

Original Research

Studying the Cognitive and Behavioural Dynamics of Psychopathy

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2025, volume 9, issue 1

doi:10.21926/obm.neurobiol.2501275

Received: December 04, 2024**Accepted:** March 06, 2025**Published:** March 14, 2025

Abstract

The relevance of studying the cognitive and behavioral dynamics of psychopathy lies in its importance for improving diagnosis, therapeutic interventions, and reducing crime, thereby contributing to public safety. This study aimed to investigate how cognitive and behavioral mechanisms influence psychopathy. A combination of methods was employed, including the Levenson Self-Report Psychopathy Scale, semi-structured interviews, and the analysis of non-verbal reactions. The sample consisted of eight participants (four men and four women) aged 23 to 45, selected based on high scores in both primary and secondary psychopathy traits. The findings indicate that psychopathic traits, such as reduced sensitivity to affiliation, emotional dysregulation, impulsivity, and low empathy, complicate social adaptation, leading to social isolation and conflict. These traits increase the risk of antisocial behavior and recidivism, posing challenges to public safety and rehabilitation. Cognitive mechanisms in individuals with psychopathic characteristics showed selective attention, with concentration driven by personal gain, and memory focused on the practical value of information. Decision-making was marked by quick, rational choices aimed at control and efficiency, with impulsivity arising from the desire for immediate results. In stressful situations or when plans were threatened, participants exhibited reactive aggression and managed their impulses using strategies like distraction or physical activity. Manipulativeness was a key strategy for goal achievement, with honesty seen as a tool used only when beneficial. This study contributes to understanding the cognitive and behavioral dynamics of psychopathy, offering insights for



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developing more effective interventions and rehabilitation strategies. Future research should involve more extensive, diverse samples to validate these findings and explore broader implications for public policy and criminal justice interventions.

Keywords

Empathy; recidivism; aggressiveness; manipulateness; impulsivity

1. Introduction

Psychopathy is a complex and multifaceted construct that has garnered significant research attention due to its implications for individual behavior, societal safety, and mental health. Although not officially recognized as a distinct diagnosis in major classification systems like the DSM-5, psychopathy is typically understood as a personality disorder characterized by a pervasive pattern of callousness, manipulateness, impulsivity, and diminished empathy. Prevalence estimates indicate that psychopathy affects approximately 1% of the general population and up to 25% of incarcerated individuals, highlighting its societal relevance and the necessity for continued research. Historically, the concept of psychopathy has evolved from its early roots in psychiatry, where it was often conflated with general antisocial behavior, to a more nuanced understanding of its distinct cognitive and emotional underpinnings. Research on psychopathy is critical not only for advancing theoretical knowledge but also for developing practical interventions. Understanding the cognitive and behavioral dynamics of psychopathy is essential for improving diagnostic accuracy, tailoring therapeutic approaches, and implementing preventive measures to reduce antisocial and criminal behavior. The study of psychopathy also has broader implications, including the development of strategies for rehabilitation and reintegration, particularly for individuals with pronounced psychopathic traits who pose challenges to existing systems of mental health and criminal justice.

Recent studies have significantly advanced our understanding of the neural and cognitive mechanisms underlying psychopathy. For instance, psychopathic individuals exhibit reduced activity in neural regions associated with affective perception, such as the left anterior insula, right precuneus, and left superior parietal lobe, particularly during tasks involving emotional processing of fear, joy, and sadness [1]. This diminished activity correlates with abnormalities in empathy, as highlighted by the Zipper model, which posits a disconnection between the cognitive and affective components of empathy due to dysfunctions in the basolateral and central amygdala [2, 3]. Similarly, impaired attention to social cues, such as reduced eye contact during live interactions, further underscores the role of cognitive deficits in the development of psychopathy [4].

In addition to cognitive impairments, psychopathy is linked to behavioral patterns characterized by impulsivity, aggressiveness, and manipulateness. Studies on reinforcement learning have demonstrated that individuals with high psychopathic traits exhibit deficits in adapting behavior to avoid negative consequences, suggesting anomalies in learning mechanisms [5]. Moreover, childhood maltreatment, including physical and emotional abuse, has been identified as a significant risk factor for the development of psychopathy, particularly its antisocial dimensions [6]. Longitudinal data further reveal the stability of psychopathic traits across the lifespan, underscoring the importance of early interventions to mitigate their impact [7]. Despite these advances, several

gaps in the literature remain. Notably, there is a lack of comprehensive analysis of how cognitive mechanisms, such as attention, memory, and decision-making processes, interact with behavioral traits like impulsivity and manipulateness to influence the manifestation of psychopathy. Additionally, the relationship between psychopathy and recidivism, as well as its broader societal consequences, requires further exploration. Addressing these gaps is essential for advancing both theoretical understanding and practical applications in the fields of psychology, criminal justice, and mental health.

One of the characteristic features of psychopathy is reduced motivation and the ability to develop authentic social relationships [8, 9]. Lack of empathy and interest in prosocial behaviour contribute to the development of these deficits. Research has shown that neurocognitive vulnerabilities, such as impaired processing of negative emotions, can affect psychopaths' ability to feel guilt or empathy for the suffering of others. These processes and neural systems, particularly those involving the amygdala, contribute to the development of psychopathic traits, although this does not necessarily imply a structural abnormality in the amygdala [10]. The recent studies analyzed have not highlighted the impact of psychopathy on recidivism and antisocial behavior, nor have they examined in detail the role of cognitive mechanisms (attention, memory, decision-making processes) in the development of psychopathic traits. In addition, characteristic behavioural patterns such as impulsivity, aggressiveness, and manipulateness have not been studied in depth.

Therefore, the study aims to determine the influence of cognitive and behavioural mechanisms on the development and manifestations of psychopathy. It was possible to achieve the aim of the study by solving the following three tasks:

1. Investigating the social effects of psychopathy, including the impact of psychopathic traits on the ability to form social bonds, adaptation in society, and the increased risk of aggression and antisocial behaviour.
2. Studying the cognitive mechanisms of psychopathy, focusing on the peculiarities of selective attention, selective memory, and decision-making processes, in order to identify key cognitive deficits and their impact on behavioural patterns.
3. Analysing the behavioural patterns of psychopathy, particularly the role of impulsivity, aggressiveness, and manipulateness in achieving personal goals, as well as their impact on interpersonal relationships and social interactions.

2. Materials and Methods

This study used a comprehensive theoretical and methodological approach to explore the cognitive and behavioral dynamics of psychopathy, grounded in the biopsychosocial model. This model views psychopathy as a result of the interaction between biological, psychological, and social factors, and each of these components was addressed to provide a holistic understanding of the disorder. A systematic literature review was conducted to address the first research objective of identifying the social effects of psychopathy. This review included peer-reviewed journal articles published between 2018 and 2023, sourced from databases such as PubMed, PsycINFO, and Scopus. Studies included in the review examined the social and interpersonal consequences of psychopathy, with a focus on its effects on empathy, social adaptation, and aggression. Articles without empirical data, studies focused solely on secondary psychopathy, or those discussing unrelated personality

disorders were excluded. The literature review provided a theoretical foundation for understanding the social implications of psychopathy, which informed the design of the empirical study.

Participants were recruited through targeted advertisements on social media platforms such as Facebook and Instagram, and in online communities affiliated with universities in Kyiv and Lviv. The advertisements invited individuals to participate in a study on personality traits and cognitive processes, but did not explicitly mention psychopathy to avoid selection bias. Interested individuals were directed to complete the Levenson Self-Report Psychopathy Scale (LSRP) (Appendix A), which consists of 26 items measuring primary psychopathy, characterized by emotional callousness and manipulateness, and secondary psychopathy, characterized by impulsivity and antisocial behavior. Responses were rated on a 4-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree). From the pool of initial respondents, those who scored in the upper quartile on both primary and secondary psychopathy components were shortlisted. A total of 8 participants, consisting of 4 men and 4 women aged 23 to 45 years, were selected to ensure gender balance and age diversity. Although the small sample size may limit the generalizability of the findings, it was considered suitable for in-depth qualitative analysis, which is appropriate for the exploratory nature of the study.

Before participating, all individuals were given detailed information about the study's objectives, procedures, and confidentiality measures. Informed consent was obtained, including consent for audio recording of interviews. Participants were informed of their right to withdraw at any stage without repercussions, and all data were anonymized to protect their identities. The study protocol was reviewed and approved by an institutional ethics review board. Semi-structured interviews were conducted with the selected participants to explore cognitive mechanisms such as attention, memory, and decision-making, and behavioral patterns like impulsivity, aggressiveness, and manipulateness. The interview protocol consisted of open-ended questions designed to encourage detailed responses, and the interview process was divided into two main sections. The first section focused on cognitive mechanisms, with questions about participants' ability to concentrate and factors influencing attention, memory, and decision-making processes. The second section addressed behavioral patterns, including impulsivity, aggression, and manipulateness, asking participants to reflect on their experiences and coping strategies.

Each interview lasted approximately 60 minutes and was conducted in a private, comfortable setting to ensure confidentiality and a relaxed atmosphere for the participants. Non-verbal cues and emotional reactions were also noted to provide deeper insights into the participants' responses. Qualitative data from the interviews were analyzed using thematic analysis. The analysis involved transcribing the audio recordings verbatim, reading the transcripts multiple times to identify preliminary patterns, and coding text segments based on recurring themes. Themes were then reviewed and refined to ensure they were consistent with the data. The final analysis presented the cognitive and behavioral mechanisms of psychopathy, highlighting patterns such as selective attention, pragmatic decision-making, and controlled impulsivity.

The small sample size, while limiting generalizability, allowed for detailed qualitative insights, and the diverse age and gender representation within the sample provided a more comprehensive perspective. Future studies should aim to replicate these findings with more extensive and varied samples. This study's methodology, combining theoretical insights and empirical data, offers a nuanced understanding of the cognitive and behavioral dynamics of psychopathy and contributes valuable insights for advancing research and practice in this field.

2.1 Ethical Statement

All procedures performed in the study were in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki Declaration and its later amendments. The study was ethically approved by the Kyiv International University Ethics Committee, with the approval reference number 1310.

3. Results

3.1 Social Effects of Psychopathy: The Importance of Researching This Pathology

Psychopathy is characterized by a specific set of traits, including lack of empathy, manipulateness, impulsivity, and risk-taking behaviour. While some of these traits may seem adaptive in specific contexts, their cumulative effect often leads to serious problems in interpersonal relationships, and social adjustment. It increases the risk of antisocial behaviour, including aggression and violence. Scientific research suggests that psychopathic traits are associated with fewer positive interpersonal interactions and more negative descriptions of them [11, 12]. This may be due to a reduced sensitivity to affiliation, i.e., less receptivity to emotional and physical cues that usually contribute to forming social ties [13]. Individuals with psychopathic traits may have difficulty recognizing and interpreting the emotions of others, making it challenging to establish emotional connection and empathy [14]. Their tendency towards manipulation, defined as deceit or exploitation to control or influence others for personal gain, may lead them to treat people as mere tools to satisfy their desires, disregarding their feelings or needs. In the social context, although people with psychopathic traits may demonstrate outward adaptability and success, their adaptation is often superficial and based on mimicry rather than a proper understanding and acceptance of social norms and values [15]. This can lead to conflicts with the law and the creation of dangerous situations. Their ability to succeed in specific fields, such as business or politics, may be overshadowed by their tendency to engage in risky and immoral behaviour.

One of the most disturbing manifestations of psychopathy is a tendency to aggression and violent behaviour [16]. This tendency may be associated with impulsivity, lack of empathy, thrill-seeking, and lack of fear of punishment. Individuals with psychopathic traits often act under the influence of the moment, without thinking about the consequences of their actions [17, 18]. This can lead to aggressive outbursts and violent behavior, even in response to minor stimuli or provocations. Their inability to control their impulses can lead to unpredictable and dangerous behaviour. The failure to understand and empathize with the feelings of others lowers the barrier to harm. This can manifest itself in animal abuse, bullying, domestic violence and other forms of aggression. People with psychopathic traits may seek out risky and dangerous situations to experience adrenaline and pleasure [19, 20]. This may include aggressive and violent behaviour, as well as engaging in criminal activities such as theft, fraud, or drug use. They may not be afraid of the consequences of their actions, which increases the likelihood of aggressive and risky behaviour. They may not respond to the threat of punishment or social stigma, making it difficult to control their behaviour and increasing the risk of relapse into criminal activity. This combination of traits can lead to serious crimes, including physical violence, sexual harassment, and even murder. People with psychopathic

traits often do not feel remorse or guilt for their actions, which makes it difficult for them to rehabilitate and reintegrate into society [21].

Psychopathy poses serious security and justice challenges to society [22]. People with this disorder can be skillful manipulators who can avoid taking responsibility for their actions and continue to harm others. They can use their social skills to gain trust and infiltrate different areas of society where they can carry out their manipulative and criminal activities. This poses significant challenges for law enforcement and the justice system, which must develop effective strategies to detect, prevent and respond to crimes committed by people with psychopathic traits. Psychopathy is a complex and multifaceted disorder that has a profound impact on individuals and society [23, 24]. Understanding psychopathy and its consequences is key to developing effective prevention, intervention, and rehabilitation strategies. This will not only help protect society from dangerous individuals, but also help people with psychopathic traits find their way to healthier and more productive lives. Further research is needed to better understand the causes and mechanisms of psychopathy and to develop innovative approaches to the treatment and rehabilitation of people with this disorder. This will help not only to improve their quality of life, but also to make our society safer and more just for all its members. In order to fully understand psychopathy and develop practical approaches to its treatment and prevention, it is also essential to consider the role of social factors in shaping this disorder. Psychopathy has a complex etiology in which genetic predisposition, neurobiological abnormalities, and social influences such as upbringing, traumatic childhood events, and social conditions interact.

Social factors play a pivotal role in the development of psychopathic traits. Negative influences such as domestic violence, neglect, or social isolation in childhood can significantly increase the risk of developing psychopathy. Thus, a comprehensive approach to treating this disorder should include not only psychological methods but also social interventions aimed at supporting families and preventing negative influences on children's development. In addition, it is relevant to consider cultural and ethical aspects in approaches to the treatment and rehabilitation of people with psychopathic traits. This means that interventions need to be adapted to the specific social and cultural context in order to be most effective. It is also critical to emphasize that although psychopathy is a severe disorder, not all people with psychopathic traits commit crimes or engage in violent behaviour. Some individuals with psychopathic traits can succeed in society by using their characteristics to achieve high goals in their professional activities without causing harm to others. While this may be the case, channeling their potential in a constructive way can enhance their ability to contribute positively, though it is not necessarily dependent on specialized intervention.

3.2 Cognitive Mechanisms of Psychopathy Dynamics: Attention, Memory and Decision-Making Processes

Recent research over the past 5 years has provided important information about the cognitive features of psychopathy dynamics, revealing various aspects of this complex disorder. The study by P. Deming et al. [1] showed that psychopathy is associated with a specific decrease in brain activity related to the affective processing of emotions, particularly during fear processing. This indicates a deficit in the cognitive mechanisms of empathy, in particular, in understanding the emotions of others. This study highlights that empathy impairments in psychopaths are not limited to affective mechanisms but also affect cognitive aspects related to the emotional perception of others. The

survey by R.J.P. Rijnders et al. [3] introduces a new model of empathy that helps to explain empathy deficits in psychopaths. The authors point out that psychopathy is characterized by a discrepancy between the affective and cognitive components of empathy, which leads to a lack of deep understanding of other people's emotions and the use of this understanding in one's actions.

It is also worth noting the study by J. Tiihonen et al. [25], which investigated the neurobiological roots of psychopathy. The authors found that specific genetic markers and abnormalities in glucose metabolism may be associated with antisocial behaviour and lack of empathy in psychopaths. These changes may explain the behavioural characteristics of psychopaths. In addition, the study by T. Oba et al. [5] shows that psychopathy is associated with learning disabilities, in particular, a reduced ability to update the value of actions after avoiding negative consequences. This may explain the impulsive and antisocial behaviour characteristic of psychopaths. In summary, current research highlights the complexity of the cognitive mechanisms associated with psychopathy. These include impairments in empathy, moral judgment, learning, and emotion processing, which together lead to the behavioral patterns typical of psychopathy. When analyzing the responses of the 8 individuals with psychopathic traits, several characteristic patterns emerge regarding their ability to concentrate and sustain attention. These people generally demonstrate a high ability to focus when the task is of interest or personal significance. However, if the task is perceived as boring, routine, or does not bring tangible benefits, their ability to focus decreases dramatically. This indicates that their attention is selective and highly dependent on intrinsic motivation.

Another important pattern is that these people are rarely distracted by external factors unless they are of personal importance. They can ignore stimuli if they are focused on an essential task, but can quickly lose concentration if the situation is out of their control or does not meet their expectations. This indicates high self-control and a tendency to dominate when they feel involved. When analyzing situations where respondents experience difficulties with concentration, it can be seen that such problems usually arise when they do not see any benefit for themselves or cannot influence the course of events. For example, if a task requires them to follow rules without the possibility of improvisation, their interest, and concentration are significantly reduced. This emphasizes their need for autonomy and control. When it comes to coping strategies for attention difficulties, they often try to change the situation to suit themselves or manipulate it to gain power. If this is impossible, they tend to ignore the task or perform it superficially to complete it faster. This behaviour confirms their pragmatic and result-oriented nature. In general, individuals with psychopathic traits demonstrate considerable flexibility in their approach to concentration and attention. Still, this flexibility is subordinated to their internal motivations and desire to control the situation. Their ability to concentrate is conditional and depends on the extent to which the task meets their personal goals and the extent to which they can influence the outcome.

Six respondents rate their short-term and long-term memory as good or even excellent, but they emphasize the selectivity of this memory. The main pattern is that respondents remember only information that is of personal importance to them or may be helpful in the future. Information that does not meet their interests or goals is quickly forgotten or not remembered at all. As for forgetting important things, eight respondents said that this rarely happens. However, when this happens, it is usually due to an overload of information or the fact that at the time of remembering, their attention is focused on other, more critical tasks. In other words, even if an event or information is objectively crucial, it can be forgotten if it does not meet its current goals or priorities. This again points out that their memory is conditional and subject to personal priorities. When it comes to

memorization strategies, the respondents demonstrate a pragmatic approach. Four prefer internal strategies, such as associations, mental maps or visualization, to improve memory. They rarely use external reminders, such as writing or notes, and only when the task is relevant and the risk of forgetting it is very high. This indicates a high level of self-control and independence in managing their memory. Thus, it can be concluded that people with psychopathic traits have well-developed memory, but it is highly dependent on their personal motivations and interests. Their memory is a tool that they use selectively, depending on their current needs and goals, which reflects their general tendency towards pragmatism and control over situations.

Five respondents indicated that in difficult situations, they try to quickly evaluate possible options and choose the one that will bring the most significant benefit. The main emphasis is on a pragmatic approach, where efficiency and personal gain are the key criteria. This indicates that their decision-making process is based on logic and calculation. However, some respondents also say that they trust their instincts, especially in situations where a quick response is required. Analyzing options before making a decision also highlights their pragmatic nature. They do not spend much time considering all possible options, but focus on those that seem most beneficial or obvious. This strategy allows them to act quickly and with minimal resources, again highlighting their desire for control and efficiency. Regarding impulsive decisions, some respondents admitted that they sometimes act impulsively, especially when the situation requires a quick response. However, even in such cases, their decisions are still driven by a pragmatic approach: impulsiveness arises when there is an opportunity to gain a benefit or solve a problem quickly. This suggests that their impulsiveness is not so emotional as it is driven by a desire to achieve a goal as quickly as possible. Seven respondents feel satisfied with their actions because they usually achieve the desired result. They rarely regret their decisions, and if this happens, it is mainly because the result did not meet their expectations or bring the expected benefits. This confirms their confidence in their abilities and their desire to achieve maximum control over situations. These people generally demonstrate high efficiency, pragmatism, and a tendency to control the decision-making process. They quickly assess the situation, choose the most favourable option, and rarely regret their actions because their approach allows them to achieve the desired results. Impulsiveness in their decisions occurs only when it meets their goals and will enable them to achieve results faster. These characteristics emphasize rationality and purposefulness, key aspects of their thinking and behaviour.

When considering the cognitive mechanisms of psychopathy dynamics, several key components can be identified (Table 1). These components are the primary markers of the cognitive characteristics of people with psychopathic traits.

Table 1 Cognitive mechanisms of psychopathy dynamics.

Cognitive aspect	Description	Main conclusions
Empathy	Psychopathy is associated with a deficit in the cognitive mechanisms of empathy, in particular, in understanding the emotions of others	Empathy deficits affect both affective and cognitive aspects
Moral thinking	Impaired moral reasoning in psychopaths, is associated with changes in the activity of the dorsomedial prefrontal cortex and amygdala	Impaired moral judgment leads to antisocial behaviour
Training	Reduced ability to update the value of actions after avoiding negative consequences, which explains impulsive behaviour	Learning disabilities affect the ability to adapt
Warning	Selective attention, which depends on intrinsic motivation. Concentration decreases if the task is not rewarding	The ability to concentrate is conditional and depends on the importance of the task
Memory	Well-developed but selective memory. Only information of personal value is remembered	Memory is driven by personal priorities and the practical value of information
Decision-making	The decision-making process is based on logic and a pragmatic approach, with impulsiveness driven by a desire to achieve quick results	Rationality and pragmatism determine the decision-making process

Source: compiled by the author.

Thus, the cognitive mechanisms of psychopathy dynamics are a complex set of processes that include attention, memory and decision-making, and are characterized by specific abnormalities that shape the behaviour of people with psychopathic traits. Research shows that psychopathy is associated with impaired empathy and moral judgement, which is reflected in a deficit in the cognitive processing of other people’s emotions and affects their ability to empathize. Attention deficits in such individuals are manifested in their selectivity, where the ability to concentrate depends on the personal significance of the task. If the task is not beneficial to them, their attention is quickly distracted, but they can demonstrate high self-control in situations of personal significance. When it comes to memory, psychopathic individuals are also selective, focusing only on information that is of practical value to them, which emphasizes their pragmatic approach to memorization. Their decision-making process is characterized by rationality, a quick analysis of the situation, and selection of the most favorable option. Impulsiveness in their decisions is usually driven by the desire to achieve quick results, which highlights their focus on control and efficiency. Thus, the cognitive features of psychopathy reflect a pragmatic, rational approach to life, where attention, memory, and decision-making processes are subordinated to personal goals and the desire to control the situation.

3.3 Behavioral Mechanisms of Psychopathy Dynamics: Impulsivity, Aggressiveness and Manipulativeness

Research focuses on the lack of social attachment and abnormal social relationships in people with psychopathy. It has been shown that psychopaths have a reduced level of motivation and ability to develop authentic social relationships, which is explained by their neurocognitive characteristics. Studies also show that these abnormalities may be the result of disruptions in the functioning of specific brain structures responsible for social affiliation and empathy [26]. In addition, research shows that psychopathy, especially its secondary form, characterized by impulsive and risky behaviour, is strongly associated with alcohol use. It has been found that people with high levels of psychopathy are more likely to drink alcohol and have fewer defense strategies to help limit their alcohol consumption and avoid alcohol-related problems. This underscores the need to take into account the specific characteristics of psychopathy when developing therapeutic strategies to reduce alcohol harm among these individuals [27].

An analysis of the responses of 8 people with psychopathic traits to questions related to impulsivity reveals several important patterns that characterize their approach to this aspect of behaviour. Seven respondents indicated that they sometimes make decisions without much thought, especially in situations that require a quick reaction or when something crucial is happening. This highlights that their impulsiveness is not random or uncontrollable, but rather driven by a desire to achieve results faster or avoid missing opportunities. They tend to act impulsively when the situation calls for immediate action, and they feel that this may be the best way to achieve the goal. Regarding the consequences of impulsive actions, some respondents acknowledged that sometimes their impulsiveness led to negative results. However, five of them also noted that in such situations, they are able to quickly deal with the consequences by using their problem-solving and adaptation skills. For example, they may use manipulation or look for ways to turn the situation to their advantage. This demonstrates their ability not only to act quickly but also to correct mistakes that arise from impulsiveness.

Regarding impulsivity control strategies, four respondents indicated that they try to keep impulses under control, especially when the situation requires reflection and a balanced approach. Some of them indicated that they use specific techniques, such as analyzing the situation or assessing the potential consequences before acting. This shows they are aware of the risks associated with impulsivity and try to minimize them when necessary. In general, people with psychopathic traits tend to be impulsive, but their impulsivity is not uncontrollable [28]. It is often driven by a desire to achieve a quick result or to avoid losing opportunities. Even if impulsive actions lead to negative consequences, these people usually know how to correct and minimize the damage quickly. They also use a variety of strategies to control their impulsivity, especially when they realize that a situation requires a more balanced approach. Thus, their impulsivity is part of a broader strategy for achieving goals that include both quick and deliberate decisions, depending on the circumstances. Six respondents admit that they sometimes feel angry or aggressive, especially in situations where they face obstacles or when their plans are threatened. The frequency of such feelings varies from person to person, but generally, they are not constant. This suggests that their aggression is reactive, arising in response to stressful situations and resulting from frustration or dissatisfaction.

