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The Impact of Negative Life Events on Individuals with Childhood Adverse Experiences: The Development of Paranoid Thinking and Rule-Breaking Behaviour

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Research Article

Keywords: Adverse Childhood Experiences, Negative Life Events, Paranoid Thinking, Rule-Breaking Behaviour, Childhood Trauma, Antisocial Behaviour

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Abstract

Individuals with adverse childhood experiences and negative life events in adulthood may be particularly vulnerable to psychological stressors that can contribute to psychological difficulties. Paranoid thinking and rule-breaking behaviour are important outcomes in understanding maladaptive responses to traumatic experiences. Early traumatic experiences may predispose individuals to maladaptive coping mechanisms, including paranoid ideation and antisocial behaviour, potentially through cognitive distortions or the misinterpretation of social cues. A total of 138 participants were included in the final analyses. The study examined the relationships between adverse childhood experiences, negative life events, paranoid thinking, and rule-breaking behaviour. The results indicated a significant positive association between adverse childhood experiences and rule-breaking behaviour, while adverse childhood experiences were also significantly associated with persecutory beliefs. In contrast, negative life events in adulthood did not significantly predict paranoid thinking. These findings contribute to understanding the potential long-term psychological and behavioural correlates of childhood adversity. Theoretical and practical implications are considered alongside the conceptual and methodological limitations of the study and recommendations for future research.

Keywords: Adverse Childhood Experiences; Negative Life Events; Paranoid Thinking; Rule-Breaking Behaviour; Childhood Trauma; Antisocial Behaviour

Introduction

Analysing the impact of negative life events in adulthood on people who experienced childhood traumatic events is paramount since these individuals are at high risk for alterations in cognitive, behavioural, and psychological functions (Meiser-Stedman et al., 2019). Additionally, the predisposed vulnerability might result in severe mental health disorders, such as depression, anxiety, and psychosis, including paranoid thinking (Griffiths & Macbeth, 2022). Moreover, the individuals are prone to adopting dysfunctional behaviours, for example, rule breaking or antisocial behaviour, which could further aggravate their social, professional, and personal lives.

However, there is a limited body of research (Adler et al., 2019; Pastore et al., 2020; Xiao et al., 2021) highlighting how childhood trauma, in conjunction with the experiences of negative events in adulthood, contributes to psychotic outcomes and the development of rule breaking behaviour.

Adverse childhood experiences encompass distressing events which children might experience early in life, and they differentiate in severity and chronicity. Typically happening within a child's household or social settings, these experiences result in harm that interrupts both physical and mental health development processes (Alhowaymel et al., 2021). These experiences disrupt healthy developmental trajectories, influence neurological functioning, and trigger maladaptive mechanisms throughout the lifespan, thereby increasing the risk of developing psychological or physical disorders, and diminished social skills (Schilling et al., 2007).

Some of the most prevalent types of adverse childhood experiences fall into three categories: abuse, which can manifest as physical, emotional or sexual and is characterized by physical injuries, threats, or coerced sexual activities; neglect where children lack a secure environment, warmth, safety or sufficient food and clothing; and household dysfunction

wherein children witness domestic violence, struggle with parental mental health problems or parental substance misuse (Anda et al., 2010). Norman et al. (2012) suggested that child maltreatment is highly correlated with substance misuse, suicide ideation and risky sexual behaviour, whereas physical abuse was linked with depression in adulthood. Witnessing verbal aggression or domestic abuse exemplifies forms of childhood maltreatment that have been associated with borderline personality disorder and paranoid personality (Teicher et al., 2006).

Negative life events in adulthood cause distress and have a paramount impact on mental health, usually exacerbated by childhood traumatic experiences because they affect the pre-existing unhealthy coping mechanisms or attachment styles established in the formative years of life (Hammen, 2006). Due to stress-sensitization, individuals may unconsciously seek out familiar situations or interpersonal relationship to express their internal states (Korkeila et al., 2010). Similarly, traumatic childhood events can intensify sensitivity to challenges, diminish the degrees of emotional protective factors and result in acute symptoms of clinical depression in adulthood (Hammen et al., 2000).

Although it is widely recognized that adverse childhood experiences facilitate the onset of numerous mental illnesses (Álvarez et al., 2011), research has shown that early adverse events are correlated with the emergence of psychotic symptoms, even among general populations (Appiah-Kusi et al., 2017). In addition, people with a past of childhood maltreatment are more prone to evolve high-risk psychotic symptoms (Thompson et al., 2009).

Another essential factor involves the potential pathways combining trauma from childhood with psychotic features, including negative schemas about oneself and other people, thereby leading to paranoid analysis regarding atypical personal events (Garety et al., 2001). Similarly, Morrison et al. (2003) suggest that negative assessments of oneself and the

external world have been connected to a propensity to develop hallucinations and delusional ideation.

Paranoid thinking can be defined as an inclination towards irrational suspicion and distrust of others, often accompanied by delusions, and strongly correlated with aggression and rule breaking behaviour (Bailey et al., 2007), because paranoid individuals are prone to misinterpreting social interactions as threatening, since they are frequently in a state of heightened hypervigilance (Tone & Davis, 2012).

Antisocial behaviour typically emerges in childhood through impulsivity, physical abuse, or disrupted family environments (Farrington, 2005), being characterized in adulthood by lack of self-control, seeking immediate gratification and sensations (Romero et al., 2001).

Consequently, antisocial individuals display rule breaking behaviour in adulthood due to a lack of responsibility and empathy. They tend to violate the socially accepted standards and to fail to the conform societal expectations. Moreover, the responses to environmental aspects and stressors are negatively influencing the rule breaking behaviour (Fishbein, 2000).

Paranoid thinking might be interconnected with rule breaking behaviour through its skewed perspective of reality (Bailey et al., 2007). