime. People's dishonesty is only weakly influenced by expected (material) costs and benefits. Social context and psychological factors seem to be more important. Still, Ariely's results do not provide sufficient evidence to completely reject the economic model of crime. People's behavior is not unaffected by incentives.

The aim of this chapter is to review and discuss some of the main research findings of Ariely and colleagues, in particular their contribution to understanding how social context influences dishonesty and in what way people's behavior deviates from the theory of rational crime. It is demonstrated that by incorporating key findings from Ariely's research into the traditional economic model of crime, we can gain deeper insights into some of the shortcomings of the traditional model while at the same time putting Ariely's experimental findings into a more general theoretical framework. By applying this theoretical framework, the aim of this chapter is also to show that the

distance between the theory of rational crime and more psychological and criminological approaches to crime is not as great as many make it out to be. Finally, a wider version of the theory of rational crime can also contribute to a better understanding of why recent empirical research on the relationship between stricter deterrence and the rate of crime achieves such divergent results.

2. The problem of dishonesty

Cheating, stealing, and other forms of unethical behavior represent major challenges for society. While the standard economic model of crime seems to predict more crime than what we witness, dishonesty of one form or another is not difficult to spot [4]. While the media usually highlight the most extraordinary cases, these extraordinary cases often join the ranks of cheating and stealing in society more broadly. Citizens avoid taxes, bureaucrats and politicians accept bribes and supply corrupt services, students cheat on exams, people call in sick when they are not, people trick insurance companies into paying them more than they are entitled to, customers steal from shops, and so on. These are examples of “unethical behaviors committed by “ordinary” people who value their morality highly but cut corners when faced with an opportunity to gain from dishonest behavior.” ([12], p. 125). Stated differently, a lot of crime and dishonesty are not limited to examples of one person causing harm to many. Rather, the general picture is that many cheat a little, in sum causing harm to many.

Examples of the same pattern are also easy to find in the corporate world [8]. Over the past few decades, we have witnessed several corporate scandals that have had major consequences for society, for the economy, and for individuals. Just to name a few: The Enron Scandal in 2001 is often mentioned as the most infamous corporate scandals in history. Enron, an energy company based in Houston, USA, was found to have largely manipulated its financial statements to inflate its stock price and deceive investors. This led to the bankruptcy of the company and the loss of thousands of jobs and billions of dollars for investors. Several executives of the company were convicted of fraud and other crimes related to the scandal. The year after, the telecommunications company WorldCom was found to have falsified financial statements in order to hide billions of dollars in losses. The scandal led to the company's bankruptcy. The solid and well-known German car manufacturer Volkswagen (VW) was also close to bankruptcy after what is often referred to as “dieseldgate”. The VW emissions scandal began to roll when the United States Environmental Protection Agency announced that the company had installed software in certain diesel vehicles that could detect when the vehicle was being tested for emissions. The software would activate controls that reduced emissions of nitrogen oxides (NO_x) to pass the test, but during normal driving, the controls would be turned off, leading to higher emissions of NO_x. The company was caught and subsequently admitted to the use of the software. Another case that involved both money and politics is the so-called Cambridge Analytica scandal in 2018. Cambridge Analytica, a political consulting firm, was found to have harvested the personal data of millions of Facebook users without their consent and used it to influence their opinions and behavior during the 2016 US presidential election. Finally, the financial crisis that struck the world in 2008 was also a result of unethical behavior and shady dealings, particularly within the financial sector. Creative banking, lax lending standards, and development of complex financial instruments, which proved to destabilize the entire financial sector, forced governments

around the world to intervene and to stabilize the financial system, including bailouts to many financial institutions. Despite governments' effort, the financial crisis led to a strong global economic downturn, hurting many families and communities.

All these examples illustrate that the problem of dishonesty is usually not that it is one person or one corporation that causes harm to many. It is rather as Gino et al. ([10], p. 4) emphasize: "an increasing amount of empirical evidence in the social psychology and management literatures demonstrates that dishonesty often results not from the actions of a few people who cheat a lot, but from the actions of a lot of people who cheat a little." This observation has been confirmed by Dan Ariely through his own research [13]. Ariely has carried out a large number of experiments to study various aspects of cheating and dishonesty, where the participants have been incentivized with money. The experiments have involved more than 30,000 participants around the world. Ariely reports that 12 of these acted maximally dishonestly and as a result have run away with approximately \$300. In contrast, around 20,000 participants behaved "a little" dishonestly and as a result have run away with around \$50,000. This illustrates that the problem of cheating and dishonesty is not a question of picking out a couple of rotten apples. It is the group of "small cheaters" that represents the largest cost to organizations, firms, and society. But how should such "everyday crime" be dealt with? Designing effective measures against unethical behavior requires a deeper understanding of the factors that drive such behavior, and this is where Ariely's research comes in.

3. Dishonesty explained

Dan Ariely and colleagues have conducted numerous experiments to explore various factors that may influence dishonesty, including the factors that are central to the economic model of crime. The experiments are quite simple yet cleverly designed. Here is an example (see [4, 9, 10] for further details). The participants are invited to take part in an experiment where they are briefed to believe that it is their mathematical skills that will be tested. They are given a sheet of 20 simple math problems to be answered within 5 minutes, where they are offered money per correct answer (the amount varies over different versions of the experiment). When 5 minutes have passed, the participants hand in the answer sheet, which is checked, and the participants are paid money according to the number of correct answers. This is the control group.

In another version of the experiment, called the shredder condition, participants are asked to do the same but with a twist. Participants correct their answers themselves, then run the answer sheet through a shredding machine, and self-report how many correct answers they have. Since the answer sheet is shredded, participants can cheat without the possibility of being detected. What happened in this version of the experiment? The participants in the shredder condition claimed to have solved on average two more questions compared to the control group. That is, they seem to cheat somewhat but much less than what the economic model of crime suggests [4].

What happened when the participants were offered more money for each correct answer, and the probability of detection remained zero? Little happened. In fact, the extent of cheating decreased when participants were promised the maximum amount of \$10 for each correct answer. This is clearly contrary to what the economic model of crime predicts.

The upshot of all of this and similar types of experiments is that the participants' behavior is quite insensitive to changes in the variables that drive behavior in the economic model of crime. How can this be explained? Ariely argues that most people have a strong self-concept of being honest and that this self-concept is important to them. This still does not prevent people from cheating or engaging in dishonest behavior. People seem to be equipped with a kind of "moral wiggle room" that gives quite a lot of flexibility when it comes to bending or breaking rules. That is, people are not completely honest or dishonest, they rather seem to operate within a range of acceptable behavior. People cheat or engage in dishonest behavior but only up to a point where the amount of cheating would not damage their self-concept of being an honest person. In the words of Ariely ([4], p. 27):

our behavior is driven by two opposing motivations. On one hand, we want to be able to view ourselves as honest, honorable people. ... On the other hand, we want to benefit from cheating and get as much money as possible (this is the standard financial motivation). Clearly these two motivations are in conflict. How can we secure the benefits of cheating and at the same time still view ourselves as honest, wonderful people? This is where our amazing cognitive flexibility comes into play.

Another interesting finding from the experiments described above is that people's behavior is sensitive to small changes in situational factors (other than material costs and benefits). That is, people do not seem to have a fixed set of moral standards. Their moral wiggle room can expand or contract depending on the social context. Ariely [4] and Mazar et al. [9] show that people's degree of dishonesty can be particularly influenced by:

- Distance: The greater the physical, psychological, or emotional distance between the person and the target of the dishonest act, the more likely the person is to engage in dishonesty.
- Diffuseness: The more vague or abstract the description of the target of the dishonest act, the more likely people are to engage in dishonesty.
- Doping: The more people can tie their actions to a higher purpose, such as helping a good cause, the more likely they are to engage in dishonesty.
- Moral reminders: When people are reminded of moral values or ethical principles, they are less likely to cheat.

4. Dishonesty, norms, and social dynamics

While most people have a general inclination to be honest, their moral standards are not fixed. As just noted, people's tendency to stretch ethical standards is affected by situation and context. Ariely and colleagues have also found that *peer influence* is a strong factor in unethical behavior [10]. Dishonesty can spread through social contagion, a process by which people's behavior is influenced by the behavior of those around them. In one experiment, participants were given the opportunity to cheat on a task and were told that their performance would be compared to that of others in the group. The results showed that participants were significantly more likely to cheat

when they were told that others in the group had cheated, compared to when they were told that others in the group had not cheated. In another experiment, participants were exposed to a person (an actor) who exhibited dishonesty, a manipulation that significantly increased dishonesty in the rest of the group. This effect was particularly strong when the dishonest person was clearly identified as an in-group member [10].

4.1 Dishonesty and social norms

Since people are more likely to cheat when they perceive that others around them are also cheating, unethical behavior can escalate. Mazar and Ariely [8] argue that *social norms* play an important role here. Social norms shape the extent to which people consider certain forms of dishonesty to be acceptable and therefore also people's self-concept of what it means to be an honest person. Social norms serve as a benchmark against which an individual compares his behavior.

It is well documented more generally that people care about the norms and values of their society [14–16]. People want to conform to social norms to avoid disapproval from others, which creates an inner feeling of discomfort. As part of socialization, people often also internalize social norms and self-enforce them. Internalized norms thus motivate us through our commitment to them, created by internally generated rewards or punishments. Feeling of guilt, shame, and remorse may arise if a social norm is violated, even if no one else knows about it. Hence, social norms influence our behavior through our inner reward system. Social norms have a 'grip on the mind', as Elster puts it [17].

4.2 Integrating social norms into the economic model of crime

As noted, the economic model of crime is based on the idea that people engage in crime (dishonesty) when they believe the potential benefits outweigh the potential costs. The decision is based on a cost-benefit analysis, where the following elements are essential: (1) the payoff from crime, which we denote as a ; (2) the payoff from the legal alternative, which we denote as b (where $a > b$); (3) the probability of being caught, which we denote as s ; and (4) the magnitude of punishment if caught, which we denote as c . On the basis of these variables, the individual chooses the action that maximizes his payoff, which means that the individual follows the criminal strategy if the expected payoff from crime, $\pi^C = (1 - s)a - sc$, is greater than the alternative, b . If we set $b = 0$ (to economize on notation), we can clarify the decision problem as illustrated in **Figure 1**, where the black solid line represents the expected payoff from crime (π^C).

The individual will follow the criminal strategy if $\pi^C > 0$, which is met up to the point where $s = s^*$ in **Figure 1**. That is, the individual will follow the criminal strategy if the probability of being caught (s) is small enough (less than s^*). If $s > s^*$ the individual will choose the legal strategy.

An increase in the cost of crime due to harsher punishment (c goes up) shifts the payoff from crime schedule (π^C) down. For $s = s^*$, the individual will now follow the legal strategy, and this will be the case down to the point where $s = s^{**}$. These effects capture in a nutshell the basic message of the standard economic model of crime. Increasing the probability of detection or the magnitude of punishment will reduce or even eliminate crime.

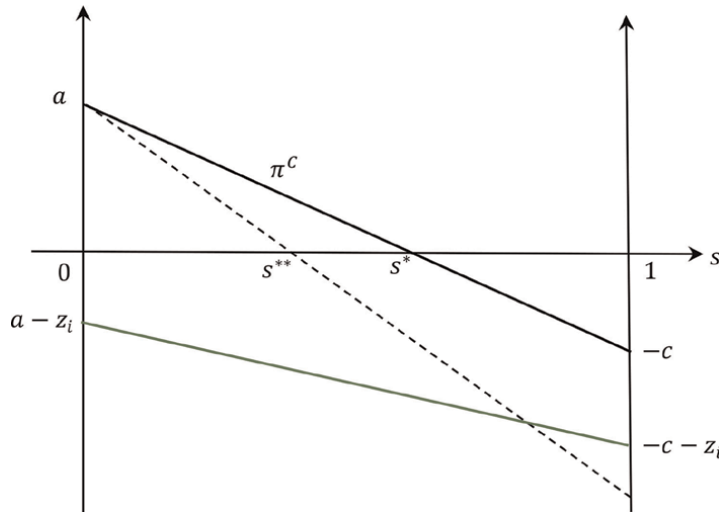


Figure 1.
 The decision problem.

The basic idea behind introducing a norm of honesty into this framework is that norms also influence behavior. As Mazar et al. ([9], p. 634) note: “if a person fails to comply with his or her internal standards for honesty, he or she will need to negatively update his or her self-concept, which is aversive. ... Notably, this perspective suggests that to maintain their positive self-concepts, people will comply with their internal standards even when doing so involves investments of effort or sacrificing financial gains.” Applied to the context of rational crime, this suggests that people who consider doing something illegal will be influenced not only by external costs and benefits but also by the way the act might make them perceive themselves.

Assume a large group or a society where there exists a norm saying that “you should not commit crime”. Assume further that noncompliance with the norm leads to negative rewards (i.e., punishments) or what I will denote a *moral cost*. Since individuals differ in their psychological constitutions, they may have different moral costs. We capture this by assuming that individuals are heterogeneous with respect to the moral cost, where z_i denotes the moral cost for individual i .

Integrating this idea into the framework illustrated in **Figure 1** produces a small but potential important adjustment. The expected payoff from the criminal strategy is now $\pi^C = (1 - s)a - sc - z_i$, and the individual follows this strategy if this is greater than the legal alternative, which gives

$$z_i < (1 - s)a - sc \quad (1)$$

Eq. (1) says that only those with sufficient low moral costs follow the criminal strategy. The existence of a moral cost z_i leads to a shift down in the payoff from crime schedule (π^C). For a sufficiently high moral cost, an individual will not commit crime even if the probability of being caught (s) is zero. The last situation is illustrated in **Figure 1** by the green payoff from the crime schedule.

People care about norms, but they also care about what others do. To bring this last element into the analysis, we follow Funk [18] and Weibul and Villa [19] and assume that the strength of the honesty norm decreases in the level of crime. This can be formalized by writing up the moral cost of breaking the norm in the following way:

$$z_i = \alpha_i - \sigma p \quad (2)$$

where α_i is a fixed moral cost component, which can vary across individuals, and $p \in [0, 1]$ denotes the share of dishonest people in the group or in society or simply the crime rate. The term σp thus takes care of the effect of decreasing moral costs when crime becomes more widespread.

It is instructive for the analysis that follows to illustrate the decision problem of an individual using a slightly modified version of **Figure 1**, where we measure the crime rate in society along the horizontal axis. As before, the π^C -schedule represents the expected payoff to an individual from committing a crime, where the moral cost specified in (2) is included. The expected payoff from crime is

$\pi^C = (1-s)a - sc - \alpha_i + \sigma p$. An individual will follow the criminal strategy if $\pi^C > 0$ as illustrated in **Figure 2**.

Figure 2 shows that committing crime is preferable to not committing crime if the crime rate is greater than p^* . Hence, $p = p^*$ is a critical threshold or cross-over point, defined as the proportion of people that must be criminal before an individual joins in. That is, what an individual chooses to do depends on what others do.

Figure 2 also illustrates that when people are heterogeneous with respect to the size of the moral cost (α_i), people have different cross-over points. An increase in the moral cost shifts the payoff from the crime schedule downward and moves the critical threshold p^* to the right. More people need to be criminal before the individual joins in. A decrease in the moral cost has the opposite effect. For individuals with high moral costs, it is possible that $\pi^C < 0$ for all $p \in [0, 1]$, which means that these individuals will not commit a crime regardless of the crime rate in the group or in society.

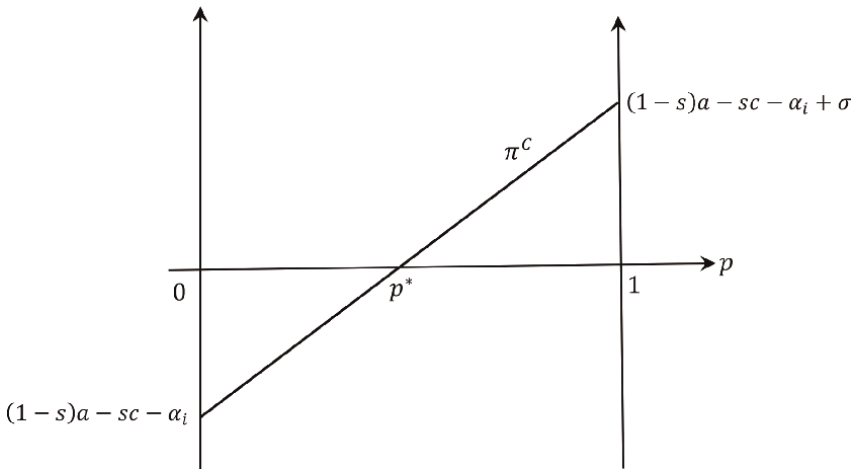


Figure 2.
The decision problem with a norm of honesty.

4.3 Thresholds, tipping, and social dynamics

The main insight from **Figure 2** is that an individual's decision whether to commit a crime is conditional on the behavior of those around him. It follows from this that individuals facing the same external costs and benefits related to crime can make very different decisions. When individuals have different moral costs, they also have different thresholds for committing crime, where these thresholds act as tipping points in decision making by marking the point where an individual comes to believe that committing a crime is preferable to not committing a crime. As McGloin and Rowan ([20], p. 485) note: "Despite the prominence of threshold models in the sociological literature, criminological research leveraging this concept has been sparse". As we will show below, there is something to be gained from closing this research gap. By incorporating the idea that individuals are influenced by social norms and have different thresholds for committing crime into a traditional model of rational crime, we reach results that differ from the traditional model in various respects - results that are difficult to derive without a more formal analysis. However, a formal analysis requires a more precise formulation of how moral costs are distributed over the population.

4.3.1 A stylized numerical example

The following simple numerical example, inspired by Kuran [21], can be illustrative to demonstrate how a small change in the distribution of moral costs may generate a large difference in the crime rate at the societal level. Consider again the moral cost z_i specified in Eq. (2). Suppose that people are equally sensitive in their moral costs when it comes to changes in the level of crime in society (they do not differ with respect to the second term in Eq. (2)), but they differ when it comes to the size of α_i . Remember also from **Figure 2** that the size of α_i determines the size of the critical threshold (p) for an individual (for a given level of a , c , and s), where this threshold specifies the proportion of people who must be criminal before the individual joins in. An individual with a large α_i will have a high threshold for committing a crime, while an individual with a small α_i will have a lower threshold.

To fix ideas, imagine a population consisting of 10 individuals – call them 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10 – where individual thresholds are distributed as follows: Individual 1 has a threshold of 0, individual 2 and 3 have a threshold of 20, while the remaining individuals have higher thresholds as summarized in the upper panel of **Table 1**. Let us denote this group of individuals by society A.

The outcome in society A is clear: Individual 1 will commit crime irrespective of what others do. But since individual 1 constitutes only 10 percent of the population, and that is below the thresholds of each of the others, all of them therefore opt for the legal alternative. The stable outcome is that only 1 in 10 individuals commits crime.

A	Individual	1	2	3	4	5	6	7	8	9	10
	Threshold	0%	20%	20%	30%	40%	50%	60%	80%	100%	100%
B	Individual	1	2	3	4	5	6	7	8	9	10
	Threshold	0%	10%	20%	30%	40%	50%	60%	80%	100%	100%

Table 1.
Distribution of threshold in society A and B.

Now perturb the distribution of thresholds slightly, as illustrated in the lower panel of **Table 1**, which we denote society B. Remove individual 2 with threshold 20 and replace him by one with threshold 10. Society A and B are essentially identical, but the outcome in society B is quite different. The outcome in society B can be described as a bandwagon effect: As above, individual 1 will commit crime irrespective of what others do, but this will now activate individual 2, again activating individual 3, and so on, until individual 7 has committed crime. Since individuals 1 to 7 constitute 70 percent of the population, and that is below the thresholds of the remaining three individuals, the process will stop. The stable outcome is that 7 in 10 individuals commit crime.

This skeletal numerical example illustrates two main points:

1. Two societies that are identical when it comes to the payoff from crime (a), the probability of being caught (s), and how severely crime is punished (c) may end up in very different situations due to minor differences in the process of aggregation, produced by a small change in the threshold for one individual (in this case individual 2).
2. It may be misleading to infer individual dispositions from aggregate outcomes [22]. It is tempting, for example, to conclude that society A mostly consists of individuals with high moral standards and who keep within existing laws and regulations, while society B is characterized by the majority being unscrupulous criminals. This is clearly not correct. As we know, since we have constructed the example, society A and B are almost identical in individual dispositions.

4.3.2 A more general model

A more general model can be developed by assuming a society with many individuals where each individual is associated with a level of moral costs (see Andvig and Moene [23], Naylor [24], Lindbeck et al. [25], and Funk [18] for a related analysis in the context of corruption, collective action, work incentives in the welfare state, and crime, respectively). Remember from **Figure 2** that an individual will follow the criminal strategy if the expected payoff from committing a crime $((1-s)a - sc - z_i)$ is greater than the payoff from a legal alternative, which is identical to the inequality

$$\alpha_i < (1-s)a - sc - \sigma p \quad (3)$$

Eq. (3) is essentially identical to (1), but here we have used $z_i = \alpha_i - \sigma p$. Equation (3) states that only those with sufficient low moral costs follow the criminal strategy, constituting the crime rate (p) in society. What the crime rate will be depends on how α_i is distributed in the population.

When the distribution of α_i is bell shaped, we may have the case illustrated in **Figure 3**. The $f(\cdot)$ curve represents the cumulative distribution function, illustrating how many individuals in society follow the criminal strategy for a perceived level of crime (p^e) and for given levels of a , c , and s . Individual decisions are guided by the following process: Each individual knows his own moral cost α_i , observes the level of crime in society, and adjusts his strategy in the next period given that information. The horizontal axis in **Figure 3** represents the perceived crime rate, while the vertical

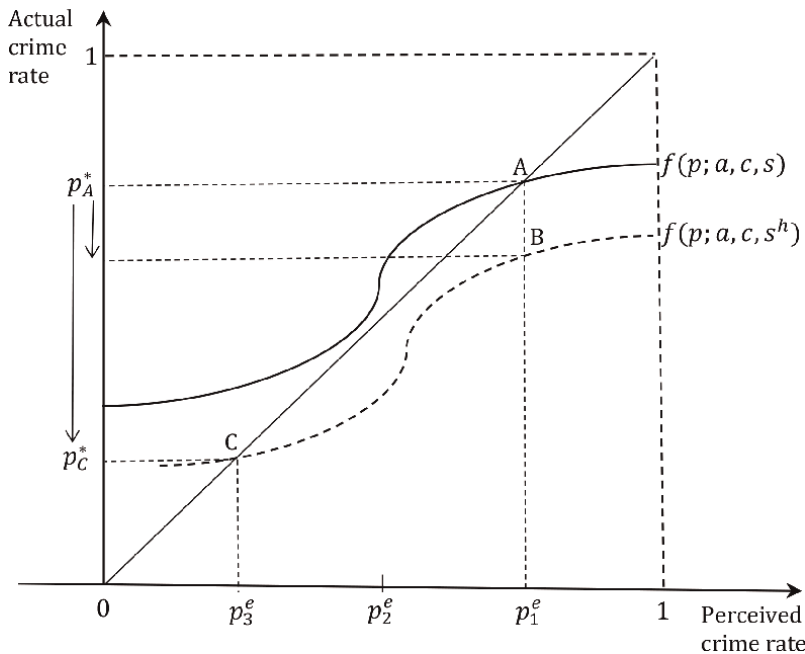


Figure 3.
The equilibrium crime rate.

axis records the realized crime rate. The 45-degree line is for reference. It shows all points where the perceived crime rate is equal to the actual crime rate.

Point A in **Figure 3** is a stable social crime equilibrium. To see why, imagine that the perceived crime rate somehow starts out at p_2^e . The f -curve shows that this produces a crime rate that is higher than the perceived. Having turned out to be an underestimation, the initial perceived crime rate will be revised upward, inducing more people to switch to the criminal strategy because of a weakening social norm. This will now activate other individuals with slightly higher moral costs. This process will continue until the perceived crime rate is p_1^e . If the perceived crime rate somehow starts out to the right of p_1^e , the process will go the other way around. To the right of p_1^e , the actual crime rate is lower than the perceived rate. Having turned out to be an overestimation, the initial perceived crime rate will be revised downward, inducing more people to switch to the legal strategy because of a strengthening of the social norm. This will now activate other individuals with slightly lower moral costs, and this process will continue until the perceived crime rate is p_1^e .

Only in point A does the actual crime match the perceived crime rate that generated it. A perceived crime rate of p_1^e and a corresponding actual crime rate of p_A^e are self-fulfilling and thus self-reproducing. Hence, point A is a unique stable equilibrium. For later analysis, it is helpful to note that we have a stable equilibrium if the f -curve crosses the 45-degree line from above (and an unstable equilibrium if the f -curve crosses the 45-degree line from below).

Exogenous changes in costs and benefits: Assume now a society that is in equilibrium A and that the government allocates more resources to fight crime. Within the model, we can interpret that the probability of being caught and convicted

increases (s increases to s^h). An increase in s shifts the f -curve downward. For a given perceived crime rate, fewer individuals follow the criminal strategy since the expected cost of crime increases. The crime rate goes down. We can think of this as a movement from point A to B in **Figure 3**. This effect is in line with the traditional model of rational crime. A higher expected cost of a crime induces more individuals to choose the legal alternative. But when people also care about social norms, we get an additional effect [18]. When the crime rate falls, the social crime norm is strengthened. Individuals with high moral cost switch to the legal alternative, which in turn leads to a further reduction in the crime rate. This in turn leads to even more individuals switching to the legal alternative and so on. In sum, this bandwagon effect leads society to the new equilibrium in point C in **Figure 3**. Stated differently: an increase in the probability of being caught does not cause the crime rate to fall from a high-crime equilibrium (point A) to another slightly lower high-crime equilibrium (point B) but to a completely new type of low-crime equilibrium (point C). This effect is produced by a gradual strengthening of the social norm.

The same effect will occur with a decrease in a (the payoff from crime) or an increase in c (the punishment of being caught and convicted). Note also that the same mechanisms can work the other way around, moving the society from the low-crime equilibrium (point C) to the high-crime equilibrium (point A) in **Figure 3**. The central point to notice is that when a social norm and associated moral costs are included in a standard model of rational crime, small changes in external costs and benefits can lead to large changes in the crime rate at the societal level (much larger than the standard model predicts).

Multiple equilibria: There is no reason why the social dynamics should produce only one equilibrium level of crime. **Figure 4** illustrates a case with three possible crime equilibria A, B, and C but where only the first and last are stable. The middle equilibrium B is unstable since nearby perceived crime rates generate movements away from it. If the perceived level of crime happens to be p_B^e , it will be confirmed (we have an equilibrium) but a slight movement away from p_B^e will produce adjustments toward one of the stable equilibria. If the perceived level of crime is to the right of p_B^e , the actual crime rate converges step by step to p_A . If the perceived level of crime is to the left of p_B^e , the actual crime rate converges step by step to p_C .

What does **Figure 4** tell us? An important observation is that two societies that are identical in terms of external costs and benefits related to crime, which also have the same social norms and an equal distribution of moral costs, can end up with very different levels of crime (which echoes the result established in the somewhat simpler context of Section 4.1). The process is path dependent in the sense that initial expectations determine where society ends up. A society that starts somewhere to the right of B ends up in a high crime equilibrium (point A), while a society that starts somewhere to the left of B ends up in a low crime equilibrium (point C).

In the case of multiple equilibria, it is also possible to move from a high crime equilibrium to a low crime equilibrium by temporary changes in the underlying parameters. Assume a society that is in the high-crime equilibrium A and where the probability of being caught and convicted (s) increases (in the same way as analyzed above). An increase in s shifts the f -curve downward. A higher expected cost of crime reduces the proportion who follow the criminal strategy. The crime rate in society goes down, which in turn strengthens the social norm. This produces a bandwagon that drives the society all the way down to the new low-crime equilibrium D in **Figure 4**. A crime-reducing shock is reinforced by the strengthening of the social

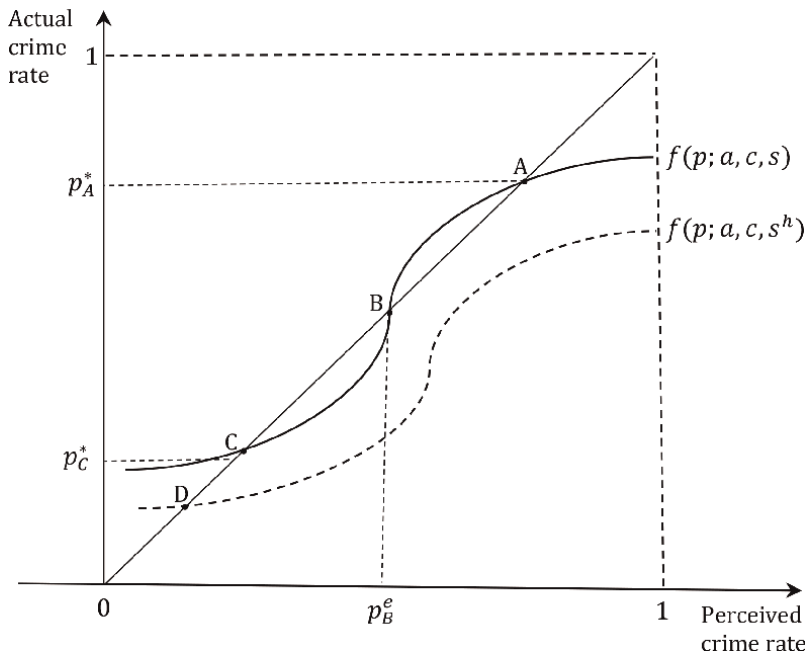


Figure 4.
 Multiple equilibria crime rates.

norm. An important result of this is that even if s is reversed back to its initial level, the crime rate will not move back to where it was (point A) but rather end up in the low-crime equilibrium (point C). A temporary increase in s creates long-lasting changes in the level of crime in society.

The status of the deterrence hypothesis: The deterrence hypothesis suggests that increasing the severity or certainty of punishment for a crime will decrease the likelihood of that crime being committed. The hypothesis follows directly from the economic model of crime. When individuals weigh the potential costs and benefits of committing a crime, and the cost increases (in the form of harsher or more certain punishment), the crime becomes less appealing. On aggregate, this will decrease the number of crimes.

As noted in the introduction, the empirical status of the deterrence hypothesis is mixed. Some studies find clear support for the hypothesis, while others are not able to find any relationship between harsher punishment and the crime rate. There are also some studies that find that harsher punishment leads to higher crime rates (see, e.g., van der Weele [3] and Opp [26] for further discussions and references to the empirical literature).

The framework developed in this chapter may help in explaining why the empirical status of the deterrence hypothesis is so mixed. We have seen that an increase in the probability of detection (or the severity of punishment) does not cause the crime rate to fall from a high-crime equilibrium to another slightly lower high-crime equilibrium (as the standard model predicts) but to a completely new type of low-crime equilibrium. A crime-reducing shock is reinforced by the strengthening of the social crime norm. And as just demonstrated, if the governments' deterrence is reversed

back to its initial level, the crime rate will not move back to where it was but rather end up in a low-crime equilibrium. A temporary increase in deterrence creates a long-lasting change in the level of crime not captured by the standard model.

It is important to note, however, that these results are sensitive to the assumptions made about the underlying social dynamics. A slight modification of how the moral cost is distributed in the population may produce a completely different result. This observation supports van der Weele ([3], p. 406), who notes that: “It is somewhat puzzling that decades of intensive empirical research on the deterrence hypothesis have not yielded consensus. One reason may be that we still have not looked hard enough, or nature has not given us clear enough evidence. ... More fundamentally, however, there may be something wrong with the question people are trying to answer. ... there is no such thing as *the* effect of deterrent policies. Rather, they seem to work in some times and places, while not in others.”

5. Conclusion

Most people want to follow the rules and to be kind. This assertion is supported by recent findings in experimental economics demonstrating that people generally have a strong self-concept of being honest. This still does not prevent people from engaging in crime and other forms of dishonesty. We seem to be equipped with a cognitive flexibility that gives us quite a lot of maneuvering room when it comes to bending or breaking rules. Most people are not completely honest or dishonest. We are often tempted and willing to engage in cheating, stealing, and lying but only up to a point where the amount of dishonesty would not damage our self-concept of being an honest person [4].

Available evidence also demonstrates that where the threshold goes for stretching ethical standards without damaging our self-concept is not fixed. Our cognitive flexibility is indeed flexible. Social norms seem to play an important role here. Social norms shape people’s self-concept of what it means to be an honest person since they serve as benchmarks against which we compare our behavior. But what others do also affects our perception of what is acceptable. A social norm loses its grip on the mind if many people do not follow the norm.

By incorporating social norms and peer influences into the standard economic model of rational crime, we are able to analyze in more depth the rather complex relationship between government deterrence, individual behavior, and aggregate outcome. We have for instance demonstrated that societies that are identical in terms of social norms and external costs related to crime may end up with very different levels of crime due to minor differences in initial beliefs and the process of aggregation.

Another key finding from the framework presented in this chapter is that when expected external costs and benefits of crime influence behavior directly as well as indirectly through their impacts from social norms, the outcome may differ significantly from the standard economic model. When the moral cost of breaking a norm of honesty increases in the number of norm followers, there is a ‘double dividend’ of deterrence [3]. A very ‘mild law’ may be sufficient to coordinate beliefs and behavior in society into a low crime equilibrium.

The standard economic model of rational crime has been heavily criticized by criminologist and other social scientists. Guided by recent findings in experimental economics, the main aim of this chapter has been to enrich the economic model of crime by embedding it in a social context. The hope is that this can contribute to an

understanding that the distance between psychological approaches to criminal behavior and the idea of rational choice is not as great as many make it out to be.

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Conflict of interest


The author declares no conflict of interest.

Author details

Jon Reiersen
School of Business, University of South-Eastern Norway, Norway

*Address all correspondence to: jon.reiersen@usn.no

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The History of Corruption within Victoria, Australia

Samantha Perussich

Abstract

Corruption is a difficult concept to define and address as it encompasses various behaviours, which often sit outside the criminal law. These are an insidious form of behaviour as they erode trust and integrity in government institutions, such as democratic values, the rule of law, and the economic efficiency and stability of governments. Corruption is estimated to cost the world 5 per cent of global GDP, approximately 2.6 trillion. It is difficult to measure the exact amount and how much corruption takes place, as most behaviours are often hidden from public view. These concepts are explored and critically discussed within the Victorian, Australian landscape as a case study example of how corruption has changed and evolved over time. It will be suggested that corruption and what is considered corrupt behaviour changes as society and its values change, making what constitutes and is defined as corruption an evolving concept throughout history.

Keywords: corruption, history, culture, societal values, outside the criminal law

1. Introduction

Corruption has existed since the beginning of civilization and is a problem that affects every government in the world, with the effects of corruption far reaching [1]. Corruption is a complex phenomenon, where there is no universal definition of its meaning. It is commonly defined as the abuse of public office for private gain, where behaviour is hidden to avoid detection [2, 3]. While corruption is present in all countries of the world its pervasiveness varies, as is evident from country scores on the corruption perceptions index (CPI) published by Transparency International as well as other cross-country governance indicators published by the World Bank Institute [4]. Corruption causes economic loss and inefficiency. Obtaining exact figures on the economic loss of corruption is difficult, however it is estimated that the cost of bribery globally to be between \$1.5 and \$2 trillion per year [5]. This represents a total economic loss of approximately 2% of global GDP, not considering the economic cost of all other forms of corruption.

Corruption leads to a lack of confidence in institutions, and in turn this has the potential to undermine public policy, weaken investment and economic growth and undermines the rule of law [5]. The cost of corruption to economies is well established, as is the loss of public confidence and integrity in the political system [6]. It comes at great expense to governments both financially and through public

goodwill regarding the ideas of government and democratic values [7]. Moreover, the public loses trust in their political leaders, and in public institutions when they believe corruption is widespread and corrupt officials are not being held accountable [8]. When political non-accountability increases, these perceptions persist and political participation and trust in those institutions declines [8]. In addition, social norms could encourage corrupt behaviour as people may then think “if everybody else is doing it, I might as well do it too” [8]. Failure to meet public expectations for zero-tolerance of corruption may have serious consequences for the legitimacy of State institutions and the utility of formal norms that the public sector is expected to follow [8]. Trust and confidence in the rule of law, and that people are equal before the law is seriously damaged when corruption runs ramped.

Corruption has existed throughout Australia’s political history at both a Federal and State level. There have been many recent examples of corruption within Australia at both the Federal, State, and Local Government levels. Throughout Victoria from the time of early settlement and colonisation, federation, to modern and present day, corruption has existed and has taken on many different forms as it evolved and continues to evolve over time. The definition of corruption has evolved from the historical contexts in which it is found. For example, the notion of blame and how fault is attributed to behaviour forming part of the criminal offence of corruption, and how this informs the key elements of proving such offences, such as the intention to commit corruption and what is required to prove corruption beyond reasonable doubt has evolved over time [8].

The behaviour forming the elements to prove corruption, such as intention, knowledge, recklessness, and negligence evolved alongside Victorian society. Four themes of corruption become clear when traversing the history of corruption within Victoria; bribery, fraudulent activity, nepotism, and other practices that can be described as corrupt practice. These four themes are set against a wider context of a relaxed attitudes amongst the Victorian Government to combat corrupt practices, at least until recently, with the introduction of governance institutions such as the Independent Broad-based Anticorruption Commission (IBAC), and other forms of government integrity administration which has been established to combat corruption.

2. Development: the 1800S

The opportunity for corrupt practices in the administration of government appears to have been born out of a sense of paternalism [9] and belief that the public were not best placed to make judgements for themselves [9]. In the development of Victoria in establishing itself as its own colony, there was a shift towards an electoral system of appointment for public office, where these systems had built in them several criteria. The primary criterion was that only those considered ‘gentlemen’ could stand for election into public office [10]. This raises questions of what constitutes a ‘gentleman’ as it is inherently subjective and open to the possibility of nepotism, where people in power would recommend connections and family members as ‘gentlemen’, it is therefore of little surprise that despite what appears to be the best of intentions, there was soon a system of administration established that was ripe for criticism based on loose practice at best and criminality at worst.

During the period of nineteenth century government appointments were made by the Governor, usually having arrived from the United Kingdom. Often, service men, such as constables and watchmen were appointed via connections to the people

in power [11]. This created unease within the public with complaints being made regarding these appointments [11]. There was then a shift within society for elections to take place and make the process open and transparent [11]. However, there were still criteria as to who could stand for election for these positions, with only 'gentlemen' being considered again for these roles. Due to the increase in crime, it was then decided that constables would be appointed by Magistrates as the free population increasingly comprised ex-convicts, who were viewed by the people in power as not to be trusted, to appoint suitable persons for the role of constables due to their troubled past [12].

Complaints were then made by the opposition party regarding nepotism, for example the investigation into the Honourable Treasurer Mr. Berry in 1872, which investigated the appointment of the Treasurer's father-in-law. Although, it was found that the 'most corruption ever made by any government in this colony', the committee that was tasked with investigating the conduct determined not to formally report it [12]. This demonstrates how often conduct that is deemed to be corrupt did not go through the implemented channels of investigation due to political influence and motivation, allowing corruption to continue without punishment.

In October 1873, by what commenced as a routine examination of accounts by the Audit Office, it was discovered that Hugh James Vincent O'Ferrall, a land licensing agent/officer of the Department of Crown Lands and Survey had defrauded his department during a prolonged period of inadequate financial supervision (dating back as far as 1866) committing in the process what proved to be the largest embezzlement by a Victorian public servant to occur in the nineteenth century [13]. Often routine audits uncovered fraudulent conduct that had been occurring for some time [14] and had remained undetected due to lack of adequate processes and procedures implemented to detect corruption [14]. Sale of land was also heavily policed, and licences were given to people who officials favoured and or accepted bribes [13]. Together with minutes and transcripts of evidence it was tabled in the Legislative Assembly of Victoria. It is noteworthy, that the Select Committee did not pursue the question of possible collusion between O'Ferrall and certain staff members working for the Audit Office. O'Ferrall was later captured in Singapore in January 1875 and brought back to Melbourne where he was tried and sentenced to nine years imprisonment to hard labour on 22 April 1875 [13].

The gold rush area also brought much corruption with the increase of travellers to Victoria. Gold was discovered to the northwest of Melbourne, Ballarat, and the rush that followed caused the population to surge [11]. More ships were coming from England and within a decade the population of Victoria overtook Sydney and remained that way for the next forty years [11]. Miners' licences were often associated with corruption, government officials accepted bribes as did police who policed these areas [11]. Where large amounts of money are readily available corruption will be found, as has been demonstrated in more recent times with the corruption that has been uncovered within government and private cooperation on large projects. With the advent of the Gold Rush in Victoria, allegations of corruption connected with mining licences were rife, including instances of government and officials accepting bribes in return for prime stake licences [15]. This is not unique to Victoria and is little reflection on the character of the province, as instances such as these connected to gold rush era appear to be ubiquitous worldwide [16]. What is notable however, is the sheer number of investigations of sufficiently serious nature to warrant recording at senior level or the status of Royal Commission, between 1851 and 1900.

In 1856 a Royal Commission investigation into allegations of bribery and accepting large sums of money against Richard Woolley in his role as Secretary of the

Railway Trustees was found to be lacking in evidence [17]. Similarly, in 1858, another Royal Commission investigation, this time into whether Captain MacMahon had a personal interest, either direct or indirect, there were found to be 'errors of detail only', however, the Commission was not in a position to draw any firm conclusion, as due to the 'extremely loose manner in which the business of that office had been conducted, it was next to impossible for the Audit Office to ascertain the precise state of the accounts' [18]. This inability to prove or disprove allegations due to poor record keeping is possibly the most pervasive theme throughout this period.

There are two eventualities that may be found in terms of the receipt of bids and tenders. The first is that of refusing to accept applications for tender, which was first recorded in the case of the Land Officer for Camperdown, another Royal Commission investigation. Scandals pertaining to land, continue to pervade the corruption landscape in Victoria in 1862 with the Camperdown Royal Commission that investigated the principal charges of the land officer, where he refused to receive applications when formally tendered to him in conducting the business of the office, he favoured certain persons, where he was known to take bribes regarding infrastructure, such as the railways and licences to conduct business and land development [18].

The second is the receipt or offering of money or favours to ensure that a tender is won [19]. This can take the form of bribery or nepotism. In 1869, it is unclear whether the entrepreneur Hugh Glass paid MLA member Edwin Jones for the actual award of tenders, but certainly money was exchanged for parliamentary votes of no motions that benefitted the interests of Hughes and his colleagues. While Glass was found guilty and Jones expelled from the Legislative Assembly, the sentence for Glass is a matter of concern, as he and his colleague Quatermain, also found guilty, were detained 'during the Legislative Assembly's pleasure', to the extent that a writ of Habeas Corpus was finally issued for their release [20]. This course of action indicates a sense of revenge, rather than justice in the actions of the Legislative Assembly. This was not the first time Jones had been accused of accepting bribes, though a Royal Commission had found the evidence for an 1865 incident unreliable [21]. Further instances of Select Committee reports into parliamentary charges, unsubstantiated, against a Magistrate in Ballarat for bribery and corruption are recorded in 1871 [22]. While in 1872 nepotism was investigated in the case of the honourable Treasurer Mr. Berry's appointment of his father. Again, while it was clear that corruption was rife, sufficient evidence to convict was not presented [23].

While these cases of nepotism-based bribery appear to be quite common throughout the latter half of the nineteenth century, only one case of outright fraud appears to have been investigated, when land licencing Hugh James Vincent O'Farrell was found to have defrauded the Department for a prolonged period, partly due to the opportunities provided by inadequate financial supervision going back at least five years [24]. During this investigation, further evidence of both nepotism and bribery incidents were uncovered [24]. There was another form of nepotism that came to the fore throughout the late 1870s and early 1880s with the rise of the Ned Kelly gang. With a police force largely of Irish descent, there was a certain amount of cultural nepotism and corruption, where people turned a blind eye, or judge's rulings made based on the cultural sentiments of the day, rather than following the rule of law [25].

There are common themes that pervade the discourse and landscape of corruption over the centuries within Victoria and that are still present today. People in power, that have the means and opportunity to be corrupt, that is either take bribes to affect an outcome, and or collude with others for financial benefit are at risk of corrupt practices [26]. Particularly, if there are no frameworks in place that can prevent

these practices from occurring or at least limit their occurrence. It is also interesting that most matters that are investigated during this period in history are those that have been made via complaint, via an organisation or employee or Government Department or via Opposition Party, all being politically motivated [26]. For example, throughout the Ned Kelly era the political landscape at the time consisted of a lot of police corruption, decision makers such as judges were making decisions based on the cultural sentiments of the day and not according to the rule of law [27]. Ned Kelly being an icon of anti-authoritarianism sentiment was the subject of police harassment and corruption, which played an essential role in the Kelly story. Many of the local constables were of Irish decent and Kelly outs the police as traitors for co-operating with the existing power structure of the local constables and political landscape more generally. This reinforces class-based stereotypes and the 'larkinism' movement begins to take shape within Australia, rooted within rural banditry, bushrangers like Ned Kelly were heroes to this 'larrikan' movement.

Bush ranging at the time, meant both robbery under arms and stock theft, which was a significant problem in Victoria and where law enforcement was using any means available to limit its occurrence even if sufficient evidence was not present for law enforcement intervention [28]. The gold rush era had made Melbourne one of the wealthiest cities in the world, but many people did not share in that wealth. The trial that Kelly was subjected to upon his arrest and charge was not conducted according to the rule of law and had it been appealed on today's legal and ethical standards it is likely that Kelly would have been acquitted [28]. Corruption is therefore shaped by the society of the day and the standards and values that are prevalent at that point in time. This means that corrupt conduct is culturally defined and what is seen as corruption in one era may not be perceived as such in another. However, some conduct and behaviours are so abhorrent that its corrupt nature transcends time, as was the case with police harassment and judicial interference as was uncovered through the Kelly trial.

3. The twentieth century

This feeling of cultural iconography may well have persisted into the early twentieth century, as asserted by Piper, who states that many of those accused of theft were in fact rather more guilty of white-collar, low-level fraud [29]. Throughout the early twentieth century, there appears to be a gradual moving away from high-profile, upper-class incidents, although the influence of wealthy families linger towards a more mundane type of corruption with a somewhat parochial ambience. Even those that involve Members of Parliament, such as the investigation into allegations of bribery in connection with the Money Lenders Bill of 1838 and the Milk Board Bill seem only to have been able to prove that bribery was attempted, not completed [30]. From this point on, this kind of scandalous high-level accusation appears to recede, and incidences of expenses and corporate fraud appear to increase.

By the 1940s and into the 1950s, a series of incidents that can be attributed to the war related streamlining of processes were being reported in a variety of Melbourne newspapers, notably *The Age* and *The Melbourne Argus*. The concerns that the removal of the tender process would lead to corrupt behaviour was identified before relevant Victorian legislation was passed in 1940 [31] and by 1943, allegations of corruption in the selection of a distillery site [32] and nepotism in the awarding of a Wool Centre contract [33] were being made. There also appears to be a rise in allegations of corruption and collusion between government administrators and Union officials in 1944 [34].

Further into the 1950s, nepotism appears to remerge as the corruption of the day, with allegations made against the Gas and Fuel Corporation in 1950 [35], and the Victorian Government in 1953 [36]. Evidence of corruption from the late 1950s until the early 1990s, focuses on corruption within land scandals within local governments.

The problem of balancing accountability and innovation in government administration is a real problem in the 1970s. The Bland report recommendations into the transport sector did not adequately address the difficulties involved in reforming the Victorian structures of government. Bland's reports were written from a perspective vastly different from those that have shaped the states administration prior [37]. A difficulty facing all reform proposals in the Victorian Local Council Government scene have seen few grounds for sweeping changes. A major outcome of the Bland report was the Railways (Amendment) Act 1972, which passed the management and operation of the railways from the Victorian Railways Commissioner to a Victorian Railways Board, the Board was then replaced in 1983 when the *Transport Act 1983* was passed. Over the past one hundred years there have been instances of corruption and mismanagement by councillors or their employees, nor is there an immediately obvious way of managing local units better, given their financial problems in a service orientated grass roots ideological climate. Attempts to change the system seem only to rally entrenched supporters of local democracy who find an immediate response in the community. There seems to be a public reservoir of sympathy for local government.

The 1970s also brought corrupt practices within abortion clinics, which were illegal at the time, by doctors who bribed police in exchange for information as to whether raids would occur and to keep secret the underground clinics to perform these services [38]. The strange case of John Friedrich who defrauded the National Safety Council of Australia on a massive scale between 1977 and 1989, giving the profits away to a wide number of worthy causes [39]. The 1990s, see a return to administrative corruption, normally involving fraudulent expansion of expenses [40], but there also appear to be a recurrence of concerns about the suppression of Police Intelligence and other matters [41]. This is not only an after effect from the Ned Kelly days but appears to carry on from the alleged manipulation of police behaviour in the witness box from the 1920s to the 1960s [42, 43].

4. The twenty-first century

The pressure to do something about corruption at every level of the administration has gathered pace since the beginning of the twenty-first century. Not only have the number of investigations proliferated significantly, covering the broadest range of corruption, a number have concentrated on nepotism and conflict of interest at their widest scope [44]. There is now a clear message that nepotism does not simply refer to family, but to a broader range of connections [45]. Throughout the early 2000s, there is a distinct growth in the lack of tolerance for low level corruption, such as conflict of interest. Repeatedly, reports by special investigations and commissions criticise not just those guilty of the crimes they are accused of, but the lax controls that allow the opportunities in the first place [43]. In 2009, a report into Conflict of Interest, at Brimbank City Council, for instance, discussed at length the importance of internal controls and compliance auditing [44]. Similarly, in 2012, another investigation into conflict of interest made recommendations to assist the council to prevent such instances recurring [46].

Further instances can be found in 2014 in the investigation into fraud in aged care programmes in Latrobe City Council [47]. Most concerning, the realms of administrative fraud appear to be joining up with more violent crime, such as the trafficking of drugs by members of Ambulance Victoria [48] and links to motorcycle gangs [49]. These, along with many other instances point to a continued culture of fraud, bribery, nepotism and other types of corruption. What is also evident, however, is a growing awareness by both the public and those in authority, that the environment of lax administration that allows these activities to continue, is damaging to the relationship between the Victorian Government and the community and is increasingly not to be tolerated [50]. Failure to declare conflicts or perceived conflicts of interests as well as nepotism regarding hiring are themes present in 1800s and are seen in present day, as is evidenced from this documented history. Calls for integrity-based systems and structures were called into question by the Victorian public and the government responded, after years of corrupt behaviour having been identified, leading to the creation of IBAC. Investigations done by IBAC focus on uncovering corruption within the public sector and identify audit processes and procedures focusing on robust processes to ensure that any discrepancies can be detected early and effectively managed [51].

5. Key themes identified over the history of corruption

Documenting the historical landscape of corruption within Victoria from 1800s until present day, there was often insufficient evidence to make out corruption was occurring if behaviour was identified, and the people thought to be involved within various government organisations or members of parliament continued in their occupations whether being in organisations and or parliament. Where evidence was identified it was often insufficient to find someone guilty of an offence, let alone at the criminal standard or threshold required and there was little recourse that could be achieved regarding that person's employment status, which allowed the person to go on to reoffend. Changes were often made to the organisation in question/government departments, but little direct consequences except for job losses in minimal circumstances occurred. Rarely did criminal prosecutions eventuate and when they did, little to no criminal sanctions were imposed.

Definitions of class and character had an impact on whether police pursued a matter particularly in earlier time periods and how it was dealt with in the courts, affecting the way that fault and blame was attributed to certain classes of offences, such as political nepotism, bribery, and kickbacks. Looking at the law and doctrinal definition of what constitutes an offence, as opposed to viewing conduct through the prism of what is right and just regarding Victorian society, can provide some understanding into the history of corruption and the establishment of integrity institutions within the Victorian public sector. Due to the elements of proving an offence under the *Crimes Act 1958 (Vic)* (the Act), particularly the mental intention (*mens rea*) of the offence of corruption and the complex enshrined types of corruption under the Act, being difficult to legally prove. The law and society to a degree, relies on people doing the right thing, via a sense of self-regulation through community values and sentiment. Especially where conduct falls outside the criminal law, as is often the case in corrupt behaviour.

Education campaigns regarding behavioural and attitudinal change which become important in this regard, rather than relying purely on legal sanctions alone. Particularly as the definition of corruption changes as societies' values and

community standards change with it. Some behaviours are so abhorrent that they transcend time periods in that if they were corrupt in the 1800s, they would still be today, for example bribery of the police force and other people in positions of power. One of the main consistent themes throughout the history of corruption within Victoria, Australia was that corruption erodes trust and confidence in government and its systems and damages integrity in the processes and institutions that form the basis of society no matter how large or small, these actions chip away at the democratic processes and the rule of law, allowing corruption to take place and be seen as common place. Especially when perpetrators are not held to account or fall outside the traditional criminal justice process. If things aren't classified as criminal, are they necessarily wrong? Or do they still infringe societal values? And as a result, should people be held to account?

Despite good intentions on stamping out corruption, a review into the integrity frameworks regarding Victorian public sector agencies found that corruption and its prevention is generally not a prominent consideration of Victorian public sector agencies and departments [52]. Research conducted from IBAC looked at perceptions of corruption by senior public sector employees, which concluded that many employees would have difficulties identifying fraud and corruption risks within their organisation and were not aware of the systems in place to prevent or report it within their agency [52]. Few agencies reported having systems in place to assess risk assessment processes. There was little evidence of senior management being involved or having oversight into corruption prevention policies and procedures [52]. Agencies saw that improper behaviour led to a risk to their agency affecting their brand and service delivery, however they did not see this as presenting a risk to the public's perception of integrity of government processes generally. Integrity is often viewed as an underlying tenet in public sector decision making, providing legitimacy to the government of the day [53]. While senior executives and people in power including politicians are endeavouring to build the right culture in fighting corruption and preventing its existence, more needs to be done to prioritise corruption control, and to ensure that where corruption controls exist, they operate as intended.

6. Conclusion

Australia has experienced corruption at all levels and at all time periods since its discovery [54]. Across Australia there have been many investigations into fraud and corruption in the public sector at both State and Federal level. Some investigations have seen Royal Commissions into this conduct resulting in Court action against Government officials with some being imprisoned [54]. When the history of corruption within Victoria, Australia is traversed, four themes of corruption become clear; bribery, fraudulent activity, nepotism, and other practices that can be described as corrupt conduct. What is clear from this history is that what is deemed as corrupt behaviour varies over time and is dependent on the values and sentiments of the day that deem the conduct criminally illegal and subject to punishment. Where corruption goes unpunished it erodes the political legitimacy of the government and erodes key principles such as the rule of law.

It is difficult to measure the true extent of fraud and corruption in the public sector, as often it is hidden from public view [53]. The most common means of assessing the prevalence of corruption is through the subjective judgement of the people who know whether and to what extent it is occurring, that is, people working within the

sector to combat corruption [54]. If those who are in a position to know are able to form a consensus on whether and where corruption may be a problem, and whether there is more or less of it now than there used to be, one may at least be able to develop a plausible impression of the extent of the problem and whether the perceptions of fraud and corruption match the capturing of those statistics and the cases that get chosen for investigation and prosecution [54].

What is apparent is that as society evolves and community values change, what is deemed to be corrupt conduct changes also, including what is serious enough corrupt behaviour to be deemed criminal. When corrupt conduct goes unpunished it creates a culture of acceptance and non-accountability, eroding democratic values. Corruption is costly for a range of reasons, consumers and taxpayers suffer as a result with the waste of public expenditure on projects that may offer bribes and 'kickbacks' to government officials, against more worthy projects that do not. Resulting in higher cost to consumers for products, to the loss of integrity in the public sector, to the potential for political instability and an impact on the national security. The effects of corruption are wide reaching and culturally dependent, requiring a mix methods approach to combating and limiting its existence [54].


Author details

Samantha Perussich

Victorian Government, Griffith University, Queensland, Australia

*Address all correspondence to: samperussich@outlook.com

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Section 2

Underlyings

The Relevance of Personality to Criminal Behavior

Murat Ozer and Halil Akbas

Abstract

This chapter explores personality theories as they relate to criminal behavior. According to these theories, criminal behavior is linked to the presence of certain personality traits or a specific criminal personality. Psychologists link personality to criminal behavior by examining an offender's specific traits or certain clusters of traits that drive them toward the criminal behavior. This chapter focuses on personality theories that attempt to explain the major traits of criminal propensity, including undercontrolled vs. overcontrolled personality traits, Eysenck's Extraversion, Neuroticism, and Psychoticism dimensions, and Tellegen's Positive Emotionality, Negative Emotionality, and Constraint. Empirical evidence for each theory is presented, and the relevance of personality to criminal behavior is discussed.

Keywords: criminal behavior, personality, personality theories, criminal personality, personality traits

1. Introduction

Personality theories, such as Eysenck's biosocial personality theory, offer additional insights into the psychological aspects of crime. This perspective suggests that the presence of certain personality traits is associated with crime and delinquency. Personality traits are stable characteristics of an individual that remain consistent over time and across various social contexts. Scholars associate personality with criminal behavior in two primary ways. First, an offender may possess specific personality traits that make them more prone to criminal activity. Second, some psychologists suggest that certain criminal offenders, known as psychopaths or antisocial personality disorder, exhibit a criminal personality. This criminal personality comprises a cluster of personality traits that predispose individuals toward criminal behavior.

Given this introduction, many studies of personality and behavior rely on a descriptive model containing: (a) traits and (b) types of super factors. As noted above, personality traits are enduring characteristics that determine the individual's behavior. However, a type is "a group of correlated traits" [1]. The term in modern personality theory is superordinate to that of a trait. The type corresponds to what others, using factor analysis, have called second-order types or superfactors [1]. Hence, the type or superfactor consists of multiple individual personality traits.

Based on this distinction, it is mainly focused on personality theories on superfactors of criminal behavior. In this context, three personality theories will be discussed

that try to explain the major traits of criminal propensity. These are: Megargee's [2] undercontrolled *vs.* overcontrolled personality traits; (2) Eysenck's [3] Extraversion, Neuroticism, and Psychoticism dimensions; and (3) Tellegen's [4] Positive Emotionality, Negative Emotionality, and Constraint. Empirical evidence of these three personality theories will be provided in their own section. Finally, one theory will be selected to discuss how personality is relevant to criminal behavior.

2. Undercontrolled *vs.* overcontrolled personalities

In attempting to explain antisocial aggression, Megargee [2] posits two distinct personality types: the undercontrolled and the overcontrolled persons. Megargee [2] questions Berkowitz's [5] notion that when inhibitions exceed instigations, aggression dissipates over time. He suggests that residual aggression may remain active for extended periods of time and be augmented by additional frustrations.

The main assumption of this distinction is that individuals may develop two distinct personalities from their immediate environment that drives them into antisocial aggression. Megargee hypothesizes that the high level of inhibition prevents overcontrolled individuals from regularly exhibiting their anger. Thus, over time and repeated provocation, the instigation accumulates to such a degree that the result is an explosion of anger and violence well beyond the current level (not a contingent base).

Given this typology, Megargee [2] studied four groups of delinquents. The first two groups included delinquents, who were all assaultive offenders. Based on an aggression scale, these delinquents were placed into Extremely Assaultive and Moderately Assaultive groups. The other two groups were matched non-assaultive delinquents detained for either incorrigibility or property crimes. A battery of psychological tests was conducted on the delinquents, and the results supported 22 of the 28 hypotheses, with the Extremely Assaultive group displaying less aggression and more control than all three other groups.

Verona and Carbonell [6] investigated the validity of the overcontrolled hostility (OH) scale of the MMPI-2 with non-violent (NV), one-time violent (OV), and repeat violent (RV) female inmates. They hypothesized that: (1) the non-violent females would not conform to either the under- or overcontrolled typology; (2) the repeat violent offenders would better conform to an undercontrolled typology, and (3) the one-time violent females would be best classified as overcontrolled. Results were supportive of these hypotheses. The overcontrolled hostility (OH) scale successfully differentiated the OV group from the NV and RV groups. Furthermore, the OV women had significantly shorter nonviolent criminal histories than the other two groups and were more likely to have committed an extremely violent act than the RV group. Thus, Verona and Carbonell [6] lend support for the under-/overcontrolled typology.

Similarly, Moffit [7] found that while individuals with overcontrolled personalities are more likely to engage in life-course-persistent antisocial behavior, such as white-collar crime. Contrarily, undercontrolled personalities associated with impulsivity and sensation-seeking behavior are more likely to engage in adolescence-limited antisocial behavior, such as delinquency and drug use. Piquero and Tibbetts [8] study how undercontrolled and overcontrolled people differ regarding their planned and unplanned criminal behaviors. Their study shows that individuals with undercontrolled personalities are more likely to engage in impulsive and unplanned criminal acts. On the other hand, individuals with overcontrolled personalities are more likely

to engage in planned and deliberate criminal acts. Kruger, Hciks, Patrick [9] studied various crime involvements for undercontrolled and overcontrolled individuals. They found that individuals with undercontrolled personalities more likely engage in a variety of criminal behaviors, including violent crimes, property crimes, and drug offenses. On the other hand, overcontrolled personalities are less likely to engage in criminal behavior; however, they may be more likely to engage in white-collar crimes.

In their recent study, Jang and Lee [9] found that undercontrolled personalities were more likely to engage in delinquent behavior compared to those with overcontrolled personalities. Laajasola and Hakkanen-Nyholm [10] re-stated a well-known finding that undercontrolled personalities, characterized by impulsivity, sensation seeking, and aggressiveness, were more likely to be violent offenders than those with overcontrolled personalities. Finally, Yildirim and Ozdemir's [11] findings showed similar results for juvenile delinquency. The authors conclude that undercontrolled personalities who are characterized by impulsivity, emotional instability, and low agreeableness were more likely to engage in juvenile delinquency than those with overcontrolled personalities.

3. Extraversion, neuroticism, and psychoticism

Eysenck's work emerged from his exploration of personality traits among 700 male service patients in 1940s. Eysenck completed a large-scale factorial study that resulted in three main types: neuroticism (N), extroversion (E), and psychoticism (P).

Neuroticism: The traits that compose the type neuroticism include: anxious, depressed, guilt feelings, low self-esteem, irrational, shy, moody, and emotional. Individuals falling under this super factor are prone to feeling anxious in social situations and often experience low self-esteem and guilt. They may exhibit irrational and emotional behavior, where emotions override reason, leading to aggressive and impulsive actions. According to Eysenck, the multiplicative process of the traits composing neuroticism becomes more evident over time, resulting in a positive association between neuroticism and criminal behavior in older samples.

Extraversion: Extraverted persons tend to be outgoing, talkative and friendly, but also assertive, sensation seeking, and dominate in social situations. Eysenck found that extraverts tend to have low cortical arousal which influences conditionability. Eysenck uses conditionability to refer social learning mechanism. He states that learning is really a conditioning phenomenon. Differences in cortical arousal are associated with differences in conditionability. High cortical arousal is connected with better conditioning. Finally, Eysenck associates differences in cortical arousal with biological factors (i.e., low MOA).

In addition, Eysenck recognized that extraversion is more likely in younger samples since these traits gradually may lose their influences with aging. For instance, socializing experiences influence risk-taking behaviors in some individuals.

Psychoticism: Finally, persons characterized with psychoticism tend to be very egocentric and are unemphatic to others' needs. They also tend to be impulsive, cold, and impersonal. Eysenck suggests psychoticism is positively associated with criminal behavior among all individuals exhibiting the traits that compose psychoticism.

Taken together, high scores on all three personality domains greatly increase the likelihood that someone will exhibit criminal behavior. However, Eysenck [3] notes that not all three dimensions are required for criminal conduct to occur. Furthermore, it is important to note that Eysenck's notion of personality stems from both biological

and social factors. He recognizes both (1) the importance of genetics and their biological manifestations to personality (e.g., cortical arousal, neurotransmitters, limbic system) and (2) the environment's effect on personality (e.g., whether the individual is around prosocial conditioning and frequency of conditioning).

Empirical evidence for Eysenck three personality dimensions: Johnson Listwan et al. [12] discusses four separate studies that reveal the importance of identifying neurotic, or highly anxious, offenders. Across all four studies, the Jesness Inventory was used with adult male offenders. Studies revealed that inmates characterized as neurotic were significantly more depressed than the remaining three groups, recidivism rates are significantly higher (controlling race and risk), and they were more likely to involve in drug offenses. In addition, examining personality types in child molesters revealed that neurotics differed significantly on three dependent measures including self-esteem, distress, and fantasy (i.e., an intellectual component of empathy). Specifically, neurotics scored significantly higher on both measures of distress and fantasy, and significantly lower on self-esteem.

By using Dunedin sample (ages 13 to 18 males), Moffitt, Lynam, Donald, and Silva [7] found that individual differences in neurological functioning were related to early onset. In other words, delinquency at age 13 predicts delinquency at age 18, and neurological measures contribute for this stability. Based on this finding, it can be argued that neurological deficits create variation in cognitive ability of individuals, which in turn yield to behavior differentiation in the same birth cohort. In his social learning theory, Bandura [13] also mentions about the role of biological factors for the acquisition of aggressive behavior. Bandura asserts that neurological deficits may impair cognitive capability of individuals, which in turn reduces the chance of direct and observational learning capacity of individuals for prosocial behavior. In addition, similarly, Eysenck [13] well integrates the role of biological factors on neuroticism and psychoticism.

Subsequent studies reported similar findings. For instance, Miller and Lynam [12] found that extraversion was positively correlated with criminal behavior, particularly property crimes. The study by Francis, Penny, and Campbell [13] showed that individuals scoring high on extraversion were likelier to engage in risky behaviors such as drug use and crime. Another study by Coid et al. [14] found that extraversion was positively correlated with violent and nonviolent criminal behavior. Francis et al.'s study [15] reported that extraversion was positively correlated with aggressive behavior and delinquent behavior among adolescents. Hartman, van Rooijen, and van de Weijer-Bergsma [16] found that extraversion was positively correlated with bullying behavior among adolescents.

Junger-Tas and Marshall [17] studied neuroticism and found that neuroticism was positively correlated with violent behavior. Similarly, Meldrum and Young [18] stated that individuals who score high on neuroticism were more likely to engage in criminal behavior, particularly drug-related crimes. A study by Trimpop, Stoll, and Juckel [19] found that neuroticism was positively correlated with criminal behavior and recidivism. Likewise, Huitema, Bogaerts, and Lens (2019) reported that neuroticism was positively correlated with criminal recidivism among adult offenders. Finally, Clark and Ireland [20] found that neuroticism was positively correlated with violence among prisoners.

Studies report similar results for the relationship between psychoticism and crime involvement. For instance, Hare et al. [21] stated that individuals who score high on psychoticism were more likely to engage in violent and aggressive behavior, which are common features of criminal behavior. Gudjonsson and Sigurdsson [22] found that

psychoticism was positively correlated with delinquent behavior and recidivism. Tang and Fu's [23] study reported that psychoticism was positively correlated with adolescents' aggressive behavior. Finally, Vierikko et al. [24] found that psychoticism was positively correlated with political violence and terrorism among Palestinian youth.

4. Positive emotionality, negative emotionality, and low constraint

The personality traits that form positive emotionality, negative emotionality, and constraint are based on the work of Tellegen's [4] Multidimensional Personality Questionnaire. The MPQ is a self-report personality instrument designed to assess a broad range of individual differences in behavioral style. In their study, Caspi and Silva [25] identified constraint as a composite of traditionalism, harm avoidance, and control scales. This construct is associated with individuals who tend to conform to social norms, behave in a cautious and restrained manner, and avoid thrill-seeking behaviors. On the other hand, negative emotionality is composed of the aggression, alienation, and stress reaction scales. This reflects those individuals who have a low threshold for experiencing negative emotions such as fear, anxiety, and anger. These individuals are also more likely to engage in antagonistic relationships. Finally, positive emotionality encompasses the achievement, social potency, well-being, and social closeness scales and characterizes individuals who tend to have a pleasurable experience. These three dimensions emerged as major factors related to a variety of behavioral measures in previous research [4].

Perhaps one of the best tests of these three super factors comes from Caspi et al. [26]. Using multiple, independent measures of personality and delinquency, the researchers found that individuals high in negative emotionality or low constraint were significantly more likely to engage in delinquency. This finding is held across gender, race, and country (New Zealand and Pittsburgh, USA). Although they did not test for interaction effects, Caspi et al.'s [26] results suggest that those who are high in both traits are even more likely to commit criminal acts.

Such an interaction effect was found by Agnew et al. [27]. These authors investigated whether negative emotionality and low constraint condition the effect of strain on delinquency. Support for this hypothesis was found. Furthermore, negative emotionality/low constraint was found to have virtually no effect on delinquency when strain was low, but a substantial effect when strain was high. Thus, General Strain Theory is one criminological theory to which personality is relevant. Another study by Jonason, Li, and Richardson [28] found that positive emotionality was positively correlated with aggression and delinquent behavior. Likewise, Reijntjes et al. [29] stated that positive emotionality was positively correlated with bullying perpetration among adolescents. Another study by Ttofi et al. [30] found that positive emotionality was positively correlated with cyberbullying perpetration among adolescents. From the opposite direction, Ullrich et al. [31] reported that negative emotionality was positively correlated with violent and nonviolent criminal behavior among male offenders. Piquero and Moffitt [32] found that negative emotionality was positively correlated with criminal behavior and recidivism. Harada et al. [33] found that negative emotionality was positively correlated with criminal thinking among adult offenders. A study by Natividade et al. [34] found that negative emotionality was positively correlated with violent behavior among Brazilian youth. Regarding low constraint, Lynam & Gudonis [35] found that low constraint was positively correlated with criminal behavior and recidivism. Similarly, Wolff et al.'s [36] study showed

that low constraint was positively correlated with criminal thinking and delinquent behavior among incarcerated adults. A study by Raftery and Tafrate [35] found that low constraint was positively correlated with violent behavior among forensic psychiatric patients.

Gottfredson and Hirschi's [37] low self-control theory suggests that individuals with low self-control are more likely to engage in criminal behavior. Low self-control is associated with impulsivity, a lack of persistence, and a lack of concern for the long-term consequences of one's actions. According to this theory, low self-control is the leading cause of criminal behavior. It is developed early in childhood through ineffective parenting practices. These individuals cannot resist immediate gratification, making them more likely to engage in impulsive, criminal behavior.

Moffitt's [7] dual taxonomy theory proposes that there are two types of offenders: adolescent-limited (AL) and life-course-persistent (LCP). While AL offenders engage in delinquent behavior only during adolescence, LCP offenders continue their criminal behavior during their adulthood. According to this theory, individuals with AL criminal behavior are motivated by peer pressure and are more likely to exhibit impulsivity and engage in risky behavior during adolescence. In contrast, LCP offenders have neurological deficits that impair their ability to regulate emotions and make decisions, which results in a lack of impulse control and greater susceptibility to committing crimes.

Sampson and Laub [38] suggest that social bonds can impact criminal behavior. This theory proposes that individuals who have strong social bonds with family, school, and work are less likely to engage in criminal behavior. Similarly, individuals who experience turning points in their lives, such as getting married or starting a career, are less likely to engage in criminal behavior. Impulsivity, however, can disrupt the formation of these social bonds and lead to a disconnection from conventional society. As a result, individuals who exhibit high levels of impulsivity may be less likely to develop strong social bonds and more likely to engage in criminal behavior throughout their lives.

Taken together, criminological theories suggest that personality traits such as impulsivity and self-control can significantly impact criminal behavior. Those who lack self-control or are prone to impulsive behavior may be more likely to engage in criminal activity, especially if they have a history of ineffective parenting or a lack of positive social bonds.

5. Conclusion

One of the aims of criminological studies is to determine who will more likely to commit crime relative to others. Eysenck and Eysenck [1] claim human beings differ not only for their appearances but also for their certain dimensions. Quantifying and measuring differences and similarities across people, personality theories try to understand what kind of personality types are more likely associate with criminal behavior.

Over the last three decades, studies have found that certain personality dimensions are significant in predicting future criminal involvement. This is a great assessment tool to prevent criminal propensities for individuals and offenders. Finally, as opposed to prior acceptance, personality traits occupy newly developed theories, such as Gottfredson and Hirschi's low self-control, Moffitt's dual taxonomy of adolescent limited and life course persistent and even Sampson and Laub's [38] age-graded informal social control theory.

Taken together, the criminological theories suggest that there is a significant relationship between personality traits (e.g., impulsivity, self-control) and the criminal behavior. Individuals with low self-control or a tendency to impulsive behavior may be more likely to engage in criminal activity. The magnitude of the relationship increases when there is a history of ineffective parenting or weak social bonds.

Author details


Murat Ozer^{1*} and Halil Akbas²

1 School of Information Technology, University of Cincinnati, Washington,
United States of America

2 Criminal Justice, Troy University, New York

*Address all correspondence to: m.ozero@uc.edu

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Perspective Chapter: Personality and Criminal Behaviors

Gizem Turgut and Kübra Demirci

Abstract

In this chapter, first of all, the social order and deviation, the concept of crime and the development of the concept of crime, the elements and types of crime, and the theories explaining the crime are given. Then, the concept of personality, the concepts of character, temperament, personality theories, the relationship between personality and crime, and the relationship between personality traits and psychopathology are addressed. While examining the relationship between Criminal Behavior and Personality, 10 studies that were written for graduate education in Turkey and that deal with the relationship between personality traits and criminal behavior from different perspectives were examined theoretically. A general inference was tried to be made to shed light on future studies and to provide a basic platform.

Keywords: criminal behaviors, forensic clinical psychology, personality, big factor personality inventory, psychopathological personality

1. Introduction

1.1 Deviation from norms and criminal Behaviors

A person opens his eyes to life in a community, and continues his life and dies. Social life works according to certain rules and the learning of these rules starts from the family, continues on the street, in educational institutions, in the working environment, in various sub-cultural groups and finally in other areas of life. Malinowski, who examined the primitive Melanesian population in the Trobriand Archipelago in the northeast of New Guinea, explains the result of his research as follows: "Such an examination reveals that the rules of laws and traditions cannot be evaluated separately from each other, but that there are organic ties between them. This law, customs and traditions contain many sensitive points due to their nature. Time will show us that these sensitive points are reflected in the functioning of social life and that rules exist only in the chain of social transactions and are nothing more than a link in this chain." As it is seen, including primitive societies, this learning, in other words, socialization process, prepares the individual for social life and the process continues throughout life. The family, which is the first social institution that the child encounters, is also the place where the first moral norms and value judgments and customs and traditions are learned. With this function, the family is an irreplaceable institution in the socialization process. This is the period in which the child learns moral

norms such as good-bad, beautiful-ugly, and emotions such as pleasure, liking, pain, and hatred before learning the reason for reasoning and behavior. The foundations for the next years of life are laid in this period. The environments of socialization after the family are: street, educational institutions, sub-cultural groups, business environment, social, cultural, and political environments. Thanks to the rapid social transformation, “mass media” has been effectively added to these environments. In the accepted expression, “the influence of the media is more profound and continuous today than the others.” In recent years, it has been observed that while the influence of traditional socialization environments (family, street, educational institutions, work environment) has decreased, the influence of the media has increased. The individual learns and internalizes the values and norms of the society in which he grew up during the socialization process. In this way, while gaining a unique identity and self, it also provides continuity to the society in which it is located. The society stands as long as these values and norms are followed. This standing of society is called “social order.” Social groups put pressure on their members for the continuation of the social order, and they are largely successful in this. However, it is not always possible to fully comply with social rules. Here, deviant behavior emerges when there is no compliance with the social rules. Deviation may not always be negative, harmful to the social structure. Philosophers, saints, and scholars are also people who behave outside the average norms of the societies they belong to, and their behaviors above the average social norms are met with appreciation and admiration, not reaction. For this reason, it is necessary to examine the deviation in two dimensions as positive and negative [1]. However, if the deviation disrupts the functioning of the social structure through the social problems it causes, it is useful to consider whether this deviation is a crime.

The phenomenon of crime is a multifaceted social problem. This phenomenon can be handled from its moral, legal, economic, political, religious, and cultural dimensions and its analysis can be made on different grounds. It is an important problem in our country as well as in the whole world, both sociologically and legally. For lawyers, crime is an action that the law considers a crime and requires a sanction [2]. Although the phenomenon of crime is included in a legal definition, its sub-dimensions and problematics can be reached when it is evaluated within a social and cultural structure. Therefore, Seligman and Johnson defined the concept of crime as any action directed against the traditions and customs of a community or group. According to Lombroso, crime is a natural phenomenon as the concepts of birth and death. All acts and thoughts that threaten the welfare of a group or the community disrupt the peace and order, and contain contradictions included in the concept of crime. For years, the concept of crime has become a universal problem in which communities reflect their interests and fears, investigate the causes, and carry out preventive studies [3].

The fact that a crime can be legally considered a crime according to the Turkish Penal Code is evaluated in terms of legal, material, illegality, and morality. In order for a behavior to be considered a crime, it must be clearly stated in the law. This element, also known as the element of typicality in crime, can be considered as a form of behavior contrary to the legal order within the framework drawn by the laws. The basic concept here is the principle of “no crime and punishment without law” [4]. Material element, unless there is a positive or negative action aimed at creating a change in the external world, the existence of crime cannot be mentioned. There must be an action in the middle. In other words, to realize the material element of the crime, there must be an action that is reflected outside [5]. The unlawful element of the crime is accepted as the acceptance of the act as a crime in the laws and the presence of penal sanctions related to it. In other words, the main theme of illegality

is stated not only as a violation against the criminal law but also as a violation against the entire legal order [6]. Finally, the moral element of the crime means that the conscious and mental abilities of the perpetrator are at a minimum standard. In other words, the spiritual element is the state of the perpetrator not to be a minor child or to have mental weakness or mental illness [7].

Apart from the elements of the crime, it is useful to mention the types of crime to better understand the crime phenomenon. Types of crimes can be broadly grouped as personal (violent) crimes, sexual crimes, addictive substance criminality, and property crimes. Violence refers to a behavior that results in physical, psychological, or social harm to the victim. Violent crimes can be listed as willful murder, looting, blood feud, and domestic violence. Sex crimes are crimes against the same or opposite sex. Rape, adultery, and prostitution crimes, which are considered in the category of sexual crimes, are crimes that are lower than other types of crimes. Addictive substance crimes are examined in two groups as providing addictive substances and using addictive substances. Theft is one of the most common crimes against property [8].

Because criminal behavior is diverse, there are multiple theories of criminality. The first of the guilt theories is the classical school (utilitarian school) based on "Hedonistic Psychology." Hedonistic belief (hedonistic, utilitarian) suggested that man adjusts his actions according to the principle of pleasure and pain. The pleasure of a behavior should be balanced with the pain that that behavior will cause. Otherwise, if the pleasure that the individual gets from his behavior is more than the pain it causes, the individual will tend to this behavior. This view was pioneered by Jeremy Bentham and Marquis Beccaria. According to Bentham, punishment should be such that the offender does not commit a greater crime when released. The classical school looks at crime and punishment from a legal point of view. It envisages that the evaluation should be made by ignoring the individual differences seen in individuals who commit crimes. Beccaria summarizes this situation as follows: All persons who commit illegal acts should be punished equally, regardless of their age, status, or state of health. However, the classical school criticizes the unlimited power of the state to punish and proposes a more realistic approach to crime and punishment. In the nineteenth century, the Neo-classical school (new classical school) emerged, based on the same foundation as the classical school. Neo-classicals are of the opinion that the harsh punishments of the classical school should be more humane and softened. It is not wrong to say that the new classicists made the first scientific studies in the field of juvenile delinquency. Among the innovations they have introduced are the provisions that no penalties are applied to those under the age of seven and that those with mental disabilities are not criminally liable [9]. The classical school deals with the crime phenomenon legally. The positivist school, on the other hand, deals with crime psychologically, sociologically, and biologically. According to the positivist school, many sociological, psychological, and biological reasons affect human behavior. In social life, people are under the influence of many factors. This situation plays an important role in the criminal behavior of people. Individuals exhibit criminal behavior by being affected by their environment, economic situation, and psychological disorders, so the source of criminal behavior is not the person himself, but the factors that affect him [10]. According to the geographical theory, which is one of the first elements of the positivist school, crime is examined according to geographical regions. In this method, the effects of regional differences, climatic characteristics, and geographical location on individuals committing crimes are emphasized. Claiming that crime rates are higher in equatorial climates, Montesquieu argued that alcoholic beverages are more preferred in the arctic region. It is possible to say that

Aristotle's views on the effects of natural conditions on the lives of individuals, social life, and therefore on laws, are parallel to Montesquieu, in this context, Aristotle's advocacy of individuals living in cold climates to be liberal and saying that freedom does not mean anything for societies living in hot regions. It is possible to think that it is related to the fact that Ibn Khaldun said that the Bedouins living in harsh weather conditions were brave people. Quetelet, on the other hand, argued that crimes against individuals increased in southern regions and hot climates; on the contrary, there were many conflicts over property in northern regions and cold climates, and such crimes were more common. He named this theory as "the heat law about guilt" [4]. Psychological explanations focus on intrinsic drives and motivations that influence behavior. Sigmund Freud, the pioneer of psychoanalytic theory, argues that early childhood experiences leave permanent traces and are effective in criminal behavior. He also states that guilt can be used as a defense mechanism to get rid of the stress created by sexual and aggressive impulses, especially during adolescence. Erik Ericsson's Psychosocial Development Theory, who has a psychoanalytic view, also states that identity development is closely related to antisocial behavior. He argues that adolescents may engage in illegal behaviors and experience severe emotional problems while resolving identity confusion. Another psychological explanation is the explanations of Learning Theories. Watson, Skinner, Rotter, Bandura, Akers, and Berkowitz emphasize the importance of learning in the development and maintenance of criminal behavior. Watson and other behavioral theorists, one of the pioneers of Behaviorism Theory, argue that it would be better to eliminate all concepts related to the mind and mind, since it cannot be observed and measured, and that the stimulus-response model explains criminal behavior more clearly. They emphasize that the reinforcements or punishments given after the behavior affect the subsequent behavior and that the criminal behavior is learned and strengthened by the reinforcements gained. Skinner also argues in Operant Conditioning Theory that it is not very meaningful to investigate the temperaments or personalities that cause criminal behavior, and that criminal behavior is determined by the environment one lives in. According to Skinner and his followers, to eliminate crime, it is necessary to establish a social order in which people can get rewards only if they comply with social rules and regulations, and in which they will not receive rewards if they do not obey the rules. According to the Social Learning Theory, which emphasizes the importance of mental processes as well as the stimulus-response link when explaining human behavior, finding Skinner's theory too limiting, human beings are active problem solvers who perceive, encode, and interpret environmental stimuli. To comprehend criminal behavior, it is crucial to have a deep understanding of perceptions, thoughts, expectations, competition, and values. Among social learning theorists, the theories of Rotter, Bandura, Shuterland, and Akers explain criminal behavior. Julian Rotter's Expectancy Theory draws attention to the importance of expectations about the consequences of behavior. People develop fixed and coherent "generalized expectations" in the face of relatively similar situations. Before performing a behavior, the person asks himself, "What were the consequences of this behavior before and what will I gain now?" asks the question. According to Rotter, whether or not a certain behavior pattern will be revealed depends on the person's expectations of the results and how much they value those results. When Rotter's theory is applied to criminal behavior, it can be said that the person expects a change in status, power, security, love, financial gain, or living conditions as a result of an illegal behavior. Although they can regulate their own behavior and their moral development is normal, people who commit illegal acts perceive and interpret the situation and choose the behavior they think is most

effective under these conditions. The person can perform the behavior by observing that another person gains as a result of the behavior, as well as considering previous experiences about the consequences of the behavior. In his Social Learning Theory, Bandura argues that people can be led to do that behavior by watching what another person does without the need for a reward. Bandura claimed that most behaviors are acquired by following models in the first place. Social learning theorists believe that the social environment is the most important factor in the acquisition of most human behaviors. However, they also recognize the necessity of reward for maintaining the behavior. Criminal behavior is first gained through identification and observation, but whether the behavior is preserved or not is explained depending on the reward. If no reward is received, the behavior will most likely not be repeated (extinction). If the behavior produces undesirable consequences (punishment), it prevents or suppresses similar behavior that may occur in the future. Adolescents imitate the behaviors of individuals they respect and admire. If the behavior of a role model is anti-social, the adolescent may imitate this model. Particularly, if the model is financially or socially successful, the likelihood of imitation may increase. If criminal behavior brings wealth, status, prestige, or the appreciation of friends, the behavior is likely to increase. If criminal behavior eventually loses credibility in the eyes of adolescent friends or those important to him, these behaviors will disappear. According to Bandura, if the observer sees a model that receives a reward, it is more likely to be imitated. Conversely, if the model is punished, the behavior is less likely to be imitated. In Bandura, he believed that a person's decision to use the new acquired behavior depends on the situation or the expectation of potential gain. This potential gain can come from outside (praise of others, financial gain) or from within (rewarding oneself for perceiving oneself successful at a job). Sutherland states in Differentiated Associations Theory that a person learns to behave deviantly (unusual) through his interpersonal relationships with his social environment. According to the theory, the important factors in acquiring deviant behavior are "the person with whom the identity is established, the duration and frequency of the automata and how important it is in the development of the person." Sutherland states that appropriate or inappropriate messages are learned in close relationships, and negative messages are more common in breaking the law and criminal behavior. Ronald Akers developed the Social Learning Theory of Deviance by combining the core elements of Skinner, Bandura, and Sutherland's Differentiated Association Theories. Akers states that deviant behavior most likely develops as a result of social rewards given by significant others, such as a peer group. The group first creates normative definitions about what behavior is good or bad, right or wrong, approved or disapproved. These normative definitions become internal and cognitive guides. At the same time, the strength of the deviant behavior is related to the amount, frequency, and probability of the reward that the person has earned as a result of that behavior in the past. According to Akers, there are two groups of distinctive stimuli that promote deviant behavior. The first discriminating stimulus is the behaviors encouraged by the subgroup. The person who performs these behaviors wins the social rewards given by the group. The second type of discriminative stimulus is the neutralization or justification of behavior. It neutralizes warnings of certain behaviors that are inappropriate or illegal by society. According to Akers, when the individual defines the behavior that others condemn and defines as bad at first, as problem-free, justified, forgivable, necessary, the best of the two evils, not really deviant, he does that behavior. Phrases such as "everyone has a prize," "I can't help myself," or "he deserves it" reflect the neutralized stimulus. Another learning theory that tries to explain criminal behavior is Berkowitz's

Frustration Theory. When a purposeful behavior is inhibited, the arousal increases and the person reacts to reduce it. Behavior done to reduce frustration is self-reinforcing because it changes the stimulus and reduces the unpleasant stimulus. The guilty individual is someone who has experienced long, strong disappointments as a result of their unmet needs. According to Berkowitz, both modeling and frustration play an important role in the development of criminal behavior. Particularly if the individual's expectation of achieving a goal is very high, disappointment is also great. Berkowitz states that children who are neglected by their family and whose trust and emotional needs are not met will not trust people and will experience disappointment, and as a result, they may turn to criminal behaviors [11]. Criminal behavior was first studied sociologically by scientists in the early twentieth century. The most detailed explanation about the causes of both juvenile and adult delinquency has been made by sociological crime theories. Considering the causes that lead to crime and delinquency, basic theories, social norms, social organizations, social structure and changes, social process and the relationship between social conflict and deviant behavior are emphasized. When criminal behavior is viewed from a sociological perspective, crime is the product of the social environment. So sociologically, the problem is in the society itself. When examining crime, modern sociologists have focused on two things in particular. One is structure and the other is process. Social structure theorists have tried to explain the relationship between crime and social structure. They are interested in how the crime event first started and what the characteristics of the social structure are. One of the most important issues is whether crime rates change as social structures change. The second approach issue that sociologists are interested in has been people who exhibit criminal behavior. Sociologists are concerned with the process between the criminal and the non-criminal [12]. The first theories about crime are those that deal with crime from a biological perspective. It is Lombroso who laid the foundations of this theory. Known as the father of criminology, Lombroso, who initiated biological explanations, tried to establish a relationship between delinquency and heredity. Lombroso researched the biological structure of human behavior, especially stating that physical deficiency causes delinquency. "Crime is a natural event in general causation. Crime is largely the product of organismal conditions. Some people are born criminals. Man commits crimes because of the anatomical, biological and psychological unusual features in his body. Punishment does not destroy the natural forces that created the crime. Therefore, instead of punishment, good health protection, health information is more effective in preventing crimes. The state must fight crime to ensure social defence. Over time, Lombroso limited his statements to one-third of all criminals born guilty. Thus, he drew attention to the social causes of crime." Looking at the studies in this area, starting from Lombroso's attempt to explain the origins of juvenile delinquency with biological theories, it is found that Sheldon stepped in and tried to establish relationship between body structure and juvenile delinquency. He tried to establish a relationship between temperament and personality traits in certain physical characteristics. "It continued with the Somatotype School, a movement that has developed since the beginning of the twentieth century and explores the relationship between body structure and crime." The leading names of this school are William H. Sheldon. As a result of this research, he developed a highly detailed model consisting of four categories: picnic (pyknic), athletic (athletic), asthenic (asthenic), and mixed type (unclassified mixed type). In this model, he also mentioned body types and three personality types, which he named cycloid, schizoid, and dysplastic. Sheldon divided people into three different groups according to their body structure. These are Endomorphic (short,

small-boned, fat, soft-skinned), Ectomorphic (sensitive, gentle, shy, slender, low-shouldered, small-faced), and Mesomorphic (bony, muscular, broad-chested, tough, athletic, and aggressive). Theorists mentioned in this field have determined in their studies that people with mesomorphic body structure are more prone to criminal behavior [2].

1.2 Personality

Personality can be defined as the whole of the behaviors that an individual does in order to adapt to his environment, and also as the physical, spiritual, and mental characteristics that distinguish each individual from the other [7]. To touch on the concepts of character, temperament, and temperament, which are related to personality and are often confused with the concept of personality and which are actually different components of personality, studies on character analysis have made us think that character (insight-based learning) is formed after temperament and with learning dispositions over time. Character is formed by being motivated by the events that children experience, for example, by some defense mechanisms they develop. Character is formed and shaped by the individual's responses to a set of volitional goals and motives. The concept of identity, that is, character, no longer represents the unconscious responses we can give, such as temperament, but the behaviors shaped by our brain by establishing some cause-effect relationships. On the other hand, "temperament" is the general attitude and predispositions of the individual, which is genetic, that is, innate. The word "temperament" is of Arabic origin. In TDK's General-Turkish dictionary, temperament is a noun in the sense of "humor, creation, nature, character." In psychology, temperament is the motivational processes underlying some habits in the individual that develop with emotions. Finally, temper is defined as "the whole of the creation and spirit characteristics of a person, temperament, nature" [4].

When the studies on the concept of "personality" are examined, some researchers focus on the factors that make up the "personality," consider the concept of "personality" as a part of the developmental process, and consider it as an organization that is formed by the influence of both innate characteristics and environmental factors in the development process, and that this organization is formed by the individual's thought. He tried to explain how it was reflected in his feelings and behaviors. Some researchers have considered the phenomenon of "personality" as the initial mechanism that affects thoughts, feelings, and behaviors and tried to explain the differences observed in the thoughts, feelings, and behaviors of people with the same qualities in the context of "personality traits." In addition, as a result of this, they identified the personality traits of people who had similar thoughts and feelings about events and gave similar reactions as a result, and grouped these concepts related to the personality traits they determined and categorized them under umbrella concepts. Freud, who is known as the founder of psychoanalytic theory, comes first among those who focus on the factors that make up the personality. Freud put forward the view that the first five years of childhood affect personality traits in adulthood, and he argued that the psychological and social conflict around the sexual impulses in the first years of life is one of the most influential factors on the development of the person. Based on this argument, he analyzed human development by dividing it into five psychosexual stages of development: oral, anal, phallic, latent, and genital. Drawing attention to the fact that the sources of sexual pleasure are different in these five developmental stages, he argued that personality traits are formed on the basis of whether or not satisfaction is achieved in terms of sexual pleasure with the influence of the environment. Karl Abraham, one of the scientists who grew

up with a psychoanalytic orientation, emphasized that the main factor forming the personality is the early relationship between the mother and the child. Horney, Fromm, and Sullivan did not accept Freud's theory of drive and, in relation to Fromm's theory of personality, there are four neurotic mechanisms: masochism, sadism, destructiveness, and automatic conformity. He defined five character types as accepting, hoarding, consuming, exploiting, and producing. Erikson, on the other hand, discussed personality development in terms of organ and organ function in terms of somatic perspective, self, and social context. In addition, he added the person's past life, biological structure, sociological, and anthropological knowledge into the personality organization and preferred to use the notions of zone, mode and modality for eight periods in the psychological development process of the person. On the other hand, researchers who discussed the concept of "personality" in the context of the consequences of "personality traits" realized that personality traits were a confounding factor, especially during diagnosis in the clinical sample, and initially considered personality traits categorically as "there is a disorder" and "no disorder." However, later on, they found it more appropriate to think that what is meant by personality disorder in the natural universe, not in the clinical sample, is an extension of "normal," and in this context, they discussed personality traits with a dimensional approach to explain human behaviors and gather similar behaviors under a group. Jung, who is one of the proponents of analytical theory and has different views from Freud, argued that typology has an effect instead of analytical perspective on personality theory. In this context, he made definitions about the characteristics of introverted and extroverted people and made definitions that lay the groundwork for moving from typology to dimensional features. These features have inspired many personality theorists, one of whom is Eysenck, to change the evaluations of personality traits from typology to dimensional features. Based on the dimensional characteristics of the personality, the typological modeling has been moved to the structural-developmental modeling. With this development, experimental studies were started for the first time while defining the personality structure. Another view that guides these studies is the assumption that personality traits may have an effect on the natural structure of language due to the use of language in social relations. Based on this assumption, G. Allport and H. Odbert created a comprehensive dictionary by listing personality-related traits. In the ensuing studies, thousands of words have emerged that clarify these features. Then, these words were formed to be gathered under five factors by factor analysis method. For this purpose, Cattell comes first among those who use the factor analysis method, and in 1973, he gathered complex personality traits under 16 different dimensions. In 1975, Eysenck also grouped personality under two dimensions as extraversion and introversion and neuroticism and stability. In 1980, Costa and McCrae added the dimension of openness to change as a third dimension to these two dimensions, and the dimensions of reconciliation and conscientiousness as the fourth and fifth dimensions in 1987. Costa and McCrae expanded their work based on the criticisms made against lexical dimensions and created the Five Factor Model. These factors are neuroticism, in other words, neuroticism, extroversion, openness to change, conscientiousness, and compromise. They added two more factors that they called irritability and activity for children and adolescents to these five factors they defined [13].

1.3 Personality and criminal behaviors

In studies on identifying criminal behavior related to personality, it has been stated that thoughtless and sudden reactions such as hyperactivity, inability to control oneself, and lack of control are affected and criminal behavior occurs in individuals with such

behavioral characteristics. When we consider the personality as the combination of social factors and the individual's unique heredity structure, determining the personality traits of the individual can guide us in this sense. The role of family, social factors, and education is very important in the formation of personality traits. In many crime theories, it is emphasized that these factors cause crime separately. Sutherland stated that crime is a learned behavior like other behaviors and that the learning process occurs as a result of a certain interaction. With learning, the individual is affected by the behaviors of other individuals in general, and these behaviors that form the personality have an important role. In these studies, which are mentioned in the literature as learning theories, it is stated that the behaviors of individuals are learned exactly. The importance of the advances in the cognitive movement in psychology and the shaping of individuals' behaviors in this dimension have also affected the studies in the science of criminology. In the subculture theory of crime, he stated that individuals should act together to raise themselves to the top in the environment they are in and that criminal subcultures can be formed according to their own traditions and the characteristics of the environment. Individuals who are members of the subculture stated that they see criminal behavior as a normal behavior, think that they are pushed into this situation, and resort to all kinds of violent behavior to prioritize respectability. In the following process, individuals' seeing this as a rule belonging to the society ensures that these behaviors are reinforced, and it is emphasized that living individuals think that the streets have their own rules. Finding the tendencies of individuals as personality will be an important input in determining which behaviors they are prone to processing. From the point of view of criminal behavior, in general, the realization of a behavior by individuals, with the exception of an accident situation and individuals with a biological disease, does not occur from an instantaneous development. These instantaneous events are affected by the experiences of the individual, the events he has learned, his feelings, thoughts, in short, his personality, because these concepts we have mentioned form the personality. In this sense, the concept of psychopathy was first used in studies in this field. In the case of psychopathy, it is understood that individuals exhibit irresponsible behavior and aggressive behavior from childhood to adulthood. Negative personality traits such as irresponsibility, lack of empathy, lack of guilt, sudden and thoughtless reactions, and lack of emotional depth are observed in individuals with psychopathy characteristics. Psychopathy and individuals committing crimes as a result of momentary behavioral disorders have led to the determination that there are some problems in behavioral mechanics. It has been concluded that there are some deficiencies in thinking and some learned rules come into play at this point, and the concept of personality of individuals cannot fully settle [6].

2. Methodology

In this study, the studies written by Akdemir, Arduç, Balcıoğlu, Çalışkan, Güney, İşbakan, K. Güneş, Koçak, Küçükbaşol, and Okumuş for graduate education and in which they discussed the relationship between personality traits and criminal behavior from different perspectives were examined.

3. Results

In Akdemir's study in 2015, in which the personality traits of convicted and non-convicted individuals were compared in the context of the average of their antisocial

behavior tendency levels and the average of their psychopathy scores, it was observed that the mean of the antisocial behavior tendency levels of the convicts and the mean of their psychopathy scores were higher than those who were not convicted, with the difference being significant [14].

In the study by Arduç in 2016, in which the convicted and non-convicted group compared the average scores of the sub-dimensions of the temperament and character scale, while it was observed that the average of the convicts' novelty seeking, harm avoidance, and self-transcendence scores were higher than the non-convicts and the difference was significant, the average of the reward dependence, self-direction, and cooperation scores of the non-convicts was higher than the convicts and the difference was significant [4].

In the study by Balcıoğlu, in which he compared the average scores of those who committed repetitive crimes, those who committed a single crime and those who never committed a crime, from the sub-dimensions of the temperament and character scale, it has been observed that those who commit repetitive crimes have a statistically significant higher search for novelty than those who commit a single crime and those who commit a single crime than those who have never committed a crime. In the same study, it was observed that those who have never committed a crime have a statistically significantly higher tendency to self-direct and cooperate than those who have committed a single crime and those who have committed a single crime than those who have committed repetitive crimes [15].

In a study conducted by Çalışkan in 2014 on the comparison of the personality traits of individuals in prison and those working in the police force within the framework of the five-factor personality theory, the average of emotional stability and openness scores of individuals in prisons was found to be higher than those of those working in the police force, with the difference being significant. Was found to be significantly lower [7].

In the study conducted by Güney in 2020 on the determination of the personality traits and criminal profiles of female murderers in Turkey, the research analyzed the Five-Factor Personality Scale's subdimensions' average scores and the causal relationship between social stressors and personality characteristics. She found that the women's highest personality trait was Conscientiousness. However, Agreeableness levels differed from Conscientiousness scores, which differed from Extraversion scores, and the latter differed from Emotional Inconsistency and Negative Valence scores. The research also indicated that Openness to experience scores were higher than negative valence scores. Güney pointed out that positive personality traits, such as conscientiousness, combined with challenging living conditions, acted as a trigger for the crime of murder [16].

In İşbakan's 2011 study on the examination of personality traits of individuals who committed crimes against life and property in the context of Rorschach Personality Test results, individuals who commit crimes against life are more intellectual, dreamy, realistic, impulsive, having difficulty in controlling their emotions, compared to individuals committing crimes against property. While it is observed that they are compatible with the outside world and social environment and are childlike, the content of thought of both groups is poor, having difficulty in practical and concrete thinking, shallow and superficial, emotionally childlike, primitive, experiencing intense emotional depression, not attaching much importance to reality and objectivity, and impulsive in internal processes. It has been observed that they tend to behave in a way, have weaknesses in their relations with their social environment, and have low ability to establish social relations [8].

In the study conducted by Güneş in 2018 on the effect of adolescents' personality traits and perceived parental attitudes on criminal behavior, it was found that there was a high level of positive and statistically significant correlations between adolescents' hostility and aggression tendencies and criminal behavior. It was observed that there was a positive, moderate, and statistically significant relationship between emotional consistency and worldview and criminal behavior, while a negative, low level, and statistically significant relationship was observed between addiction and defensive independence and criminal behavior [17].

In Koçak's 2017 study on the effect of childhood traumas on the violent and non-violent criminal behavior of young adults, there was a negative, low, and statistically significant and developmental relationship between women's levels of self-control and mildness and their levels of violent and non-violent criminal behavior. It has been observed that there is a negative, low, and statistically significant relationship between openness levels and non-violent criminal behaviors. In addition, there is a negative, low, and statistically significant relationship between men's levels of amenableness and violent and non-violent criminal behaviors, and there is a negative, low, and statistically significant relationship between self-control and openness to development and non-violent criminal behaviors. It was observed that there was a positive, low, and statistically significant relationship between the levels of tendency to be emotionally unstable and non-violent criminal behavior [18].

In the study of Küçükbaşol conducted in 2005 on the relationship between the personality traits and deviant behaviors of secondary and high-school students, there was a negative, low, and statistically significant relationship between the level of self-control, theft, and drug crimes; and negative, moderate, and statistically significant between the level of self-control and sexually explicit criminal behaviors. It was observed that there was a negative, moderate, and statistically significant relationship between the level of self-control and status crime and violating school rules, and a negative, moderate, and statistically significant relationship between the level of self-control and status crime related to driving. In addition, it was observed that there was a positive, low, and statistically significant relationship between the level of emotional instability and heavy-light theft and drug crimes, and a positive, low level and statistically significant relationship between emotional instability and status crime and behaving against school rules. In addition, it has been observed that there is a negative, low and statistically significant relationship between openness and sexually explicit criminal behaviors, and a negative, low, and statistically significant relationship between openness and status crime related to driving. Finally, there was a negative, low, and statistically significant relationship between the levels of compatibility and responsibility and the status crimes related to heavy and light theft and drug crimes, sexually-related criminal behaviors, and driving, and there were also differences between the levels of compatibility and responsibility and status crimes and violating school rules. It was observed that there was a negative, moderate, and statistically significant relationship [19].

Finally, in the study in which Okumuş evaluated the personality structures of the perpetrators of sexual crimes within the scope of the Rorschach Personality Test in 1994, it has been seen that the most common personality structures in perpetrators of sexual crimes and theft crimes are infantile personality structure (childlike), einotif personality structure (attribute), impulsive personality structure (impulsive), simple personality structure, puerile personality structure (pure), and inadequate personality structure. Among both crime groups, infantile personality structure was found to be the most effective [20].

4. Conclusion

This chapter explored the concepts of personality, character, and temperament, along with various personality theories. It also discussed the relationship between personality and criminal activity, and how personality traits can be associated with psychopathology. To investigate the connection between criminal behavior and personality, 10 studies at the post-graduate level conducted in Turkey examined in terms of the link between personality traits and criminal activity from different perspectives. The chapter also covered various topics related to crime, such as social order and deviation, the evolution of the crime concept, different types of crime, and theories that attempt to explain criminal behavior.

Certain researchers focus on the components that contribute to a person's "personality." They view "personality" as a part of the developmental process, shaped by both innate characteristics and environmental factors, resulting in the formation of an individual's thoughts, feelings, and behaviors. Some researchers consider "personality" as the primary mechanism that influences thoughts, feelings, and behaviors, and aim to explain the differences observed in people with similar qualities. Consequently, they identify personality traits of individuals with similar thought processes and emotional reactions, categorizing them under umbrella concepts.

Considering the studies on personality traits and criminal behavior, it has been observed that novelty seeking and harm avoidance behaviors among the Five Factor Personality Traits increase the tendency to commit crimes. It has been observed that those who can manage themselves, those who are open to cooperation and those who are compatible, have a decreased tendency to commit crimes. In addition, it has been observed that impulsive and immature individuals with antisocial personality traits, which are related to psychopathology, have an increased tendency to commit crimes.

Author details


Gizem Turgut^{1*} and Kübra Demirci²

1 Faculty of Science and Letters Psychology Department, Istanbul Arel University, Istanbul, Turkey

2 Postgraduate Education Institute Psychology Main Field, Istanbul Arel University, Istanbul, Turkey

*Address all correspondence to: gizemturgut@arel.edu.tr;
gizem.turgut@yahoo.com

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Chapter 8

Psychopathology and Criminal Behaviors

Gizem Turgut

Abstract

Forensic psychology is a branch of applied psychology in which the knowledge and skills of psychology are used in the collection, evaluation, and presentation of evidence to the judiciary. The connection between the mental state and the law has been long-standing throughout history, resulting in the emergence of forensic psychology. Plato's work in "The Republic" explores the psychological foundations of laws from earlier eras. The Middle Ages saw ongoing discussions regarding "insanity and criminal liability" in criminal proceedings. This discussion also necessitated the examination of the relationship between psychopathology and criminal behavior. In this context, researchers have periodically examined the psychological symptoms of inmates in prisons to better understand the etiology of criminal behavior and the effects of psychopathology. This chapter is crucial in highlighting the grave impact psychopathology has on the development of criminal behavior. It is imperative to fully comprehend psychopathology to prevent criminal behavior and steer clear of labeling offenders as "individuals with psychological disorders", which can be highly stigmatizing. The chapter provides an in-depth analysis of current research and lays out a clear roadmap for future studies.

Keywords: crime, criminal behaviors, forensic psychology, mental disorders in DSM5, psychopathology

1. Introduction

Psychopathology represents the branch of science that studies and examines psychological disorders as a word meaning. In addition to the word meaning, the term psychopathology is often used in practice with a synonym for psychological discomfort. Psychological discomfort is a specific clinical picture that progresses with a marked deterioration in the psycho-biological infrastructure of the person's cognition, mood, and behavior. The most widely used guide in which psychological disorders are classified and explained in detail with their symptoms is the 5th version of the Diagnostic and Statistical Manual of Mental Disorders, in other words DSM5 [1]. Neurodevelopmental Disorders, Disorders Associated with Schizophrenia and Other Psychotic Disorders Within the Scope of Schizophrenia, Bipolar and Bipolar-Related Disorders, Depression Disorders, Anxiety Disorders, Disorders Associated with Obsessive-Compulsive Disorder and Obsessive-Compulsive Disorders, Dissociation Disorders, Somatic Symptom Disorders and Somatization-Related Disorders, Eating and Eating Disorders, Impulse Disorders, Sleep-Wake

Disorders, Sexual Dysfunctions, Gender Complaints, Disruptive Disorders - Impulse Control and Behavior Disorders, Substance Use Disorders and Addiction Disorders, Neurocognitive Disorders, Personality Disorders, Sexual Deviation Disorders, Drug-Induced Movement Disorders and Other Side Effects of Medications and Other Conditions That May Be of Clinical Interest and Other Mental Disorders in the 5th edition of the Diagnostic and Statistical Manual of Mental Disorders are discussed in detail in this study [2].

Understanding the symptoms of mental disorders and classifying them according to their symptoms is important in terms of taking preventive measures to protect mental health and treating deteriorated mental health. However, understanding and classifying the symptoms of mental disorders is of great importance not only in the field of protection, maintenance, and improvement of deteriorated health but also in the establishment, protection, and maintenance of social order. One of the first things that come to mind when it comes to social order is norms, rules, rights-law and justice system. In this context, the coexistence of the mental health field and the rights-law and justice system in the establishment, protection, and maintenance of the social order has laid the groundwork for the emergence of forensic psychology.

Forensic psychology is a branch of applied psychology in which the knowledge and skills of psychology are used in the collection, evaluation, and presentation of evidence to the judiciary. The connection between the mental state and the law has been long-standing throughout history, resulting in the emergence of forensic psychology. Plato's work in "The Republic explores the psychological foundations of laws from earlier eras." The Middle Ages saw ongoing discussions regarding "insanity and criminal liability" in criminal proceedings [3]. This discussion also necessitated the examination of the relationship between psychopathology and criminal behavior. In this context, the psychological symptoms of convicts in prisons were examined from time to time, and sometimes the effects of psychopathology on the etiology of criminal behavior were tried to be understood. In this study, the effects of psychopathology on the etiology of criminal behavior will be emphasized and the importance of understanding psychopathology in the prevention of criminal behavior will be emphasized in order not to characterize criminals as "individuals with psychological disorders", in other words, not to stigmatize them.

2. The relationship between psychopathology and criminal behavior

When examining the relationship between criminal behavior and psychopathology according to DSM-5, it should begin with neurodevelopmental disorders. Neuro-developmental disorders are characterized by developmental disabilities that lead to disruptions in individual, social, educational and occupational functions, and these disabilities appear early in life, often before the child starts school. Neuro-developmental disorders include intellectual disability, communication disorders, autism spectrum disorder, attention deficit hyperactivity disorder, specific learning disorder, motor disorders, and tic disorders. Evidence from neuroimaging studies suggests that social cognition is processed in networks involving the prefrontal cortex. Impairments in empathy are frequently observed in prefrontal cortex lesions. Therefore, it has been reported that neurodevelopmental disorders such as ADHD, autism spectrum disorders (ASD), specific learning disorders (SLD), intellectual disability may have negative effects on the development of empathy. Inability to correctly evaluate the motivation of others' emotions and behaviors and anger control

disorders are among the underlying causes of violent behavior that is on the rise in our age. Therefore, it can be said that there is a positive relationship between inability to empathize and criminal behavior [4].

Continuing with the scope of schizophrenia and other disorders that go with psychosis; Schizophrenia is a psychiatric disease characterized by delusions, hallucinations, disorganized behaviors, negative symptoms, and social dysfunction [5]. In the 10th edition of the World Health Organization's (WHO) International Classification of Diseases (ICD), schizophrenia and its related diseases were grouped under the title of "Schizophrenia, Schizotypal and Delusional Disorders" [6]. Studies have shown that delusions, hallucinations and confusion in schizophrenia cause criminal behavior [7].

Continuing with bipolar and related disorders and depression disorders, there are studies reporting that an explosive and exuberant affect in manic disorders can make these individuals prone to violence. It has been stated that this risk is always higher with grandiosity, high self-confidence, and temper tantrums occurring in manic episodes. It has been stated that sexual harassment, fraud, and theft crimes can also be committed, especially during the mania process. It has been determined that the reasons such as narcissistic injury, the perception of humiliation of the person, or the feeling of shame can create the motivation for crime in the murders committed by people diagnosed with depression impulsively. In addition, it has been reported that post-homicide suicide is frequently observed in psychotic or severe depression [8].

Continuing with anxiety disorders; anxiety is uncertain how it will happen in the present and future; maybe it can be defined as a state of worry and uneasiness about a subjective situation that is unlikely to happen [9]. The results of the studies show that anxiety disorders are a mood state that occurs after criminal behavior rather than causing criminal behavior [7]. It is thought that the reason for this is that an individual who has committed a crime experiences intense anxiety because he will be deprived of his freedom when he is arrested, he will have to eat, drink, and sleep in the same place with people he does not know when he is arrested, and he will be referred to as an "ex-convict" in the society when his detention is over and he will not be trusted.

Continuing with obsession-compulsive disorder and related disorders, according to the psychoanalytic view, obsessions are derivatives of repressed impulses. Obsessive-compulsive personality has anal features and shows fixation features in the anal period. According to Freud, when these individuals get into conflict due to their unresolved oedipal demands that cause anxiety, they regress to the anal stage of psychosexual development to get rid of the anxiety they experience. Regression affects not only the ego but also the superego, making the superego more rigid and primitive. Basically, three defense mechanisms are used to cope with aggressive and sexual urges. These are isolation, doing-undoing, and opposition formation (reaction formation). It is the separation of the impulse from its emotional composition by isolation and keeping it at the level of consciousness only with its thought content. Doing-destroying is the removal of an action that was actually done or assumed to have been done, with the opposite action in order to prevent bad consequences. It is possible that the compulsive action is canceled by a second action and through such actions the person gets rid of the ego-threatening and frightening obsessive thoughts. The opposite reaction is the development of behavior patterns that are the exact opposite of one's main impulses [10]. No study has been found in the literature on Obsessive-Compulsive Disorder and Criminal Behavior. This is thought to be due to the belief that the rigid superego will not allow the self to go beyond the norm. However, when faced with any stressful situation, a person can also commit a crime by disrupting what he does right or by compulsive continuation of what he does right. This can be

seen clearly in crimes committed by white-collar workers. Consider a scenario where a doctor is extremely concerned about contracting an illness and refuses to touch a patient with mild allergies. Likewise, a nurse who is overly suspicious may administer extra medication to a patient due to uncertainty about whether they have taken their medication on schedule. Unfortunately, if the patient ultimately passes away due to the doctor's failure to intervene in a timely manner and the nurse's excessive dose of medication, the nurse would be held responsible for committing a crime.

Continuing with disorders related to trauma and triggering factors, it is a post-traumatic mental disorder that causes fear, helplessness or horror reactions in the person. The disease is characterized by re-experiencing the traumatic event, avoiding trauma-related stimuli, and hyperarousal symptoms. According to the research, trauma victims exhibit excessively angry behaviors and tend to use alcohol and drugs in order to cope with the guilt and hyperarousal they feel because they cannot prevent the traumatic event from happening again [11]. This extreme anger behavior will increase the tendency to exhibit criminal behavior by committing violence against other people and by committing acts such as being involved in crime when the consciousness is clouded due to the drug effect of the alcohol and substance used.

Continuing with dissociative disorders, it can be defined as a mental illness that includes problems related to memory, identity, emotion, perception, behavior and sense of self, and whose symptoms can potentially impair all areas of mental functionality [12]. Three common symptoms of this disorder are amnesia, fugue, and multiple personality. In multiple personalities, different personalities and identities are experienced in the same person. As if the other personality did not exist at that time, the personality in which he or she lives at that moment dominates his attitudes and behaviors. When the patient transitions to a second identity, the real personality is often not remembered. The real personality is not aware of the other. The transition from one personality to another is often sudden. Each personality has different characteristics. When they are subjected to a two-person psychological test, they give completely different results [13]. In these sudden personality transitions, the tendency of the person to not be able to recognize and make sense of where he is and the people he is with increases, and in this case, the tendency to exhibit criminal behavior increases.

Continuing with somatic symptom disorders and related disorders, somatic symptom disorder occurs when a person feels excessive and exaggerated anxiety about physical symptoms [14]. As mentioned before, the relationship between anxiety disorders and crime-related behaviors, results of studies show that anxiety disorders are a mood state that occurs after criminal behavior rather than causing criminal behavior [7]. It is thought that the reason for this is that an individual who has committed a crime experiences intense anxiety because he will be deprived of his freedom when he is arrested, he will have to eat, drink, and sleep in the same place with people he does not know when he is arrested, and he will be referred to as an "ex-convict" in the society when his detention is over and he will not be trusted.

Continuing with nutrition and eating disorders; eating disorders are psychiatric disorders in which there are deteriorations in eating attitudes and behaviors, behaviors toward weight control are revealed, and psychosocial and physical functions are impaired [15]. Since eating disorders are a disorder characterized by behaviors aimed at controlling one's own weight, its relationship with criminal behaviors is thought to be limited to the suicide dimension.

Continuing with the expulsion disorders; excretion disorders are disorders that are common in childhood and negatively affect the life of the child and the family,

associated with the lack of bladder or bowel control expected according to the child's age and developmental status [16]. As it can be understood from the definition of expulsion disorders, it is thought that there is no direct relationship with criminal behaviors.

Continuing with sleep–wake disorders; According to the International Classification of Sleep Disorders, sleep disorders are basically divided into two as “dys-somnia” and “parasomnia.” Dysomnia is defined as sleep initiation or continuation disorders with changes in the amount, quality and timing of sleep. Parasomnia, on the other hand, is used to express changes and deterioration in behavioral and physiological areas during sleep, concurrent with the sleep period [17]. When the defenses in criminal cases are examined, many examples of sleep disorders, especially parasomnias, are used as defense in criminal cases. In particular, there were many cases where sleepwalking convinced the jury in American courts that the accused was innocent [18]. This suggests that sleepwalking seen in parasomnia leads to criminal behaviors.

Continuing with sexual dysfunctions, gender complaints, and sexual perversion disorders; Physiological responses to sexual stimuli in humans are divided into four stages as arousal, plateau, orgasm, and resolution. Sexual dysfunctions are the absence of response or overstimulation in any of these stages. Sexual dysfunctions are generally divided into three as paraphilias, sexual identity disorders, and sexual dysfunctions [19]. Depending on the type of disorder acts such as violations of sexual autonomy and sexually aggressive behaviors toward children, violations of privacy and inviolability of home, and attacking the body of the deceased after the death of the deceased were observed in the acts committed by the perpetrators with these disorders [20]. It is also understood from the use of the word perpetrator that the behaviors are also criminal acts.

Disruptive disorders – Continuing with impulse control and conduct disorders; Impulse control disorders are characterized by the repetitive inability of the person to perform actions that may be clearly harmful to himself or to others, while destructive behavior disorders are characterized by behavioral problems such as aggression and breaking the rules [21]. According to the DSM-5, there are two forms of the disorder with childhood-onset and adolescence-onset. In the childhood onset, physical violence and difficulty in peer relationships predominate, and the symptoms of the disorder begin before the age of 10. Another disorder, such as attention deficit hyperactivity disorder (ADHD) and oppositional defiant disorder (COD), often accompanies the clinical picture. In the adolescence-onset type, the findings related to the disorder are absent before the age of 10, and the disorder in violent behavior and peer relationships is relatively mild [22]. The dimension of this disorder, which is characterized by physical violence and disorder in peer relationships, is closely related to criminal behavior, especially in terms of violent behavior.

Continuing with substance-related disorders and addiction disorders; substance addiction, which is called substance use disorder together with DSM-V, is defined as a brain disease characterized by the desire to take substances continuously or periodically and some behavioral disorders in order to feel the pleasurable effects of the substance or to avoid the discomfort caused by its absence [23]. While there are many factors that lead individuals to commit crimes, drug addiction can also be among the reasons that lead individuals to commit crimes. The individual may become a victim of crime by causing a change in the situation and behavior of individuals. When the literature is reviewed, the relationship between illegal substance use and crimes of violence, aggression and theft is mentioned. Apart from violence, aggression and theft committed under the influence of drugs, crimes such as traffic accidents, media

courier, and sexual assault can also be committed. In addition, due to wrong decisions when people are under the influence of substance use; behavioral disorders, provocation and aggression, fraud, drug addicts can be involved in crimes such as armed and unarmed attacks, blackmail and threats, murder in order to obtain the substance they use, may cause traffic accidents, sexual abuse, work in a way that can harm oneself and others. They may cause accidents and commit crimes such as substance use during imprisonment [24].

Continuing with personality disorders, it is very difficult to define a personality disorder. It can be said that personality disorders are the area that causes the most diagnostic discussion in psychiatry. It is known that people who are excluded from mental disorders and who show long-term adjustment disorders are common in every society. What distinguishes personality disorders from personality structure is the severity of the traits. In order for the diagnosis of personality disorder to be made, significant disorders must be present for a relatively long period of time without changing the individual's ability to adapt to society, to keep a regular job, and to ensure continuity in relationships. These behavioral patterns, which are embedded in the self, are maintained without showing flexibility for the purpose of adaptation and cause significant impairment in the society and work life [25]. There are many subtypes of personality disorders. Individuals who have difficulty in adapting to social norms and who constantly repeat behaviors that are considered criminal by social norms are diagnosed with antisocial personality disorder (APD). Individuals with this diagnosis are those who cannot take the necessary responsibility in family and social life, act impulsively, and often display aggressive behaviors [26]. In addition to APD, although intense anger and impulsive behaviors are evident in borderline personality disorder, the presence of transient paranoid thoughts or severe dissociative symptoms under intense stress are features that increase the risk of being involved in crime. In addition, it is known that paranoid, passive – aggressive personality disorders and narcissistic behaviors increase the risk of committing violent crimes in adolescents and young adults. Multiple personality disorder causes sexual dysfunctions in individuals; it is said that sadomasochism, pedophilia, zoophilia, exhibitionism, and erotic asphyxia can be seen in both homosexual and heterosexuals [8].

3. Conclusion

As a result, it is understood that many of the mental illnesses in DSM-5 cause criminal behavior, while others are associated with criminal behavior even if they do not cause criminal behavior. However, the above-mentioned information should be used to strengthen preventive mental health services, rather than labeling offenders as “mentally ill”. For example, it is stated in the literature that individuals with neurodevelopmental disorders have difficulty in empathizing and tend to commit crimes because they have a tendency to act impulsively. During therapy with these individuals, “What did he say, what did I understand?” It is possible to prevent them from committing crimes by doing exercises or doing impulse control work so that they can empathize. In order to prevent schizophrenia from committing crimes, it can be shown that the sound heard or the image seen does not actually exist by recording a phone call while working with auditory hallucinations to show that their hallucinations are not real in therapy, or by video recording with a camera when working with visual hallucinations. In bipolar disorder, on the other hand, when the individual is in a manic period, it can be prevented from committing a crime by strengthening


social support resources and ensuring that he is under the supervision of his family or close circle. In order to prevent criminal behavior in sleep–wake disorders, simple measures such as locking the bedroom door can be taken to prevent crime, especially for sleep-walkers. In sexual dysfunctions, in order to prevent delinquency, hormonal therapy can be applied to individuals with sexual dysfunction or daily activities can be planned to transfer their energies outside of sexuality. In order to prevent children with impulse control and conduct disorder from committing crimes, it is important to provide early therapy support and to raise awareness of their families. In personality disorders, in order to prevent delinquency, antisocial personality disorder can be prevented by applying the right treatment method when childhood conduct disorder is observed in order to prevent the development of antisocial personality disorder. In addition, people with borderline personality disorder can be prevented from committing crimes by conducting impulse control studies during therapy.

Author details

Gizem Turgut
Faculty of Science and Letters Psychology Department, Istanbul Arel University,
Istanbul, Turkey

*Address all correspondence to: gizemturgut@arel.edu.tr; gizem.turgut@yahoo.com

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Criminal Behavior and Toxic Environment

Dilek Baysal

Abstract

Crime and society appear as two inseparable concepts. In defining crime and attempting to uncover its causes, it is crucial to consider social concepts and processes. Since crime is defined through actions, it can be considered a dynamic phenomenon rather than a static one. This dynamism allows crime to manifest itself differently across societies and over time. Consequently, individuals, in regulating their behaviors throughout their lives, are primarily influenced by their families and environments. In terms of ensuring social welfare, penalties determined by laws alone are not sufficient. Hence, arises the necessity of crime prevention before it occurs. By implementing improvements in the environmental and societal domains, this imperative becomes more attainable. Consequently, the examination of social and environmental factors has increasingly been integrated into crime prevention programs. In this section, information regarding the relationship between the environment, society, and criminal behavior has been provided. Furthermore, the effects of a toxic environment on individuals' inclination toward crime have been thoroughly examined within a theoretical framework, and the discussed topics have been debated in a manner that would contribute to the momentum of studies revealing the social and environmental dynamics of criminal behavior.

Keywords: crime, criminal behavior, forensic sciences, social learning, toxic environment

1. Introduction

Crime has been a reality in human societies for centuries, and the propensity to commit crimes is determined by the complex interaction of various factors. Among these factors, the individual's social environment holds great importance. Nowadays, it is widely accepted in the scientific community that environmental factors can influence individuals' behaviors. The social environment encompasses many aspects such as family, friends, education, economic status, and neighborhood, and plays a significant role in the occurrence of crime. In this section, we will examine the information provided by forensic sciences to understand the impact of the social environment on criminal behavior.

2. Socialization and crime

Crime and society are inseparable concepts that intersect. Therefore, it is valuable to approach the definition of crime and its causes within the framework of social concepts and processes. One of the best ways to define crime is by understanding human nature. The sense of ownership forms a starting point in humans. They have determined that moment of existence as a reference point and from then on, they have developed a sense of responsibility to protect and preserve their existence. This is where socialization emerges. A person, due to their ownership, feels threatened by another person and subsequently realizes that the same threat could apply to the second person, leading to the need for the determination of a third party. This need gave rise to the concept of “social contract” [1]. Socialization and the sense of ownership in humans are nearly simultaneous concepts.

The establishment of rules and the acquisition of the concept of ownership can exhibit a continuity. One of the crucial justifications is the association of these rules with values. Only through such association can a system of rules be constructed. The persistence of the social contract relies on the preservation and continuity of rules that best reflect the values that hold society together. The concept of value is inherently intertwined with human existence. There is no value that contradicts human existence. In this regard, if a perpetrator of murder attempts to explain the motive of the crime based on their own constructed values and seeks forgiveness on those grounds, the plea should be rejected in order to safeguard the continuity of both society and human existence. While these crimes may lack a foundation in a specific value, there exists a value upon which the punishment for such crimes is based. Thus, engaging in a value-oriented debate is deemed unnecessary and perilous, as it would divert attention and potentially jeopardize the legal framework. The assumption that values lack objectivity at certain points signifies the underlying acceptance that underpins such debates. However, within the process of socialization, it is vital to refrain from tampering with and preserve values in their original form. Otherwise, the formation of society becomes unattainable or, if achieved, unsustainable. In the process of socialization, crime is met with ethical sensitivity and punishment. Nonetheless, certain assumptions may attribute a reward-oriented value to the explanation of crime causation. This raises the question: “Is the subject of debate the crime itself or its motives?” The differing definitions of crime in the present compared to the past prompt the inquiry into the extent of the malleability of the concept of crime, as actions previously considered criminal and subject to penalties are no longer regarded as such today. Does this variability in the concept entail hypocrisy, or are the factors that contribute to this variability responsible? Rather than reaching such weighty conclusions by posing further questions, it may be more fruitful to identify discussion topics worthy of contemplation.

Assessing crime from a universal perspective is a rational and accurate method to define it. In this context, crime encompasses behaviors that pose a threat to societal welfare and are consequently prohibited by laws. Laws also entail the application of penalties and sanctions when criminal behavior occurs. In determining these penalties and sanctions, individuals’ psychological and physical vulnerabilities are taken into consideration, while social and environmental factors are excluded. Examining and explaining a criminal act from the perspective of the individual perpetrator moves beyond the universality of crime and imparts subjective and individualistic interpretations. These subjective interpretations shed light on the motives behind the crime rather than its definition. Providing clarity within a universal framework not only prevents biases but also aids in understanding crime’s causes and effects

for both the offender and the victim. However, the legal system often encounters a dilemma at this juncture. While there may not be overt biases, another factor comes into play: the mental state of the offender or, more precisely, the mental state and socioenvironmental circumstances in which the crime was committed. Incorporating psychological assessments that consider the offender's mental state during the crime, without disregarding it, prevents the imposition of biases and upholds impartiality. Furthermore, evaluating the social and environmental factors that influence the offender's condition and are considered risk factors for criminal behavior contributes to crime prevention and the establishment of societal welfare. Consequently, investigating social and environmental characteristics is not only relevant for determining guilt or innocence in the judicial process but also for incorporating crime prevention programs into the broader scope of maintaining social order.

The process of socialization, initiated alongside the emergence of property, has also brought about the existence of crime. Therefore, it is crucial to approach the explanation of crime within the framework of the socialization process. One of the reasons for this is the inseparable nature of crime and society as two interconnected concepts. Since crime is an action in itself and its definition is constructed based on actions, it can be asserted that crime entails a dynamic position rather than a static one. This dynamism enables it to assume different forms across societies and time, distancing itself from stagnation. There is no single universal definition of crime worldwide. In other words, crime is approached from various perspectives by different individuals due to the presence of diverse norms. Each norm establishes its own conception of crime. While it is not feasible to encapsulate crime within a single definition, it is important to address the following questions that arise when discussing crime:

- Why do individuals commit crimes?
- Who falls under the category of criminals?
- Is criminality an innate trait or an acquired behavior?
- Can an individual be compelled to commit a crime against their will? In other words, can someone be coerced into criminality involuntarily?

These questions can be expanded upon, and it is crucial not to overlook them. Employing a theoretical framework while tackling these questions will lead us to more accurate outcomes.

Until the 18th century, there were no comprehensive penalties in place to correspond to the crimes committed in France. What mattered more was whether the criminal act was committed against the monarchy or the Church. The penalties imposed for crimes were not determined based on societal considerations but rather appeared arbitrary. This situation has been extensively discussed by numerous intellectuals who advocated for an examination of both the nature of the crime and the punishment from a sociocultural perspective. One prominent figure whose ideas have had a lasting impact and are still referenced today is Cesare Beccaria. In his renowned work "On Crimes and Punishments," published toward the end of the 18th century, Beccaria put forth fundamental principles that shed light on potential definitions. Beccaria argued that crimes should be met with penalties defined by laws. In this regard, he made reference to Rousseau's previously mentioned "Social Contract." This becomes clear from the following two statements of Harcourt about Beccaria's theory:

“The law should only establish penalties that are explicit and necessary, and an individual should only be subject to punishment according to a law that was established, publicly declared, and applied in accordance with legal procedures prior to the commission of the crime.”

“There can be no crime or punishment in the absence of law” [2].

The emerging ideas in the 19th century shifted the focus from the act of crime to the individual who commits it. According to these ideas, punishment should be tailored to the offender rather than the offense itself. Therefore, it is crucial to consider the individual's psychological state and the process of socialization before discussing the crime. In this context, during the period when industrialization was on the rise and modern societies based on individualism were forming, a prevalent notion arose that emphasized the need to evaluate the offender from sociological and psychological perspectives before administering punishment. Examples of such practices include “probation” and “good behavior discounts.” Probation entails the execution of a sentence within the community and aims to reintegrate the offender into society. Developing countries, in their ongoing process of socialization, often emulate the justice systems and practices of developed countries, potentially compromising their own systems.

Those who advocate classical psychoanalysis attribute crime to childhood traumas and provide an explanation based on an enduring and unchanging pattern resulting from these traumas. If there is a disturbance in the individual's personality structure, it is believed to remain constant, predisposing the individual to a propensity for committing crimes based on the effects of early traumas. This notion prevailed from the late 19th century until the mid-20th century. The U.S. justice and legal system are founded on psychoanalytic determinism, which has spurred widespread acceptance and thorough investigation of theories pertaining to crime. In situations where the individual is unaware of the specific circumstances and conditions surrounding the crime, the attribution of the offense is tied to the contextual factors of its occurrence. However, under the conditions of the “here and now,” the principle of the presumption of innocence is granted to the offender independent of causation. With the emergence of the Behaviorist School, confidence in this perspective, which emphasizes the role of the environment and learning, has somewhat diminished. The psychoanalytic approach prominently features a reductionist viewpoint where the environment is held entirely responsible, suggesting that erroneous learning is a byproduct of environmental influences.

Sociology adopts a multidimensional approach to the study of crime. This approach encompasses social theories rooted in extensive research and the paradigms derived from these theories. Through these paradigms, an effort is made to elucidate the phenomenon of criminal behavior. Sociology posits that crime emerges as a byproduct of socialization, whereby society serves as the catalyst, shaping and providing the conditions for the manifestation of criminal acts [3]. Within the realm of sociological theories, three fundamental axes can be identified:

- a. Theories pertaining to social structure.
- b. Theories focusing on social processes.
- c. Theories centered around social conflict.

2.1 Theories pertaining to social structure

These theoretical frameworks commonly examine the structure and function of society. The theories proposing that the emergence of crime is attributable to the structure and function of society also argue that crime is socially constructed in accordance with societal conditions. Despite variations, all crimes are rooted in the origins of social order and functioning. These approaches encompass subapproaches, including explanations based on environmental factors and subcultural influences. This demonstrates the formation of a foundational framework based on functionality. Through these classifications, social structures can be thoroughly analyzed, thereby establishing the recognition of crime as a product of social dynamics. Durkheim associates society with crime and presents crime as a direct consequence of social functionality. Moreover, he highlights the notion that a crime-free society is nonexistent.

2.2 Theories focusing on social processes

In a manner similar to social structure theories, social process theories encompass various sub-theories that function as distinct subsystems. These sub-theories not only contribute to the overall framework but also enable a nuanced evaluation of intricate aspects. The constituent sub-theories, such as “learning theories,” “control mechanisms approach,” and “labeling theory,” endeavor to qualitatively elucidate crime by examining it through diverse dimensions. Importantly, the underlying premise that crime is a social consequence remains constant throughout these discussions.

2.3 Theories centered around social conflict

At the core of these theories lie conflicting elements within the structural functionality of society. It is crucial to recognize that such conflicts serve as pivotal components in the process of societal change. The presence of conflicts is essential for facilitating social transformation. Through conflicts, viable resolutions are generated, leading to social cohesion and comprehensive functioning. These conflicts can manifest at both individual and societal levels. The aggression instinct ingrained in human existence, coupled with its universal acknowledgment and validation, elucidates the individual facet of conflict. On the other hand, the motivations that instigate the mobilization of existing groups within society exhibit variation. These variations stem from diverse expectations and demands. Consequently, disparities in expectations and demands give rise to conflicts within the societal framework. In the context of these conflicts, inequality emerges as a crucial element. When examining conflicts from an individual standpoint, it becomes apparent that they originate from the individualistic nature intrinsic to social dynamics. Conversely, when conflicts unfold at the societal level, economic factors come into play in defining the nature of crime. An exemplification of this notion can be observed in the higher crime rates prevalent in socioeconomically disadvantaged strata within society. This phenomenon can be attributed to the disruptive influence of economic disparities, ultimately culminating in the manifestation of crime.

Ultimately, while these approaches provide explanations for crime, none of them can singularly encompass crime within a unified definition. This is inherent in the nature of crime, which is a complex phenomenon requiring comprehensive

examination from multiple angles. Which definition can adequately capture crime in its entirety? The most insightful answer is presented by Karl Menninger in his book “The Vital Balance.” Menninger’s concept of the “Biopsychosocial Holistic Approach” enables us to perceive and define crime in an integrated manner. This approach allows for a multidimensional and multi-institutional analysis of both the criminal act and the offender, while also facilitating a comprehensive understanding of the holistic repercussions. By adopting this holistic perspective, we can delve into the intricate layers of crime and gain a more nuanced comprehension of its multifaceted nature.

In contemporary society, there is an observable trend toward an increase in the prevalence and individualization of criminal behavior. This shift in perspective is rooted in the growing acceptance of the notion that individuals possess an inherent inclination toward criminality across various circumstances. The individualization of criminal acts prompts individuals to exert additional efforts in order to construct personalized justifications for their offenses. Within this context, professionals working in the field of forensic sciences bear a significant responsibility. To enhance the objectivity of their duties and assessments, it becomes essential for multiple professionals within the same domain to engage in concurrent evaluations. This approach minimizes the margin for error, thereby ensuring that the rights of both the offender are safeguarded and any attempts at deceptive manipulation are thwarted. It is important to emphasize that the objective is not to impede the exercise of legal rights by the perpetrator but rather to elucidate the underlying reasons and motivations behind the commission of the crime.

The identification of attributes that contribute to and precipitate criminal behavior remains a subject of ongoing discourse. Matters of contention include the accuracy of ascertaining these attributes through appropriate methodologies and the generalizability of their findings. Consensus has not yet been reached on these issues. Following the assessment of individuals who have engaged in criminal acts using psychological measurement tools, certain shared characteristics have been observed, including:

- A distinct propensity toward novelty-seeking behavior.
- A notable absence of concern for the well-being of others.
- A relatively low expectancy of reward in relation to their attitudes and behaviors.

While these traits may align with those already delineated for antisocial personality disorder, a direct causal link cannot be unequivocally established solely through the utilization of scientific methodologies. Due to methodological limitations inherent in many studies, the findings may not consistently provide conclusive evidence regarding the actual existence of a genuine problem.

Consequently, premature and unwarranted generalizations may arise. Although acknowledging their limitations, numerous studies or investigations tend to support the debated biases concerning the relationship between crime and Antisocial Personality Disorder. However, considering crime theories that contend the necessity of relating criminal behavior to other constructs, it exceeds the intended scope to assert that criminal acts are exclusively driven by personality disorders. It is essential to recognize crime as a multifaceted phenomenon that extends beyond the confines of individualistic explanations.

3. The relationship between social and environmental risk factors and crime

The causes and emergence of crime are intricate subjects, wherein an individual's social milieu assumes a pivotal role. Studies reveal that individuals inclined toward criminal behavior tend to reside in low socioeconomic strata, encounter familial issues, and associate themselves with peer groups that foster delinquency. The impact of the social environment on crime emanates from the amalgamation of several factors affecting an individual's personality development, values, attitudes, and social norms.

The theory of social disorganization emerges as a causal factor explaining the relationship between the social environment and crime [4]. According to this perspective, neighborhoods characterized by disorder, wherein homelessness, disadvantaged groups, and increased racial diversity coexist, engender deteriorating living conditions for individuals, leading to diminished social cohesion and weakened social control. Furthermore, frequent instances of relocation and migration are also regarded as risk factors for crime [5].

The residential neighborhood and environmental factors exert influence on the risks associated with crime. Individuals residing in neighborhoods marked by infamy, high crime rates, or limited access to social services may exhibit a proclivity toward criminal conduct. Factors such as neighborhood security measures, availability of social services, and community support can prove efficacious in tackling crime.

Research indicates that increasing crime rates are generally more prevalent in disadvantaged and low-income neighborhoods. Such neighborhoods often exhibit signs of social disorder and low collective efficacy. For instance, factors such as the absence of strong social bonds among individuals, weak neighborhood relationships, and a lack of effective control mechanisms for sustaining common societal goals can contribute to an increase in crime rates [6].

Social disorder is associated with the conformity of society to norms and values and the weakening of social control. Factors such as economic problems, unemployment, low educational levels, and limitations in accessing social services can influence the formation of social disorder in disadvantaged neighborhoods. In such neighborhoods, the lack of effective collective mechanisms to address the needs and problems of the community can contribute to the spread and perpetuation of crime. It has been observed that these deficiencies and areas of intensified crime are predominantly micro-level geographical locations, namely streets [7]. Neighborhood crime is believed to be an ecological stressor that can lead to behavioral avoidance [8]. Neighborhood crime can be perceived as a threat and a source of anxiety that affects people's daily activities. This situation can lead individuals to avoid walking in the streets or participating in social activities. People living in unsafe neighborhoods may experience a constant stress response due to the risk of crime. Furthermore, a meta-analysis study has shown that individuals' mental health is directly affected by high crime rates in their environment [9]. This stress response and mental health issues can manifest in symptoms such as hypervigilance, restlessness, fear, and worry. People may seek protection against crime and prefer to confine themselves to their homes to ensure their safety. Consequently, neighborhood crime can lead individuals to refrain from participating in social activities and engage in behavioral avoidance. Additionally, neighborhood crime can also result in a decrease in social and physical activities. People may avoid going to parks, sports fields, community centers, or other

public spaces. This can reduce individuals' social interaction and societal engagement. Avoidance of being active can narrow individuals' social networks, leave them devoid of community support, and lead to isolation. This process can perpetuate a cycle of crime. In neighborhoods with high crime rates, individuals' preference for behavioral avoidance and social isolation can weaken community solidarity and control mechanisms. This can further contribute to an increase in crime rates and the spread of insecurity. It is plausible that neighborhood crime, as an ecological stress factor, leads to behavioral avoidance and a decrease in participation in social activities. People living in unsafe neighborhoods may refrain from being active and experience social isolation due to the threat and anxiety caused by crime. This situation can weaken community solidarity and control mechanisms, thereby contributing to an increase in crime rates.

On the contrary, social cohesion is intricately linked to neighborly collaboration, solidarity, and the presence of social control mechanisms. Strong bonds among neighbors can serve as a potent instrument for attaining collective objectives, conforming to norms, and deterring criminal activities. Proficient inter-neighbor social cohesion holds the potential to curtail crime rates within residential enclaves. Consequently, collaborative endeavors, the establishment of communal objectives, the implementation of security measures, and the cultivation of a positive social milieu stand to contribute significantly to the mitigation of criminality.

Studies have investigated the nexus between the built environment, urban planning, societal well-being, and crime, particularly within the realm of physical conditions [10, 11]. The presence of green spaces in residential and neighborhood settings not only fosters conducive physical environments that facilitate social interaction and sociability but also serves as reparative, invigorating, and tranquil surroundings on an individual level [12–14]. In their study, Ambrey and Shahni (2017) observed a positive association between the availability of green spaces in the surrounding environment and community well-being, whereas they identified a negative association between community well-being and neighborhood crime rates [15]. Furthermore, their findings suggested that the relationship between green spaces and well-being could be influenced by local crime rates. Hence, it would be erroneous to assert that crime rates do not diminish the favorable psychological impacts engendered by green spaces in this particular context.

Both the educational level and economic status of both individuals and the living environment are crucial factors in the influence of the social environment on crime. A low level of education, unemployment, and insufficient economic resources contribute to an elevated risk of engaging in criminal activities. Conversely, a socially cohesive environment characterized by higher education levels and economic prosperity can mitigate the inclination toward criminal behavior by expanding individuals' alternatives and future prospects.

In conclusion, the escalation of crime rates is observed to be more prevalent within disadvantaged and low-income neighborhoods, as well as areas characterized by social disarray and limited collective efficacy. This phenomenon is intricately linked to factors encompassing economic hardships, constraints in accessing social services, indistinct societal objectives, and deficiencies in social control. Neighborhood crime, in view of its multidimensional nature and ramifications on societal well-being, presents itself as a pertinent public health concern [16]. Establishing social harmony, fortifying neighborly relations, and harnessing the effective utilization of social control mechanisms hold potential for ameliorating crime rates.

4. Family and crime

The family represents the closest and most influential social sphere wherein individuals forge their primary relationships and experience profound effects. As the individual's initial social context, the family exerts a significant influence on the propensity to engage in criminal conduct. Empirical investigations have consistently demonstrated that intrafamilial abuse, neglect, suboptimal parenting attitudes, and domestic violence contribute to an elevated risk of criminal involvement. Moreover, it has been duly noted that individuals predisposed to criminality often originate from socioeconomically disadvantaged backgrounds characterized by limited financial resources, unemployment, and educational deficiencies. Conversely, the presence of robust familial dynamics, encompassing healthy communication patterns, an affectionate milieu, consistent disciplinary practices, and supportive interfamily relationships, serves to attenuate the proclivity for criminal behavior. Additionally, the existence of psychopathological disturbances within parental figures has been duly acknowledged as a salient risk factor pertaining to the perpetration of unlawful acts by juveniles.

4.1 Intrafamilial abuse and neglect

Intrafamilial abuse and neglect refer to situations where individuals, be they children or adults, experience physical, emotional, or sexual harm at the hands of family members, or their basic needs are inadequately met. These forms of maltreatment can have long-lasting effects. In this regard, intrafamilial abuse and neglect are significant factors that contribute to an individual's inclination toward criminal behavior. Experiences of physical, sexual, or emotional abuse during childhood, coupled with instances of neglect, emotional deprivation, and unmet basic needs, can trigger a propensity for criminal conduct. Such adverse experiences may impede the individual's ability to cope with problems such as low self-esteem, anger, and aggression, thus increasing their susceptibility to engaging in criminal activities. Furthermore, a history of violence within the family is a notable social factor involved in the development of criminal behavior [17]. Bandura's theory on the association between modeling violent behavior and aggression suggests that the presence of violent behavioral attitudes, particularly within the family, heightens the likelihood of individuals exhibiting aggressive behaviors toward all sectors of society in their later years. This is because Bandura posits that aggression is a learned behavior, and he has empirically substantiated this notion through a variety of experimental studies [18]. The impact of intrafamilial abuse and neglect on criminality can be shaped by various influencing factors. For instance, the duration, intensity, and frequency of abuse or neglect are significant considerations. Additionally, factors such as the environment in which the abuse or neglect occurs, socioeconomic status, parental attitudes, and intrafamilial communication can also exert an influence. To comprehend the relationship between intrafamilial abuse, neglect, and criminality, it is crucial to consider these factors.

4.2 Parental attitude and discipline

Parental attitudes and disciplinary practices significantly shape a child's behavioral development and have implications for their inclination toward criminal tendencies. An affectionate, supportive, and warm parental attitude fosters the satisfaction of a child's emotional needs, mitigates the emergence of destructive behaviors during

adulthood, and facilitates healthy socialization processes [19]. Conversely, an excessively strict, authoritarian, and discipline-oriented parenting style can contribute to a child's susceptibility to engage in delinquent activities. Such a parenting approach may engender feelings of diminished self-worth, impair social adaptive skills, and internalize deviant values.

One perspective accounting for the association between parenting attitude and criminal and aggressive behaviors pertains to the insufficiency of deterrent reactions exhibited by the family toward the child's inappropriate conduct. In the absence of appropriate inhibitory responses from parents or a lack of consistency in the inhibitory reactions displayed by parents towards repetitive aggressive behaviors, the manifestation of adverse behaviors escalates and may become ingrained as habitual behavioral patterns [20]. Another explanation is grounded in attachment theory, which posits that the establishment of a secure attachment bond during the parent-child relationship in early childhood fosters the development of effective problem-solving skills and reduces the likelihood of experiencing behavioral problems in adulthood [21].

Children and adolescents exhibit delinquent behaviors that primarily originate from their upbringing in the family environment and are subsequently influenced by both their immediate surroundings and interactions with peers. Social learning theory postulates that delinquent behaviors emerge through learning acquired within social groups. Moreover, inadequate parental reactions and attitudes towards children's negative and maladaptive behaviors can manifest as a deficiency in self-control during their adulthood [22]. Furthermore, individuals who experience harsh and violent reactions from their families during early childhood tend to replicate these behaviors in similar ways in their later interactions with others.

4.3 Family values and social norms

The family serves as an environment where individuals acquire values and social norms. Family values shape the understanding of right and wrong and influence adherence to accepted social norms, thus being considered a fundamental factor influencing personality development. While family values represent the beliefs, values, and attitudes learned within the family context, social norms represent the behavior rules accepted and expected by society. Positive family values, such as ethical conduct, sense of responsibility, and empathy, can have a mitigating effect on the inclination toward criminal behavior. Additionally, the adoption of values within the family environment, such as healthy communication, love, and support, can contribute to deterring children from engaging in delinquency. Social norms, on the other hand, represent the behavior rules established and accepted by society to maintain social order and promote harmonious coexistence among individuals. Crime arises from the violation of societal norms. The condemnation and punishment of crime by society demonstrate the deterrent effect of social norms on criminal behavior. If society tolerates behaviors inclined toward criminality as norms, families may tend to conform to these norms and teach their children to embrace criminal actions. Furthermore, negative family values that normalize violence, aim for unjust gains, or encourage antisocial behaviors can contribute to individuals' propensity for criminality. The relationship between these two concepts and crime is further elucidated within the frameworks of social learning theory and social control theory. Social learning theory asserts that children's adoption of values learned from their families can either draw them closer to or distance them from criminal behavior. Social control theory, on the other hand, suggests that individuals' inclination toward crime varies according to their adherence to social norms and values [23].

4.4 Family structure

Family structure refers to the characteristics, organization, and interactions within the familial environment where individuals reside. It can exert an influence on the propensity for criminal behavior. Understanding the impact of family structure on criminal inclination is of paramount importance for crime prevention and the establishment of a safer societal milieu. Empirical evidence suggests that single-parent households, divorced families, or pervasive intrafamilial conflicts contribute to an increased likelihood of criminal tendencies [24]. Such family structures may also be associated with adverse socioeconomic conditions, thereby restricting a child's access to a supportive social network. Furthermore, when parents exhibit low levels of attentiveness and communication toward their children due to interparental conflicts, it can augment an individual's inclination toward engaging in criminal activities [25]. The process of parental separation and divorce generates stressors for both mothers and fathers, which, in conjunction with ensuing mental health problems, impairs the quality of parent-child communication. Consequently, children may experience emotional and behavioral difficulties [26].

One other crucial point addressed by studies examining the relationship between family structures and crime is the notion of extended family structure. The extended family structure signifies a setting in which a child is raised amidst numerous relatives and across multiple generations. This family arrangement can engender distinct experiences for children in terms of social support, role modeling, and intrafamilial dynamics. Consequently, children may benefit from an expanded social support network and the presence of diverse role models within their upbringing milieu. These factors have the potential to shape a child's social competencies, behaviors, and values. Children who grow up in an extended family structure may draw advantages from elements such as the reinforcement of familial bonds, the establishment of social support networks, and the existence of positive role models. Such circumstances can exert a mitigating influence on the propensity for criminality. However, the impact of an extended family structure on a child's inclination toward criminal behavior exhibits a complex relationship. The efficacy of this type of family structure in diminishing a child's proclivity for crime is contingent upon factors including the quality of intrafamilial communication, the extent of familial conflict, and the prevalence of criminal tendencies within the family unit.

5. Friendship groups and social norms

The social environment of individuals encompasses social norms that either encourage or deter criminal behavior. Involvement in delinquent friendship groups can facilitate an individual's adoption of crime-related behaviors. Studies have shown that adolescents exhibiting antisocial behaviors tend to have a greater number of antisocial peers [27]. Individuals associated with delinquent friendship groups are prone to imitating and seeking approval for criminal behaviors. The prevalence of antisocial behaviors within friendship groups can increase an individual's propensity for engaging in criminal activities. Another judgment in this regard is that due to the perception of crime as a group activity, individuals involved in criminal and violent behaviors are inevitably connected to peer groups that exhibit similar tendencies. Furthermore, research has found evidence suggesting that peer victimization during childhood contributes to criminal behavior

in adulthood. The development of internalizing behaviors like depression and externalizing behaviors like aggression as a result of peer victimization leads to a tendency toward criminality in adulthood. The increased risk of future criminal involvement is significant for both the perpetrators and victims of bullying. Children who experience direct or indirect exposure to violence and those who exhibit repetitive aggressive behaviors and bullying are at risk of persisting in such negative behaviors in later stages of life. To address these risks, studies advocate for examining antisocial behaviors among school-aged children and developing necessary treatment and support programs for children identified as exhibiting such behaviors [28].

In the ever-evolving landscape of today's society, the pervasive presence of the internet and technological devices has become an inseparable facet of our daily lives. While this advancement has undoubtedly yielded positive implications, it has also brought forth a host of detrimental outcomes. The widespread utilization of the internet has ushered in a paradigm shift in interpersonal communication among children, transitioning from face-to-face interactions to the vast realm of the virtual world. Consequently, instances of violent behavior have also taken on a novel guise, persistently manifesting through the medium of the internet and various technological tools. The escalating migration of children's recreational activities to online platforms, coupled with the amplified reliance on technology and online systems due to prevailing pandemic circumstances, has given rise to the emergence of a nascent phenomenon known as cyberbullying. Tokunaga provides the following definition for cyberbullying: "Any conduct perpetrated by individuals or groups via electronic or digital media with the recurrent intent of transmitting hostile or aggressive messages for the purpose of inflicting harm or distress upon others" [29]. This definition underscores the absence of any discernible demarcation between traditional peer bullying and its cyber counterpart. The advent of cyberbullying has precipitated a global confrontation with the darker underbelly of the internet and technological advancements within societies at large. In this context, the prevalence and increase of violence and crime can be observed in both short and long-term processes associated with cyberbullying. Due to the difficulties in controlling online communication, its 24/7 accessibility, low emotional reactivity, continuous replicability, and high permanence, there is an increase in the risk and prevalence of violence and crime. Additionally, the challenges in controlling it make it harder to prevent recurring acts of violence and crime. Similar to traditional bullying, children who engage in cyberbullying have been found to exhibit characteristics such as low academic achievement, disregard for moral norms, low empathy, greater social isolation, inadequate parental supervision and support regarding internet usage, and other related factors [30].

6. Conclusions

Risk factors that contribute to the escalation of criminal behaviors individuals encounter throughout their lives have been the focal point of crime research in the existing literature. These studies have examined crime-related risk factors within the framework of individual, environmental, and social elements [31, 32]. The individual risk factors associated with crime can be listed as inclinations toward aggressive behaviors, low empathy abilities, attention deficits, prior criminal experiences,

antisocial attitudes and judgments, low levels of cognitive functioning, weak social adaptability, high impulsivity levels, and low self-control and alcohol/substance abuse [33–35]. The research conducted has integrated crime-related social risk factors under the umbrella of an individual's interaction with their family, school environment, peers, and other social contexts [36, 37]. Lastly, environmental risk factors can be explained by variables such as residing in criminogenic neighborhoods, living in deprived and unfavorable conditions, and associating with vulnerable groups in relation to criminal activities [38].

Numerous risk factors that are considered significant in relation to crime have been identified, and it is evident that these factors can be modified through effective interventions and preventive measures. This has the potential to prevent situations that jeopardize the well-being of individuals and society at large. Additionally, it is envisaged that such preventive efforts will contribute to the global reduction of crime and violence, which are recognized as pressing public health concerns. Consequently, a pivotal aspect of crime prevention initiatives involves elucidating the risk factors associated with criminal behavior.

Various elements, including family dynamics, peer group influences, educational factors, economic conditions, neighborhood characteristics, and societal influences, play influential roles in shaping an individual's propensity for engaging in criminal activities. However, it is important to note that an isolated examination of these risk factors may not yield comprehensive insights, and instead, a comprehensive evaluation that considers their cumulative impact would be more conducive to effective action. Extensive research conducted over the years indicates that individual risk factors alone do not exert significant independent effects on criminal behavior. Hence, understanding the interaction and synergistic effects of multiple risk factors is pivotal in enhancing the predictive capacity for criminal conduct.

In light of the foregoing, it is paramount to comprehend the role of familial, societal, and environmental contexts in order to develop efficacious strategies for crime control. Consequently, fostering a supportive, secure, and equitable social environment becomes imperative for crime prevention and the promotion of societal well-being.

Author details


Dilek Baysal^{1,2}

1 Candidate in Forensic Sciences, Ankara University Graduate School of Health Sciences, Criminalistic, Ankara, Turkey

2 Ankara University Department of Psychiatry, Ankara, Turkey

*Address all correspondence to: dtektas@ankara.edu.tr

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Adverse Childhood Experiences (ACEs) and the Link to Antisocial, Delinquent, and Criminal Behaviors

Anni Hesselink

Abstract

Adverse childhood experiences (ACEs) are negative and powerful experiences that are linked to childhood trauma and abuse that can be passed on to own children, creating a devious cycle of ACEs. ACEs affect the development of children on an individual level (i.e., antisocial personality traits and mental health issues), physical health level (i.e., general health and diabetes), family and parental level (i.e., dysfunctional households and family violence), socioeconomic level (i.e., low family income and unemployment), peer level (i.e., antisocial and delinquent peers), school level (i.e., learning problems and low school attainment), and community/neighborhood level (i.e., high-crime levels and overcrowding). Depending on the impact and the severity of the abuse experienced by children and adolescents, the inability to positively adapt, regulate emotions, steer attitudes and skills, and foster positive personal relationships may lead to maladaptive functioning, and antisocial, violent, at-risk, and criminal behaviors. This chapter outlines ACEs within the context of antisocial, delinquent behaviors, and the link to criminal involvement.

Keywords: adverse childhood experiences (ACEs), antisocial behavior, criminal behavior, protective factors, risk factors

1. Introduction

Adverse childhood experiences (ACEs) do not have a single cause, it takes on several causes and forms, as many factors contribute to ACEs, ranging from parents, family environments, personality traits, socioeconomic circumstances, the school, peers, mental health issues, physical health problems, to community/neighborhood characteristics [1–15]. The crux is ACEs facilitate, simulate, and play significant roles in the maltreatment and trauma of ACEs' victims' lives [3, 4, 7, 10, 12, 16, 17]. Interestingly, research conducted by Zhu, Zhang, and Anme [14] found that intergenerational transmission of ACEs, focusing on maternal ACEs, has (a) a direct effect on the mother's parenting ability (or disability), (b) is recognized by dysfunctional and fragile family lives, (c) ACEs have a strong connection to the mother's offspring's (i.e., children's)

behavioral challenges and problems, such as aggression, anxiety, and depression), (d) seriously affect the children's brain development, emotional regulation, and sense of compassion, and (e) ACEs hinder the children's psychosocial functioning with regards to insecure and poor attachments with parents, significant others, problematic romantic relationships, and displaying traits, such as unreliability and untrustworthiness.

Existing research [5, 7, 10, 11, 18] indicates a direct link to ACE victimization (i.e., childhood maltreatment and trauma) [3, 8, 11, 13, 17] and serious, violent, and chronic delinquency [5, 7, 12]. It is also common to find that ACEs are general occurrences among many children, youth, adults, and older male and female offenders [5, 8, 10, 11]. In addition, many victims of ACEs use antisocial and negative coping mechanisms (i.e., substance abuse and gang involvement) [11, 19], acting out (i.e., aggression and suicidal ideation) [1, 2, 14], and delinquent behaviors (i.e., fighting and criminality) [2, 10, 11, 12].

Victims of childhood abuse are at risk for an array of adverse short-term (i.e., physical injuries) [8, 16, 17] and long-term (i.e., mental health issues) [1, 8, 9, 14, 19, 17] outcomes, that might influence the victims' health and well-being later in life [3, 8, 14, 17]. ACEs can have life-changing effects on victims, as indicated by the following research initiatives [1–8, 14, 16–19]:

Antisocial behaviors (i.e., risk-taking and challenging behaviors, such as dangerous driving and substance use/abuse) [13, 19].

Increased aggression and violent behavior [1, 2, 13, 18].

School problems (i.e., absenteeism and low academic achievements) [1, 2, 13, 17, 18].

Peer problems (i.e., antisocial, and negative peer associations) [7, 13, 18].

Contact with social work and/or social work interventions are linked to ACEs and trauma [1, 4].

Being placed in foster care, or at out-of-home care facilities due to dire and dysfunctional home environments are linked to ACEs [1, 4, 13, 14].

Developmental processes (i.e., cognitive ability, cognitive processes, social cognition, perception processes, and interpretation ability) [1, 3, 6, 14, 17].

Education needs and problems (i.e., attention and concentration problems and low school commitment) [1, 4, 20].

Physical health (i.e., chronic health issues such as headaches, fatigue, and physical inactivity) [4, 8, 16].

Personal issues regarding ACEs victims include a sense of self and identity; attachment issues; adaptation problems; feelings of hopelessness, helplessness, and rejection; abandonment; high levels of self-criticism; low self-control; low self-worth; low self-esteem; and a skewed sense of belonging) [1, 3, 6, 7, 11, 13, 14, 17].

Mental health problems (i.e., anxiety, depression, emotional regulation problems, and suicidal ideation and attempts) [2–4, 8, 14].

Future involvement in the criminal justice system/involvement in crime [1, 4, 6, 7, 8, 11, 12].

When more than one (cumulative or compounded) ACEs are experienced, toxic stress (related to prolonged ACEs and the body and the brain's stress responses) may impact the child/adolescent's ability to develop and function completely [8, 21]. ACEs correlate with various negative outcomes, such as alcoholism, smoking, obesity, mental illness, depression, risky sexual behavior, adolescent pregnancy, homelessness, suicidal behavior, delinquent behavior, and a youth's likeliness of serious, violent, and chronic delinquency and criminality [11, 22]. Recurrent exposure to ACEs may enhance the risk of delinquent outcomes and the internalizing of behaviors (i.e., anger and depression) during adolescence [5, 21].

Sadly, and in contrast, research [1, 9, 12, 13, 18] illustrates that children need a family environment characterized by caring, nurturing, loving, stable, and supportive parent/caregiver-child relationships. In addition, parents should be involved in their children's lives, and monitor and supervise their children [7, 11–13]. At the same time, Ward [12] and Huijsman et al. [6] summarized that the family is the most significant socializing environment for a child where conventional norms, values, self-regulation, self-control, feelings of guilt, remorse, responsibility, and prosocial socializing practices are learned.

2. Defining adverse childhood experiences (ACEs)

Adverse Childhood Experiences (ACEs) are direct or indirect adverse, negative, stressful, and traumatic incidents during childhood and adolescence with detrimental effects during life [7, 22–25]. ACEs encompass different forms of child abuse (i.e., physical, psychological, sexual abuse, and neglect), household dysfunction, and household instability (i.e., exposure to intimate partner violence, family/parental toxic stress, trauma, parental criminality, mental health issues, violence, divorce, family substance use, and familial imprisonment) [4, 22–25]. Research [1, 6, 8, 10, 11, 14, 18] furthermore recaps that childhood maltreatment and trauma are related to the abandonment and rejection of children (by the parents), uninvolved parents, parental substance abuse, domestic violence, parental separation or divorce, parental ACEs, anxiety, depression, mental illness, and suicidal behaviors. The ACEs recoil and have a direct impact on the child's development [14, 17], identity and sense of self [3, 8], and functioning [1, 3, 8, 14, 17].

Perez, Jennings, and Baglivio [11] developed an Adverse Childhood Experiences Score to measure ACEs related to the presence or the absence of emotional abuse, physical abuse, sexual abuse, emotional neglect, physical neglect, witnessing household violence, household substance abuse, household mental illness, and household member imprisonment.

Wang [25] concludes that ACEs are toxic stimuli that may enhance different negative coping strategies for boys (i.e., emotions linked to crime, such as anger and frustration) and girls (i.e., internalized responses, such as anxiety, depression, substance abuse, and self-destructive behaviors).

3. ACEs during childhood and adolescence

ACEs are divided into individual, parental/family, socioeconomic, school, peers, physical health, mental health, and community/neighborhood factors.

3.1 Individual factors

Child abuse is a common denominator identified in research as the main factor linked to ACEs [11–14, 16, 18, 24, 26]. Well-known ACEs include physical abuse [11, 26], emotional and psychological abuse [11, 26], sexual abuse [11, 17, 26], abandonment and neglect [24, 26, 27, 28], and unplanned teenage or adolescent pregnancies [27, 29].

Other individual ACEs involve a lack of self-control [7, 30], delinquent attitudes [7], tolerant views about delinquency [7], impulsivity [11, 30], poor social skills [28], early onset of dating and engaging in risky sexual behaviors and promiscuity [15, 17, 24, 28, 30, 31], social isolation [15], and difficulty to form and maintain relationships [21].

3.2 Parental/family factors

A confluence of parental and family factors are linked to ACEs, namely inadequate parenting ability [7, 26, 31], poor parenting attitudes [7, 26], previous records of child abuse [26], a dysfunctional home environment [11, 28], domestic violence at home [11, 24, 26, 28, 31], substance abuse at home [11, 13, 24, 26, 28, 30], poor parental supervision [7, 13, 30], and parent interpersonal skills deficits [13, 26].

Other factors that might play a role in ACEs include parental employment problems [13, 26, 31], parental stress [26], parent self-esteem deficits [26], parent experienced abuse as a child [26], poor parental psychological adjustment [26], unreliable parents [26], parental/sibling substance (drugs and alcohol) abuse [11, 13, 26, 29], poor parent–child attachments/bonds [13, 26, 28, 31], and uninvolved parents [7, 13, 26]. Further to this, parental (or sibling) psychological or psychiatric treatment history [26], parents who are unresponsive to the child's needs, safety, and security [26], family poverty [13, 24, 26, 31], multigenerational poverty [24], and inadequate access to social support [26] have been listed as significant parental or family factors that may enhance exposure to ACEs.

Along with the aforementioned factors, other ACEs factors that children are exposed to incorporate the instability of the family [26], family history of prior interventions for child abuse [13, 26], family murder and suicide [24], parental separation/divorce/single parent households [12–14, 31], and parental/siblings/family imprisonment [11, 13, 24]. Lastly, exposure to overcrowded households [7, 13, 24], frequently moving [24], homelessness [13, 21, 24], food insecurity [24], parental/sibling mental health issues (i.e., depression and personality disorders) [13, 29], and an absent father figure [13, 29] might intensify children's vulnerability to ACEs.

Research [1, 7, 11, 13, 18, 31] explains that inadequate, abusive, and uninvolved parents and dysfunctional families are prominent risk factors for children's exposure to child maltreatment, trauma, and ACEs. In this respect, exposure to ACEs often determines victims' involvement in antisocial (i.e., aggression and gang involvement), delinquent (i.e., running away and truancy), and violent and criminal behaviors [1, 7, 11, 13, 14]. This explains why child victims of ACEs often model, imitate, and role-play the ACEs that they have endured as children. Thus, some victims of ACEs imitate and display the learned behavior from intimate and significant others (i.e., parents and family members), initiating the cycle of ACEs, and transferring the exposure and behaviors learned from their parents and family to their own lives [7, 10, 12, 13, 18].

3.3 Out-of-home care/placement

Children placed in out-of-home care (OOHC) are a marginalized and vulnerable population known to have suffered severe ACEs at home, with often, ongoing trauma and suffering at OOHC facilities [32, 33]. Commonly, children placed in OOHC are at risk of harm (i.e., abandonment and neglect) or have suffered actual harm (i.e., physical, sexual, emotional, and psychological abuse) in their home environments [17, 26, 32, 33].

According to McGrath, Gerard, and Colvin [33], OOHC children are over-represented in the criminal justice system (i.e., arrests, court contacts, and restorative justice initiatives [diversion] and incarceration). The contact with the criminal justice system is directly linked to the children's history of trauma, abuse, abandonment, and neglect [33]. Furthermore, the care environment at the OOHC facilities is perceived

as criminogenic because of the stigmatization (labeling) endured by the children in care, the criminalization of the environment, and the behavioral management techniques (linked to discipline and punishment styles) applied to the children [33].

OOHC children are often placed in an adverse OOHC facility characterized by placement instability (i.e., different placements) and disrupted education, which in turn exacerbates the child's trauma, feelings of abandonment, hopelessness, helplessness, and social isolation. These ongoing adverse experiences have a detrimental effect on the child's self-esteem, sense of self-worth, sense of belonging, identity, social relationships, physical health, psychological well-being, and mental health [32, 33]. The cycle of trauma, abuse, and subjection to ACEs continues with children placed at OOHC facilities.

In this regard, research [32] confirms that OOHC children display more violent, aggressive, and antisocial behaviors (i.e., hostility, anger, rage, and engagements in assault), obtain limited educational attainment, psychiatric and psychological disorders (i.e., anxiety disorders, depression, eating disorders, posttraumatic stress disorder [PTSD], poor self-esteem, and helplessness), physical injuries, engage in substance abuse, and are more susceptible to negative and criminal peer influence. These children are also more prone to be arrested for violent crimes [32, 34].

3.4 School factors

Children with toxic stress (i.e., extreme poverty and household dysfunction) struggle to concentrate, learn, concentrate, and complete schooling [24]. Research [35] demonstrates that children with three or more ACEs are five times more prone to experience school attendance problems, six times more inclined to display behavioral problems (i.e., disruptive behavior), and three times more to be expected to encounter academic failure. In addition, one in six schoolchildren attends school with four or more compounded (accumulated) ACEs [21]. ACEs generate stress which creates pressure on the brain that may result in learning problems [21]. Furthermore, children who experienced ACEs may display somatic symptoms at school such as clinging behavior, headaches, and stomach aches [21].

3.5 Peer associations

Children and adolescents who experienced ACEs often have aggressive and delinquent friends and spent time in criminogenic situations [7, 24]. Adolescents with delinquent peers are more inclined to display delinquent attitudes and to search for situations and opportunities to take part in delinquency [24]. Factors related to antisocial, negative, and criminal peers include gang involvement, truancy, acts of vandalism, substance abuse, antisocial values, and criminal thinking styles [7, 13, 18].

3.6 Socioeconomic challenges

Research [13, 24, 26, 28, 29] links ACEs and socioeconomic challenges to low parental education, unemployment, low family income, poor employability probabilities, and restricted economic opportunities. Aside from this, the following socioeconomic factors are often overlooked and/or not considered with ACE victims [4, 8, 16, 17, 20]:

Medical and hospital costs for treating injuries sustained by victims of ACEs' physical abuse.

Being placed in foster care or out-of-home care facilities (removal from abusive and dysfunctional families).

Juvenile delinquency (arrest, adjudication, diversion, rehabilitation, and incarceration costs).

Involvement in delinquency and crime (i.e., running away, truancy, substance abuse, teenage pregnancies, inappropriate and deviant sexual behaviors, and oversexualized behavioral problems).

Child welfare (identification of problems, assessments, referrals, and placement of the child).

Special education costs (learning disabilities and learning problems).

Productivity costs linked to mental health issues and chronic physical health problems are known to be associated with low academic achievement, unemployment, lack of skills, and incarceration.

Criminal justice system (police, courts and the correctional environment, rehabilitation costs).

Adult homelessness (indirect costs linked to the consequences of abuse and neglect of child victims and assisting with emergency shelter).

3.7 Physical health outcomes

ACEs impact individuals' physical health by triggering a survival-mode retort that causes stress levels to escalate and ACEs raise stress hormones that weaken the immune system [11, 21]. ACEs are associated with being overweight and obese [24], and ACEs are contributors to the development of age-related diseases and general health (i.e., cancer, cardiovascular diseases, diabetes, morbidity and mortality of cancer, and respiratory diseases) [25].

3.8 Mental health issues

The negative consequences of ACEs and exposure to traumatic events incorporate a range of internalizing (i.e., depression) and externalizing (i.e., substance abuse) mental health problems [5, 17, 21]. Examples hereof include depression [11, 13, 28], depressive disorder [24], substance use disorder [11, 24, 28, 29], anxiety disorder (i.e., agoraphobia – anxiety in particular environments) [5], panic disorder (recurring panic attacks and worry about having attacks) [5], posttraumatic stress disorder [5, 13], and social phobia (strong fear in social situations) [5].

Other negative outcomes linked to ACEs and mental health issues include anger issues [11, 28, 30], low self-worth [13, 28], suicide attempts [5, 23, 24, 28], psychological distress (i.e., anxiety and sadness) [11, 13, 28], social withdrawal [11, 13, 16, 28], and eating disorders [36].

Distress experienced from traumatic events (i.e., ACEs) mentally and physically drains children and adolescents, which might lead to emotional dysregulation, impulsivity, dysfunctional information processing, inadequate empathy levels, and involvement in antisocial behavior [5]. In addition, according to Hammerton et al. [29], children with conduct problems have an increased risk of involvement in criminality, emotional disorders, not being involved in education, unemployment, and not being in training.

Research [1, 4] confirms a complex connection between ACE victims and mental illness. This complex connection is related to the abuse, neglect, trauma, harm, hardship, and adversity suffered by the victims. Additional research on the intergenerational transmission of ACEs with maternal ACEs [14] shows that exposure to early

adversity might have an enduring effect on the mental illness of the offspring of the ACEs mothers. Research [14] suggests that maternal ACEs affect anxiety, depression, emotional dysregulation, compassion, hostility, and kindness in children. Apropos of this, research [2] found a strong connection between aggression and suicidality, especially in children and adolescents with alarming rates of antisocial and violent behaviors. Aggression expressed by ACE victims is a mediator between childhood maltreatment and suicide attempts [2].

3.9 Community and neighborhood

Community and neighborhood factors linked to ACEs include being afraid of/ fear of the neighborhood, gangsterism, the incidence of nonviolent crime (including stealing from shops/stores, damaging property, stealing from a vehicle, stealing a vehicle, selling drugs, burgling, selling stolen goods, arson and stole from a person without the use of force), together with the occurrence of violent crime (i.e., assault, robbery, and armed robbery, kidnapping, murder, rape, stealing with use of force, carrying and the use of weapons for crime and for self-defense) [13, 29].

4. Antisocial and delinquent behavior

ACEs and trauma have diverse effects on children with adverse outcomes, such as addiction to substances, despair, depression, hopelessness, hostility, poor impulse control, problematic intimate relationships, social skills deficits, social isolation, and self-harm/self-destructive behaviors (i.e., overeating, suicide attempts, and ideation) [13, 23]. In addition, many children that endured ACEs are at risk for engaging in violence, early initiation of sexual activity, unprotected sex, promiscuous behavior, and suicide attempts [13, 24].

Notable antisocial behaviors that are linked to ACEs during childhood and adolescence include animal cruelty, begging, bullying, car cruising, criminal damage, cruelty to animals, deceitfulness, disobeying, fighting, gang involvement, insulting, loitering, littering, neighbor disputes, poor temperament, self-harm behaviors, reckless driving, rowdy behavior, sexual promiscuity, sport (i.e. football or rugby) disorder, stealing, heavy drinking/substance use, truancy (i.e., being absent from school without parents' knowledge or permission), vandalism, and not being involved in education [11, 13, 28, 29, 30]. Additionally, behavioral problems are also associated with norm-breaking behaviors (i.e., deviance – behaviors that violate social norms, such as disrupting a class and not saying “please” and “thank you”), violations of the rights of others (i.e., discrimination founded on disability or ethnic origin), and being noncompliant and angry [5, 29].

5. Engagement in crime and reoffending behavior

There is a strong connection between collective/compounded ACEs and children, adolescents, and youths' involvement in the criminal justice system (i.e., conflict with the law/contact with the police and arrest) and persistent offending behavior [13, 22]. Incidentally, research [23] indicates a prominent link between ACEs, antisocial behavior, involvement in violent crime, sexual offending, and domestic violence. Therefore, exposure to ACEs and trauma (compounded or a single episode) should

be perceived as high-risk preceding/at-risk factors to address and/or prevent engagements in violence and contact with the criminal justice system [13, 23].

Research [13, 22] has recognized the important influence of ACEs on certain forms of delinquent and violent behaviors such as theft, dating violence, bullying, fighting, sex offending, and gang involvement. Children who have experienced emotional, physical, and/or sexual abuse and who committed childhood animal cruelty are more likely as adults to commit crimes against humans [13, 37].

Adding to this, Heide, Solomon, Sellers, and Chan [38] found that male juvenile homicide offenders were exposed to violence at home, neighborhood violence, had significant trauma, experienced poor bonds with their parents, were cruel to animals, demonstrated deceitful behavior, engaged in fire setting, and drowned or set fire to their victims. In turn, the female juvenile homicide offenders were subjected to poor parental supervision, displayed poor anger management skills, presented unhealthy sexual experiences, engaged in truant behavior (i.e., running away), and pondered about murder [38].

The male and female homicide offenders were furthermore victims of turbulent childhood experiences, prone to be influenced by antisocial, delinquent, negative, and criminal peers, acted impulsive, and engaged in violent and aggressive behaviors [38]. Both the male and female juvenile homicide offenders exhibited a history of child abuse, came from disturbing and violent home environments (i.e., parental substance abuse and violence), were raised in poverty, experienced school problems (i.e., learning problems), internalized behaviors (i.e., anxiety, depression) and showcased a history of conflict with the law (i.e., prior charges/court contacts) [38].

6. Case study: ACEs trajectories linked to antisocial, aggressive, violent, and criminal behavior

This case demonstrates the direct link between childhood maltreatment, trauma, ACEs, and antisocial and criminal behaviors. The case study concerns a criminological needs assessment (for therapy and rehabilitation directives for correctional staff). The criminologist assists the Department of Correctional Services (DCS) with volunteer criminological needs, risk assessments, and pre-parole reports for juvenile, male, and female offenders. The academic institution and the DCS Research Committee approved using the data for research purposes (with the main research topic being ‘offender assessments’). The participant consented to the assessment and voluntarily participated in the assessments. The offender was treated with dignity and respect, and anonymity and confidentiality were ensured. That is, no data presented in this case study can be directly traced to the female’s identity or personal details. This is regardless of the details and crime-related facts presented here. A semi-structured interview schedule with predetermined themes (i.e., personal, and social background, familial factors, school, peers, influences, employment, and intimate relationships) was used to collect the data, and a thematic analysis was used to identify and organize the data. In this case, the female offender will be called “Lee-Ann” (pseudonym), “the participant”, or “the offender”.

At the time of the interviews, Lee-Ann was 28 years old, serving a 12-year sentence for assault and murder and possessing an unlicensed firearm and ammunition. Lee-Ann completed Grade 8 and dropped out of school during Grade 9. When asked about her childhood years, Lee-Ann described them as “very rough, cruel, messed-up,

and screwed up.” I grew up with my maternal grandmother and saw my mother twice a year. I only met my sisters when I was 17 years old. They grew up in their fathers’ families. There was no contact between my mother and father, and to this day, I have not met my father.” Lee-Ann was asked to describe her upbringing with her maternal grandmother. In this regard, she cited, “My grandmother was very strict, a hard woman, no love, and no fun. Since I was small – about 4 or 5 years old – I had to help clean the house, wash the dishes while standing on a bucket, wash the floors, and do the washing.” My grandmother said, “Nothing is free here. You work for your food and bed”. According to the offender, her grandmother meted out harsh discipline where she (Lee-Ann) was regularly beaten with a belt, slapped around, scolded, and sworn at, being called “a nothing, being useless, and a whore like your mother”, Lee-Ann was often hit by hand, and, at times, sent to bed without food as punishment. As a result of the offender’s challenging house environment, she struggled at school and failed Grade 3 and Grade 5. Lee-Ann says she was teased and bullied for failing her grades. She stated, “Three girls cornered me, called me ugly, dumb, and that I look like a whore”. A physical fight ensued between Lee-Ann and one of the girls, and two teachers had to break up the fight. Lee-Ann stated that when she arrived home, that “my grandmother had beaten me so badly, I could not sleep that night; my whole body was aching”.

In secondary school, Lee-Ann was bullied and stigmatized for failing her grades in primary school. During her one year at the secondary school, the offender was ostracized and called “awkward” (for not wearing the correct clothes). This victimization resulted in Lee-Ann “hiding in the toilet during school breaks to avoid more abuse and conflict”. The second physical fight occurred in Grade 9 when Lee-Ann befriended a Grade 11 schoolboy. “He was ‘the man’ at school, a gang leader ... and handsome”. Due to the offender’s new-found friendship with this boy, a Grade 11 girl assaulted (physically abused) Lee-Ann and accused her of stealing her boyfriend. After this incident, Lee-Ann dropped out of school (during Grade 9), ran away from home, and joined the Grade 11 schoolboy’s gang. After enduring all of this, Lee-Ann confesses “From about 11 years old, many times I wanted to kill myself ... setting me alight within the house or stabbing me with a knife”.

Four gang members (boys aged between 13 and 17 years) were also school drop-outs and ran away from their homes. These boys resided in an abandoned and decapitated house – “the gang’s place where we met, socialized and held parties ... used and sold drugs”. Lee-Ann said “I started using drugs (marijuana, methamphetamine, and hallucinogens) in Grade 8 (at 14 years) “to ease the pain, it was nice ... I felt that I fit in, was not judged, loved ... wanted, and appreciated. It made me forget about my mother, father, grandmother, the abuse, and my horrible school days”. During this time, Lee-Ann confirmed “I slept (sexually engaged) with four or five of the guys ... I think. I had two abortions – the guys took me to this old woman who used to be a nurse, she helped me. With the first one (abortion) I was 15 years old, then again when I was 17 years old”.

“Our gang concentrated on theft, robbery, armed robbery, drug dealing, and kidnapping (for a ransom). I was involved in all of them ... I started with theft and then joined the others. My trouble started when an armed robbery in a club’s parking lot went wrong. I was defending myself against two men – they were about three times my size. They were so strong and violent, the one guy picked me up and threw me on a car’s windscreen, the other one hit me with his fists, and he kicked me. Three of our (gang) guys were also badly beaten. When I got up, I grabbed the gun from the car, and I shot the guy that threw me against the windscreen”.

In Lee-Ann's case, ACEs, such as growing up in an abusive and dysfunctional household [1, 6, 13, 14] without parents, enduring severe child maltreatment, trauma, a lack of affection, safety, security, and protection (i.e., by her mother, father, and grandmother) [3, 6, 9, 11–13] placed her at a disadvantage for a flourishing and happy childhood. Due to her dire home circumstances (i.e., abandonment, rejection, emotional and physical abuse and neglect, uninvolved and absent parents, and lack of prosocial bonds with significant others) [1, 3, 11–13], Lee-Ann was further victimized (i.e., bullying and peer rejection), at school [5, 7, 12, 19], which resulted in antisocial and deviant behaviors (i.e., suicidal ideation, substance abuse, aggression, fighting, gang involvement, and promiscuity) [1, 2, 5, 6, 8, 11–13, 19].

To evince the effect of the ACEs on Lee-Ann's life, she joined the 'cycle of antisocial, deviant, and criminal behavior' [4, 5, 13] by committing severe violent crimes which can directly be traced to her childhood maltreatment, abuse, abandonment, and other ACEs [4, 7, 11, 13]. Lee-Ann learned through exposure to ACEs and other associations (i.e., delinquent, negative, and criminal friends) to display antisocial, delinquent, and criminal behaviors [1, 2, 4, 5].

7. Risk and protective factors

Risk factors associated with ACEs include early onset of offending behavior before age 20 [13, 23], child physical abuse [13, 30, 39], low intelligence [13, 30, 39], low school achievement [13, 30, 39], hyperactivity-impulsiveness [13, 30, 39], temperament [30, 39] and risk-taking behaviors [13, 30, 39]. In addition, family risk factors consist of poor parent–child bonds, poor parental supervision, harsh and inconsistent discipline, child physical abuse, aloof parents, child neglect, low parental involvement, parental conflict, broken families, parental criminality, delinquent siblings, the loss of a father and low parental education [13, 15, 30, 39]. Other familial risk factors entail an inadequate understanding of children's needs for development, caregivers who were abused or neglected as children, young caregivers or single parents, low income, adults with low levels of education, high levels of economic and parenting stress, parents that use physical punishment for discipline, inconsistent discipline, isolation from extended family, friends, and neighbors, exposure to conflict, negative communication styles, and accepting or adapting attitudes that justify aggression and violence [15].

Child and adolescent risk indicators involve stealing, vandalism, conflict or resistance with authority figures, drinking, physical aggression, impulsiveness, advanced sexual behavior, running away from home, truanting from school, lying, and cruelty to animals [39].

Community and neighborhood risk factors include communities characterized by high rates of violence, crime, poverty, inadequate educational and economic opportunities, high unemployment rates, easy access to alcohol and drugs, insufficient community activities for young people, unstable housing, food insecurity, and elevated levels of social and environment disorder [15].

Protective factors are linked to desistance from crime, and these factors can assist children, adolescents, and youths to acquire resilience to overcome the consequences of ACEs [23, 30]. Protective factors for criminality include resilience, noncriminal peers, commitment to school and education, a meaningful, nonabusive, nonviolent, non-criminal, and a supportive family that serves as a buffer against antisocial and delinquent behaviors and criminality. An ordered and inspiring neighborhood will diminish

the impact of ACEs on delinquency and involvement in crime [22]. Other factors that enable desistance from crime involve parental supervision and monitoring, involved parents, stable employment, self-control, getting married, a satisfying job, joining the military, moving to a better area, and converting to religion [7, 13, 15, 23, 30].

Lastly, protective community and neighborhood factors include where families have access to economic and financial help, medical and mental health services, safe childcare, good-quality preschool, and communities where violence is not promoted or tolerated [22].

8. Conclusion

This chapter highlighted ACEs in many forms and on different levels. The most common form of ACEs is on an individual level and concerns child abuse (emotional, physical, sexual abuse, and neglect). Parental involvement, monitoring, supervision, household violence, poverty, unemployment, substance abuse, incarceration, and mental health issues are breeding grounds for children, toxic stress, and prolonged ACEs. Children placed in out-of-home facilities are jeopardized by further vulnerability, abuse, isolation, and instability, exacerbating this marginalized population's ACEs.

School factors associated with ACEs include poor school attendance, learning problems, and academic failure, while negative and criminal peer associations are well-established as an outcome of ACEs. On a socioeconomic level, low parental education, low family income, and limited economic and employment opportunities place children further at risk for ACEs. Other negative consequences related to ACEs are physical health problems such as obesity, diabetes, and cancer and mental health issues such as anxiety, eating, depression, panic disorder and substance use disorders, and suicidal behaviors. Finally, community and neighborhood factors associated with ACEs involve attitudes tolerant of violence, substance abuse, crime, and disorder.

Antisocial and delinquent behaviors such as aggression, cruelty to animals, promiscuity, substance use, fighting, and continuous disorderly behavior are linked to pathways to crime. In addition, various risk factors were identified to address and curb ACEs. Lastly, desistance to crime and recidivism are directly linked to protective factors such as a nurturing, caring, loving, nonviolent, supportive home environment.

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Author details

Anni Hesselink

Department of Criminology and Criminal Justice, School of Social Science, Faculty of Humanities and Social Sciences, University of Limpopo, South Africa

*Address all correspondence to: ann-mari.hesselink@ul.ac.za

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Section 3

Contemporary Applications

Perspective Chapter: Crime Scene Investigation in Criminal Behavior Cases – Forensic Biology, Forensic Entomology and Forensic Entomotoxicology

Ali Açikgöz and Halide Nihal Açikgöz

Abstract

Branches of forensic science are used to determine the samples used in solving suspicious death cases and the criminal behavior of the suspect. Forensic biology, forensic entomology, and forensic entomotoxicology are just three of them exterior surfaces of cars, are of interest to forensic biology. Forensic entomology is an interdisciplinary science that contributes to the solution of forensic cases by examining the life cycles and successions of arthropods on corpses. The first question that forensic entomology seeks to answer is when the person died. Clarifying the questions of how and where the person was killed will shed light on forensic investigations. The field of forensic entomotoxicology is to determine the alcohol, narcotic substances, and poisons used by the person before his death by toxicological analysis of arthropods fed on corpses. In this section, the journey of the samples collected from the crime scene to the laboratory in the fields of forensic biology, forensic entomology, and forensic entomotoxicology will be followed.

Keywords: blood stains, DNA, forensic biology, forensic entomology, forensic entomotoxicology

1. Introduction

In this chapter, crime scene investigation in the field of forensic biology, forensic entomology, and forensic entomotoxicology will be mentioned.

Forensic biology is a science field that has support to the forensic system by investigation of body liquids such as blood, semen, saliva, feces, urine, buccal swap, and vaginal swap. DNA exists in every body cell, and therefore, DNA is available on each biological material where the crime scene [1]. Collecting and sending every sample that can contain DNA material is important for forensic biologists to solving crimes.

1.1 Crime scene investigation in forensic biology

The first step of resolution of subjects including crime behavior is crime scene investigation. We can understand that the crime scene investigation is not only the first step of resolution of crime but also the key point of it from “Every Contact Leaves a Trace” sentence is expressed by Edmond Locard [2, 3].

Crime scene work is a scientific work. Therefore, during education of crime scene investigation, analytical thinking, making observations, practical thinking, and quick interpretation of the data obtained trainings are also given. Biological and physical samples are collected from crime scene so that identification work can be carried out in the laboratory [4]. Collected samples are findings. Findings are considered as evidence as a result of laboratory examination. Not all findings are evidence. In suspicious deaths, investigation that will be done at the crime scene is usually once; therefore, it should be done very carefully and in the correct form. In order to understand the behavior of crime at the scene, a crime scene investigator should walk around scene and should think about the kind of case and which samples may be evidence. Once the crime scene investigators have decided what to collect and the pattern of criminal behavior that is to collect samples from crime scene easy for a crime scene investigator who has the ability to actively, fast, and practical thinking. Odors and sounds should be taken into consideration very carefully at the crime scene. Security of crime scene should be provided for both physical and biological materials and crime scene investigators. The investigator should take pictures of materials and samples being answers to the questions of 6 W (Who, What, When, Where, Why and How) and should also record on video, draw sketches, make measurements, save notes, and bring these materials and samples to the laboratory [5, 6].

1.2 Importance of taking pictures, recording videos, and documentation

Taking pictures and recording videos have a vital importance in investigation of crime scene. They are important for both documentation and preservation of physical evidence and also provide a visual representation of crime scene. Taking pictures and recording videos are creating correct and detailed record of crime scene. They protect the crime scene that is found, locations of items, and potential evidence. This documentation is used as a reference for legal processes by investigators and forensic experts. Pictures and videos keep crime scenes untouched when they need to be cleaned or changed. Investigators can then refer to the images for analysis or review.

Detailed pictures and videos help forensic experts that can analyze the crime scene more effectively. Bloodstain pattern analysis and bullet path determination reviews can be done by zooming in specific areas and by improving imagery. In addition, it helps reconstruction of the crime scene and helps understand to investigators progression of the case.

Pictures and videos are used to effective visual tools in the courtroom. They help to communicate information to the judge and other interested parties by providing a clear and unbiased representation of the crime scene. By providing visual evidence, prosecutors can effectively support their arguments and better explain the case.

Starting an investigation, to provide general view of crime scene, wide-angle shots are taken to cover the entire crime scene. Detailed shots are taken including of entrances and exits. Shots should not be taken at only the eye level. Shots should be taken from a high point to cover the entire scene.

Shots of related objects or areas are taken. Shots of evidence should be taken such as fingerprints, footprints, tool marks, or bloodstains. In order to obtain high-quality imagery, appropriate lighting and equipment should be used.

Documentation of information on date, hour, and topic of each image or video record correctly is important. Related forms should be filled to provide integrity and admissibility in court of every media files. Detailed notes or explanations should be written in forms for each image or video records.

1.3 Collecting evidence

Although some biological stains are clearly visible, some of them can be hard to see due to the color of the fabric on which they are. When these two types of stains are together, this cause cross contamination [7].

In the crime scene, there are samples belonging to both victim and suspect in the course of collecting samples. For no confusion and to prevent contamination, each sample should be put in a paper bag or envelope. Samples that belong to the victim should not come into contact with those belonging to the suspect [7].

Collected materials should be recorded on both crime scene investigation report and label on the paper bag [8]. Contamination caused by physical contact can only be prevented by using different forceps and gloves; for that reason, forceps and gloves should be changed in collection of each sample.

When findings are collected, a mask should be worn and no smoking, no snack-ing, no sneezing, and no coughing, definitely. Attention must be paid for particles that belong to us not to contaminate the crime scene. We should not let contaminated samples with us, and we need to pay attention that our personal protective equipment is solid and complete. There is always a possibility of transmission of disease-causing microorganisms from blood and other biological fluids found in the crime scene. During the collection of cutting and piercing tools that contact blood and other body fluids such as injector, needle point, knife, and pocketknife, care must be taken not to be damaged blood and other body fluids. Overshoes worn in the crime scene should be inverted and put in the paper bag, and also, it should be noted that they belong to the crime scene investigator.

In suspicious deaths, before the victim is buried, blood, hair, or tissue samples should be taken and stored so that they can be compared with claims and findings that may arise later.

If the victim or suspect has had a blood transfusion before, the laboratory that will conduct the examination should be informed. The characteristics of the blood given or transferred to the injured victim or suspect in the hospital should be requested, and this information should be given to the relevant laboratory.

In order to make a comparison between the biological samples that are collected from the crime scene and those of the victim and suspect, blood, rooted hair, head hair sample cut from the top of the head, body hair sample if the person is bald, and buccal swap should be taken from both and should be sent to the laboratory.

1.4 Importance of packaging

In packaging of biological samples, precautions should be taken in case of tearing the package and breaking the sample, which can cause liquid samples to spill and contaminate other samples. The mouth of the paper bags should be closed with their own adhesive, and metal and rustable items such as staples should not be used to close them. Unless biological samples are stored following the rules, samples may deteriorate and lose their properties. The laboratory cannot analyze the sample that escaped the attention of the crime scene investigation team and deteriorated.

Biological samples should be stored at +4°C and in a dry environment away from moisture, and they should be sent to the laboratory as soon as possible. Temperature and humidity cause mold and bacteria to grow, and DNA will deteriorate that cannot be analyzed.

Solid items such as guns, pieces of glass, and drinking cups should be transported and protected in hard protectors that will not cause the findings to be lost, broken, or scratched.

Samples containing liquid blood, body fluids, and other infectious liquids (such as alcohol, insecticide, pesticide) and sharp-pointed substances (injector and needles used, knives) contaminated with the victim or suspect should be placed in leak-proof, unbreakable, puncture-proof, and protective covers.

2. Crime scene investigation in forensic entomology

Forensic entomology is a discipline collecting insects on corpses, studying their biology, and predicting the time of death and works for forensic sciences [9–11]. Besides prediction of death time, forensic entomology helps forensic sciences and forensic system by determining the location of death according to ecological properties of insects and whether the victim takes a narcotic or poison [12]. Although collection of insects from the crime scene is long and troublesome, it should be done definitely.

When samples are collected, temperature data of the environment and the corpse should be recorded without wasting time.

2.1 Collection of entomological specimens from crime scene

Upon arrival at the crime scene, the first step is to record your arrival time at the scene. The time period between the corpse was found and sample collection was started will be used by forensic entomologist when predicting the time of death.

2.2 Photo and video shooting

All samples collected from the crime scene should be documented before they are collected. If sample collection cannot be proved by documentary, originality of sample might be doubted. Crime scene is dynamic and complex. The slightest change can change the course of the event. Samples should be photographed and recorded as videos before they are touched, moved, or collected. Unless original positions of findings and environmental conditions are documented, any object should not be moved. Location and position of a sample and the relation of a sample with the crime scene and other existing objects should be noted to the crime scene protocol. In order to protect the crime scene, every activity should be documented, and documents should be kept very carefully. As samples are collected, materials that are under objects or the corpse will appear. When a crime scene investigator is discovered those, photos should be taken.

2.3 Temperature data

Temperature, moisture, and adequate food source are the most important elements affecting insect growth. Insects are poikilothermic species, and external temperatures

directly affect the rate of enzyme activities that provide growth of the body of the insect. There exist minimum and maximum temperature thresholds in order to ensure the desired reactions and expected enzyme competencies in the insect. Other temperatures except for these thresholds can cause mortal effects on growing organism. Forensic Entomologist uses temperature data for determining the age of insects [12–14].

Ambient temperature should be measured and recorded. Weather forecast and temperature data during the period from about a week before the day the body was found should be taken from the nearest meteorological station to the scene. Comprehensive weather information including hourly temperatures, humidity, precipitation, and wind speed and direction, including current and past provinces and districts, is presented at meteorology stations.

Temperature of the corpse should be measured from the liver. If the corpse is so rotten immeasurably, skin temperature should be measured.

Measuring and recording of temperature data from larval mass, which is the intensive accumulation of larvae on the corpse, are very important data source to determine postmortem interval.

Ground temperature is measured with the thermometer touching the ground. If the area is full of leaves and branches, thermometer should be located between the branches, and temperature should be measured.

The ground temperature under the corpse should be measured by a thermometer placed between the corpse and the surface of the ground. Temperature measured from over the residue when the corpse removed can be measured slightly different due to removing corpse.

Soil temperature should be measured and recorded from under the corpse, 10 and 20 centimeters from the depth and 1–3 meters away from the corpse. When measurement is made, care should be taken not to expose the thermometer to direct sunlight.

The way a human corpse or animal carcass receives sunlight during the day should be recorded using expressions such as vertical, horizontal, in the shade, and estimating its duration.

Moisture content should be measured and recorded via either moisture meter on the thermometer or moisture meter used separately (hygrometer). The cooling of the air as a result of air movements and evaporation of moisture in the air can bring the temperature of the corpse below the ambient temperature. Those data are used by forensic entomologist in the evaluation of appropriate time intervals when estimating postmortem interval.

Move slowly to avoid disturbing winged adult flies when approaching the corpse and residue in the crime scene. Observations should be made a few steps behind to detect their activities and locations of flies (Diptera) and walking insects (Coleoptera) under the corpse, next to the corpse, and on surface of the corpse. Appropriate approaching points should be determined to provide no damage to entomological specimens.

During investigation of a crime scene including entomological specimens, it is important to use the spiral (circular) method.

In spiral method, start from periphery of the corpse and move on an ever-widening spiral plane. Investigation should be done walking from the center to the edge or from the edge to the center as the starting point. It should be kept in mind that entomological samples can be spread out 5–6 meters away from the corpse. In the situations that the boundary of the crime scene has expanded, it is extremely important that no section is left uninvestigated and that no material evidence remains at

the crime scene. During the investigation, experts in the investigation team working closely with each other is very important [15].

While dissecting the corpse, especially mouth; nostrils; ear canal; eye edges and inner parts of the eyes; palms; genital apertures; folds of clothes; also, wounds, if any; the armpits; under the breasts in women; under the testicles in men; and insides of the shoes and socks should be carefully examined. Eggs and first instar larvae, which cannot be noticed at the first sight, can be seen as a result of a careful examination. Starting from the tallest, larvae and larval skins should be collected from the corpse. The larvae molt as they undergo metamorphosis. Those residues are slightly visible on the corpse, but they should be examined carefully and should be collected. Third instar larvae (L3) start migrating just before stationary period, which is the pre-pupal stage, and feeding stops. The aim of this migration is to pass the pre-pupal and pupal stages in a protected area away from outside dangers. Insects in migrate stage will hide outdoors, under the soil, between leaves and grasses, and stones under and around. At home, they will enter the pupa stage by hiding under and in the folds of carpets, sofa cushions, curtains, inside and between clothes, papers on the table, between the table and its cover, inside the air conditioner, in the ventilation holes, in front of the window, between the skirting boards.

Fly pupae are small, brown or black, and cylindrical shaped, and usually, people with insufficient experience can confuse them with plant seeds or rat droppings. While rat droppings are close to black color, small, and with an unlined structure, fly pupae have segmentation lines. The probability of unexperienced investigators missing the pupae is very high. Pupae or larvae can jam in recesses on the soles of shoes or boots.

Sample collection, photographing, and video recording should continue during the removal of the body from the crime scene to the morgue. At this time, the temperature between the corpse and the soil should be taken urgently with the help of a thermometer. During the removal of the corpse, entomological specimens will escape very quickly either into the corpse or into the soil. Therefore, they must be collected immediately. The light and temperature change because of removal of the corpse disturbs them. For this reason, the number of investigators at the crime scene should be at least two and at most three. After the body is removed, if the ground is sandy or an area that can be excavated, such as soil, samples are collected from within 10 cm and 30 cm of the soil and further below, if necessary, in order to reach the species that have entered the soil to enter the pupal stage [15, 16]. Larvae or pupae collected from under the corpse and underground will give information about the insect fauna on the corpse. Approximately 6 m of the area where the body was found should be scanned, and the found samples should be collected. However, this process should be done with a predetermined strategy, and the relationship of the corpse with the environment should be recorded by taking photographs and videos. It is very important to take pictures of the general view of the corpse, the regions with entomological specimens from different angles, and video recordings for subsequent investigations.

The photographs taken will be used by different units such as crime scene investigation, defense authority, and the prosecutor's office. It is necessary to take photos from many angles and send them on CD to the relevant places. Because it is possible that the details become invisible due to the bending of the photo cards during the examinations or by being affected by the moisture and oil contaminated by the hand. After these processes are completed, the collection process can be started.

First, while collecting insects on or around the corpse, other objects in the crime scene should not be damaged. Otherwise, artificial damages created by people at the scene after death may mislead the event.

2.4 Entomological specimens of four different periods are collected on and around the corpse: Egg, larva, pupa and adult

Collection of Eggs: Soft forceps and plastic spoons should be used to avoid damage during collection. With the help of a watercolor brush, the samples are taken to a spoon or a tube containing 95% ethyl alcohol. Some of the eggs should be placed on a piece of liver and sent to the laboratory in ventilated containers.

Collection of Larvae: If possible, at least 60 larvae from different species and from each stage, starting from the largest larvae, and if there are enough, much more should be collected. After the larvae are killed in hot water of 85°C, they should be stored in 95% ethanol [17]. Larvae should not be placed in 70% alcohol. When the water entering the body of the larvae dying in hot water enters into the alcohol, the water in the larvae passes into the alcohol, and the alcohol is diluted (osmosis). In this case, since the 70% alcohol used will become more diluted, the larvae begin to darken and rot. Morphological diagnosis becomes impossible. Some of the larvae should also be collected and must be delivered to the laboratory alive. For entomotoxicological examinations, samples from each stage of the larvae should be collected and frozen at -20°C and sent to the laboratory. Specimens should remain frozen until identified.

Larvae to be kept alive should be placed in a ventilated box with a piece of beef liver or chicken liver or cat food, or in a glass jar with holes in the lid of which the larvae cannot escape.

Labels containing the date, time, case number, place of collection, body region, sample type, number of samples, and the name of the person collecting the samples should be affixed to the containers or tubes in which the samples are placed.

Labels affixed on the tube should be written with a pencil. A ballpoint pen should not be used as the alcohol in the tube may cause the ink on the label to be erased [17, 18]. Labels should always be prepared in pairs, with and without adhesive, and the same information should be written on both. The adhesive one should be placed on top of the sample bottle, and the nonadhesive one should be placed in alcohol in which the insect samples were placed. The double label method is standard practice in entomology. With this method, even if the label on the outer surface is dropped or deleted, it prevents data from being lost. While working, the inner label placed in the container under examination will remain inside even if some of the samples in the bottle are taken and examined, and the remaining samples remain labeled.

Coleopter larvae should be stored and transported in the same way but should not be transported alive in the same container as they are predators of fly larvae. After the corpse is removed, the larvae and pupae under the soil should be collected.

Collection of Pupae: Considering that they can be confused with stones and seeds, especially if they are on the soil, they should be carefully collected and transported in containers containing sawdust, sand, or soil. Pupae and their empty shells can remain in nature and in the laboratory for years. Therefore, drug residues are also found in the pupae and shells. If they are present at the scene, they must be collected.

Collection of Adults: Adult dipters found on the corpse or at the crime scene should be caught with the help of traps. The most troublesome aspect of catching adult insects on a corpse with insect catcher is that the activity of the catcher disturbs the fauna on the corpse and affects the presence of winged and wingless insects. Therefore, the use of succulent traps is the most appropriate method.

Coleoptera species can be caught by holding them with suitable soft forceps. In some cases, it is best to catch the adult beetles that have escaped from the forceps by

hand, but it is important not to over-squeeze and cause the insect to disintegrate. Small scoops can be used for aquatic species.

Soil samples should be collected from the bottom; right and left sides of the corpse; the top, if any; and 1 meter away, and each sample should be labeled in glass or plastic ventilated containers, indicating the place where it was taken.

2.5 Sending samples to the laboratory

Some of the captured samples should be sent to the laboratory alive, and some of them should be killed. All entomological and ecological specimens from the crime scene should be recorded on the Crime Scene Investigation Form.

Each of the insects to be kept alive should be placed in separate glass tubes, glass jars, or plastic sampling containers. For living specimens to be fed, the palm size (100 g) of meat should be placed in the containers. This meat is preferably taken to the scene, chicken livers, which are easy and cheap to use, and canned cat food are more convenient. Approximately 10 insects are placed in each sample container with meat. Putting more insects causes the insects to harm each other. Sample containers should not be too narrow. In order to the coleopters to climb, filter paper or small pieces of moisture-absorbing paper should be crumpled into the sample containers.

The width of the containers is important for winged creatures to fly. In narrow containers, insects can damage themselves and lose their diagnostic criteria. Some of the flies are predators of each other. Considering this situation, a maximum of 10 live flies should be put together. Filter paper or small pieces of moisture-absorbing paper should be crumpled and put into the sample container so that they can move freely in the sample container and that diagnostic criteria such as wings and legs do not break.

3. Collection of entomotoxicologic findings

In deaths due to intentional or accidental ingestion of narcotic substances, the type and amount of the chemical that caused the death should be determined. In cases where it is not possible to analyze traditional sources such as blood, urine, and internal organs, which are used for forensic research due to decomposition in the body after death, tissues such as hair, body hair, bone marrow, and, if these cannot be obtained, necrophage insects are reliable materials for toxicological analysis. The tissue of insects and larvae to be used in toxicological analyzes should either be crushed until homogeneous in the tube or be homogenized by breaking up with a device called a homogenizer. Due to the structure of their body tissues, larvae and adults are easily homogenized and can be easily used in toxicological analyzes [19].

The crime scene should be well analyzed. Serum hose, tourniquet rubber, spoon, pipette, rolled paper, cardboard, syringe, syringe needle, needle cap, powdered narcotic substance, bags and boxes where narcotic substance is stored, packaging papers, pesticide, insecticide bottles, food scraps seen at the crime scene, empty ampoules, medicine and medicine boxes should be collected.

The most important points to be considered in collecting the findings from the crime scene are as follows:

Before the samples are collected, their photographs must be taken, and it must be documented that they are at the scene. An undocumented example may appear suspicious. Relationships with other objects should be noted and documented by

photographing. The photographs taken should be of a quality and order that can reflect the scene and the event.

Care should be taken not to lose drug residues and DNA material on the collected materials.

Every material taken from the scene must be individually packaged and labeled. The name of the substance, the name of the deceased, the autopsy number, the name and surname of the person taking the sample, and the date of collection should be written on the label. Cross contamination should not be allowed. It should be transferred to the laboratory in such a way that mold and bacteria do not form. Packing the samples properly and duly will prevent the integrity of the packages from being compromised. During packaging, the mouth of the paper bags should be closed with the bag's own adhesive, not with pins, paper clips, and staples.

The transfer of samples to the laboratory should be done without breaking the cold chain. The safety-surveillance chain means preserving samples' journey and documenting. The name of the person from whom the sample was taken, the name and surname of each person making the transfer, the name of the organization, the storage conditions of the sample, the dates and time of collection and transfer, the sample number, brief information about the sample, and information showing the status of the seal should be recorded on the document used for documentation. A deficiency in the safety chain of custody can result in analysis results being challenged in court.

None of the solid or liquid drugs should be delivered to the laboratory without being placed in preservatives. Preservatives may cause the method of toxicological tests to be changed or result in incorrect results. There is nothing the toxicologist can do about it.

In order to prevent deterioration of the findings collected in humid and hot environments, they should be allowed to dry first and transferred to laboratories with a cold chain (+4°C).

If there is vomit or leftover food in the environment, these should also be collected and transferred to the laboratory without spoiling.

Entomological specimens should not be smelled or tasted.

While collecting the samples, dirty gloves and overshoes should be changed, and contamination of other samples should be prevented.

Do not vomit, cough, or sneeze on samples.

On-scene alcohol bottles, broken glass or bottles, ampoules, broken ampoule fragments, medicine bottles, and used needles should be transported in sealed, puncture, and friction-resistant hard cardboard or wooden boxes. Broken parts should be packed in such a way that they are not lost.

If there is blood or blood stain at the crime scene, liquid blood should be taken into tubes with the help of Pasteur pipettes; a swab should be taken with a sampling stick and labeled. Biological samples should be taken in the form of swab, either by scraping the dried blood stains or by soaking the sample stick with saline.

Soil samples must be taken from the scene. As the corpse decomposes, body fluids pass into the soil. If there is narcotic substance or toxic substance in the body of the deceased, these substances are also found in the soil.

The desire of the perpetrator to get rid of the corpse in a hurry and excitement to leave the scene causes suspect's mistake and to leave particles from the suspect himself/herself. The performance of the crime scene investigator at the crime scene will ensure that the incident is resolved smoothly from the crime scene to the laboratory to the court.

4. Conclusion

A person committing murder is excited, anxious, and annoyed. He/she leaves hair, semen, urine, fingerprint, medicine, button of his/her clothes, bloodstain even if he/she cleans the crime scene, and such to the crime scene. Besides, he/she takes fibers of carpets, fabric, and curtain and insect, bloodstain belonging to victim, and pollen from the crime scene. Crime scene investigators are knowledge workers who work with minimum information and maximum pressure in the crime scene. They must know “how crime scene data are converted to information and to business intelligence.” This profession, which is irreversible, is the first step of providing justice. It does not accept missing or wrong sample collection. Sometimes, crime scene investigators might have to work in the crime scene. They make a big effort to understand criminal behavior of the suspect and to send materials correctly collected and packed that forensic scientists can examine and solve. The correct execution of the above-mentioned tasks is an event that affects everyone, from the police to the judge, in identifying and apprehending the suspect.

Conflict of interest

The authors declare no conflict of interest.

Author details

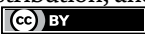
Ali Açıkgoz¹ and Halide Nihal Açıkgoz^{2*}

¹ Health of Ministry, Havacılar Family Health Center, Ankara, Turkey

² Department of Forensic Biology, University of Ankara, Forensic Sciences Institute, Ankara, Turkey

*Address all correspondence to: nacikgoz@yahoo.com

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Perspective Chapter: Criminal Responsibility

Ragip Baris Erman

Abstract

Contemporary criminal law aims to balance the public's need to punish harmful behavior with the moral choice of the individual agent who causes harm. The principle of individual criminal responsibility in criminal law focuses on human actions and omissions as the foundations of guilt. Although the debate on free will and agency continues to play a role in contemporary criminal law, criminal responsibility is based on a normative understanding of these notions. This understanding presupposes human agency and the capacity to appreciate the wrongfulness of one's actions and the ability to conduct one's behavior accordingly. However, when this capacity is affected by internal or external circumstances, criminal responsibility can be excluded or diminished. This chapter focuses on the different ways of understanding criminal responsibility among various legal systems by comparing the definition and scope of individual criminal responsibility, culpability, and the place of strict responsibility within criminal law and later compares some of the more common defenses affecting the criminal capacity of the defendant: insanity, diminished responsibility, intoxication, and infancy. These defenses shall be compared according to various common law and civil law systems according to their definitions, fields of application, and legal consequences.

Keywords: culpability, individual criminal responsibility, insanity defense, intoxication, minimum age of criminal responsibility

1. Introduction

Contemporary legal systems try to strike a balance between the public's need to punish harmful behavior and the moral choice of the individual agent who causes harm. This approach creates a twofold reason and source for a punishment corresponding to the crime: harm and responsibility.

The law defines actions and omissions that constitute harm or, in some cases, clear and imminent danger to a public good. This harmful act must be prescribed by a previously published law that clearly and foreseeably defines it under the principle of *nullum crimen sine lege* (no punishment without law). It is generally understood that punishment must correspond to the degree of public harm; thus, more harmful behavior is subject to greater punishment. This proportionality of punishment is necessary for both deterrence (in the form of general and special prevention) and retribution, or the restoration of public order, which are the established purposes of criminal punishment [1].

A basic tenet of criminal law is that the basis of criminal liability is the voluntary action of the individual [2]. This presupposes a human agency and choice based on the assumption of free will. This presupposition brings us to the principles of individual responsibility and guilt in criminal law, which will be analyzed further below.

2. Individual criminal responsibility, human agency, and normativity

2.1 The principle of individual criminal responsibility in criminal law

Criminal law differs from other areas of law in that it focuses on human actions and omissions as the foundations of guilt. This does not rule out the criminal liability of corporations and legal entities, as most legal systems accept this responsibility as part of their criminal law [3]. However, in countries such as Germany and Turkey, the principle is understood to exclude the criminal liability of legal entities and only punish natural persons [4–6].

The actual meaning of individual responsibility is apparent in the fact that people cannot be punished for others' actions or omissions. This principle effectively prohibits vicarious liability (liability for the actions or omissions of another person) under criminal law. Thus, moral responsibility can be considered a necessary condition for criminal liability. However, criminal liability may arise from a failure to exercise a duty to effectively supervise the actions or omissions of other people, typically, employees. This kind of liability can still be generally associated with the personal guilt of the supervisor [7]. Additionally, special modes of liability, such as indirect perpetration, command responsibility, and complicity in crime, are accepted as concordant with the principle of individual responsibility. Particularly in international criminal law, command responsibility is understood to encompass the liability of military and non-military commanders for crimes committed by people under their effective command and control (or, when applicable, effective authority and control), as provided by the Rome Statute of the International Criminal Court, Article 28 [8, 9].

However, as stated above, the reasoning behind the acceptance of human behavior as the source of criminal responsibility lies in the presupposition of human agency. Agency defines humans as both the subject and the object of criminal law. Only a person who had some degree of control over their actions and omission can—or, at least, should—be considered an individual deserving punishment

2.2 The role of personal guilt in criminal responsibility

The premise of individual criminal responsibility is further developed by the principle of guilt, according to which criminal responsibility can only be based on a guilty action or omission (*nulla poena sine culpa*, no punishment without guilt) and must have been able to make a free choice between what is legally right and legally wrong and must have chosen the wrong alternative over the right alternative. In other words, people cannot be blamed for their actions or omissions if they “could not help doing it” [10].

In his famous dissenting opinion, Judge *Rubin* postulated this principle: “An adjudication of guilt is more than a factual determination that the defendant pulled a trigger, took a bicycle, or sold heroin. It is a moral judgment that the individual is

blameworthy. Our collective conscience does not allow punishment where it cannot impose blame. Our concept of blameworthiness rests on assumptions that are older than the Republic: man is naturally endowed with these two great faculties, understanding and liberty of will. Historically, our substantive criminal law is based on a theory of punishing the vicious will. It postulates a free agent confronted with a choice between doing right and wrong, and choosing freely to do wrong” [11].

The normative nature of this choice makes a distinction between ethical and legal reasoning and focuses on what is legally right or wrong based on common values rather than personal ones [12]. Thus, a person deciding to break the law based on his or her ethical convictions can still be regarded as a criminal, while a person committing ethically dubious deeds cannot be punished if his or her behavior conforms to the law in force or even if that behavior, while illegal, has not been defined as a criminal offense.

The definition and scope of the principle of guilt are not uniform across criminal legal systems. In most civil-law countries like Germany, it is understood that strict liability offenses violate this principle, no person can be punished without personal guilt and blameworthiness, and the burden of proof cannot be reversed and laid on the defendant [6]. In contrast, common-law systems such as England and Wales, Canada, and the USA accept strict liability offenses or strict responsibility in criminal law, particularly in cases of minor infractions [7]. In these cases, the culpability of the offender does not need to be present or bound to a presumption that needs to be proven wrong to exculpate the defendant [13].

In civil-law systems, such presumptions would most likely be seen as violating the principle of guilt. However, in common-law systems, strict liability offenses can be punished with imprisonment. In these cases, the lack of culpability in a concrete case may result in a mitigated sentence but does not necessarily change the nature of the penalty, as criticized in [14].

There is one aspect of the principle of guilt where it is possible to observe a wide consensus among legal systems: that criminal punishment must be proportional to guilt. Even if the same amount of damage has been caused by two different actions, punishment must be separated for negligent and intentional behavior, and further distinctions should be made for different degrees of *mens rea*, such as premeditation, direct intent, recklessness, and negligence.

The Turkish Constitutional Court enforces the principle of guilt in its judgments as part of the constitutional principles of the rule of law and individual criminal responsibility (Articles 10 and 38 of the Turkish Constitution). According to the Turkish Constitutional Court, a leading feature of contemporary criminal law is the adoption of responsibility based on personal guilt. (...) Thus, modern criminal law has left absolute liability and accepted the principle of ‘no punishment without guilt’ as a basic principle” [15]. The Turkish Supreme Court (Yargıtay) goes further by interpreting the law as not allowing aggravated assault and battery to be punished at the same level if the act is committed through *dolus eventualis* (indirect intent) when compared to direct intent. According to Yargıtay, “(t)he fact that in both cases [direct vs. indirect intent] the punishment should be the same would not conform to the notion of criminal justice or to the purpose of the legislator to provide a lesser degree of punishment for crimes committed with *dolus eventualis*” [16].

2.3 The illusion of free will and normativity of criminal responsibility

Of course, the legal paradigm based on free choice was, and still is, not without strong criticism. The first wave of criticism against the premise of moral agency was

the rise of positivism in the first half of the 20th century. Ferri famously argued that the moral agency of humans was an illusion; all human behavior was based on the laws of causality, and a scientifically accurate criminal law ought to reject the notion of free will and instead base its legitimacy on the notion of necessity [17]. Criminal behavior is not the result of a moral choice by the perpetrator; rather, it is understood as a symptom. According to him, the purpose of punishment should not be to deal with the symptoms but to cure the underlying illness. This meant that criminal law should not focus on the crime, but on the criminal. It should try to understand why the criminal had committed the crime and try to eliminate the underlying reasons. Thus, the real purpose of punishment should be the rehabilitation of the criminal and the protection of the public from the danger posed by the criminal. To its full extent, this positivist system required the elimination of the principles of legality and individual responsibility, as well as punishment in the classical sense. Punishment should not be prescribed by law and applied by lawyers; rather, scientists should decide what measures to apply to criminals to eliminate their dangerousness to society [17, 18].

Positivism, as *Ferri* proposed, was never applied to this extent, although it had a significant impact on criminal legal systems [19]. Although legality and individual criminal responsibility remain the basic principles of criminal law, the classification and treatment of criminals for purposes of resocialization has entered the penitentiary system. In addition, positivism affected special measures applicable to recidivists and other especially dangerous criminals. Other effects of positivism include probation and the early release of criminals who do not pose a threat to society. Finally and, for the purposes of this chapter, most importantly, positivism caused the introduction of a new system of measures applicable to people who are deemed to lack full moral agency: minors, people with limited capacity, the legally insane, and so on [20].

The debate on free will and agency continues to play a role in contemporary criminal law. A major criticism directed against the premise of agency and choice of the perpetrator arises from recent findings in neuroscience. The famous *Libet* experiments, where it is shown that decision-making processes mainly take place in the unconscious mind, question the essence of the freedom of will. In these experiments, *Libet* et al. used electroencephalograms to measure the activity in the supplementary motor area (SMA) of subjects who were asked to note when they were consciously aware of their choice to flex their muscles. The experiment showed that conscious choice followed the brain activity for approximately 350 ms [21]. Although *Libet* denies that his experiment is incompatible with the idea of free will on the grounds that people can consciously choose to stop the process and not comply with the decision formed in the subconscious mind, the debate on what this means for the purposes of subjective criminal responsibility is ongoing [22].

It should be noted that contemporary legal doctrine considers human agency as a normative notion that is not necessarily affected by any conceived determinism of the decision-making process. Thus, criminal responsibility is understood to be related to the “illusion of free will,” rather than free will itself. Contemporary criminal law, as a social construct, presupposes the normative paradigm that guilt is based on human agency and the free choice of the offender and can work on this presumption unless, or until, it is replaced by a more efficient construct [12, 23].

3. Defenses and criminal responsibility

3.1 The role of defenses in criminal law

In most criminal legal systems, it is generally accepted that actions committed under specific circumstances constitute an exception to liability. However, the nature and effects of these circumstances vary significantly across different jurisdictions.

In civil-law countries, defenses are divided into causes of justification and excuse and are seen exclusively as part of substantive criminal law. Causes of justification, such as legitimate defense, are considered to bring the action in full conformity with the law, resulting in a full exoneration of the defendant. In contrast, causes of excuse do not affect the illegitimacy of the action but provide an exculpation for the defendant; as a result, the defendant cannot be punished with a criminal penalty but may be subject to special preventive measures. Turkish criminal law distinguishes between verdicts of “exoneration” vs. “not to be punished” (Turkish Criminal Procedure Code article 223): whereas the former would result in a complete lack of criminal sanction, the latter allows for measures taken for the confiscation of proceeds from the crime, as well as measures for the rehabilitation of children and mentally challenged criminals.

Jurisdictions under the influence of common law do not distinguish between justification and excuse very strictly; although the distinction is expressed theoretically, in practice, both form part of the broader category of defenses. In addition, in common law, defenses are in close contact with the law of evidence, which is part of the procedural law.

This distinction also affects the burden of proof in many defenses. In civil law countries, criminal procedure does not generally accept presumptions of guilt, and any defense falls under the general presumption of innocence: the court may only reject a defense if it cannot be shown beyond reasonable doubt that the defense did not occur. In contrast, for many common-law jurisdictions, the so-called affirmative defenses, which comprise all forms of excuse, lay the burden of proof partly on the defendant, who must introduce credible evidence for the occurrence of the excuse.

The category of exculpating defenses, or excuses, refers to circumstances that affect the defendant’s ability to understand the legal and social nature of his or her conduct and the capacity to conform his or her behavior to this understanding. Any lack of this understanding or capacity would mean that the defendant cannot act as an agent that can freely choose between right and wrong and thus cannot be considered guilty of his or her conduct.

While some defenses affecting this freedom of choice may have a temporary or permanent effect on the personal decision-making process and capacity to understand the nature of the wrongdoing (insanity, diminished capacity, intoxication), others appear as external effects that do not concern the defendant’s criminal capacity but their *mens rea* (mistake of fact, duress, coercion).

It should be noted that jurisdictions heavily disagree over which circumstances to accept as affecting the perpetrator’s criminal responsibility and what the effects of a partial or full excuse are. For example, diminished capacity is accepted as a partial defense in some US states but not in others. The effects of voluntary substance abuse also vary across civil- and common-law jurisdictions. Some of the most common examples of defenses that affect individual capacity are examined below.

3.2 Common defenses affecting criminal capacity

3.2.1 Insanity

3.2.1.1 Concept of insanity in criminal law

Insanity is a defense found in most criminal legal systems that results in a lack of criminal responsibility and, in most cases, compulsory treatment of the offender in a mental facility rather than imposing a criminal penalty in the traditional sense. However, the definition of insanity and the legal procedure used to prove its existence vary across different legal traditions. Another major distinction regarding insanity relates to its consequences.

It should be noted that the term “insanity” itself can be considered outdated and fails to encompass all kinds of mental disability, brain damage, and even conditions arising from neurodiversity, which can cause cognitive and volitional effects similar to those defined under various provisions. The terminology may be considered non-inclusive and discriminatory against neurodiverse persons [24]. Additionally, in cases where courts adhere to the letter of the law, their interpretation may prevent such individuals from successfully resorting to a defense in criminal matters.

A common point across different legal systems is that automatism caused by external forces and brain damage cannot be designated as insanity in criminal law. Automatism results in the lack of human action and would normally result in acquittal in contrast to insanity, which would generally lead to compulsory treatment [25, 26].

Insanity is understood to encompass organic and functional, permanent, transient, and intermittent effects that are in effect at the time of the act [6, 25]. As such, a “brief psychotic episode” that does not originate from an underlying mental disease may result in the exculpation of the defendant [26].

In any case of an insanity defense, there must be a causal link between the existing mental condition and the act committed by the defendant. The mere existence of a mental condition, however severe, does not exculpate the offender if the said condition did not contribute to the commission of the offense in trial. However, if the person is convicted of the crime and is unfit to be incarcerated due to their mental condition, alternatives to incarceration, including confinement in a mental institution, may be sought by criminal justice systems.

3.2.1.2 Various definitions and standards related to the insanity defense

In most civil-law countries such as Germany, Turkey, Italy, and Spain, insanity is mostly defined as being incapable of appreciating the unlawfulness of one’s actions or of acting in accordance with any such appreciation. In fact, the legal definitions found in the respective criminal codes of these countries (par. 20 German Criminal Code, art. 20/1 Spanish Criminal Code, art. 32 Turkish Criminal Code) are almost identical. This definition comprises two elements: cognitive and volitional [24, 27]. The lack of either element results in a successful insanity defense. Thus, both mental conditions that result in an inability to distinguish right from wrong and conditions that involve uncontrollable or irresistible impulses can result in a lack of capacity.

It should be noted that various civil-law countries adopt different determinations as to when the capacity is to be considered affected. As such, the Turkish provision speaks of a complete lack of cognitive ability (i.e., the perpetrator cannot

comprehend the legal meaning or consequences of the act he or she has committed), while the perpetrator's ability to control their behavior only needs to be significantly diminished [28]. The German provision (par. 20 German Criminal Code) includes the following list of mental conditions that qualify as a basis for the insanity defense: "a pathological mental disorder, a profound consciousness disorder, debility or any other serious mental abnormality" [6].

Other civil-law criminal legal systems, such as the Netherlands, refrain from legally defining mental illness and from specifying the types of mental conditions that would lead to an exclusion of criminal responsibility [29].

Common-law systems mostly derive their definition of the insanity defense from the M'Naghten standard, laid down by the UK House of Lords in the case of Daniel M'Naghten in 1843 [25, 30]. The standard, defined by Justice Tindal, is as follows: "To establish a defense on the ground of insanity, it must be proved that, at the time of the committing of the act, the party accused was laboring under such a defect of reason, from disease of the mind, as not to know the nature and quality of the act he was doing or if he did know it, that he did not know he was doing what was wrong" [31].

As can be seen, the original M'Naghten standard only mentions the cognitive element, stressing "not knowing the nature and quality of the act," while it does not recognize the volitional element [32]. However, this standard has been revised in 1991 under the UK Criminal Procedure (Insanity and Unfitness to Plead) Act as to incorporate the volitional element and to replace the outdated terminology "disease of the mind" with any kind of "mental impairment," which could encompass intellectual disability and personality disorders [33].

The M'Naghten standard was adopted by the US courts as well. However, the Model Penal Code (MPC), a non-binding legal text published in 1962 by the American Legal Institute to standardize US law, also introduced an alternative standard incorporating the volitional element. According to the MPC, the defendant is exculpated for reasons of "mental disease or defect" if, "...as a result of mental disease or defect he lacks substantial capacity either to appreciate the criminality [wrongfulness] of his conduct or to conform his conduct to the requirements of law" [34]. The second definition is understood to be broader: the MPC stresses the appreciation of wrongfulness rather than mere knowledge. Additionally, according to the MPC, a lack of "substantial capacity" is sufficient, as opposed to a complete lack of capacity. In 1984, a federal law entitled the Insanity Defense Reform Act (IDRA) was introduced following the acquittal of Hinckley, who attempted to assassinate President Ronald Reagan of the United States. This law restricted the use of the insanity defense by abolishing the volitional element of the definition and curtailed the possibility of other excuses based on "mental diseases or defects" (§17 IDRA) [27, 31]. It has been reported that in the wake of IDRA, courts in the majority of US states (approximately 30 states) still follow a version of M'Naghten rules, while approximately 14 states adopted the MPC standard. Five states abolished the defense, not allowing for insanity to exculpate the defendant unless the insanity caused a lack in the *mens rea* through a valid mistake of law [27, 35, 36].

In Canada, the M'Naghten standard was modified under Section 16 of the Criminal Code to include the lack of appreciation rather than mere knowledge of the nature and quality of the acts, in parallel with the US MPC. As a consequence, the inability to emotionally appreciate the effect of one's actions, such as the possibility of them causing the death of another person, can be considered a valid defense of "mental disorder," as called under Canadian law [37].

3.2.1.3 Burden of proof

The greatest distinction among major legal systems regarding insanity defense is undoubtedly related to the standard and burden of proof. Civil-law systems generally do not accept any suppositions of culpability and view the shift in the burden of proof to the defendant as a violation of the principle of culpability, as explained above. However, defenses in common-law countries tend to have standards of proof involving a reversal of the burden of proof. One major example of this is the insanity defense.

According to the M’Naghten rules mentioned above, any person is presumed to be sane. As such, “the accused must prove on the preponderance of probabilities first a defect of reason from a disease of the mind, and, secondly, as a consequence of such a defect, ignorance of the nature and quality (or the wrongfulness) of the acts” [25]. The standard of proof is lower than the one required to convict a person: it is based on the balance of probabilities rather than the “beyond reasonable doubt” standard. This standard requires that, other things being equal, the burden be placed on the party arguing for the improbable event [38]. The reason for this presumption of sanity is explained as that solely the accused holds the knowledge on the facts related to the nature of the insanity [39]. Although US courts uphold the constitutionality of this standard, it should be stressed that this presumption severely restricts the number of cases where insanity can be accepted as a valid excuse [38].

In many US states, such as New York, insanity defense is considered an affirmative defense, which means that the defendant bears the burden of proof that he or she was under an exculpating mental condition at the time of the act. However, it is still the prosecution that needs to prove *mens rea*, that is, intent, in a specific case [36].

In civil-law systems, the proof of insanity follows the general rules on the determination of the defendant’s guilt, and, according to the presumption of innocence, the defendant is considered innocent until proven guilty. Thus, the defendant cannot be considered under any burden of proving the existence of insanity [6, 27].

Since the determination of insanity mostly involves technical expertise, in most cases, forensic experts evaluate the mental status of a defendant, whereas the court is not necessarily bound by the outcome of the evaluation [6]. However, in most cases, the court will have to rely on the findings of the experts, which is a point of critique [27].

Under the Turkish criminal procedure system, the Council on Forensic Medicine (*Adli Tıp Kurumu*) is the official national body of expertise. In many situations, including the evaluation of mental status, an expert opinion from this institution is legally mandated. Under Article 74 of the Turkish Criminal Procedure Code (CPC), the defendant may be put under surveillance in a medical facility following expert opinion to determine whether insanity has affected their behavior during the act. This surveillance cannot extend beyond three months. However, the courts are free to disregard the outcome of the expertise on sufficient grounds [40].

3.2.2 Diminished responsibility

In the case of a mental disorder that does not affect the mental capacity of the offender to a degree to fully exculpate them, some legal systems recognize a partial excuse under the term “*diminished responsibility*.” However, the standards for allowing diminished responsibility as a valid defense and its legal consequences vary widely among different traditions.

German and Turkish criminal codes similarly define diminished responsibility. Under par. 21 of the German Criminal Code and art. 32/2 TCC, any mental condition that reduces but does not destroy a defendant's cognitive and volitional capabilities during the act would result in this partial excuse. Legal consequences of diminished responsibility in civil law countries mostly include a mitigated sentence [41]. This mitigation may be accompanied by a special treatment program during incarceration; the possibility of applying special protective measures, including mandatory treatment, during the execution of the sentence; and a possible evaluation of the dangerousness toward society before being released from the correctional or medical facility [6].

According to art. 32/2 TCC, a defendant with diminished responsibility is still convicted to imprisonment for the crime they commit but to a reduced sentence. In addition, they may be subject to a measure of medical or psychological treatment in a medical facility that would partially or wholly replace the prison sentence.

In some common-law systems such as England and Australia, diminished responsibility is only accepted in cases of homicide and reduces the murder charge to manslaughter [25, 27, 39, 42]. The US, on the other hand, does not recognize *diminished responsibility* as a defense, but such conditions may fall under the sentencing judge's discretion to apply a reduction [35].

In England and Wales, diminished responsibility is recognized as a special defense for the crime of homicide. According to Section 2(1) of the Homicide Act 1957: "*Where a person kills or is party to the killing of another, he shall not be convicted of murder if he was suffering from such abnormality of mind (whether arising from a condition of arrested or retarded development of mind or any inherent causes or induced by disease or injury) as substantially impaired his mental responsibility for his acts and omissions in doing or being a party to the killing*" [25].

As with the insanity defense, the defense of diminished responsibility places the burden of proof on the defendant in common-law systems that recognize it [25]. For civil-law countries, general principles on evidence and proof apply, as stated above, under the title of insanity.

3.2.3 Intoxication

A defendant who has acted under the influence of alcohol, drugs, or other substances may resort to a defense of intoxication. However, under most legal systems, voluntary intoxication rarely leads to a complete exculpation of the defendant and, in most cases, is not recognized as a defense at all. However, in most cases, involuntary intoxication is considered an excuse.

Intoxication is closely linked to the defense of temporary insanity. In fact, Turkish Criminal Code defines both conditions under the same article, art. 34 TCC. According to this provision, "*a person who cannot appreciate the legal meaning and consequences of his or her actions or whose ability to conduct his or her actions according to this action has been substantially diminished as a result of a transitory effect, or due to a non-voluntary abuse of alcohol or narcotic drugs, shall not be punished.*" The German Criminal Code does not define a separate defense of intoxication but considers it a special form of insanity [43].

Civil-law systems mostly accept this defense under the broader theory of *actio libera in causa*. According to this theory, the *mens rea* of the defendant who acted under voluntary self-intoxication is to be determined according to the point in time at which he or she took the substance, thus connecting the culpability of the defendant to their prior fault [26]. As a result, an offender who decides to intoxicate themselves in order to commit the crime without any moral inhibitions would be

guilty of an intentional offense even if they did not possess the relevant will during the act itself. By contrast, a person who did not intend to commit a crime when he or she took the substance but should have known that the loss of control over his or her actions could result in a criminal act would be responsible for his or her negligence. Other types of *mens rea*, such as *dolus eventualis* or willful negligence, are also defined the same way [6].

An essential result of the doctrine of *actio libera in causa* is that the defendant may benefit from a complete exculpatory effect if, during a voluntary self-intoxication, he or she, as a reasonable agent, could not have predicted the acts he or she would later commit [29]. This might be the case if the defendant decides to take a drug in the privacy of his or her house but later is disturbed by a burglar, on whom the defendant applies excessive force as a result of the effects of intoxication. Most civil-law criminal legal systems would, in this example, conclude that no negligence was present for a lack of possibility in foreseeing the event, and therefore, voluntary self-intoxication provided an exculpation of the act itself. To avoid the possible loophole, the German legislator introduced a specific criminal offense penalizing the act of causing complete self-intoxication, as a result of which the defendant commits an unlawful act (par. 323a German Criminal Code) [43].

In contrast, the Turkish Criminal Code does not recognize the doctrine of *actio libera in causa* and introduces an irrebuttable presumption that any voluntary self-intoxication results in an intentional act, even if the act was not foreseen, or even foreseeable by the defendant at the time he or she took the substance that would lead to the loss of capacity (art. 34/2 TCC). However, this involuntariness is limited to the abuse of alcohol or drugs. In other words, any other kind of insanity that was affected by the culpable behavior of the offender would still be considered a valid defense under Turkish law. Even in the case of severe alcohol or drug addiction, when substance abuse cannot be seen as “voluntary,” pathological intoxication may provide a valid defense, albeit as insanity under art. 32 rather than intoxication under art. 34 TCC [44]. Similar consequences can be drawn in common-law systems [31].

In the US, it is accepted that any mental impairment “*must have been brought about by circumstances beyond the control of the actor*” [31]. Consequently, voluntary intoxication does not constitute a defense. However, in UK law, the effects of intoxication, voluntary or not, vary according to the *mens rea* required by the crime in question [25].

3.3 Infancy and age of criminal responsibility

3.3.1 Definition and rationale

Age of criminal responsibility refers to the minimum age at which a person can be held accountable for committing a criminal offense. In general, most legal systems recognize a minimum age for being considered a subject under criminal law capable of committing a crime; however, the specific age limit may vary significantly across different countries.

The 1989 UN Convention on the Rights of the Child specifically mentions the minimum age of responsibility under art. 40/3 as part of duties of States parties to the convention:

“States Parties shall seek to promote the establishment of laws, procedures, authorities and institutions specifically applicable to children alleged as, accused of, or recognized as having infringed the penal law, and, in particular:

(a) *The establishment of a minimum age below which children shall be presumed not to have the capacity to infringe the penal law”.*

The UN Committee on the Rights of the Children stated in 2007 that legislating the age of responsibility below the age of 12 was not “internationally acceptable” [45].

The age of responsibility is typically based on the assumption that children below a certain age lack the capacity to understand the nature and consequences of their actions. However, establishing a precise age threshold is challenging because of the inherent individual variability in cognitive and emotional development. Thus, an irrefutable legal presumption is set that excludes children below a certain age from responsibility, although in specific cases, the mental capacity of the child may indeed have reached the natural maturity that would, under normal circumstances, lead to liability. This presumption is independent of the nature of the crime committed [46].

3.3.2 Various approaches to the age of responsibility

In many legal systems, two different age limits are set: a minimum age that constitutes an irrefutable presumption and a higher age limit for the application of the so-called *dolus incapax* test, which denotes the evaluation of the natural maturity development of the child to determine his or her cognitive and volitional capacity regarding the particular crime committed. For example, in Turkey, the minimum age of responsibility is 12. Children below this limit are excluded from any type of criminal responsibility, whereas children between 12 and 15 years of age are subjected to the *dolus incapax* test conducted by experts. If, as a result of this test, they are found to be able to appreciate the legal meaning of their actions and conduct their behavior accordingly, they are subject to a criminal trial and may be convicted of a mitigated sentence. Otherwise, they are completely treated as children [28]. Children above the age of 15 but under 18 are considered juvenile offenders and subject to a criminal trial followed by a possible conviction. If a child's mental development is impaired by any internal or external circumstance that prevents their cognitive or volitional abilities beyond the age of 15, they may be subject to the provisions of insanity. This distinction is criticized in Turkish law for not allowing mentally or developmentally challenged youth to be treated the same way as other children [44].

In Germany, the minimum age limit is 14 years, while the *dolus incapax* test is applied to all children between 14 and 18 years of age. Most European countries also have the 14-year limit with or without a *dolus incapax* test for older children [46].

The UK applies the youngest age of responsibility in Europe, 10, a situation that causes international criticism [45]. Until 1998, the *dolus incapax* test was applied to children between the ages of 10 and 14, whereas the burden of proof of lack of capacity was on the prosecution. However, in 1998, the government abolished the test through Section 34 of the Crime and Disorder Act 1998, resulting in all children above the age of 10 being criminally responsible. Reportedly, the main reason for this amendment was the killing of a 2-year-old boy by two 10-year-olds in 1993 [45].

It should be noted, however, that many common-law jurisdictions, particularly a large number of US states, do not recognize a statutory minimum age of responsibility [46].

3.3.3 Legal consequences of infancy

Children below the age of responsibility may be subject to special protective measures that aim to protect them from outside influences that could lead to criminal

behavior or to remove them from a harmful environment. However, it should be noted that the process of determining such a measure lies normally outside of the rules of criminal procedure [46].

Under most legal systems, a distinct juvenile court structure and criminal procedure are provided for children above the age of criminal responsibility. In determining whether the child may be punished as an adult or whether they should be treated as a child, their mental capacity may be individually assessed by experts. In most cases, special protective measures may be applied in addition to any punishment, and any prison sentence they receive is subject to mitigation [47].

In many common-law systems, children tried by juvenile courts have the right to choose to be tried by a jury or to be subject to bench trial [48]. In civil-law countries, the trial is generally conducted *in camera*, closed to the public. The Turkish Criminal Procedure Code provides under art. 185 that all criminal trials against persons under the age of 18 must be conducted closed to the public, including the pronouncement of the judgment.

In many countries, juvenile judges and prosecutors are specifically trained in child psychology, and additional social workers, pedagogues, psychologists, and sociologists may be employed in the criminal justice system. An essential aspect of the juvenile criminal procedure is that the traumatization of the child is sought to be avoided by creating a trustful environment and by treating the child not as a criminal but as a victim of circumstances. In general, deprivation of liberty may only be applied as a last resort when it involves children. In addition, the child has the right to have a person of trust to be present during the proceedings. On 21.5.2016, the EU introduced Directive 2016/800 on procedural safeguards for children who are suspects or accused persons in criminal proceedings, which include many of the safeguards listed above.

In many legal systems, special provisions regarding recidivism and the protection of criminal records of children are introduced in order to protect them against the stigmatizing effects of a criminal conviction [47].

4. Conclusion

Our findings show that the definition of criminal responsibility and its role in criminal legal systems are consistent in that the concept of responsibility is based on the presumption of human agency and the ability to choose between what is legally right and wrong. If the criminal liability is determined solely according to the harm caused by the perpetrator, the punishment is conceived as disproportional and overly harsh. Thus, the concept of guilt based on the presumption of free will is needed to mitigate this outcome and to strike a balance between deterrence and resocialization.

Many legal systems recognize the principle of individual criminal responsibility and reject vicarious liability. However, they have strikingly different approaches regarding the role of culpability, the criminal liability of legal entities, and the burden of proof regarding personal guilt. Many legal systems, particularly those pertaining to the common-law tradition, acknowledge the existence of strict liability offenses, while civil-law systems require the existence of culpability and the corresponding *mens rea* as a general rule.

This discrepancy is even more prevalent for defenses, their role, and consequences in the criminal legal system. This discrepancy is partly explainable by the difference in legal traditions. Common-law systems tend to derive their definitions and legal categorization from a long-lasting series of precedents. This is the case in the

definition of insanity and infancy, as well as the requirements about the proof of such conditions. These long-lasting precedents may be one reason why legislators and courts cannot easily develop new standards regarding these issues.

However, another major issue regarding the development of standards concerning capacity-related defenses is that the tendency of legislators to intervene with populist and reactionary motives. In some situations, when the consequences of a lenient law disturbed the public sentiment of justice, the legislators in the US and the UK intervened with the existing legal status of perpetrators with restricted agency and changed the existing legal standards in a way to disallow the application of defenses under such circumstances. Such interventions invariably cause lasting effects that may affect greater injustice in the following years. However, since these eventual effects do not stir the public opinion to cause a comparable sense of urgency, the changes stay nevertheless in effect. This populism, while more visible in common-law systems, is prevalent throughout legal systems of the world, particularly within the last decades.

A third issue regarding the definition of the defenses like insanity, diminished responsibility, intoxication, and infancy that is common to all legal systems is that terminology, definitions, and consequences tend to be outdated in legal provisions. It is necessary that legislators and courts follow the scientific development in behavioral sciences more closely to adapt the legal standards to the existing scientific level. One major example of this is that insanity is regarded as a single monolithic cause affecting criminal responsibility, while neurodivergence as well as different brain-related syndromes are either not addressed at all or forced to fall under the same broader umbrella. This not only causes discriminatory practices in the criminal justice system but also results in a shortcoming of legal institutions for the needs of affected persons.


As a conclusion, criminal legal systems should aim to develop harmonized provisions regarding criminal responsibility based on scientific findings and standards rather than responding to conjunctural public sensation with populist motives.

Author details

Ragip Baris Eрман
Yeditepe University Law Faculty, Istanbul, Turkey

*Address all correspondence to: baris.erman@yeditepe.edu.tr

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Psychodynamic Short-Term Therapy for Criminal Behaviors

Dilan Aktaş, Deniz Çelik and Melike Çakır

Abstract

The psychodynamic therapy technique is used in addressing a variety of mental health concerns, including behaviors that are considered criminal. In this chapter, the implementation of psychodynamic short-term therapy (PSTT) for people who engage in criminal behavior will be examined. Psychodynamic short-term therapy (PSTT) can be conceptualized as a brief therapy that helps individuals to gain awareness of unconscious factors that play a role in shaping their behaviors. It is based on the idea that criminal behaviors are associated with the trauma and unresolved conflicts from the past experiences repressed into the unconscious. This therapy technique, which leads to the discovery of these unconscious factors, provides tools for individuals to better understand and change their behavior. In this chapter, the theoretical basis of psychodynamic therapy, including its key concepts such as the unconscious, transference, and defense mechanisms, will be explored. Then, specific approaches and strategies such as identification of maladaptive coping mechanisms and the impact of trauma on individual's criminal behavior will be discussed with case examples from the literature. At the end, the empirical evidence supporting the effectiveness of psychodynamic short-term therapy for criminal behavior and its limitations will be examined. The findings of the literature and recommendations will be offered to expedite forthcoming research in this domain.

Keywords: criminal behavior, psychoanalysis, psychodynamic short-term therapy, psychodynamics, psychotherapy

1. Introduction

Within the context of criminal behaviors and efforts toward preventative measures and rehabilitation, psychodynamic short-term therapy emerges as an effective method for addressing the underlying psychological elements that may lead to criminal behaviors. In the scope of this chapter, the theoretical framework and techniques behind psychodynamic therapies and how it is integrated into a short-term form will be explained in relation to criminal behaviors. Lastly, the effectiveness of short-term psychodynamic therapy in terms of a rehabilitation tool for criminal behaviors will be discussed.

2. Psychodynamic short-term therapy: understanding the theory and techniques

A very important perspective on human behavior to discuss is Freud's argument that psychological disturbances are caused by unconscious conflicts rather than organic causes [1]. Calling his theory psychoanalysis, Freud stated that the inner conflicts caused by past experiences of early relationships in early childhood are suppressed to the unconscious. Therefore, it is possible for these suppressed notions to lead to anxiety and other psychological problems in adulthood [2]. From Freud to other theorists who studied psychoanalysis, a broad range of therapies were developed. Psychodynamic therapy is one of the therapy techniques that emerged from the psychoanalytic theory. In Webster's Third New International Dictionary, the term psychodynamic is defined as the study of the driving factors that influence behavior and mental states, particularly those that are unconscious or related to emotions, and their development during early childhood and subsequent impact [3]. The goal of psychodynamic therapy is to assist the progress of emotional experience and increase one's understanding of their own by using various techniques such as transference, countertransference, and defense mechanisms [4].

The psychodynamic approach, while making use of the basic propositions and concepts of psychoanalysis and different theories and schools, has become a holistic perspective [5]. Moreover, the term psychodynamic is used because it is inclusive enough to cover any theory addressing psychological forces that operate beneath conscious awareness and form the basis of the majority of human behavior [6]. Commonly, psychodynamic therapies are long term, and they necessitate a higher frequency of sessions. However, the theory and techniques of psychodynamic therapies could be applied to short-term therapy. Therefore, short-term psychodynamic therapies emerged in line with needs.

Short-term dynamic therapy is an intervention that utilizes the concepts and techniques of psychoanalytic theory to address specific disorders usually within a timeframe of 10–25 sessions [7]. It is used for having the patient gain insight into the underlying causes of their specific problems [8]. As mentioned, psychodynamic therapies are usually long term, so why should there be a need for the use of short-term psychodynamic therapies? Firstly, long-term therapies are costly and require a commitment for a long time. In that sense, short-term therapies are more accessible. As there is a higher demand for short-term therapies, research on the effectiveness of short-term psychodynamic therapy showed that there is an increase in the number of studies that are challenging the assumption of needing long-term therapies [9].

Before starting to explain the theory and techniques used in short-term psychodynamic therapy, how it can be used in a criminal setting will be discussed. Forensic psychotherapy mainly originates from psychoanalytical and psychodynamic foundations. The insightful comprehension offered by forensic psychotherapy with regard to the patient's previous encounters and present psychological condition can contribute to decision making. In this context, the psychotherapists who work with forensic patients not only offer therapy but also employ psychodynamic reasoning to understand the intricacies and dynamics among staff teams and institutions when treating this particular group of patients [10]. Dynamic therapy aims to uncover unconscious thoughts, impulses, and defense mechanisms. Gaining insight into one's own unconscious motivation behind their actions provides individuals the chance to understand the underlying reasons behind a specific focal problem. By gaining such insight, an inmate or a criminal would gain comprehension in terms of recognizing and handling

their recurrent patterns of criminal behavior. This insight would help to resolve the internal conflicts they experience, leading to a more realistic perception of the outside world. This is an important point in distinguishing short-term psychodynamic therapies from other time-limited therapies. For example, while cognitive behavioral therapy (CBT) has proven its effects on modifying behavior and thinking, it does not aim to consider the root cause of behaviors. Therefore, short-term psychodynamic therapy can not only become an effective tool for one to understand the root reason behind their criminal behavior and let them be active agents in terms of dealing with certain impulses but also is cost and time efficient as it is limited with a certain number of sessions [11].

Gaining insight about oneself is not an easy task, especially in a short-term period; however, it is possible under some criteria and using some techniques. To be able to explain them, first, it is necessary to talk about the theoretical background of short-term psychodynamic therapy. In this context, the terms unconscious, Oedipal relationships, transference, and defense mechanisms will be discussed. Starting with the term unconscious will be important for grasping other concepts. The term unconscious has been used before; however, with Freud's use the term gained an original meaning that puts it in the position of the most important concept in psychoanalytic theory. In his structural/topographical theory, Freud explains the unconscious as not being limited to what is outside of conscious awareness, but rather comprises thoughts and memories that have been deeply separated from consciousness through repression. Without undergoing distortion, these thoughts or memories cannot enter the conscious or preconscious [12]. If the premise is bringing unconscious material into consciousness for healing, how can this be made possible? Psychoanalyst and theorist Jacques Lacan, who is known for the "return to Freud" movement, states that "the unconscious is structured like language" [13]. This means that our understanding of the unconscious only becomes clear when it is articulated and expressed through words. In psychoanalysis, the free associations, dreams, and the way the patient tells these, such as hesitations, pausing, forgetting, repetition, ambiguity in the language (equivokes), and slips of the tongue make up the foundation [14].

The therapeutic relationship is formed between the therapist and the patient. In essence, the therapist relies on the therapeutic relationship as the primary catalyst for facilitating transformation. The patient's learning and the factors that lead to therapeutic progress primarily occur within the dynamics of this relationship. A significant part of therapeutic change is likely achieved through identifying the childhood origins of present psychological conflicts, along with the unconscious fantasies and emotions connected to the enduring impact of these early experiences [15]. The term transference was used by Freud first in his work called *The Interpretation of Dreams* [16]. The term indicates the displacement of affect from one idea to another. In a therapeutic setting, however, transference refers to the, whether positive or negative, affects placed on the therapist as a figure that is unconsciously put in a position of a familiar person by the patient [17]. The familiar person/s that are meant here are usually the patient's parents or parental figures. The unconscious feelings of love and hostility that an individual experience toward their parents is called the Oedipus complex. It involves the desire for one parent, leading to a sense of competition or rivalry with the other parent. In that sense, it can be said that what is transferred by the patient onto the therapist is the Oedipal relations. This phenomenon is conceptualized by Malan [18] with his triangular models (see **Figure 1**).

The first one is called the triangle of conflict. The corners consist of defense, anxiety, and hidden feelings. The first triangle is connected to the second one in the

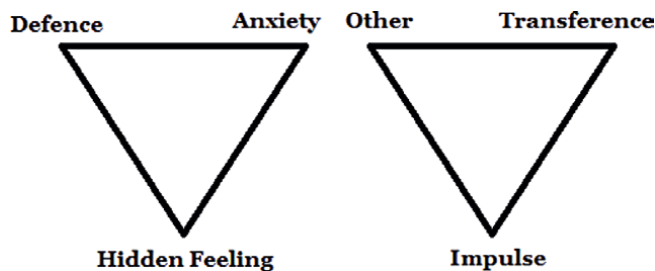


Figure 1.
The two triangles.

sense that the hidden feelings one has are directed toward specific categories of individuals. These categories are represented by the Other, Parent, and Transference. The corner the triangles stand on means that element is foundational for the other two. In the second triangle, the three categories of the person also signify three potential connections. They include the Other and Parent link, where emotions toward the Other are derived from emotions toward the Parent; the Other and Transference link, where similar emotions are directed toward the Other and the Therapist; and the Transference and Parent link, where Transference feelings originate from feelings associated with the Parents. The apex that the triangles stand on symbolizes the goal of dynamic psychotherapy to delve beneath defenses and anxiety to uncover hidden emotions. The process involves tracing these emotions back to their origins in the past, which is typically related to parents. These two triangles are crucial as they encompass nearly every intervention made by a therapist. A therapist's skill lies in knowing which components of the triangles to incorporate into interpretations at any given moment.

In psychodynamic short-term therapy, the therapeutic focus is on the triangular interpersonal or Oedipal relationships as the underlying factor of psychological conflicts [19]. As alterations occur in the types of defenses and desires and that they are more suitably fulfilled, the patient is no longer going to be fixated on their drives at an early stage of development. The therapist helps the patient to have a conscious recognition of the aspects within these triangles that operate in the unconscious. By recognizing this process in their unconscious, the patient can prevent the confusion of past conflicts with the present relationships [20]. However, this recognition may not come easy due to the factor called defense. Being reluctant to talk about certain things and to freely associate indicates resistance as an integral part of treatment. Rather than an obstacle, resistance has an adaptive goal of conserving the patient from material that could be agonizing to be experienced in consciousness. Resistance is used by repressing distressing information, which involves blocking one's own awareness of it.

While paying attention to the defenses of the patient, as the unconscious conflicts surface and the patient's unconscious anxieties reduce, the therapist also undergoes emotional and impulsive fluctuations, known as the countertransference experience. The term countertransference was framed to indicate the unconscious feelings of the therapist for the patient. Lacan stated that countertransference is a handicap that hampers the treatment process and it is a resistance that belongs to the therapist. Many analysts stated that manifestations of countertransference occur when the analyst has not completed their own analysis.

In psychodynamic understanding, therapy can be applied to forensic patients with regard to the patient's unconscious beliefs and impulses, previous encounters, and

present psychological condition. The question arises, how does the theory see crime? Psychodynamic theories have a maladaptive childhood as the subject matter in relation to crime. From the point of view of Freud's structural theory, it can be said that a frail superego, or conscience, is lacking in terms of keeping the powerful id under control. Therefore crime-related behavior arises accompanied by Oedipal conflicts that are unresolved as a product of insufficient psychosexual development. On the other hand, Kleinian theory explains criminal tendencies with guilt, stating that the origin of crime could be attributed to an abundance of guilt rather than a deficiency in having a conscience. This theory suggests that instead of a feeble conscience, disturbances in behavior may stem from a persecutory conscience [21]. Theoretically, many psychodynamic and psychoanalytic theorists bring crime explanations from somewhat different perspectives. However, they all emphasize the experiences from childhood. Each and every subject's experience can only be unique to themselves. This uniqueness brings about different unconscious processes. Therefore, it can be said that subjectivity is at the very center of psychoanalysis and psychodynamic therapies.

3. Practical application: treatment plan

In the literature, the treatment plan is described in terms of three phases that are the beginning phase, middle phase, and ending phase [22]. Beginning phase includes evaluation, relationship building, goal, and parameter setting. The aim of the evaluation part is to determine appropriate or inappropriate candidates for short-term psychodynamic therapy with comprehensive assessment. For this purpose, the therapist receives the main complaint; evaluates mental status, intelligence, and psychological mindedness; and gathers information such as personal, social, and significant early life experiences with various techniques such as interviews, questionnaires, or projective tests. The intended parameters to be measured are the ability to identify or clearly define a main complaint for the focus of therapy, history of a meaningful relationship during childhood, the capacity to express feelings freely and relate flexibly with the therapist, intelligence, psychological sophistication, and motivation for change. Alongside these criteria, ego strength is another essential feature that a patient needs to benefit from short-term psychodynamic therapy (to tolerate and benefit from anxiety-provoking techniques such as interpretation and confrontation). Considering all the information provided, it can be said that due to its time-limited nature, this psychodynamic therapy approach generally operates with strict and careful selection criteria in order to be beneficial.

Within the context of PSTT, it often is believed that patients with unresolved Oedipal issues are the most appropriate candidates for short-term psychodynamic therapy. There is a general emphasis on the investigation of interpersonal interactions and transference in therapy, with a focus on unresolved Oedipal issues originating from the patient's history. In other words, PSTT investigates the connection between the patient's relationship with past parental figures and the conflict in the therapist-patient relationship. It is also shown that the selection of patients in PSTT can go beyond Oedipal problems like separation anxiety or loss experience. It can be said, however, that there is a common belief that neurotic patients should be chosen over those with severe psychiatric issues because they are unable to handle the insight they would encounter in therapy [23].

Trial interpretation or trial therapy is one of the methods used for testing a patient's appropriateness for short-term psychodynamic therapy. The aim of the trial

interpretation or therapy is to see if the patient was able to respond appropriately to the new insights presented by the therapist [24]. The focus of the therapy is determined and worked upon directly in connection with the patient's openness to new insights. When a patient starts therapy with a particular complaint, the complaint is reformulated by the therapist considering early life experiences. In this process, the therapist creates a psychodynamic hypothesis by combining the patient's complaint and history information. This hypothesis helps to explain the nature of the patient's presented problem such as criminal behavior and lays the groundwork for the resolution process. The formulation is presented to the patient and the patient is expected to be open to interpretation and agreement on this matter. The patient's responsiveness to interpretation and willingness for agreement are crucial factors in focalization of the therapy.

Setting treatment goals with a central focus is a required part considering the aim of achievement in a limited time. Determining clinical priorities is done to ensure the most efficient use of available time. In accordance with this trajectory, potentially achievable goals are set. Such goals may include gaining greater understanding of interpersonal conflicts, greater access to repressed emotions, emotional maturity, capacity for intimacy in relationships, reduction of anxiety and depression, and so on. Goals are set for an individual patient and address the issues that are of most immediate concern.

Setting boundaries and explaining them clearly to the patient are another required part in psychodynamic short-term therapy. It includes specification of time and place to conduct therapy. To exemplify, sessions can be done face-to-face once a week, at a specific time, for about 45 minutes. A clear explanation of goals and boundaries in this manner is important for establishing a solid therapeutic relationship and a ground for a successful therapeutic process. However, it should be added at this point that setting clear and firm boundaries may be of extra importance in order to achieve a successful therapeutic process with criminal patients who have problems with legal boundaries.

The middle phase is an essential stage in which the therapeutic process starts to concentrate on certain aspects such as work focus, curative factors, and goal achievement. In this phase, the therapist actively exposes the patient's conscious ego to the repressed thoughts and emotions originating from the unconscious, which are the source of underlying conflicts, and helps the patient in readjustment. By investigating these repressed aspects, the therapist addresses the underlying psychological factors that can contribute to the criminal behavior to give an example. To facilitate this process in the short term, the therapist uses anxiety provoking questions, confrontations, and interpretations with the aim of increasing awareness and acceptance. However, it is crucial to note that these therapeutic interventions can be wounding since they create high anxiety. Although patients with criminal behavior may have ego strength against anxiety-provoking statements, it should be kept in mind that individuals who exhibit criminal behavior tend to resist acceptance, in other words, use the defense mechanism called denial.

Miller states that defense mechanisms have the function of keeping one's consciousness away from unconscious conflicts. He adds that the threat of punishment in the face of unconscious thoughts and emotions may lead to the use of defense mechanisms to escape from unwanted thoughts and emotions. This phenomenon is specifically relevant for patients with criminal behavior given the legal aspect of their behavior and the possibility of punishment. Miller also proposed the idea that a therapist offers interpretations so that a patient can use insight to become aware of

internal conflicts, thereby replacing awareness with defense mechanisms used [25]. Nevertheless, Molnos claimed that it is more favorable in the long term for patients to explore their unconscious processes rather than be readily given them by the therapist [26]. At this point, it can be suggested that resistance is one of the factors indicating the need for long-term psychodynamic therapy. However, it can also be said that in the short term, the therapist may play a crucial role creating an appropriate medium to surmount or handle with resistance. Taking the limitedness of the time into consideration, the therapist should confront the patient with their defensive strategies or resistant attitudes by recognizing them from the very first session. The therapist should confront the patient with a clear and understandable use of language to improve trust in the relationship. Moreover, the therapist should create a safe environment for communication without the fear of judgment and foster a therapeutic alliance that is characterized by a clear framework, rules, and goals to reduce resistance while increasing tolerance for interpretations.

One of the fundamental techniques employed in PSTT is the utilization of transference in therapeutic relationships. It is based on the idea of connecting the current therapeutic relationship between therapist and patient with past relationships. The advantage of establishing these connections is obvious since it brings old Oedipal issues and all associated emotions into the therapeutic relationship. At this phase of the therapy, the therapeutic atmosphere is established to allow the patient to experience those repressed issues and emotions through a transference relationship. The role of the therapist is to show the patient how these issues and emotions have shaped their current relationships in a repetitive manner. When the therapist facilitates the individual's awareness of their here-and-now transferential reactions and facilitates their experience of connections with current and past relationships, insight follows producing powerful meaning. At this point, the therapist should reduce the patient's internal psychological tension by providing a supportive environment. Through this attitude, the therapist can make the patient realize how these transference reactions may have been adaptive in the past, but are now expressed unconsciously, maladaptive in the present. In this way, the possibilities for the development of new learning and new behavioral patterns can be presented to the patient. In the final analysis, the resolution of core Oedipal issues depends on new learning and cognitive understanding, successful utilization of gained insights, and the experiential activation of emotions with the help of transference interpretations during therapy.

During this process, the therapist also experiences emotional and impulsive fluctuations, known as the countertransference reactions, as the unconscious conflicts surface and the patient's unconscious anxieties decrease. The term countertransference basically refers to unconscious thoughts and emotions of the therapist for the patient. It can be stated that the therapist's countertransference responses can be used as a powerful tool for therapeutic change when they arise in response to the patient's transference. However, these reactions may not always occur as expected. The therapist's own unconscious processes and conflicts may come to light in the patient's presence and negatively impact the therapeutic process. Studies examining the experiences of therapists working with criminals have revealed that the therapist's encounter with the patient's criminal history, feelings, and behaviors related to crime can lead to deep emotional and cognitive conflicts in the therapeutic process. These studies reported a variety of countertransference responses that may hinder the therapeutic process [27, 28]. According to Lacanian psychoanalytic theory, on the other hand, there is no concept called countertransference. Instead, there is the transference of the therapist. This transference has the potential to influence the

healthy functioning of the therapeutic process. Awareness of the therapist's own internal processes and conflicts, making sense of these responses and managing them appropriately, can improve the quality of the therapeutic relationship. Therefore, therapists' participation in the supervision process and personal analysis is a critical step for the healthy functioning of the therapeutic process. These platforms can help the therapist make sense of their own transference, explore their blind spots, and contribute to the therapeutic process with deeper understanding and awareness [29].

The last phase of PSTT is called the ending phase. At this phase, the evidence the therapist should be looking for is improved problem-solving skills, changes in attitudes, behavioral patterns, and overall changes in the patient. Once the therapist is convinced that these are taking place, he or she must understand that treatment must end soon.

At this point, some questions arise. What should be the evidence of change? What should the therapist look for to be convinced that it is really taking place? The first and most important thing is to demonstrate a change in the patient's attitude toward the fundamental psychological problem and their attitude toward the Oedipal foundation that therapy focuses on. The therapist may use a variety of ways to test whether this is happening. One of these ways is for the therapist to carefully examine the transference relationship. Elements such as progressive independence, increased self-confidence, improved self-esteem, and reduced dependence on the therapist are indicators of important steps in the right direction. Another way the therapist can resort to is to ask the patient to explain his or her understanding of his or her psychodynamic roots of psychological problems. In PSTT, it is extremely important at the end of treatment that the therapist and patient have a clear understanding of the psychodynamics roots of the psychological problems. Moreover, the therapist should ask the patient to give instances of situations where their attitudes and behavioral patterns have changed and inquire about the differences in how they engage with significant people around them. Finally, information should be gathered about the development of new relationships and the emergence of new ways of dealing with old problems. The reduction or disappearance of past neurotic patterns should provide tangible evidence that fundamental changes have indeed occurred, and that some insight has been gained.

4. Fictional case example

Due to his persistent issues with criminal activity, John, a 35-year-old man, seeks out psychodynamic short-term therapy. His judicial troubles in the past have included stealing and substance abuse. John wants to understand the underlying reasons for his behavior because he recognizes the damaging effects it has had on his life and personal relationships.

John and his therapist conduct a thorough evaluation of his psychological background and criminal activities throughout the evaluation phase. The therapist investigates John's early life, family relationships, and any traumatic situations that might have affected his development. They explore the idea of the Oedipal complex, which contends that early life experiences have a major impact on a person's conduct and personality. John reveals that he was raised in a low-income area with a history of high crime, little prospects, and exposure to drug usage. Due to his father's frequent absences and involvement in illegal enterprises, their relationship was strained. During this process, the therapist discovers unresolved issues related to the Oedipal

conflict, where John has experienced feelings of rivalry and jealousy toward his father's criminal lifestyle.

As the therapeutic relationship is formed, the therapist provides John with a secure and accepting environment in which to examine his feelings and thoughts, including his encounters with the Oedipal dynamic. John displays a range of contradictory feelings, such as resentment, a yearning for parental guidance, and a desire to forge his own identity. The therapist fosters trust and fosters an atmosphere that is conducive to self-reflection by actively listening and exhibiting empathy.

Setting therapy objectives while taking into consideration the Oedipal theme is a joint effort between John and his therapist. They list a number of particular objectives, such as comprehending how the Oedipal conflict affects John's criminal behavior, resolving unresolved feelings related to his father-son relationship, creating healthier coping mechanisms, and strengthening decision-making abilities. John says he wants to develop a secure profession, mend his relationships, and release himself from the Oedipal dilemma.

John and the therapist also talk about how long therapy will last, with the therapist highlighting how short-term psychodynamic therapy is time limited. With the understanding that the emphasis will be on accomplishing specific goals connected to the Oedipal theme within this timeframe, they agree on the specification of the time and location to conduct treatment. This conversation makes sure that John and the therapist are on the same page on the goals and framework of the therapy, with a focus on addressing the Oedipal issues.

In the middle phase of the treatment, the emphasis shifts toward resolving the Oedipal conflicts and unconscious forces that underlie John's criminal behavior. As John projects his unresolved thoughts and emotions related to his criminal tendencies onto the therapist, transference becomes a critical component of the therapeutic process. John starts to project his unresolved issues with his father and his criminal behavior onto the therapist as their therapy relationship develops. He views the therapist as an authoritative figure or perhaps a "criminal accomplice," causing him to experience strong emotions and unresolved problems related to his illegal behavior. John's emotions alternate between wanting approval for his actions and carrying around guilt or shame. The therapist is aware of this transference and accepts it, giving John a secure and compassionate environment in which to explore and express these difficult feelings. The therapist urges John to consider how his prior experiences might be influencing his present criminal behavior and decisions by assisting him in seeing that his feelings toward the therapist are a mirror of those events.

John has used defense mechanisms such as denial or rationalization to lessen the gravity of his conduct within the framework of the Oedipal conflicts and his criminal tendencies. But as therapy goes on, these protective mechanisms progressively give way to new and more beneficial coping strategies. John learns to accept responsibility for his criminal actions while also addressing the underlying psychological issues with the help of the therapist. A supportive and nonjudgmental environment is established by the therapist in order to address these defense mechanisms. The therapist offers John empathy and understanding as he explores and processes his feelings and thoughts in relation to his criminal actions. The therapist supports John's personal development and a change to a law-abiding lifestyle by encouraging him to test out better alternatives to his old coping mechanisms.

To address the transference and direct John toward healthy coping strategies tailored to his criminal behavior, the therapist employs a variety of techniques. The

therapist assists John in making the connection between his present encounters with the therapist and his unresolved conflicts over his criminal behavior through interpretation and confrontation. The therapist draws comparisons between John's unconscious wishes for authority or recognition in relation to the Oedipal conflicts and his craving for power or control inside his criminal activity.

The therapist keeps track of and controls their own countertransference reactions throughout this stage. The therapist maintains a professional demeanor while acknowledging any emotional reactions brought on by John's views on his illegal activities. The therapist makes sure that their own unresolved issues or emotional reactions associated with crime do not interfere with the therapeutic process by using supervision and personal therapy to address any potential biases or blind spots that may occur.

John's therapist helps him gain a deeper awareness of the psychological elements influencing his conduct by addressing the transference and working through the defense mechanisms connected to his criminal behavior. Together, they elucidate the hidden motives, unsolved issues, and unfulfilled needs that underpin his criminal propensities. John learns new techniques for managing his emotions, making wise judgments, and encouraging positive behavioral changes *via* this exploration, which helps him reach his therapeutic objectives.

In the ending phase of the treatment, the therapist wants to evaluate the progress made. They pay close attention to how John's projections onto the therapist have greatly lessened. John no longer views the therapist as an authority figure or an accomplice, but rather as a reliable mentor on his road to recovery. John demonstrates a profound awareness of the psychological causes that motivated his illegal activity during their genuine conversations. He discusses how his behaviors are related to his unmet emotional demands after learning how his prior experiences shaped his decisions. This new perspective illuminates the path to recovery and personal development.

At this process, the therapist observes that John has adapted new coping mechanisms. John shares stories of how he now controls his rage and impulsivity using mindfulness practices, which helps him respond instead of reacting negatively. He has the capability to deal with challenging circumstances thanks to the learned tools. With a transformed mindset and improved coping mechanisms, John begins to mend his connections. In an effort to put things right and forge stronger bonds, he contacts his family and friends. He has meaningful interactions with his loved ones thanks to his increased communication abilities and his newly discovered capacity for understanding others. He expresses guilt for his prior deeds and demonstrates empathy for their perspectives.

The therapist witnesses John's remarkable changes as therapy comes to an end. His attitudes, actions, and coping techniques have undergone a profound transformation. Although John's path to recovery has not been simple, he has become stronger and more resilient and is now prepared to embrace a law-abiding and fulfilling life.

5. Effectiveness of PSTT on criminal behavior

There are plenty of studies in the literature that compares the effectiveness of both psychodynamic therapy and short-term psychodynamic therapy specifically with other therapy schools. A meta-analysis article that integrated 17 studies reported that short-term psychodynamic therapies generated large effect sizes for different variables such as target problems and social functioning [30]. According to a study of university counseling services including both psychodynamic and CBT approaches, significant

improvements were seen after both therapy and at the 6-month follow-up, compared to before treatment [31]. Short-term psychodynamic therapy is found to be more effective than psychoanalysis in the initial year in terms of improvement in work ability and functional capacity for anxiety and depression patients, whereas in 5-year follow-up psychoanalysis showed better improvement [32]. Long-term psychodynamic therapy is also found to be more effective in terms of elimination of psychiatric symptoms and working ability compared to PSTT and solution-focused therapy, which were classified as “short-term” therapy approaches with no significant difference among them [33]. There are also studies showing that there is no significant difference between cognitive therapy and PSTT in terms of defensive functioning of Cluster C personality disorder patients [34]. In light of such findings, long-term psychodynamic approaches seem to be more effective for long-term results. However, PSTT shows promising efficacy similarly with other short-term therapy methods, such as CBT.

The effectiveness of PSTT on different types of psychiatric conditions was proven within the literature as well. For personality disorders, it is shown that Intensive Short-Term Dynamic Psychotherapy-treated individuals achieved better results compared to the control group across all outcome measures. Furthermore, the improvements in both functionality and reduction of symptoms were maintained during the long-term follow-up period [35]. Psychodynamic short-term therapy (PSTT) has been discovered to be a successful therapy for individuals experiencing depression, regardless of whether they also have a concurrent borderline personality disorder [36]. For various types of psychiatric symptomatology, PSTT was found to be significantly effective to reduce symptoms [37]. Related to personality disorders, a review paper revealed that PSTT offers efficient improvement as compared to control groups [38]. Same paper suggests that Cluster C personality traits are the most proper for PSTT as compared to Clusters A and B, since they are seen as less vulnerable, which will be discussed later on.

Therapies conducted on crime in the literature generally appear to adopt the cognitive behavioral therapy approach. On the other hand, some studies reported use of psychodynamic approaches toward domestic violence perpetrators [39], sexual offenders [40, 41], violent individuals [42], and offenders who self-harm [43]. Although such studies report promising use of PSTT, there are a limited number of studies showing the use of PSTT on crime behavior. The possible reasons for that will be discussed in the following parts.

There are some case reports that summarize psychodynamic therapy processes with criminals. Such studies would be a good investigation method for effectiveness of PSTT, since psychoanalytic point of view notices the importance of subjectivity of each individual. As one of those case reports, Marriott described a detailed case of a teenager murder convict and his one-year long psychodynamic psychotherapy process [44]. In this report, the use of transference and countertransference concepts within the sessions and how these were worked in therapy were well described. Moreover, it is stated that through therapy, the subject began to establish more internal attributions for his acts and became more remorseful, which may reduce the risk of reoffending.

5.1 Why PSTT would be a good therapy alternative for criminal behavior?

There are numerous theoretical explanations stating that the roots of criminal behavior stem from unconscious conflicts. Moreover, although limited, a number of studies succeed to empirically present such connections. For instance, Brody and

Rosenfeld's study showed that there is a significant relationship between object relation dimensions and psychopathy [45]. Object relation theory proposes that interpersonal behavior is driven, in part, by internalized and unconscious mental representations of oneself and others. These representations are formed as a result of early experiences, specifically going back to mother-child unity, which takes roots from psychoanalytic theory. As findings supported as well, work with criminal behavior requires unconscious study. Although not detailed as psychoanalysis, PSTT would be considered as a shortcut alternative to interpret unconscious processes. As described in previous chapters, theories emphasizing the dynamic nature of criminal personality based on early childhood conflicts, PSTT would be the best way to refer to those issues in a limited time.

When working with criminal behavior, one aim is to help the client in taking accountability for their offense. By recognizing their role and ownership in the crime, the goal is to decrease the likelihood of future acts of violence [46]. As other psychoanalytically oriented therapies, PSTT also favors subjectivity of the client by pursuing the unconscious conflicts that are idiopathic to the client. Therefore, PSTT is a good method specifically for criminals, since it may help take and accept the responsibility of their acts.

6. Limitations

As reviewed in the previous section, there is a limited amount of research, which was able to investigate the effectiveness of PSTT for criminal behaviors empirically. The first reason for that would be that most studies about criminal behavior for therapy setting have samples from convict individuals. For offenders staying in an institute, hope for reduction in the sentence was a common characteristic for psychotherapy motivation [47]. Considering the strict election criteria for PSTT, such individuals might be considered to be not eligible for psychodynamic treatment. Moreover, due to the scarce resources in prison settings, group psychodynamic therapies seem to be preferred over individual psychotherapy, as a more cost-efficient alternative. Overall, this scarcity of data makes it challenging to measure its efficacy. The overall discussion on efficacy of PSTT focuses on psychodynamic theory in general, rather than focusing on PSTT specifically due to the lack of empirical effectiveness studies in the literature. Although using similar concepts and methods, PSTT needs to be assessed in terms of its efficacy on criminal behavior.

The duration for "short-term" psychodynamic therapy is not consistent within the literature. In the review paper investigating the effectiveness of PSTT, a maximum of 40 sessions and a minimum of seven sessions were included [48]. Moreover, some PSTT procedures include no time limit at all. Since there is a discrepancy between durations among studies, it becomes harder to define "short-term" or "brief" psychodynamic therapy within the literature in the beginning. Moreover, since criminal behavior is characterized with resistance and denial, obtaining successful results through short-term therapy approaches can be challenging.

One final limitation regarding the issue is the relation of criminal behavior with specific personality traits. Considering personality disorders, criminal and violent behaviors are more prominent among Clusters A and B personality types as plenty of studies in literature suggested [49, 50]. As noted previously, however, Cluster C personality traits are the most proper characteristics to benefit from PSTT. Considering such differences among subtypes of personality disorders, it becomes harder to reach a general conclusion about the effectiveness.

7. Conclusion

In this chapter, theoretical background, treatment plan, and effectiveness of PSTT on criminal behavior were discussed. Despite the theoretical underpinning of crime and psychoanalytical theory, there are a limited number of studies examining the usage of psychodynamically oriented treatment plans on criminals. More case studies are needed to illustrate the relationship among unconscious conflicts with such behavior. Further studies would also focus to demonstrate the practical outcomes such as symptom or criminal attempt reduction of PSTT.

Author details

Dilan Aktaş^{1*}, Deniz Çelik^{1,2} and Melike Çakır^{1,3}


1 Middle East Technical University, Ankara, Turkey

2 Çankaya University, Ankara, Turkey

3 Ankara Science University, Ankara, Turkey

*Address all correspondence to: dilan.aktas@metu.edu.tr

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Cognitive Behavioral Therapy (CBT) for Criminal Behaviors

Orkun Karabatak

Abstract

Criminal behavior, theft, fraud, violence, manslaughter, etc., are defined as illegal behaviors that cause problems at the social level. In the emergence of criminal behavior, approximately four concepts are functional. These concepts are individual motivation, relevant circumstances, meaning to the individual, and the individual's reason for committing the crime. These concepts are also considered in crime prevention. In this chapter, information is provided about cognitive behavioral therapy (CBT) and the therapeutic methods derived from this approach. First, Cognitive Behavioral Therapy is explained of how it originated. Then, the therapeutic approaches as third wave derived from the CBT approach such as schema therapy, acceptance and commitment therapy, and metacognitive therapy are discussed. The professionals recognize that thought content is the fundamental step in the development of criminal behavior. For this reason, information is also provided on techniques such as recognizing thought errors, distraction, social skill training, and breathing and relaxation exercises that are effectively used in the rehabilitation of criminal behavior. Studies from the relevant literature address the effectiveness of cognitive therapy techniques in neutralizing criminal behaviors, including anger management, sexual offending, and partner violence. Findings from the literature and suggestions for accelerating future studies in this area are provided.

Keywords: acceptance and commitment therapy, anger management, cognitive behavioral therapy (CBT), criminal behaviors, metacognitive therapy, social skill training, schema therapy

1. Introduction

Criminal behavior has long been analyzed in both clinical psychology and forensic psychology to prevent crime. Cognitive behavioral therapy provides forensic psychology with useful tools to explain criminal behavior and to prevent it. The interaction among the three components of CBT results in different models for each criminal behavior. The models have the same perceptions of criminal behavior, such as personal variables, individual responsibility, and risk reduction, rather than cultural and social aspects.

1.1 Cognitive behavioral therapy

Cognitive therapy is based on the cognitive model, which states that perceptions related to an event have a mediating role for emotions about that event. The cognitive

model provides three different levels for cognitive perspectives. The first level is automatic thoughts about an event. Automatic thoughts arise quickly in the mind, and automatic thoughts are also the cause of sudden emotional reactions to events. In cognitive theory, it is mentioned that people can have different automatic thoughts about the same event based on beliefs underlying automatic thoughts. These beliefs are developed based on childhood experiences about the environment. Childhood experiences influence beliefs about oneself, other people, and the world. These beliefs continue by selectively focusing information that confirms these beliefs. Core beliefs are the most important beliefs that are global, rigid, and overgeneralized. Automatic thoughts are words or images associated with a particular situation. Intermediate beliefs lie between these two levels. Intermediate beliefs arise as rules, attitudes, and assumptions to resolve negative core beliefs. Intermediate beliefs influence the perception of the two events [1].

1.1.1 Case

Sally is an 18-year-old college student who suffers from depression. She strongly believes that she is inadequate because she performed poorly as a child compared to her older brother, and her mother reinforced this belief by saying, “Cannot you do anything right?” “Your brother got a good report card. But you? You’ll never do well.” The core beliefs continued as she selectively focused on poor performance in her school life. Sally developed intermediate beliefs for inadequacy beliefs, such as “I should be good at everything I try” or “I should always do my best.” These intermediate beliefs led to negative automatic thoughts about everyday events, such as Sally not being able to sleep because she felt anxiety, with an automatic thought that said “I’ll probably fail that night” [1]. The middle beliefs led to negative automatic thoughts about daily events, such as Sally could not sleep because she felt anxiety.

1.2 Third-wave therapies

The first wave of therapy is behavior therapy, which is based on classical conditioning, operant conditioning, and behaviorism. The second wave is cognitive therapy, which focuses on both cognition and information processing. The third wave focuses on the contextual approach, which considers the function of behaviors and private events. Some examples of third wave are metacognitive therapy, acceptance and commitment therapy, and schema therapy. Metacognitive theory was developed by Adrian Wells and is based on the self-regulatory executive function model and cognitive attention syndrome. The self-regulatory executive function model states that the interaction between lower-level automatic processing and higher-level automatic processing activates the cognitive attention syndrome (CAS) as a function of metacognitive beliefs. When the metacognitive beliefs mention the effectiveness of the CAS for problem solving, problem avoidance, or the uncontrollability of the CAS, the CAS is activated by the self-regulatory executive model (S-REF). The CAS activates cognitive processes (rumination, worry) that lead to threat monitoring as dysfunctional coping strategies [2]. The Acceptance and Commitment Therapy (ACT) states that words and events match until worlds with events can elicit the same responses. The ACT states that people cannot distance themselves from their thoughts and feelings because their dysfunctional problem-solving strategies are based on

experience. The ACT describes that psychological problems are based on inflexibility resulting from both reliance on experience and the conflation of words and events [3]. Schema therapy expresses that toxic childhood experiences lead to early maladaptive schemas, that is, pervasive themes related to relationships with others, memories, and life experiences. Dysfunctional responses lead to continuity of early maladaptive schemas [4].

2. History of CBT

CBT can be understood as an integration of two different schools of psychology (behavioral psychology and cognitive psychology). Behavioral psychology is a perspective that uses experimental methods, falsifiable hypotheses, and operationalization to make psychology a natural science. The goal of behaviorism is to manipulate behavior by understanding the interaction between behavior and environmental variables. Behaviorism began with the discovery of classical conditioning. Russian physiologist Ivan Pavlov produced a conditioned adaptive response in dogs by linking a conditioned stimulus (a bell) to an unconditioned stimulus (a food). At the beginning of the experiment, the dogs showed no response to the bells, but after classical conditioning, the dogs also showed a salivary response to the bells when the food appeared. John Watson hypothesized that all human behaviors can be explained by classical conditioning. He tested this hypothesis in the experiment "Little Albert." Albert was an 11-month-old infant who had no fear of white fur before the experiment. John Watson used a loud voice to elicit an unconditioned fear response when Albert looked at a rat with white fur, and after repeating the same procedure, Albert showed a conditioned fear response to the rat with white fur. Watson reported that little Albert generalized the same fear response to other objects with white fur [5]. Burrhus Skinner, another behaviorist, developed operant conditioning based on Edward Thorndike's studies of the law of effect, which states that the frequency of behaviors followed by satisfaction increases and the frequency of behaviors followed by dissatisfaction decreases [6]. Skinner noted that organisms change their own behaviors in response to environmental changes. Some environmental changes lead to a decrease in the frequency of behaviors, and this effect is called punishment. Some environmental changes lead to an increase in the frequency of behaviors, which is called reward [7]. Mary Cover Jones used classical conditioning to treat a three-year-old boy who suffered from rabbit phobia. During treatment, she systematically related cookies and rabbits [8]. Albert Bandura contributed to behavior therapy with the social-cognitive process by showing the possibility of a cognitive process from a behavioral perspective. The social-cognitive process states that the organism can learn new behaviors by observing indirect rewards and indirect punishments [9]. Cognitive therapy is based on the cognitive model, which states that people's emotions and behaviors are influenced by thoughts about events. The cognitive model is based on the Greek philosopher Epictetus' statement that "people are not disturbed by things, but by the view they have of them." Aaron T. Beck, the founder of cognitive therapy, attempted to test a psychoanalytic theory about depression. The theory states that depression is a result of inner anger toward others. Beck could not prove the theory of inner anger, but he found extremely negative views about themselves in the group of depressed patients [10]. Beck improved the studies on negative self-images until he found cognitive

errors in patient groups. Beck developed cognitive therapy based on scientific studies of patients [11]. The metacognitive therapy (MCT) approach is the result of laboratory findings on attentional biases and observations in clinical patients. Unlike the CBT approach, MCT focuses on maladaptive thinking styles (rumination and worry) rather than cognitive content (beliefs or automatic thoughts) [12]. Acceptance and Commitment Therapy (ACT) was developed by Steven Hayes and his doctoral student Robert D. Zettle based on the role of language in clinical situations. The ACT is based on Relational Frame Theory, which, unlike CBT, emphasizes possible behavioral/behavioral relationships rather than cognitive control of behaviors [13]. Schema therapy was developed by Young and colleagues using various schools of therapy such as cognitive behavioral therapy, Gestalt therapy, object relations, attachment therapy, constructivist therapy, and psychoanalytic therapy. Schema therapy focuses on chronic personality disorders and is based on long-term psychotherapy sessions [4].

3. Techniques of cognitive behavioral therapy

Psychoeducation: Psychoeducation can be used to change patients cognitively. The content of psychoeducation includes the philosophy of CBT based on a cognitive model about the relationship between events and emotions under the mediation effect of cognition, the role of core beliefs and intermediate beliefs, and specific models for certain psychopathologies. Therapists define the nature of beliefs as something learned in the past rather than innate.

Socratic dialog: Therapists can use the Socratic Dialog technique to review overgeneralized thoughts by evaluating them in the context of specific examples.

Behavioral experiments: Behavioral experiments are used to test the validity of assumptions. Behavioral experiments are more effective than verbal techniques.

Role plays: Role plays can be used for social skill training to practice assertiveness and empathetic communication with others during a discussion.

Restructuring early memories: Memories related to core beliefs can be changed through the use of emotional and experiential techniques following the presentation of cognitive techniques. The therapist finds traumatic memories to change the meaning of the event during the imagining process. Memories associated with core beliefs can be altered through the use of emotional and experiential techniques following the presentation of cognitive techniques. The therapist finds traumatic memories to change the meaning of the event during the imagination process. *Problem solving:* Learning to problem solve involves specifying a problem, planning a solution, designing an experiment to solve the problem, and evaluating its effectiveness. Patients must examine dysfunctional beliefs that prevent the problem-solving process from beginning.

Decision making: The therapist guides the patient in evaluating options based on the pros and cons of the options during the decision-making process. The patient chooses the best option at the end of the dialog.

Refocusing through distraction: The therapist guides the patient to recognize his or her own past strategies as the patient refocuses or distracts his or her attention. This same technique can be used as an imagination of possible strategies for refocusing distraction in the future. Some strategies include memory cards to recall motivating worlds in the past.

Relaxation: Relaxation including systematic muscle contraction relaxation exercises. Relaxation exercises produce a paradoxical arousal effect in some patients. Thinking of relaxation exercises as an experiment to treat anxiety symptoms may be beneficial to patients [14].

4. Research on the effects of cognitive behavioral therapy (CBT) on unlawful acts

A study has shown that a CBT program for law-breaking behavior can reduce recidivism by 29% when the treated group is compared to the non-treated group [15]. The study used cognitive modification for cognitive distortions. A meta-analysis found that CBT programs were effective in reducing recidivism between 1968 and 1996. Programs were found to be most effective when they targeted both cognitive and social skills, rather than just standard behavior modification [16].

4.1 Research on anger management

4.1.1 Statistical studies on the effect of cognitive behavioral therapy on anger management

A meta-analysis based on 50 studies showed that cognitive behavioral therapy is an effective treatment for anger problems [17]. Another meta-analysis showed that CBT-based treatments reduced the risk of general relapse and violent relapse for anger problems by 23 and 28%, respectively [18]. A systematic review study showed that CBT-based group therapies improved anger management skills in different groups such as college students, psychiatric patients, and individuals with personality disorders [19]. One study indicated that CBT-based group therapy was effective for adolescents with anger management problems [20].

4.1.2 Models of anger management

4.1.2.1 Anger episode model

The anger episode model assumes that intense anger occurs in a short period of time. The model states that unhealthy anger results from modeling others. The model defines five contexts of the anger episode: trigger, appraisal, experience, expression, and outcome. The trigger is a stimulus that triggers the anger episode. A trigger can be an external stimulus (e.g., a criticism) or an internal stimulus (e.g., a picture of a problematic situation about a friend). The appraisal phase is about beliefs related to the triggers. Four types of appraisal lead to anger about the trigger. Making demands of the trigger, usually involving a “should” or “should not,” scaring the trigger, believing that unpleasant events will not be tolerated, and explaining events by using general terms for the personalities of others. The next step is experiencing anger, which includes both physiological reactions (high heartbeat or tense stomach) and secondary thoughts about the trigger. Another step is the expression of anger in the form of verbal or physical expressions. Offenders who have a problem managing their anger may be encouraged by their family members or gang members to express their anger physically rather than showing patience with it. The consequences of

anger can be classified as positive or negative, with over long or short periods of time. Aggressive behaviors can lead to positive outcomes in the short term, but the same aggressive behaviors can also be triggered for the next anger outbursts [21].

4.1.2.2 Anger management techniques

Using psychoeducational techniques, the anger episode model is presented with patient examples. Offenders learn an emotional vocabulary to identify their anger spectrum using an anger thermometer. The anger management model provides environmental manipulations to reduce triggers. These include moving to a less crowded place. Some techniques target anger experiences, such as barbing. Barbing is an exposure technique used with verbal anger triggers. The offender calls out the verbal trigger until it loses its meaning. Some techniques target the expression of anger, such as assertiveness training. Expressing anger assertively has two parts. The first part is using certain verb patterns such as “if ..., then I feel,” and the second part is asking for help.

4.1.2.3 Case

Terry was a young woman who grew up with her abusive mother. Terry’s sister had schizophrenic episodes. Terry’s father had suicidal thoughts during Terry’s childhood. Terry’s mother’s behavior included yelling, hitting, and being abusive to Terry and Terry’s sister. Terry has been in psychotherapy treatment for 20 years for anger issues. Terry described herself by saying, “I know I am crazy, I need help fighting dangerous thoughts.” Terry described her fears of the harmful effects of her anger on her life. For example, Terry attacked an elderly lady, as a result of which she was arrested. Terry’s anger management problem increased over time [22]. Terry’s anger management problem can be explained using the anger episode model. Her mother’s physical attack on Julia (Terry’s sister) was the trigger for her anger. Terry appraised the triggering event based on these thoughts, “I was mad as hell, God help me, I’d have a baseball bat or something, I’d lunge at her,” indicating the belief of losing control during unpleasant events. The appraisal phase directly impacts the experience phase. Terry stated that she got energy and felt possessed, as if on TV. Terry physically attacked her mother in the expression phase of anger. The result of this action was that her mother did not speak to her for a long time, and Terry learned the attitude of being violent to protect herself, which led to new triggering events as a short-term positive result as a long-term negative result, and her mother stayed away from her little sister Julia after the tantrum.

4.1.2.4 General aggression model (GAM)

The GAM is divided into two parts, distal process causes and proximal process causes. The distal process causes state that personality generates aggression tendencies. Personality is the result of the relationship between biological modifiers and environmental modifiers. Biological modifiers cause the factors for the development of aggressive personality. Biological modifiers include ADHD, impaired executive functions, low arousal, and hormonal imbalances. Environmental modifiers that lead to aggressive personality include cultural norms, violent peer groups, difficult living conditions, and maladaptive families. The immediate process causes can be divided into three stages: Input, Routine, and Outcome. The input stage means that two parts of aggression are the person and the situation. Two factors influence internal variables such as cognition, affect, and arousal related to aggression. The person

factor is the trait of aggression, including high self-esteem with narcissism, high self-efficacy for aggression, acceptance, hostile cognitive distortions, moral justification of violence, certain personality disorders, and high neuroticism. Situational factors contributing to aggressive behavior include provocation, exercise, alcohol, anonymity, noise, presence of weapons, and threatening stimuli. Situational factors and biological factors interact to influence internal factors such as cognition, affect, and arousal related to aggression. The second stage is the process of decision making with or without judgment based on internal variables under the influence of situational factors and personal factors. The internal variables, that is, affect, cognition, and arousal, may influence each other. The input variable increases the accessibility of aggressive thoughts, behaviors, and anger. The third stage focuses on both the appraisal process and the decision-making process for aggressive or nonaggressive responses. Immediate appraisals lead to inferences about traits or situations. People respond aggressively to others when they infer a particular trait. Inference from a trait leads to approving goals, plans, and behavioral scripts toward another person. Individuals can make alternative inferences about the behavior of others if they have both sufficient time and cognitive resources to consider negative outcomes [23].

4.1.2.5 Anger management techniques

The techniques refer to the model based on reversing risk factors such as positive attitudes toward aggression, high neuroticism, and low conscientiousness through the use of CBT techniques. Virtual Reality Aggression Prevention Training (VRAP) is an exposure technique that improves both awareness of aggression and control over aggression during social interactions. The technique provides physiological feedback to the therapist for real-time therapeutic intervention and treatment design for the offender. The technique can be used for social skill practice or relaxation exercises in a virtual reality environment [24].

4.1.2.6 Case

This case is about anger management in three individuals who have similar anger management problems, such as verbal, emotional, and physical violence against others in prison. The three cases also have prior convictions related to violent behavior. Demographic information about the cases states the following: The 3 men were 26, 30, and 40 years old. Similar characteristics of the cases are: sexual orientation toward other men, victims of childhood sexual abuse, rejection by the family because of their sexual orientation, and anger toward the family and society. Three psychopathologies were diagnosed: depression, antisocial personality disorder, and generalized anxiety disorder. Some cognitive schemas can be summarized as “I often think that I get angry,” “controlling anger is difficult because there are many instances,” “I should be reactive because people are bad, “and” if people do not make me angry, I do not feel angry. “Some other examples of cognitive distortions: “people deserve aggressive behavior”—these types of schemas and automatic thoughts lead to aggressive behavior against both self and others. An example of aggressive behavior toward other prisoners: Prisoner G offers prisoner S a dessert, but prisoner S refuses to eat the dessert. Prisoner G yelled at Prisoner S in an angry voice after his refusal. Prisoner O said, “Leave S alone, he is just sitting there.” Prisoner G threw the dessert against the wall. Psychologist applied several CBT techniques in this case; for example, psychologist used Socratic dialogue to recall alternative behaviors, recalled hot automatic

thoughts by imagining the problematic situation, and activated and diverted attention, and also psychologist used relaxation exercises during the imagining process to balance both physiological reaction of anger and physiological relaxation [25]. The case can be explained by the General Aggression Model (GAM). Prisoner G. grew up in a negative family environment because he had a different sexual orientation. The interaction between biological modifiers and environmental modifiers causes prisoner G. to react to rejection in his personality. The event of rejection of friendly behavior, such as presenting desserts, leads to negative cognitions, emotions, and arousal during the route phase. Prisoner G. has become accustomed to immediately processing his impulsive actions, such as yelling at or throwing certain objects at the wall, without evaluating the results. Prisoner G.'s action led to a social reaction from Prisoner O., who was subsequently warned, and at the end of the event, Prisoner G. created a negative environment in the prison.

4.2 Research on addiction

4.2.1 Studies on the effect of cognitive behavioral therapy (CBT) on addiction

A literature review shows that CBT interventions for alcohol or other substance abuse disorders are effective under two mediator variables, including self-efficacy and coping skills. Self-efficacy is related to improvement in therapeutic commitment, global symptom severity, and reduction in drinking frequency. Coping skills are related to self-regulatory cognitions and behaviors to reduce substance use risk behaviors in the Litracer study [26].

4.2.2 Models for the disease of addiction

4.2.2.1 Marlatt's cognitive behavioral model

Marlatt's cognitive behavioral model is based on social-cognitive psychology. Marlatt's model aims to prevent relapse in addiction. The model emphasizes that two categories of factors lead to a relapse episode. The immediate determinants include the absence of the injury effect, outcome expectations, the person's coping skills, and high-risk situations. The second factor includes antecedents such as urges with craving and lifestyle imbalances. High-risk situations are a threat to the person's perception of self-control over his or her own addictive behavior. High-risk situations include negative emotional states (depression, anxiety), interpersonal conflicts (conflicts with family members), positive emotional states (parties), and testing personal control over addictive behaviors (buying a bottle of wine). Coping skills are important for relapse episodes because responding to trigger situations is critical for relapse episodes. Cognitive behavioral therapy strategies can increase self-efficacy for relapse episodes. Outcome expectations mean that positive expectations of alcohol/drug use for satisfaction also ignore negative outcomes. The effects of the absence violation are the attitudes of the person himself, which decay during the healing process. Attitudes can be global, stable, and internal explanations for one's failure. Attitudes can reduce self-efficacy, which prevents relapse. Covert antecedent factors lead to "seemingly irrelevant decisions" (AID) that appear to have nothing to do with relapse but actually increase the risk for relapse. Covert antecedent factors include lifestyle factors that represent an unbalanced life between duties and leisure.

Lifestyle can lead to rationalizations for addiction. Another covert antecedent factor is craving for immediate gratification; craving has two processes: The first step relates to classical conditioning between stimuli and past gratification, and the next step relates to cognitive processes related to the expectation of a positive effect from alcohol or drugs [27].

4.2.2.2 Techniques for addiction control

Self-observation is a technique based on understanding the triggers for relapse. The technique may involve writing down cognitions, emotions, and behaviors during relapse. The cognitive restructuring technique is a definition of psychoeducation *via* Martlatt's cognitive behavioral model. Psychoeducation can mention the myths as well as the Placebo effect of medication during the relapse episode. Downsizing goals to more manageable and smaller goals is a technique based on self-efficacy. Relapse roadmap is a technique based on discovering possible scenarios for relapse. The relapse roadmap can be used to develop coping skills for each scenario.

4.2.2.3 Case

R.P. was a 14-year-old adolescent who lived with her family, including her mother, father, and sister. R.P. was diagnosed with depression and drug addiction. R.P. was caught using drugs at school. R.P. reported using marijuana and other drugs for 2 years. She suffered from depression for 1 year. She took antidepressants and received psychiatric treatment for her suicidal thoughts. She stated that she did not think about the negative consequences of drug use and acknowledged that both her communication and problem-solving skills were problematic. R.P.'s situation can be explained on the basis of Martlatt's cognitive behavioral model. In high-risk situations, there were both relationship conflicts and problematic episodes regarding her mental health. R.P. applied ineffective solutions, such as taking various drugs. The ineffective solutions increase positive expectations about the outcomes of drug use. The positive expectations lead to relapse. The absence of violence and the thought of the positive effects of the drug increase the likelihood of relapse. R.P. learned to manage her stress without drug use. Instead of using drugs, she found other activities such as talking with her boyfriend, exercising, drawing, and listening to music. She recognized some events as triggers for both her depression and anxious feelings, such as relationship conflicts with her boyfriend or her worries about school. She recognized her automatic thoughts about her grades in school. She changed her high expectations of both her triple scores and her exam scores [28].

4.3 Research on partner violence

4.3.1 Studies on the effect of cognitive behavioral therapy (CBT) on partner violence

Cognitive behavioral group therapy can reduce both physical and psychological abuses in male perpetrators of partner violence when CBT is delivered with a therapeutic alliance that prevents blaming others for their aggressive actions and reduces resistance to the therapist's efforts [29]. Standard CBT group therapy is an effective treatment for preventing partner violence in men with or without motivational interviewing strategies [30].

4.3.2 Models for partner violence

4.3.2.1 Duluth model with CBT

The Duluth model was developed for men who perpetrate domestic violence against family members or men. The Duluth model is based on feminist theory, which states that domestic violence is a consequence of the power and control paradigm. The Domestic Violence Project is a group psychoeducation program for men who exhibit partner violence. The psychoeducation program follows the Duluth model and lasts 28 weeks. In the first phase of psychoeducation, specific topics are addressed, such as emotional abuse, belittlement, denial, blaming, intimidation, children, male privilege, economic abuse, coercion, and threats. The themes are presented on the power and control wheel. The Duluth model emphasizes non-threatening behavior over the power and control wheel. The themes on the non-threatening behavior wheel are honesty, respect, trust and support, accountability, responsible parenting, economic partnership, shared responsibility, negotiation, and fairness. The Duluth model explains domestic violence as a past learned behavior related to power and control. The Duluth model emphasizes the influence of socialization on behavior rather than psychopathology [31].

Criticism of the Duluth model relate to the therapeutic process, theory, and effectiveness of the model. The first criticism is that the Duluth model neglects data on female violence, such as mothers being one of the violent groups for child abuse. Another criticism is that the Duluth model is presented as a CBT model, but the Duluth model does not fit CBT because of its polarized thinking based on the gender paradigm. Criticism of the effectiveness of the model is that the recidivism rate for domestic violence after intervention treatment was 40% [32].

4.3.2.2 Techniques related to partner violence

The Duluth model uses group psychoeducation based on themes related to power and the wheel of control. The second episode of the treatment cycle provides video exercises on the topic to understand the pathways of violence based on the topic, and the final episode of the treatment cycle focuses on practicing non-violent and non-controlling behaviors in the problem situation using role playing. The treatment cycle is used for each theme of the power and control wheel.

4.3.2.3 Case

Lyn is a 65-year-old white woman who experienced domestic violence at the hands of her father, stepfather, ex-husband, husband, and son. Lyn reported sexual abuse, threats with weapons, and beatings in her past life. Lyn stated she was emotionally abused by her son, a middle-aged adult. Lyn came from a dysfunctional family in which her father used emotional and physical violence against her and her mother. Lyn blamed her mother for not protecting her from her father. Lyn mentioned that her son blamed Lyn because Lyn had not protected her son from his grandfather's violence in the past [33]. The themes related to power and control can be seen in the case: intimidation by the male relatives, emotional abuse by the son due to blame, children growing up with domestic violence, and threats with guns.

The assumptions of the Duluth model have been heavily criticized because of its feminist bias, which is inconsistent with some of the assumptions of the CBT model.

The BIP program is based on both the Duluth model and couple therapy techniques, and the BIP model harmonizes with the therapeutic CBT model. The BIP program is based on the I3 model (instigation—prompting—(dis)inhibition).

4.3.2.4 I3 model

The I3 model was developed based on the analysis of studies containing predictions of violence in couple relationships (IPV). The I3 model identifies three main factors for intimate partner violence, including instigation, drive, and (DIS) inhibition. The core assumption of the I3 model is that intimate partner violence is the result of the interaction between environmental triggers and aggressive drives that overcome individual coping skills. The instigation factor states that direct/indirect instigation contexts are starting points for intimate partner violence. Direct instigations are provocative events such as abusive remarks between partners. Indirect instigations are events that trigger the aggressive urge in both the original source and the intimate partner. Instigations are the situational and dispositional factors that lead to aggressive responses to triggering events. There are four types of impelling factors. Distal factors represent the evolutionary and cultural predisposition to aggressive drives. Dispositional factors represent individual differences for experiencing aggressive drives. For example, hostility tendency, anger outbursts, and testosterone levels. Relational factors are dyadic features of the relationship such as jealousy, insecurity in the relationship, and dissatisfaction with power dynamics in the relationship. Situational factors are representative of immediate variables such as cognitions, affects, and physiological arousal. Situational factors have two subcategories (internal-external). Internal situation can be physical pain, and external situation can be hot room temperature or violent media. The instigating factors must be compatible with the drive factors in order to increase the aggressive urge. The (dis)inhibition factor is a critical factor based on both self-regulation (inhibition) and self-control (disinhibition). Disinhibition factors contain four subfactors: distal, dispositional, relational, and situational. Distal disinhibition states that cultural norms promote intimate partner violence. Dispositional disinhibitors result in the reduction of abilities associated with the prevention of aggressive drives. These include the inability to maintain both high executive function and the prevention of impulsivity. Relationship-related disinhibition factors include lack of empathy for the partner and low commitment to the relationship. Situational disinhibition factors related to external and internal influences, such as alcohol intoxication, impair executive function, which is important for both problem-solving skills and understanding social cues during an argument between partners. Inhibitory factors can provide protection for aggressive urges, but a lack of inhibitory factors can also lead to a decline in coping skills for aggressive urges. Each self-regulatory attempt consumes the resources needed to inhibit the next drive. In this sense, each self-regulation is a situational disinhibition factor for the next impulse [34].

4.3.2.5 Techniques for partner violence

Techniques for instigation include the use of self-observation sheets, relaxation exercises to activate the parasympathetic nervous system to reduce anger, and psychoeducation for social learning experiences about aggression patterns using the offender's life history. Techniques for facilitation include identifying cognitive

errors (arbitrary reasoning, overgeneralization, dichotomous thinking) that lead to aggression, cognitive restructuring through the use of contention questions aimed at both reducing certainty about thoughts and seeking alternative information against hostile thoughts, and social skill training based on role playing. Inhibition techniques include working on problem-solving worksheets, improving self-awareness of negative consequences of violence, and training in the use of empathy based on perspective taking.

4.3.2.6 Case

GM was a 42-year-old white man living in the United States with his 58-year-old partner. GM was supported by his girlfriend's income, and GM also has a monthly income from Social Security disability insurance because of his chronic neck and back pain. His current partner reported a long history of domestic violence by him. The case can be explained by the I3 model. Instigations: GM reported his direct instigations, for example, verbal and physical aggression by his partner due to his immature behavior. The indirect instigations were intrusive neighbors, holistic calls from his debt collectors, and traffic. GM's distal instigators were relationally abusive parents, GM had an aggression problem since age 17, such as fights with neighbors, friends, and strangers in bars as dispositional causers, situational causers: GM reported that he had low self-esteem because of both his financial problem and sexual problem, and also, he had physical pain because of his neck. GM had a sensitivity to temperatures, and GM used marijuana as self-medication. (Dis)inhibition: GM could not appreciate the consequences of his partner's violent acts, such as arrest or loss of financial support. GM had multiple concussions due to his field hockey past. The multiple concussions could result in his inability to properly assess the consequences of his violent behavior. GM reported that he consumed alcohol prior to his aggressive behavior. GM ability to suppress his aggressive urges was limited by poor executive functioning for a variety of reasons. The first session of treatment for GM included psychoeducation for rational treatment as well as identification of the triggers for his aggression. Further sessions addressed the aggression patterns of GM's parents and their impact on GM's social interactions with others. For this reason, GM was given self-observation worksheets. GM learned coping skills for his aggression triggers, such as sleep regulation and relationship disconnection. GM learned relaxation exercises for the physiological symptoms of his aggression. GM learned to modify his cognitive distortions. GM developed his social skills, including empathy, using role playing. GM improved his decision-making ability with the evaluation of partner violence based on both its positive and negative sides [35].

4.4 Research on sexual offenders

4.4.1 Studies on the effect of cognitive behavioral therapy (CBT) on sex offenders

In a literature review study based on 10 different studies, it is mentioned that CBT interventions reduce the recidivism rate of sex offenders. The outcome of the literature review study includes a comparison group, a homogeneous group of medium and high risk sex offenders, and a follow-up period of 1 year. CBT intervention groups have recidivism rates ranging from 0.6 to 21.8% for deviant behavior. For sex

offenders compared to the intervention group, recidivism rates for deviant behavior range from 4.5 to 32.2%. In the same study, it was emphasized that CBT intervention reduces the recidivism rates of sex offenders who take responsibility for their criminal behavior. The result of the study also showed that CBT intervention reduced recidivism for other violent behaviors in the sex offender group [36]. Another study used a retrospective risk scale and information from Canadian sentencing practices to control for sex offender offense severity. The same study used records from the Canadian Police Information Center to determine the recidivism rates. The integrated CBT program reduced recidivism rates by 76 to 81% for high-risk sex offenders and 65 to 75% for medium-risk cases [37].

4.4.2 Models on sex offenders

4.4.2.1 Integration of the cognitive behavioral model for sex offenders

The behavioral model explains deviant sexual behavior based on Pavlov's classical conditioning model. The object of deviant sexual behavior is initially a neutral stimulus that matches a natural stimulus that elicits a sexual arousal response. After the adaptation process, ex-neutral stimuli can also lead to sexual arousal. The continuity of deviant sexual behavior is explained on the basis of Skinner's model of operant conditioning. The deviant sexual behaviors are usually rewarded with orgasm for sexual objects, for example, children or animals. The cognitive model expresses that deviant sexual behaviors exist under the influence of cognitive biases. Sex offenders typically minimize or justify sexually deviant behaviors. Sex offenders tend to misunderstand victims' actions and cues. They also deny the criminal behavior to reduce their guilt for the consequences of the criminal behavior.

4.4.2.2 Techniques for sex offenders

The cognitive restructuring method consists of four steps: The first step is psycho-education about the cognitive model, including the effects of cognitive distortions on sex offender behavior. The second step is about providing offenders with information to change the process of false thinking. The third step is about helping offenders distinguish functional thoughts from non-functional thoughts. The final step is about challenging non-functional thoughts.

4.4.2.2.1 Education to deal with emotions

Sex offenders are educated about their own emotional behaviors and how to cope with negative emotional states. Education about negative emotions include recognizing the different parts of negative emotions such as depression, anger, shame, and guilt. Offenders can use their negative emotions as a clue to their risk of reoffending.

4.4.2.2.2 CBT techniques for empathy deficits

Videos of victims' reactions can be used to develop empathy. Offenders can write a letter to the victim expressing regret for past sexual assaults. Offenders can read the letters in groups of three to get each other's feedback. Offenders can write a letter as a victim of sexual assault to develop empathy.

4.4.2.2.3 CBT techniques for deviant sexual arousal

Masturbatory satiation can be used for aversive conditioning. The offender can imagine a healthy sexual seance while masturbating. The offender may verbalize a healthy sexual image while experiencing orgasm. The offender can imagine a deviant sexual seance after orgasm. The second part of the exercise is used to explore both the impotence phase and the deviant sexual seance.

4.4.2.3 Case

The sex offender preyed on 19 women in southern Italy between September 2002 and November 2005. All victims were raped in the evenings in suburbs. The age of the victims varies from 10 to 34 years. The perpetrator looks like a non-violent, good-looking gentleman. The perpetrator was caught by local residents during the last sexual assault. The offender was a 38 year old male who has a family of 2 children and a wife. The perpetrator's wife and colleagues described him as an accommodating and reasonable person. The psychological assessment revealed that the offender exhibited borderline symptoms (unstable self-image and impulsivity) and narcissistic symptoms (grandiose sense of self-importance, lack of empathy, and fantasies of unlimited success and power). The offender described his family as having a warm mother and a father who was not very empathetic. The offender believed his penis was too small and had a deficient shape. As for the anatomical problems, the perpetrator believed that his partner was not sexually satisfied with him. He also had an erection problem since 2002. The offender admitted to having problematic thoughts about inadequacy. The offender imagined sexually aggressive fantasies when he masturbated to solve his erection problem. When he saw his first victim, he felt sexual arousal due to his predatory actions. The frequency of his sexual assaults increased from one sexual assault every 50 days to one sexual assault every 20 days after his first sexual assault. The perpetrator described his sexual assaults as an "apparent affirmative sexual act" [38]. The case can be explained using the CBT model. Initially, the perpetrator imagined sexually aggressive fantasies when he stood up. The repeated action resulted in sexual aggression being associated with sexual arousal. Classical conditioning produced sexual arousal when the perpetrator performed a predatory act such as his sexual dominance fantasies. The cessation of sexual assault changed his mind so that the offender continued to perform criminal acts because of the operative conditioning. The sex offender became increasingly dissatisfied over time. The offender increased the number of sexual assaults he performed over time. The offender minimized the outcome of his criminal acts by using "seemingly affirmative sexual arousal" words. The minimization leads to a repetition of the criminal acts based on the cognitive model. Also, the lack of empathy leads to reinforcement of the sexual acts without remorse. In addition, by trivializing his criminal acts, the offender may protect his self-image.

4.4.2.4 Self-regulation model with cognitive behavioral therapy

Marlatt's relapse prevention model or cognitive behavioral model for addiction problems is applied to sex offenders. Marlatt's cognitive behavioral model explains sex offenders' actions based on a lack of coping skills for sexual urges. The model is criticized for emphasizing a single pathway for sex offenders. In addition, the model does not include milestones for sex offender behaviors. The self-regulation model

was developed to enhance Marlatt's cognitive behavioral model for sex offenders. Self-regulation is a goal-setting process that is important for monitoring, modifying, selecting, and evaluating actions. Goals can be divided into acquisition goals and inhibitory goals. Acquisition goals are concerned with the development of skills or behaviors. Acquisition goals focus on data associated with achieving the goal. Inhibitory goals are about reducing behaviors. The inhibitory goals placed high demands on performance, which led to a focus of the data on failure. Sustaining the inhibitory goals is more difficult than sustaining the acquiring goals. The model identifies goals as cognitive structures that contain behavioral outlines to guide actions. The model of self-regulation identifies nine phases: Life Events, Desire for Deviant Sex, Establishment of Offense-Related Goals, Choice of Strategy, Entry into a High-Risk Situation, Recidivism, Sexual Offense, Post-Offense Evaluation, and Attitude toward Future Offense. In the life event phase, it is mentioned that a particular life event produces cognitive structures, including goals, beliefs, and needs. These cognitive structures can be automatically activated by similar life events in the past. The second phase is about the desire for deviant sexual activities, that is, sexually aggressive fantasies that increase the possibility of sexual assault. Certain cues may trigger both goals related to sexual desire and maladaptive beliefs related to sexual fantasies. In the third stage, targets are mentioned for both acceptance of maladaptive sexual desires and strategies for deviant sexual desires. Inhibition targets focus on avoidance of sexually deviant behavior as opposed to acquisition targets that lead to sexually aggressive behavior. The fourth stage refers to the choice of strategy. The model of self-regulation describes four pathways based on both different goals and different strategies. The avoidant-passive pathway involves sex offenders who unsuccessfully attempt to prevent their deviant sexual desires. Individuals with poor coping skills, impulsive behavior, and low self-efficacy follow the avoidant-passive pathway for recidivism. Both denial and "seemingly irrelevant choices" (AID) are found in this pathway. The avoidant-active pathway represents the direct attempts to avoid sexual misconduct. The offender uses dysfunctional strategies to control his deviant sexual fantasies. As a result of the dysfunctional coping strategies, deviant sexual desire increases in the fourth stages. The approach automaticity pathway includes behavioral scripts for automatic sexual aggression that may be impulsive or rudimentary. The pathway shows harmony with acquisition goals. The sexually aggressive behaviors are easily activated by environmental stimuli without cognitive resources in a short time. The Approach Explicit pathway represents sex offenders who have high self-regulation for deviant sexual desires but harmful goals for sexual desires. Offenders use deliberate strategies to commit sexual assault. Sexual assault is an acceptable act for a positive emotional state in the pathway group. The fifth phase is about victim contact for sexual offenders. The assessment processes for potential victims may vary depending on the pathway type. Individuals with the avoidant-passive pathway experience sexual arousal, and they may also exhibit automatic behaviors toward the victim. Individuals with the avoidant-active pathway use paradoxical strategies to control sexual deviance, such as drug use, resulting in a sense of loss of control. Individuals with the automatic approach path focus on the immediate gratification of sexual satisfaction. Persons with explicit approach have positive emotions due to their plans for sexual acts. The sixth stage contains lapse episodes for four pathways. Individuals with the avoidant-passive pathway change their goal from avoidant to approaching during the lapse episode. This change is temporary. Individuals with avoidant-active pathway are changed to approaching goal. Individuals evaluate the control attempt as a failure. Individuals with the approach-automatic pathway show impulsive reactions

as opposed to the approach-explicit pathway. The seventh stage is sexual assaults that are self-focused or victim-focused. Self-focused sexual assaults are indicated by both short duration and high intrusiveness. The eighth phase is the follow-up to the crime, which can be both protracted and less violent. Individuals with avoidance behaviors may exhibit negative feelings such as guilt or shame as a classic abstinence violation response. If the individual's evaluation of the sexual offense is based on stable or uncontrollable internal reasons, the individual may attempt to sexually assault a second time in the future. The ninth stage involves attitudes toward future offending. Individuals with avoidance behaviors may reattain their avoidance goal for sexually deviant desires through solutions that do not work, or they may permanently change their goal. Individuals with the approach pathway may have feelings of success after sexual assault. Individuals with the approach pathway develop new strategies based on their past experiences with sexual assault [39].

4.4.2.5 Techniques for sex offenders

Offenders learn a self-regulatory model for analyzing their progression to sexual assault. Offenders use their pattern of sexual assault, including cognitive biases, decision making, pathways, and interpretations of events, to develop new strategies based on CBT techniques for sex offenders. In addition, offenders find prosocial goals related to the risk situation for reoffending [40].

4.4.2.6 Case

Demographic data of the sex offender: The offender is 50 years old, father of five daughters, married, retired soldier, lives in Jordan, and has no mental disorder and he has been diagnosed with diabetes. The perpetrator's daughters reported that their father tried to sexually assault them several times. The offender used sleeping pills to sexually assault them. The offender sexually assaulted his daughter in his car by performing sexual movements. The offender watched pornographic movies in his room and threatened other family members. The offender sometimes went into his daughters' rooms without clothes. The perpetrator's daughters reported that their mother knew everything about her husband but did nothing because she said, "We don't want to expose ourselves in front of relatives, and no one will believe us" [41]. The case can be explained on the basis of the model of self-regulation. The sex offender's past experiences led to a cognitive structure for sexually deviant desires toward his daughters. Watching pornographic movies can be a cognitive stimulus for deviant aggressive sexual desires. The offender's goal setting is based on acceptance of aggressive sexual desire. The offender's strategy changed from the automatic approach strategy, which is impulsive, to the explicit approach strategy as the offender developed a plan for sexual exploitation using sleeping pills. The offender had high expectations for gratification, which led to impulsive sexual behavior. The offender exhibited self-focused patterns that led to violence against his victim. The offender was able to experience negative emotions due to his unsuccessful attempts.

5. Conclusion

In conclusion, much research has indicated that CBT is an effective therapy for the criminal population. Research has shown that CBT can be useful with new


technological tools. Third-wave therapies and CBT offer many techniques for criminal behavior based on different models for different criminal populations. The CBT approach provides opportunities for effective treatment of criminal behaviors such as addiction, sexual assault, aggression, and intimate partner violence. The CBT approach can explain a wide range of criminal patterns using specific models of unlawful acts. CBT-based treatment can be combined with the technological tools. On the other hand, research on the relationship between CBT and criminal behavior, based on paper-and-pencil measures, lacks the subjective views of offender groups about the treatment experience. Another issue is that the treatment setting includes a prison environment that may influence treatment outcomes. New research may be based on the use of virtual reality technology for treatments in the prison setting. In addition, new research can use both scales and interview techniques for the subjective experiences of offenders. The final suggestion is that new research can focus on combining third-wave therapies and CBT models to provide effective treatments for offender groups.

Author details

Orkun Karabatak
Private Practice, Ankara, Turkey

*Address all correspondence to: orkunkurt13@gmail.com

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Perspective Chapter: Positive Psychotherapy for Criminal Behaviors

Sevgi Güney

Abstract

Aware that criminal behavior undermines a society's level of well-being, numerous studies on crime prevention, rehabilitation, and intervention have been conducted for many years. As new information about human behavior is discovered, various treatment and intervention techniques are utilized to regulate and cure deviant criminal behaviors. Legal provisions have been put in place to provide criminal sanctions for preventing and correcting crime. Evidence-based studies have been conducted in correctional facilities. This chapter provides theoretical and practical information on the Positive Psychotherapy (PPT) and discusses how it can be adapted to address criminal cases. Positive Psychology is introduced as the foundation for Positive Psychotherapy. Although PPT has been effective in many areas of life, its potential in the criminal justice system has not been explored. The chapter provides a framework for understanding criminal behavior and emphasizes that not all deviant behavior is criminal. Despite its widespread use in clinical and community settings throughout the USA, Europe, and almost all over the world, PPT has not yet been implemented in forensic settings or penal institutions. The implementation of PPT in the field could contribute to the reduction, prevention, and correction of crimes and pave the way for further research in the area.

Keywords: clinical applications, criminal behavior, pathological-deviant behavior, positive psychotherapy, psychotherapy

1. Introduction

This chapter aims to give information about positive psychotherapy applied as a part of the rehabilitation studies of detainees and convicts who are 18 years of age and over and who have committed crimes and are in penitentiary institutions. Before giving information about the use of Positive Psychotherapy in the practices on the rehabilitation of criminal behavior in prisons, it will contribute to the formation of a holistic perspective to talk about a few basic concepts about criminal behaviors.

Criminal behavior, in the legal sense, is an act that is sanctioned by the legal institutions in a society as a punishment or security measure [1]. The individual who commits the crime is called the criminal and/or the perpetrator. It is known that four factors are mainly effective in the process of the emergence of criminal behaviors; psychological, sociological, environmental, and economic factors. For an individual

to be considered “guilty” in the legal sense, it must be proven as a result of legal processes was committed by that individual. There are two main elements of the criminal behaviors. One is “injustice” and the other is “fault”. The elements of injustice are “typicality” and “unlawful” [2]. In order to be able to talk about an injustice that constitutes a crime, it is necessary to determine whether the elements of the injustice have been realized with the act committed. There can be no injustice without action. While deciding on the execution of criminal acts, it is not possible to punish the individual who has no fault. The rate of fault is considered in direct proportion to the punishment to be imposed. In other words, the individual who has committed a crime is held responsible only in proportion to his fault, while deciding on the punishment necessary for the execution of the crime he committed within the framework of the law [2]. The concept of criminal liability comes into prominence.

Criminal responsibility is the responsibility to understand, perceive, and be aware of the legal meaning and consequences [3]. Criminal acts are carried out with the concept of criminal liability. The laws of each country have established certain criteria for this status. The grounds that remove or reduce criminal liability are specified in the Turkish Penal Code as follows: Rule of law and order of the authorized person, legitimate defense and state of obligation, use of law and consent of the person concerned, crossing the border, coercion and force, intimidation and threat, unfair conduct, mistake, being a minor, mental illness, deafness and mutism, influence of alcohol and drugs [3].

Psychotherapies occupy an important place in the rehabilitation of criminal behavior, since behavioral change and modification can only be achieved through the use of psychotherapeutic techniques. Changing these entrenched criminal characteristics of an individual whose thoughts, feelings, and behaviors were organized to form the basis for the crime until he or she entered the correctional system is critical to crime prevention. This crime-prone pattern has a direct effect on the emergence of criminal behavior, which is the most extreme form of unhealthy coping. This effect is the result of the coincidence and interaction of various factors. In the psychotherapeutic practices used in correctional studies during the execution of the offense, these unhealthy behavior patterns and the perceptual, reasoning, inferential, and attributional forms underlying these patterns are intervened in. Psychotherapies aim to raise awareness of the way individuals deal with their problems, thoughts, feelings, and behaviors that are reflected directly or through interaction. In this context, the psychotherapy process is an interactive process in which the individual reconsiders and works on his thoughts and feelings.