Regarding reactions to anger and aggression, three respondents indicated that they usually try to control their emotions, but in some cases they may react aggressively. Some respondents acknowledged that aggressive behaviour sometimes leads to conflicts or relationship problems. For example, they could get into arguments or demonstrate dominant behaviour, which led to an escalation of the conflict. This indicates that although these people try to control their reactions, under high stress, their aggressive impulses can get out of control. Regarding emotional management, respondents indicated that they try to use various strategies to reduce their aggression. For example, some practice distraction, physical activity, or deep breathing to relieve tension. Others may analyse the situation rationally and find alternative ways to resolve the conflict before reacting aggressively. This shows that these people know the importance of controlling their emotions and seek to avoid the negative consequences of aggression whenever possible. In general, the analysis shows that people with psychopathic traits experience anger and aggression mainly in stressful situations or when faced with obstacles that interfere with their plans. Although they try to control their emotions, their aggressive behaviour can lead to conflicts, especially if the stressors are significant. However, these people also demonstrate an awareness of the need to manage their aggression and use various techniques to reduce tension. Thus, their aggression is more reactive and controllable, but it can still cause problems in interpersonal relationships and critical situations.

Four respondents admitted that they often use other people to achieve their goals. Examples of such actions may include using influence, manipulating information, or emotional pressure to get what they want. The main motivation for choosing a manipulative approach is to achieve results efficiently with minimal effort. For these people, manipulation is a tool that allows them to achieve their goals faster and easier, especially in situations where a direct approach may be less successful. Respondents believe manipulation is justified in certain situations, especially when achieving critical personal goals or avoiding threats. They noted that manipulation can be particularly effective in getting around obstacles or influencing others without confrontation. The choice of situations to use manipulation usually depends on the context and the level of risk. If the manipulation can bring significant benefits and the risk of being found out is low, these people use it without hesitation. In terms of attitudes towards honesty and openness, four respondents indicated that they tend to see honesty as a tool that is used when it is beneficial. For them, honesty is not an absolute value, and they may prefer manipulation to honesty if it helps them achieve their goals. This indicates a pragmatic approach to interpersonal relationships, where the main criterion is to achieve the desired result, not to adhere to moral principles. In general, people with psychopathic traits often use manipulation as an effective means of achieving their goals. They consider manipulation to be justified in situations where a direct approach does not provide the desired result or where there are obstacles to overcome. Their attitude to honesty is flexible: they use honesty only when it is beneficial and quickly switch to manipulation if it is in their interests. Thus, manipulateness is a key aspect of their behaviour that allows them to effectively achieve their goals without being burdened by moral dilemmas.

Behavioral patterns of psychopathy dynamics are characterized by three main characteristics (Table 2). These characteristics are the leading indicators of the behavioural activity of individuals with psychopathic traits.

Table 2 Behavioural mechanisms of psychopathy dynamics.

Behavioral aspect	Description	Main conclusions
Impulsiveness	Impulsivity is often driven by a desire to achieve quick results or avoid losing opportunities. It can lead to negative consequences, but people with psychopathic traits are able to correct the situation quickly.	Impulsivity is part of the strategy for achieving goals and is controlled depending on the circumstances
Aggressiveness	Aggression in these individuals is reactive, occurring in response to stressful situations. Although they try to control their emotions, in some cases aggression can get out of hand	Aggression is reactive but can lead to conflict, especially in stressful situations
Manipulative nature	Manipulation is an effective means of achieving goals, especially when a direct approach fails. Honesty is seen as a tool that is used only when it is beneficial	Manipulativeness is a key aspect of behaviour and is used to achieve personal goals

Source: compiled by the author.

Thus, the behavioural mechanisms of psychopathy dynamics reflect a pragmatic approach to life, where impulsivity, aggressiveness, and manipulativeness act as tools to achieve personal goals. These behavioural traits allow people with psychopathic traits to adapt to the environment effectively, but often lead to difficulties in interpersonal relationships due to their tendency to use other people for their benefit.

4. Discussion

The author's research has shown that people with pronounced psychopathic traits demonstrate significant cognitive and behavioural features that affect their interaction with the environment. One of the most prominent manifestations of these traits is specific cognitive information processing that focuses on pragmatic goals and the achievement of personal benefits. It has been found that the attention of these individuals is often selective, and they can focus on those aspects that directly relate to their personal goals. For example, in memory processes, there is a tendency for pragmatic memorization, which helps them achieve the desired results with minimal costs. In addition, their decision-making processes are characterized by maximizing benefits at any cost, often without regard to social consequences. The impulsivity observed in psychopathic individuals is another key trait, but it is not always random or uncontrollable. On the contrary, impulsive actions often serve as a tool to achieve their goals quickly. Aggressiveness in such people usually manifests as a reaction to stressful situations or obstacles that stand in the way of achieving their goals. Manipulativeness, one of the main characteristics of their behaviour, is used to achieve the desired results in interaction with other people. These cognitive and behavioural characteristics contribute to the adaptation of psychopathic individuals to the environment, but often lead to problems in interpersonal relationships, as their tendency to use others for their purposes creates significant difficulties in establishing authentic social connections.

The author's conclusions are confirmed or refuted by other studies. For example, the results obtained from electroencephalography (EEG) confirm that people with psychopathic traits have an excessive focus on visual cues, which reduces the resources needed for other cognitive functions [29]. This suggests that attention deficits may be an important component of psychopathy, although this may not be universally applicable in all cases. At the same time, another study found that the activation of brain structures during the processing of visual information can vary depending on the presence of brain injuries, which further complicates cognitive processes in such individuals [30]. This indicates the complexity of the interaction of various cognitive mechanisms in psychopathy. Another study confirms that psychopathy is associated with hyperactivity of mental processes, which often leads to impulsive actions that serve as a tool for achieving quick results. In particular, it has been found that such people have a specific neurophysiological response to tasks that require attention, which may explain their tendency to make quick decisions and impulsive behaviour [31]. This confirms our results, which indicate the importance of impulsivity as a mechanism that contributes to the rapid achievement of goals.

Impulsivity, which is considered by the author to be one of the central features of psychopathy, is also supported by other research. For example, researchers have found that positive impulsivity is an essential aspect of all four significant facets of psychopathy, and different forms of impulsivity can explain specific behavioural patterns, such as manipulateness or aggressiveness [32]. However, another study found that impulsivity may hurt cognitive function in older adults, especially those at risk of developing dementia, suggesting a possible relationship between cognitive impairment and psychopathic traits [33]. Aggression in people with psychopathic traits is often a reaction to stressful situations or obstacles, which is confirmed by studies that have shown that physical aggression in such people may be due to increased impulsivity in decision-making in social contexts, which leads to hasty and inflexible judgments, especially in the face of conflict or negative emotional stimuli [34].

Manipulateness, which is often considered a key characteristic of psychopathic behavior, is also confirmed by other studies. For example, research has shown that high levels of interpersonal traits in psychopaths are often accompanied by reduced impulsivity in aspects such as deliberation and persistence in achieving goals, which highlights their ability to plan carefully and achieve desired outcomes through strategic manipulation [35]. Other studies also show that psychopathy is associated with emotional dysregulation, which in turn can contribute to aggressive behaviour. In particular, it has been found that difficulties in emotion regulation explain a significant portion of the association between psychopathy and aggression, which underscores the importance of the emotional component in this disorder [16]. In addition, research on the neurobiological basis of psychopathy indicates that changes in the grey matter of the brain, especially in the prefrontal cortex and limbic system, may be associated with the characteristic features of psychopathy, such as emotional coldness and impulsivity, which further underscores the complexity of this disorder.

Thus, the results of this study confirm that psychopathy is a complex and multifaceted disorder that includes a variety of cognitive and behavioural abnormalities. These abnormalities are reflected in various aspects of individuals' functioning, such as impaired emotional response, reduced empathy, problems with moral judgement, increased impulsivity, aggressiveness, and manipulateness. Such cognitive and behavioural features allow psychopathic individuals to effectively adapt to the environment and achieve their goals using rational and pragmatic approaches. However, despite these adaptive abilities, psychopathic traits create significant difficulties in interpersonal relationships and social adaptation. Due to their reduced capacity for

empathy and insensitivity to the emotions of others, psychopaths are often perceived as cold, insensitive, and manipulative, which complicates their interactions with others and contributes to the development of conflicts. In addition, their impulsivity and tendency to act aggressively increase the risk of social isolation and antisocial behaviour, which can have serious consequences for both the individual and others.

Further research should focus on developing and improving interventions that could help minimize the negative impact of these traits on the social functioning of psychopathic individuals. This could include programs that improve emotional regulation, empathy, and moral judgment and reduce aggression and impulsivity. In addition, it is important to develop approaches that take into account the individual characteristics of each patient, as psychopathy can manifest in different ways depending on the combination of personality traits and the severity of the disorder. Such individualized interventions can significantly increase the chances of successful social integration of psychopathic individuals while reducing the risk of relapse into aggressive or antisocial behavior. Ultimately, effective interventions and rehabilitation programs can not only improve the quality of life of psychopathic individuals but also contribute to safer and more harmonious social interaction in society.

5. Conclusions

Psychopathy is a complex and multifaceted personality disorder that significantly affects interpersonal relationships and social adaptation, increasing the risk of antisocial behaviour, aggression, and violence. People with psychopathic traits can demonstrate external adaptability and succeed in some areas. Still, their social adaptation is often superficial and based on manipulation, which creates dangerous situations and increases the likelihood of conflicts with the law. Lack of empathy, impulsivity, and a desire for control can lead to serious crimes and complicate the rehabilitation and integration of such individuals into society. Given the complex etiology of psychopathy, which includes genetic, neurobiological, and social factors, effective treatment strategies should consider not only psychological methods but also social interventions adapted to the cultural context. Although not all individuals with psychopathic traits commit crimes, they may require special work to channel their potential into constructive ways. This would necessitate a deeper understanding of the nature of psychopathy, the development of innovative approaches to its treatment and rehabilitation, and, importantly, motivation and a willingness to collaborate on the part of the individual, which is undoubtedly not always guaranteed.