There are few meta-analytic studies on the effectiveness of psychotherapy techniques used in correctional settings. Although there are few meta-analytical studies, the results are promising after applying some therapeutic techniques.

2. Positive psychology as a theory behind the therapy

Positive Psychology is an approach that focuses on positive traits, strengths, and virtues rather than negative, deficient, and problematic aspects. In this state, it is based on the “health model” as opposed to the “disease model” used by traditional psychology.

The term positive psychology, which was brought up again by Seligman in 1998, dates back to Pygmalion, who fell in love with the sculpture he made in ancient Greek mythology. Pygmalion’s belief in love with high expectations and falling in love with the statue he made similar to Aphrodite, the goddess of love, was named the Rosenthal effect in later years with the experiment conducted by psychologist

Robert Rosenthal [4]. In the Pygmalion effect, it is assumed that high expectations lead to better performance. Abraham Maslow, one of the main theorists of humanistic psychology in the 1950s, used the word positive psychology.

Major advocates of positive psychology are Martin E.P., Seligman, Christopher Peterson, Ed (Edward Francis) Diener, Mihaly Csikszentmihalyi, Tayyab Rashid, James Pawelsky, Barbara Fredrickson, and so on.

Peterson stated that the central themes of positive psychology are the strengths of character, a satisfied life and happiness [5]. Strengths of character are positive traits reflecting in thoughts, feelings, and behaviors. Strengths can be measured and show individual differences. It is assumed that these have been passed down through generations through an evolutionary process. Some of strengths character are Gratitude, Integrity, Persistence, Forgiveness and Mercy, etc. With the evidence-based research, a total of 24 strengths of characters were determined and they were measured by an objective measure (VIA Inventory of Strengths [VIA-IS] [6, 7]).

Seligman developed the PERMA model, which includes five core components of individual happiness and well-being. These five core components are positive emotion, engagement, relationships, meaning, and accomplishment. *Positive emotions* correspond to seeing things as they are, and therefore to look at life positively. It expands an individual's mind, point of view, and logic. Thus, it leads the individual to build and find new resources in his individual and social environment and increase individual resilience. *Engagement* refers to all the activities that an individual does in his life, including his hobbies. It allows the individual to focus on the strengths of personality by developing new skills instead of skills that are inadequate in problem-solving situations. *Relationships* correspond to the social bonds that he creates with the people he chooses in his social environment in a way that is specific to the individual. It supports the formation of successful life experiences, including peer relationships, the formation of a sense of belonging, the reinforcement of this feeling, and the individual's feeling of security created by the need to be together. *Meaning* directly corresponds to a purpose or existence that has purposes. It occurs and takes shape when the opportunity to rewrite the individual's perspective on life is created by a bunch of new and regulating possibilities. Meaning is defined as the individual's belonging to and serving something greater. Having a purpose helps an individual focus on what is important in the face of significant challenges or adversities. *Accomplishment* corresponds to all life experiences that correspond to a sense of overcoming and achievement. Overcome follows the empowerment created by interest, practice, purpose, and hope. The PERMA model can easily be adapted to group therapy practices in penitentiary institutions. Both the exercises related to the strengths of the personality and the group sessions to be made in line with the PERMA model have an important effect on behavior modification [8–10].

3. Positive psychotherapy (PPT)

Positive Psychotherapy (PPT) has been defined as the scientific study of human flourishing and optimal functioning with the studies of character strengths, positive resources, and virtues. Prior to commencing therapy sessions, "Values in Action" test is administered to the participating convicts to identify their areas of strength. This also helps in deciding whether they will receive individual or group psychotherapy.

Considering the basis of the formation of criminal behaviors, it is possible to teach healthy behavior patterns to convicts by seeing and imitating them through group

therapy sessions and to bring what they have learned into their behavioral repertoire. Through positive therapy exercises such as “gratitude”, “good and bad memories”, “altruism”, and PERMA inmates gain a new understanding of helping others without expecting anything in return, the impact of memories on their lives, and the importance of gratitude toward others. Recognizing their individual positive resources, especially gratitude altruism, whether in individual or group therapy sessions, can neutralize, albeit slowly, the pathological learning that leads the offender to demonstrate criminal behavior.

Convicts in Positive Therapy sessions are encouraged to develop practical wisdom of strength of their character being relevant to their criminal act. As convicts navigate their strengths, they may learn to manage their emotions, including anger and frustration. Through the individual and group sessions, the convicts can translate their abstract signature strengths into their concrete actions.

The present chapter aims to encourage the implementation of this new approach, PPT, in forensic settings, which has not yet been put into use. To better understand the differences of Positive Psychotherapy from the traditional therapeutical approaches, it's functional to review the main components of the three major therapies. **Table 1** highlights these with their key elements.

3.1 Positive psychotherapy (PPT) with individual sessions

It is aimed to realize the strengths of the personality in individual positive psychotherapy sessions. First of all, signature strengths are discovered to encourage participation and solve potential problems. Attempts are made to convert these signature strengths from inconcrete to concrete actions. For example, exercises are made to help the convict, who states that he is honest, to focus on the concrete aspects of his honesty in his own life. Clients are encouraged to develop practical wisdom. They are allowed to understand which signature strengths is related to their problem behaviors throughout the sessions. Change is provided with various PPT exercises aimed to retrain attention, memory, and expectations away from the negative and destructive toward the future-oriented being positive and hopeful.

Rashid and Seligman presented a model of individual positive psychotherapy of 12 to 14 sessions [11–15]. The content of the sessions can be summarized as follows.

All therapy sessions include psycho-educational exercises. During the 1st session, orientation work is done as in all therapies. How therapy works, rules, confidentiality, etc. topics are discussed. The 2nd session is the introductory session. The client is asked to write a positive introduction story of 200–300 words maximum in their own words. In the 3rd session, strengths of character and dynamic strength assessments are made. In the 3rd session, Signature Strengths are revealed. The client and therapist work to integrate them into the client's life by tangibly aligning signature strengths with specific, measurable, fulfilling life experiences. In the 4th session, positive and negative memories and their vital projections will be discussed, as well as their contribution to the development of problems. It is asked to write memoirs about it, and it is talked about. In the 5th session, the concepts of forgiveness, forgiving, and what the client cannot do are discussed. In the 6th session, the topic of gratitude is discussed. In this session, positive and negative memories are revisited and discussed in the context of gratitude. Since the 7th session is the middle of the therapy process, what has been done so far is reviewed and feedback is given. Session 8 discusses the extent to which the client is satisfied with the dimensions identified, and if not, how

Criteria	Psychodynamic Therapies (PT)	Cognitive Behavioral Therapies (CBT)	Positive Psychotherapy (PPT)
Focus on	Changing problematic behaviors, feelings, and thoughts by discovering their unconscious meaning and motivations	Learning's role in developing normal and abnormal behaviors and Thoughts and behaviors	Satisfaction about past, optimism about future, happiness in the present
The objective of therapy	Self-awareness, insight, resolution of transference, adjusted emotional experiences – eradication of the problematic behavior pattern and change in the personality trait that underlies the problematic behavior	The reasons for everyday experiences are related to how they are perceived externally or internally. Changing thoughts lead to changing how feel and what do.	To achieve successful therapeutic outcomes, it is more beneficial to identify and work on positive resources rather than solely focusing on deficiencies and weaknesses through lengthy analysis. Awareness of character strengths, virtues Renewing strength and the virtues
Duration and frequency	50 min. From 12 sessions – to the needs of the client 90 min. For a group therapy session	50 min for individual therapy 90 min for group therapy session 12–20 sessions both group and individual therapy	50 min. For individual PPT 90 mins. For group PPT 8 sessions for group PPT 14 sessions for individual therapy
The role of therapist	Pasif and Supportive	Active and sometimes Directive	Active, Directive and Guide
Basic strategies and techniques	Self-disclosure, empathy, “here and now” – “there and then”	Correction of distorted thoughts, abstractions and attributions Objective measurements, Evidence based technicals	Here and Now Psychoeducation and Discussion sessions Evidence-based, objective measurement
Session plan	Orientation and preparation of the convict (2–5 min) Warm-up (5–10 min) Structured exercises (20–30 min) Review of the session (5–10 min)	Orientation and preparation of the convict (2–5 min) Warm-up (5–10 min) Structured exercises (20–30 min) Review of the session (5–10 min)	Orientation and preparation of the convict (2–5 min) Warm-up (5–10 min) Structured exercises (20–30 min) Review of the session (5–10 min)

Table 1.
The main features of the major therapeutic approaches.

to maximize them. It is about how to make what one cannot do, doable. This is where signature strengths are used. The 9th session is the session where hope and optimism are emphasized. Possible traumatic life experiences in convicts and post-traumatic growth after the experience are emphasized. The point here is that when one door closes, another opens. In the 10th session, the client is guided to the experiences they have had in their life that are active and constructive. In this session, the emphasis is on positive communication. The 11th session is about the character strengths of

important people in his social environment. The theme of the 12th session is Savoring. The client is introduced to various activities of enjoyment by talking about savoring. The 13th session is the Altruism session. It is determined if the client has any altruistic experiences among his previous experiences. These last two sessions are crucial for the elimination of criminal behavior. In the 14th session, the client's life is discussed in terms of positive emotions, engagement, positive relationships, meaning and accomplishments, taking into account his past experiences.

All exercises and homework in Positive Psychotherapy aim to reconstruct expectations, attributions, memories, and interests resulting from negative and potentially traumatic experiences. The aim is to reconstruct the traces of negative experiences and memories by ordering and correcting them through sessions. In this direction, discussions are conducted. This relearning and correcting situation is reinforced by homework and essays, and the improvement works are accelerated by their support and development. The problematic psychosocial development chain of experiences underlying criminal behavior is rearranged.

3.2 Positive psychotherapy (PPT) with group sessions

Positive group therapy is a cognitive-behavioral, humanistic, systemic model of therapy in which all the principles of the positive psychology approach are applied. All sessions are conducted at the level of psychoeducational sessions. The first 10 minutes of each session are devoted to summarizing the previous session, and group members talk about what they have done since the last session. At the end of each session, homework is given for the next session. Members come to the next session prepared. Each group session lasts 90–120 minutes. However, it varies on average between 90 and 120 minutes. The total number of sessions is eight sessions. In some cases, an additional session may be conducted as an out-of-group activity at the request of the therapist. It has been reported that an out-of-group activity in positive group therapy sessions conducted in a non-clinical setting is effective in retaining newly learned information and positioning its place in behavioral knowledge (19–21). Using an Altruistic approach to this unique outdoor activity, group members can decide together with the therapist.

In the group sessions with a total of eight sessions, the discussion topics of each session are treated separately and deepened by homework. These topics are respectively in the 1st session: the exploration of signature strengths, the promotion of the use, and functionalization of the strengths. In the 2nd session, three positive “things” in their lives are discussed. In the 3rd session, gratitude and its impact on one's life is discussed. The 4th session discusses savoring; enjoyment. In the 5th session, active, constructive behavior is discussed. In the 6th session, how one has reached the present point is discussed - life successes and achievements are discussed in turn. In the 7th session, the subjective definition/meaning of happiness is considered. In the 8th session, positive support and assistance - including the use of the PERMA model to integrate achievements into the behavioral repertoire for future use - is applied.

3.3 Assessment of the outcome of the positive psychotherapies (Individual/Group)

The Positive Psychotherapy Inventory (PPTI) was developed to evaluate how much change the applied positive psychotherapy method (individual or group) provides and how the functionality of its specific active components is. The validity and reliability

of PPTI have been proven in other countries [16–18]. In studies using both group and individual positive psychotherapy, the positive psychotherapy Inventory provided systematic evidence [19–21]. While no forensic studies exist, Wittekind's study on positive psychology techniques in a penitentiary provided robust findings [22].

VIA-IS (Values In Action - Inventory of Strengths) is a 240-item, 5-point self-assessment scale [23]. It was developed to identify respondents' character strengths. The scale contains a total of 24 character strengths. Each of them also contains 10 sub-items. This is the same for both the VIA classification and the scale.

4. Discussion

The negative emotion and thought state created by pathological coping ways put the individual who takes action to solve the problem in different and sometimes more challenging and difficult situations. These difficult situations serve as one of the factors that prepare the ground for the emergence of criminal behavior. There are two basic and evidence-based theories of psychosocial development that reveal this tendency toward crime. One of them is Piaget's [24] and the other is Kohlberg's [25] developmental theories. Today, Kohlberg's theory is very useful in diagnosing the tendency to crime and deciding on appropriate intervention methods.

Considering the emergence of criminal behaviors, positive psychotherapeutic interventions aim to increase the awareness of the individual by trying to explain human feelings, thoughts, and behaviors based on human values and virtues, and by trying to gain the ability to see the points that are present in the current behaviors and need to be regulated, with what the individual has and what is as it is (positivism). The methods also offer the possibility of using what the individual has learned about himself for the future and his achievements in the past.

Seligman's PERMA model, for example, was developed to raise awareness of positive mood, attachment, healthy relationships, the construction of meaning in life, and successful life experiences that never came to mind when they entered their current state. In this line if the PERMA model put forward by Seligman is applied with all its dimensions to detainees and convicts in penitentiary institutions and integrated into rehabilitation works, it will directly affect the achievement of important steps in behavior change and modification.

As Pawelski pointed out, Positive Psychology is the scientific approach of the strengths that help individuals and communities succeed. This field is based on the belief that people want to sustain and fulfil their lives, develop a sense of the best in themselves, and improve their life experiences [26].

Rashid stated that "Several PPT exercises aim to re-educate attention, memory, and expectations away from the negative and catastrophic, and toward the positive and the hopeful" [11]. This guidance by Rashid suggests that Positive Psychotherapy is a promising approach to rehabilitation, reduction, and prevention of criminal behavior.

5. Conclusion

In the present chapter, after presenting a general framework for criminal behavior, the approach of Positive Psychotherapy, an effective new therapeutic method that can be used in the rehabilitation of criminal behavior, and its practical application are explained.

Positive psychotherapy (PPT) is used in mental health practices of all European countries, starting with the United States of America, although it does not be implemented and used in forensic settings. However, some positive psychology techniques are increasingly used in correctional institutions where criminal behavior is rehabilitated. In some countries, the techniques of this approach are used as part of resilience training in military schools and institutions where members of the armed forces are trained. It is more helpful if the PPT will be implemented into these settings too. It is obvious that this approach, which is very useful for the army and mental health institutions, will also be useful in preventing and reducing criminal behavior if it is applied in all correctional institutions.

The goal of this therapeutic approach is, in fact, to improve the quality of the individual's life. The individual learns to give meaning to his life by recalling and relearning his strengths, his moral and virtuous values. Through this approach, human values are reconsidered.


The individual's strengths, potential resources, positive and functioning qualities are uncovered, and by working on them together during the therapeutic process, the resulting awareness is integrated into the individual's life. This point also has the potential to provide significant benefits to the criminal population. In other words, it is critical to correctional interventions and the prevention of criminal behavior.

Author details

Sevgi Güney
Ankara University, Ankara, Turkey

*Address all correspondence to: sevgiguney@gmail.com;
guney@medicine.ankara.edu.tr

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Perspective Chapter: Rehabilitation Programs in Penitentiary Institutions – The Case of Turkey

Sinem Çetin

Abstract

From past to present, different solutions have been brought to the problem of crime and punishment of criminals in different periods. At first, it was applied in the form of paying the penalty for the crime, paying a fine and paying a diet. Today, modernized programs are implemented in which convicts and detainees are not only imprisoned, but also by using individualized programs compatible with their personalities, making rehabilitation works and reintegrating these individuals into society as a priority. Beginning in 2015, pilot studies supported by the EU have been carried out in Turkey. The projects in which BISIS (Individual Risk and Needs Analysis) and DEPAR (Assessment, Profile Tools and Rehabilitation Programs) programs ensure that the convict's history, reason for guilt, criminal record, physical ability or problem, mental structure, personality, possible harm or damage, duration of sentence, crime risk index, and his expectation after release are determined upon admission to the penitentiary institution. The results of BISIS provide both a clue for the security unit in the institution and information about the societal risks of the perpetrators. This information has been discussed in parallel with the literature in order to further develop the improvement studies and gain a universal dimension.

Keywords: convicts, EU projects, open-closed prison, penitentiary (penal) institutions, prisoner, psychosocial service, rehabilitation

1. Introduction

Social norms are upheld by the rules of social order, with moral definitions determining what is right and wrong, and the laws of society determining what is legal and illegal. Families pass down many of these social rules, including moral guidelines, to their children. When a child misbehaves, parents may use sanctions such as getting angry, scolding, or taking away privileges to correct the behavior. The purpose of these sanctions is to teach children the consequences of their actions and to deter them from repeating the behavior. This type of discipline begins in childhood and continues into adulthood, with social institutions taking over the role of sanctioning. If the behavior is criminal, it is regulated by relevant laws, and penal sanctions are applied. These criminal sanctions aim to manage and reduce criminal behavior. Does

criminal behavior disappear with the deprivation of freedom? Incarceration or torture right method for punishment? Concerning the criminal sanction, Foucault stated that while at first it was physically abusive and damaging, over time these sanctions turned into the imprisonment and rehabilitation of the perpetrators [1]. Otherwise, penitentiary institutions might become crime schools for prisoners who are affected by each other as a result of network challenges. The prisoner might have learned new criminal skills from other criminals in prison. As s/he continued his/her relations with them even after s/he was released from prison [2].

Giddens stated prisoners whose ties with the environment outside the prison were severed, economically weakened individuals put the power of authority in an intense way so the negative conditions here, cause them to take a more aggressive attitude towards society. Another negative effect of being in prison is developing a sense of reluctance and irresponsibility. Certain timetable occurs in an order and at predetermined times, the programming of lawyer-family visit, meals, sleeping, having a rest, doing exercises, and other activities blunts the sense of responsibility. This is a situation that prevents rehabilitation in individuals [3].

In Turkey, policies and practices related to the execution of sentences have been reformed. These reforms have resulted in the provision of numerous sports, entertainment, and artistic activities, vocational and career information courses, and vocational training courses. All these activities are aimed at ensuring the psychosocial and physical development of convicts. Also, reform packages change the current law (5275) getting better with additions and subtractions in the law through all stages of the penal process. So not only education, social activity, or work inside prison but also it is necessary to make them think about crime through rehabilitation programs to reduce recidivism.

2. Crime and punishment

The existence of crime has emerged with the existence of humanity. Society tends to punish the individual who acts against its order and acts to destroy the rights of another/a group [4].

The first examples of written legal rules are seen in the Sumerians. Sumerian King Urkagina, who stated that the sovereignty was given to him by the supreme god, prepared a justice order to eliminate the corruption, unrest, and discontent of the people due to bad administration. Urkagina stated in his laws that the previous rulers combined with the priests and exploited the people. With the arrangements he made, he mostly dealt with issues such as debt amnesty and tried to comfort the people.

In the Roman period, for the first time in human history, criminal law appeared as a system. It was accepted in this period that reconciliation was the general rule and that if no compromise could be reached, retaliation would be resorted to. Especially in the imperial period, the types of crime and punishment began to become clear and a certain method of reasoning emerged. In this period, the authority, mostly the government has become the only authority that has a say in determining what the crime is and what sanctions should be applied to the actions within these limits.

Contemporary forms of sanctions are imprisonment, probation, and parole imprisonment, putting the offender in prison for the purpose of protecting the public against criminal activities and at the same time rehabilitating the prisoners by requiring them to undergo institutional treatment programs. Probation is one of these programs. The convict who has committed a crime whose sentence does not exceed 6 years is released into social life under the supervision of the probation officer.

Another modern form of sanction is Parole. Probation and parole are different concepts. Probation is part of the convict's first sentence. The decision on probation is made by the judge during the trial. Parole develops long after the execution. As long as the convict remains in the penitentiary, the decision to behave well, adapt to social life without problems, and complete the rest of his sentence in social life outside the penitentiary is called conditional release. There may be punishments arising from cultural differences in different geographies, and different penal systems have emerged at different times.

The definition of crime differs in history or in sociological, legal, political, or psychological ways. As Durkheim defines crime as the necessary fact that all individuals have feelings that cause unpleasant situations and also crime is in society's transition from a static state to a dynamic state. According to Criminal Law, a crime is "an act punished by the law" [5, 6].

Punishment is a sanction made by law and also determined by a legal decision and responsibility ratio applied to those who behave that society does not approve of or as a result of damaging acts to the society [7]. Punishment must be a deterrent for individuals. Other important aspects of punishment are low cost, individuality, and equivalence among those with similar crimes. In the past, punishment was perceived as making the criminal pay for it but today, it is considered as reintegrating the criminal into society.

2.1 From the court house to the prison

The process of punishing a crime starts when there is a suspicion that a crime has been committed and continues until this suspicion is confirmed. This process involves three basic activities: claim, defense, and trial. According to the law, the period between the suspicion of crime by competent authorities and the acceptance of the indictment is called the investigation phase. The phase between the acceptance of the indictment and the finalization of the verdict is known as the proceeding phase. During the investigation phase, investigative authorities gather evidence related to the crime and the perpetrators. A public prosecutor investigates when there is suspicion that a crime has been committed and decides whether there is enough evidence for public action. If there is sufficient evidence, the prosecutor prepares an indictment. The public prosecutor issues an indictment if the evidence collected at the end of the investigation phase creates enough suspicion that the crime has been committed. With the acceptance of the indictment by the court, a public lawsuit is filed. The prosecutor's office may change its opinion and request the accused be acquitted by the court during the prosecution phase, which starts after the indictment is accepted and brought before the court. During the prosecution phase, the preparation for the main hearing is done first, followed by the main hearing stage. At the hearing, all the evidence is presented, and prosecution and defense authorities are heard. The accused has the final word, and the hearing concludes with the verdict being established. If there is a strong suspicion of guilt, the judge can initiate detention. If the defendant is found guilty and sentenced to prison, he is sent to a penitentiary institution.

3. Penitentiary institutions in Turkey

Prison and work-based modern penitentiary institutions in Turkey have a history of 170 years. The transition process from cellars, which are dungeon-like places where convicts and detainees are closed, to nineteenth-century-invention prisons, which

aim to improve prisoners, started in the Ottoman Empire in 1851 in parallel with the enactment of the first modern penal law. The “rehabilitation of Ottoman prisoners”, which gained an international dimension with an article in the Reform Edict announced in 1856, brought with it the idea of building various prisons, which would differ according to crime and punishment, in 1858. With the Penal Code, which came into force in the same year and took its final form after the French penal code of 1810 was adapted to local conditions by Ahmed Cevdet Pasha, the transition from physical punishment to imprisonment became official. In this context, Zabtiye prison, which started its activities as a police detention center in Istanbul in 1846, but turned into a prison, was opened in addition to other prisons in the city. Prisons, the first of which were opened in Yanya (now in Greece), and work-based regional rowing centers where heavy penal convicts were kept began to gradually replace the old cellars. The general prison, which was opened in Istanbul (Turkey) Sultan Ahmet Square at the beginning of 1871 after the closure of the famous Shipyard Dungeon, is the first ward-based model prison in the history of penal executions in Turkey.

During World War II, these reform efforts continued and the Regulation on Prisons and Detention Houses was enacted in 1941, and the Law on the Organization of the General Directorate of Prisons and Detention Houses (C.T.E.) in 1943. In addition, in order to implement the gradual penal execution system, work-based open agriculture prisons were built in Dalaman in 1945 and in Edirne in 1948 and put into use. II. During the mobilization years of World War II, the labor gap created by the shift of the male population from civilian production to the army was tried to be partially filled with prisoner labor.

In the 1950s, concepts such as regional prison, E-type prison, block-type prison, and juvenile prison entered the agenda of the CTE General Directorate for the first time in these years.

At the end of the 1990s, the state authority in penitentiary institutions gradually decreased and developed establishment and administration of the penitentiary institutions and workshops institutions until 2005. Besides in the 2000s high-security penitentiary institutions that became operational and new rooms based on a room system instead of wards have taken their place in the history of penal executions in Turkey [8].

Prison now is called Penitentiary (Penal) Institutions which is public service which of social needs meets by the government. So all activities that the government undertakes to meet the common needs of society have the quality to be public service and therefore all administrative practices and actions constitute the subject of the administrative law.

The penal institutions are under the administration of the Ministry of Justice (MoJ) in Turkey. The penitentiary Institution is responsible for meeting all the essential requirements of inmates, including health, social well-being, and accommodation. These institutions are under the jurisdiction of the General Directorate of Prisons and Detention Houses (CTE in Turkish), as are public prosecutors' offices.

Based on the modern sanction concept, again, convicts are offered employment to acquire individual and professional skills in order to rehabilitate and reintegrate them into society. According to Law No. 5275 in Turkey, prisoners who want to learn a profession and work are employed with a certain salary and social rights.

3.1 Classification of penal institutions

Penitentiary institutions have undergone significant changes since the 2000s, due to a better understanding of modern sanction systems. All the institutions are new

buildings. This transformation is evident in the architecture of prisons, which now feature spacious designs that accommodate high-capacity campus-type facilities complete with hospitals, mosques, and courtrooms. These facilities are located outside of cities and are purposefully isolated from families, lawyers, and other city-related social interactions. Even high-security institutions have been transformed into self-sufficient facilities that meet all vital needs.

Penal Institutions in Turkey do not have a single model and are classified according to various characteristics. Management styles, security levels, and architectural features are the most important criteria in these classifications.

3.1.1 Management

3.1.1.1 Prisons with a directorate organization

In such institutions, the title of 1st Manager is the director of the institution, and the 2nd manager as much as the number of needs according to the size of the institution. In addition, there are teachers for education; psychologists, social workers for psychosocial service; doctors and nurses for health services, and workshop chiefs in relation to the productions made for profit in the institution. There are units such as the workplace service where the staff work.

3.1.1.2 Prisons without a directorate organization

In these institutions, only execution guards are on duty. When compared to prisons, it is seen that many services are not available as it is small.

3.1.2 Prison by security levels

3.1.2.1 Open penal institutions

The main purpose of these institutions is the rehabilitation of convicts through range of workshops in the institution to focus on production. The biggest difference between closed institutions is that it is not surrounded by high walls and is not protected by the gendarmerie.

The convict, can go out of the institution by getting permission each month after spending 3 months in institution. One of its advantages is that it is easier to communicate with the outside world via the phone booth in the institution.

3.1.2.2 Closed prisons (A- B- C- E- L- T- type)

These institutions are prohibited from both outside and inside. Electronics, food and beverages, liquid and dangerous substances (such as sharps, drugs, sim cards, cables, mobile phones, etc.) means of communication not allowed even for execution guards. Security is under control by using mechanical, electronic, and physical barriers.

In these institutions, the prisoner's visitors are allowed within the framework of the legislation.

The meeting with the prisoner takes place under strict rules. The doors of the rooms and wards where he stays are constantly closed as a medium level of security is applied in these institutions.

3.1.2.2.1 High-security prisons: (D- F- S: High-security type)

In these institutions, rooms are for 1 to 3 people. It has been designed to any activity or mobility within the institution is carried out with the highest security. The majority of inmates in these institutions are terror offenders sentenced to aggravated life sentences, organized crime called gang organization, drug production, and murder-like crimes. Same security procedure as a closed prison but execution guards are more strict about rules [9].

3.1.3 Prisons by demographic characteristics of prisoners

3.1.3.1 Women's closed penitentiary institutions

External security in such institutions is provided by the gendarmerie in institutions, internal security is performed by female staff. As the name suggests, this prison sentences of female prisoners are executed in institutions. There are children of convicted and imprisoned women, if any, between the ages of 0–6 are also can stay together with their mothers.

3.1.3.2 Juvenile and youth closed penitentiary institutions

Juvenile prisoners aged 12–18 were housed in these institutions.. If the prisoner has completed the age of 18 but has not completed the age of 21, stay till sentenced to crime. They have open visit areas and closed visit areas for seven people, in addition to these, lawyers visit areas, SEGBIS rooms have audio and video information systems and family viewing rooms, at least 1 indoor sports hall, 1 outdoor football field with a hard base, 1 artificial grass carpet field, workshops at the end of Blocks. There are classrooms, computer classrooms, library, and 1 meeting and cinema hall in order to continue educational activities in the institution.

3.1.3.3 Children's education houses

These institutions are especially for the rehabilitation of juvenile convicts. Children convict between the ages of 12–18 in these institutions acquire a profession and continue formal education. This institution is similar in structure to open penal institutions and there is no barrier against escape.

In Turkey, two types of correctional facilities cater to the sentences of juvenile delinquents. These are education houses and closed prisons for detainees and convicts. In education houses, children are required to undergo primary education and these institutions mainly operate as open corrective facilities.

In addition to all these features units established for mental disorders were put into operation in penal institutions.

4. State of imprisonment

Convicts may be transferred to open prisons directly for minor offenses but detainees or convicts (prisoners) transferred to closed/high-security prisons for serious and dangerous crimes and sentenced to long-term incarceration.

A prisoner is taken to the admission office for a security check, the goods he carries are checked, and his body is completely scanned. Whenever he receives new clothing from his family, his clothing is checked and registered one by one.. Dark blue clothes strictly forbidden as it is same color as the gendarme and guards. “ARDEF (Research Evaluation Form) and also Institution Acceptance Form—10 questions are all about demographic information. S/He is taken to a temporary dormitory to meet a psycho-social service guard fills Psycho-Social Officer form and a Psychologist or social worker fills 3rd form to get the final report Individualized Rehabilitation System (BİSİS in Turkish) which can be seen about total risk and evaluation about prisoner. Also management let her/him know about instructions. Her/his room chosen according to type of crime and being detainee or convict. Convicts are provided with all their daily needs, including food, rest, and social activities, and can participate in courses and meetings with their lawyers. They may also leave their wards to work, under the supervision of prison guards. While aggravated life prisoners do not have access to the fresh air area, all other prisoners are able to access it through their ward or cell, and it is shared by all those in the ward. The prisoners in open institutions and delinquent children in children’ education houses participate in outside activities.

Training programs offered to convicts are to aid their personal development, including non-formal and distance education and literacy courses. The availability of these programs varies between open and closed and high-security prisons. Those in closed institutions may attend with special permission, while those in open prisons can take courses and exams at nearby schools and universities. The Ministry of Justice (MoJ) covers the exam and training fees for convicts through a protocol signed with the Ministry of Family and Social Policies and the Ministry of National Education. These programs aim to support the growth and development of individuals in the justice system [10].

Convicts may be transferred to open penal institutions before being conditionally released.

The psychological support is provided more and easier in closed prison by individuals face to face whenever they apply for psychosocial service or attends programs like anger management, drug addiction as part of rehabilitation. The open penal institution is a chance where attending workshops to earn wages to integrate into society afterwards.

4.1 Training and rehabilitation of prisoners

The enforcement of laws is crucial in deterring criminal behavior and promoting positive patterns. Such measures also intend to thwart future crimes, thereby substantially reducing criminal activity. The law stipulates educational, correctional, and rehabilitation programs. Psychologists and social workers work in psycho-social service in Turkey’s penal institutions *via* face to face or group work with prisoners [11].

4.1.1 Individual study method

It is to support the psychological and social functions of people who have difficulties in their relations with themselves, with each other, and with the conditions in their environment. This is a one-to-one face-to-face psychological consultation, and the prisoner demand is issued.

4.1.2 Group working method

It is a method that includes the process of meeting the needs of the individual and helping to solve problems by making the desired changes in the individual and the environment through small groups of people. Below are the Behavior Programs developed for convicted detainees, implemented by psychologists and social workers who received the training of practitioners in the psycho-social service.

4.1.3 Think first (general criminal behavior program)

The “Think First” Program is a 23-session program designed for convicts. Sessions are 90 minutes. The program starts with problem-solving steps and continues with the development of these skills.

The program aims to help develop the skills of thinking about problems and solving problems in real-life situations, applying these skills to the problem of criminal behavior and reducing the risk of future criminal behavior.

4.1.4 Pre-release prisoner development program

The program has been prepared for convicts approaching their parole and consists of 10 sessions. Each session is designed to last 90 minutes.

The program is in order; communication skills, problem solving, negotiation skills, decision making, building relationships with family and friends, structured activities and stress management, rights, responsibilities and benefits, and future planning sessions. All sessions allow inmates to start acquiring new skills and improve existing ones. The program is based on research on what skills convicts need for successful release, and a cognitive behavioral approach is used to acquire these skills. Topics such as recidivism prevention and life planning are the focus of all sessions.

4.1.5 Anger management program

This group work program consists of 10 sessions of 2 hours each. This program, which is an introduction to Anger Management, has been prepared on the basis of the cognitive behavioral approach. The program educates participants about the need to control anger, demonstrates the benefits of this training, and develops anger management techniques. So it raises awareness of the participants about the processes that lead to their anger and the need to monitor their own behavior.

In the program, the stages of anger, physical manifestations of anger, problem-solving, self-calming expressions, self-assertion, group pressure, self-confidence, and anger in close relationships are covered. The program focuses on the benefits of successful anger management. This program is a program that can be applied not only to convicts but also to anyone who has difficulty controlling their anger. It is emphasized that controlling anger is not suppression, the anger of a person is not instantaneous but occurs through a gradual process, and if these processes are noticed and intervened with effective techniques, the destructive results of anger will not be encountered. The program is measured with the pre-test before the sessions and the post-test after the program, and feedback is received.

4.1.6 Cigarette alcohol substance addiction program (CASAP-SAMBA)

Treatment services are provided in line with the health policies determined in the studies carried out for cigarette, alcohol and substance addicts in penitentiary institutions, and the prevention, treatment, and rehabilitation of drug addiction are emphasized. In this context, there is a module on individual work on smoking addiction in the “Structured Mental Evaluation and Intervention Program (SMEIP-YARDM)” by the psycho-social aid service in penitentiary institutions, and the Cigarette Alcohol and Substance Addiction Program (SAMBA) is implemented as group work.

4.1.7 Rehabilitation programs in penitentiary institutions

Rehabilitation programs under the management of the General Directorate of Penitentiaries and Detention Facilities (CTE in Turkish) are implemented in Turkish Penal Institutions.

Research and Development and Project Office and Foreign Relations Office which are the units under the Department of Foreign Relations of CTE are all in charge of EU projects working with Non-governmental organization (NGOs) to develop rehabilitation programs for institutions as it is important in law 5275.

When designing rehabilitation programs, various factors are considered including the individual's criminal history, possible risk scenarios, personality traits, mental and physical condition, and sentence duration. These programs are intended to facilitate the reintegration of prisoners into society once their sentence has been served.

Several sanction programs have been created in partnership with the European Union Cooperation and European Council technical cooperation. These programs were developed to expand model prison practices and support prison reform. The programs include anger management, dealing with alcohol and drug addiction, raising staff awareness of suicidal and self-harm behaviors, Psychosocial development of prisoners before release, General Criminal Behaviors Program (Think First), Sexual Offenders Program, and CALM Program (Anger Management). During the implementation of these programs, healthy prisoner behavior was rewarded with increased visitation time and telephone privileges, as well as the opportunity to earn money. The Ministry of National Education also offers awareness-raising training programs to prisoners with children aged 0–18 under the name “0–18 Age Family Education Program.” When the prisoner enters the detention center, two programs are carried out; IRNA (Individual Risk and Needs Analysis)—BİSİS (In Turkish), APRP (Assessment, Profile Tools and Rehabilitation Programs)—DEPAR (In Turkish).

5. IRNA-BİSİS (individual risk and needs analysis)

Before the Individualized Rehabilitation System, entry to the Institution for convict-detainee meets with the psychologist of the prison in the temporary admission department within a maximum of 3 days. In this first interview, the psychologist introduces the psychological services carried out in the institution and tells in which situations and how the convicted prisoner can apply to a psychologist. In this interview, information such as his physical structure, demographic information about himself and his family, his previous psychological disorders and treatments, if any, and whether he has any substance addiction are obtained from the convict. The

information obtained as a result of the interview is recorded in the convict-prisoner identification form. So all documents were manually recorded and it took a really long time.

This project for the improvement of mental health and addiction services in penitentiary institutions, was developed for the purpose of early recognition of convicts and detainees with mental health problems in penitentiary institutions and training of psycho-social assistance and health service staff, and within the scope of this project, “Research Evaluation Form” (REF-ARDEF) and the “Structured Mental Evaluation and Individual Intervention Program” (IIP—YARDM). “Individual Intervention Programs” have been developed for 26 different mental and behavioral problems that are most common in penitentiary institutions for the prevention, rehabilitation, or treatment of mental problems and addiction-related problems.

Psychologists and social workers fill in the Research Evaluation Form (ARDEF) within the scope of the Individualized Improvement System (ICS-BISIS) to convicts and detainees during their admission to penitentiary institutions. The Individualized Improvement System (ICS-) consists of 3 Stages. Firstly, the “REF (ARDEF)—Institution Acceptance Form” is filled by the protection officer who is trained in the Institution Admission unit, and then “ARDEF-Psycho-Social Officer” form is filled in, and finally the “Psycho-Social Expert Form” is filled in by the Psychologist and/or Social Worker working in the Psycho-Social Assistance Service to determine the risks and needs of the convict, and as a result, an individualized psycho-social support and intervention program for each convicted prisoner. In line with the results of the ARDEF, convicts, and detainees are directed to individual interventions or group studies in accordance with their needs.

5.1 APRP-DEPAR (assessment, profile tools and rehabilitation programs)

European standards have been the basis for the evaluation of rehabilitation programs. These programs were designed with great care, ensuring that they are tailored to individual needs and have clear definitions of their functions. The aim is to create a system that can effectively reintegrate convicts from diverse backgrounds and criminal behavior into society. Additionally, personnel are trained to serve this purpose. The assessment, Profile Tools, and Rehabilitation Programs (DEPAR) project was implemented in the correctional activities of the institution.

5.2 Solution-focused therapy: Convicts with low problem solving skills

The goal of the program, which is one of the mandatory individual intervention programs, is the application of comprehensive therapy techniques that emphasize the positive strengths, resources, and effective coping skills of the convicts to bring about a positive change; It is an intervention program that aims to enable convicts to think solution-oriented and constructively. Solution Focused Therapy techniques, which are short-term therapy in principle, aim to provide positive changes in a short time.

5.3 Post-traumatic stress disorder intervention program

Considering that entering every penitentiary institution is a traumatic process or that convicts enter prisons as a result of traumatic events (for example, murder committed as a result of momentary anger), we can say that the most important phenomenon that psycho-social service specialists should deal with is traumatic processes.

In this context, the post traumatic stress disorder intervention Program, which was developed due to the need in penitentiary institutions, is one of the mandatory individual intervention programs.

5.4 Psychopathology intervention program

It is a program that includes the symptomatic description of psychological and psychiatric disorders and aims to determine the most appropriate intervention techniques for convicts by increasing the psychopathology knowledge of psycho-social service specialists working in penitentiary institutions. The psychopathology of convicts has been the subject of many studies [12–25].

5.5 Motivation for change intervention program

Motivation for change intervention program, which is one of the mandatory individual intervention programs, aims to strengthen the motivation of change and their belief in change, of convicts who are undecided about making a change in their lives, and to enable them to make a change towards determination by enabling them to discover the reason for their indecision.

5.6 Female convicts intervention program

The intervention program for women convicts is a group intervention program that must be applied if it is deemed appropriate as a result of the evaluation. The overall goal of the program is to increase the communication and coping skills of female convicts who have lost their self-confidence despite being exposed to violence, have a history of possible substance use, and have weak coping skills due to these and similar reasons, to ensure their self-confidence. In her extensive work, Güney in 2020 visited all open and closed women's penal institutions in Turkey and uncovered the details of a total of 404 women convicted of murder; their hobbies, socioeconomic characteristics, biological characteristics such as blood group, chronic physical diseases, personality characteristics, psychopathological symptoms, impulse control problems, psychosocial factors that trigger the murders they commit, and criminal behaviors [12]. Saruç visited 6 female (closed and open) prisons in 2014 and worked with 240 female convicts convicted of various crimes. She found that 24.6% of the female convicts were charged with theft, 18.3% for drug-related crimes, 10.8% for homicide, 8.8% for fraud, 7%, respectively. 5 for extortion, 6.3% for forgery, 5.8% for sexual crimes, 3.8% for injury, 1.7% for attempted murder, 0.4% for crime of embezzlement. She found that physical and sexual abuse and socio-economic reasons were the primary factors for their criminal acts [13].

5.7 The pain of separation intervention program

As a result of entering the penitentiary institution, people are deprived of many elements such as family, work, reputation, and rights. In these processes, they feel hopelessness, loneliness, and isolation and gradually break away from life. The main purpose of the intervention program for the pain of separation is to work with these negative feelings and thoughts and to help those who have to stay in the penitentiary institution to cling to life again. Although the Pain of Separation Program is an individual intervention program, it is a compulsory program to study.

5.8 Suicide prevention intervention program for convicts of high impact crimes

The program, which must be implemented individually in case of risk of suicide according to the evaluation results; To address the issue of suicidal ideation and attempts among inmates serving lengthy prison terms, it aims to create meaningful changes in the lives of convicts who have been sentenced for a long time and reconnect them to life, by involving all the staff of the penitentiary institution who have been informed about suicide within the program.

5.9 Impulsivity kleptomania intervention program

This mandatory intervention program aims to provide an intervention program that can be applied in Turkish penitentiary institutions to people who have a legal problem related to theft or kleptomania and who are found to have an impulse control disorder.

5.10 Control of sexual desire intervention program

9–12 months, depending on group dynamics, with the participation of 8–10 people, compulsory to be applied by an expert, aiming to reduce the possibility of committing new sexual crimes by using different techniques and appropriate intervention methods, to provide psycho-education to prisoners to develop non-violent sexual relations with the right partners. It is a group intervention program designed as 2-hour sessions, once a week.

5.11 Intervention program for LGBTI convicts

While the LGBTI intervention program, which is one of the mandatory group intervention programs, provides a holistic intervention program covering medical, psychiatric, psychological, and social support issues for Lesbian, Gay, Transgender, and Bisexual convicts in Turkish penitentiary institutions, it was converted into an informative seminar for staff.

5.12 Radicalization (forensic criminals)

Participation in the program, which is deemed appropriate according to the results of the evaluation tools, is on a voluntary basis; Radicalization is an intervention program for the attitudes of violent extremist convicts who have committed criminal offenses. The program aims to recognize the need for help by recognizing and accepting the responsibilities of people regarding crime.

5.13 Terror offenders response program

This intervention program, which is voluntary, is a group intervention program for convicts who have been involved in terror crimes, who aim to make changes in their lives by reaching a certain level of awareness, and who are a party to voluntarily participate in the intervention program.

5.14 Intervention program for young convicts (18–21 age group)

Aiming to provide positive changes not only in the lives of young convicts in the penitentiary institution, but also in their post-release life, and to ensure the

reintegration of young convicts into society; It is a mandatory group intervention program that utilizes new-generation psychological intervention techniques.

5.15 Domestic violence intervention program

The general goal of this program, which is one of the compulsory group intervention programs, and applied to male convicts, is to change negative behaviors by enabling men to examine their ingrained attitudes and reactions. It aims to eliminate all kinds of violent behavior (psychological/physical/sexual violence) against the partner (spouse/future spouse).

5.16 Program for convicts of murder

The general purpose of the program, which can be worked as a group intervention program, is to provide the convicts with skills such as internal burden, social responsibility, compensation for damages, acceptance of their actions, integration into society after release, and prevent returning to the penitentiary institution by committing a crime again. Güney in her study covered all open-closed penal women institutions in Turkey and examined the personality characteristics of women convicted of murder.

6. Conclusion

This chapter discusses how the legal system applies rules to offenders and the strategies to correct their criminal behavior. The ultimate goal is to provide a perspective for professionals working with offenders, to help them reintegrate into society as productive members with healthy behavior patterns, and to prevent them from repeating their past criminal behaviors. The chapter takes a broad view of the psychosocial practices related to criminal behavior in the line of Turkey applications. It provides an overview of the definition of crime and historical sanctions against it and offers suggestions for preventing and correcting criminal behavior. In this context, the following topics are covered:

1. How the laws apply to the offender,
2. How to correct the offender's criminal behavior and reintegrate them into society with healthy habits,
3. How to prevent the offenders from committing the same crime again and help them become productive members of society after serving their sentence.

The chapter provides an overview of the psychosocial and physical practices of criminals in Turkey. It also covers the definition of crime and criminal behavior, a historical summary of how societies have dealt with crime, and a comprehensive summary of strategies for preventing and correcting criminal behaviors. It gives professionals in the field a framework for replacing criminal behavior with healthy alternatives. By including an example of the Turkish penitentiary approach, which prioritizes psychosocial interventions to rehabilitate individuals and prevent recurrence, it presents an informative example of the movement of criminal behavior from

courthouse corridors to penitentiary institutions. While these techniques are specific to Turkish society, they are universal and modern crime prevention strategies.

In Turkey, the penitentiary system implements personalized rehabilitation plans to effectively prevent recidivism and promote prisoner rehabilitation. It employs various methods to measure and track the number of inmates who re-offend after their release.

Working with NGOs, associations, foundations, individual volunteers and voluntary organizations with which prison administrators and policymakers can cooperate might make a great contribution.

As new prisons are being constructed to meet capacity demands, efforts to prevent crime and support rehabilitation continue to develop and implement.


Author details

Sinem Çetin

Elazığ E Type Penal Institution, Elazığ, Turkey

*Address all correspondence to: psikolog.sinem.cetin@gmail.com

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This book delves into criminal behaviors and the various individual and psychosocial factors that contribute to their emergence. It also explores contemporary approaches and rehabilitation methods. Mental health and forensic professionals will find key models and applications that can be readily used. As the first printed source in the field of forensic clinical psychology, this book covers studies and intervention methods related to crime and criminal behaviors. This includes identifying the offender, matching and comparing offender behaviors with crime scene findings, and evaluating these behaviors at the legal level to correct and prevent criminal behaviors. Over the last decade, forensic clinical psychology has become a scientific discipline that has garnered the attention of mental health and forensic science professionals around the world.

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