The cognitive mechanisms of psychopathy are a complex set of processes, including a deficit of empathy, impaired moral thinking, and specific deviations in attention, memory and decision-making, which form the behavioural characteristics of people with psychopathic traits. Studies show that these individuals demonstrate selective attention, which depends on the personal significance of the task, a pragmatic approach to memorization, in which only useful information is retained, and rationality and pragmatism in decision-making, which emphasizes their focus on control and efficiency. In general, the cognitive mechanisms of psychopathy reflect a pragmatic, rational approach to life in which attention, memory, and decision-making are subordinated to personal goals and the desire to control the situation.

The behavioral mechanisms of psychopathy include impulsivity, aggressiveness and manipulateness, which act as the main tools for achieving personal goals. Impulsivity in such

individuals is often driven by a desire to achieve quick results or avoid losing opportunities, and it can be controlled depending on the circumstances. Aggression is reactive and occurs in response to stressful situations, leading to conflicts in interpersonal relationships, especially if the stressors are significant. Manipulativeness is used to achieve goals, especially when a direct approach fails, and honesty is seen only as a tool used when it is beneficial. In general, these behavioral traits allow people with psychopathic traits to adapt effectively to the environment. Still, they can also create serious difficulties in social interactions due to their tendency to exploit others.

A limitation of the study is the small sample of participants and the lack of a comparison group, which may limit the generality of the results. Prospects for further research include expanding the sample and using more diverse methods to provide a deeper analysis of the cognitive and behavioral mechanisms of psychopathy. The practical significance of the study lies in the fact that its results can contribute to the development of more effective therapeutic approaches for people with psychopathic traits aimed at improving their social adaptation and reducing antisocial behavior.

Appendix A

The Levenson Self-Rating Psychopathy Questionnaire

A special interview plan

Task 1: Analysing Cognitive Mechanisms

Section 1: Attention

1. Ability to concentrate:

- Question: "How would you describe your ability to focus on tasks?"
- Clarifying question: "Are you easily distracted? If so, what is the most common distraction?"

2. Problems with attention:

- Question: "Do you have difficulty sustaining attention for long periods?"
- Clarifying question: "In what situations does this most often happen?"

3. Concentration situations:

- Question: "Are there situations when you find it particularly difficult to concentrate? Can you give me an example?"
- Clarifying question: "How do you usually handle these situations?"

Section 2: Memory

1. Memory assessment:

- Question: "How would you rate your short-term and long-term memory?"
- Clarifying question: "Do you have any problems remembering information? What kind of problems?"

2. Forgetting important things:

- Question: "Do you ever forget important things or events?"
- Clarifying question: "How often does this happen?"

3. Memorisation strategies:

- Question: “How often do you have to write something down or remind yourself of it so you don’t forget?”
- Clarifying question: “What strategies do you use to improve your memory?”

Section 3: Making Decisions

1. Decision-making process:

- Question: “How do you make decisions in difficult situations?”
- Clarifying question: “Do you analyze all possible options before deciding?”

2. Impulsive decisions:

- Question: “Do you ever make decisions on impulse? Can you give us an example?”
- Clarifying question: “What usually influences such decisions?”

3. Satisfaction with solutions:

- Question: “How often do you feel satisfied with the decisions you make?”
- Clarifying question: “Do you ever regret decisions you have made? Why?”

Task 2: Study of Characteristic Behavioural Patterns

Section 1: Impulsivity

1. Frequency of impulsivity:

- Question: “How often do you decide without much thought?”
- Clarifying question: “In what situations does this most often happen?”

2. Consequences of impulsive actions:

- Question: “Have there been situations when impulsive actions led to negative consequences? Can you give me an example?”
- Clarifying question: “How do you deal with the consequences of such actions?”

3. Control strategies:

- Question: “How do you deal with the urge to act immediately without thinking?”
- Clarifying question: “Do you use any techniques to control impulsivity?”

Section 2: Aggressiveness

1. Feelings of anger:

- Question: “Do you ever feel angry or aggressive?”
- Clarifying question: “How often does this happen?”

2. Reactions to aggression:

- Question: “How do you usually react in such situations?”
- Clarifying question: “Have there been any cases in your life when aggressive behaviour led to conflicts or problems? Can you give an example?”

3. Emotion management strategies:

- Question: “How do you deal with your emotions in stressful situations?”
- Clarifying question: “Do you use any techniques to reduce aggression?”

Section 3: Manipulativeness

1. Use of manipulations:

- Question: “How often do you use other people to achieve your goals? Can you give me an example?”
- Clarifying question: “Why do you choose this approach?”

2. Justification of manipulations:

- Question: “Do you think manipulation is justified in certain situations? If so, which ones?”
- Clarifying question: “How do you choose the situations in which you use manipulation?”

3. Honesty in relationships:

- Question: “How do you feel about honesty and openness in your relationships with other people?”
- Clarifying question: “Are there situations when you prefer manipulation to honesty?”

Author Contributions

The author did all the research work for this study.

Competing Interests

The author has declared that no competing interests exist.

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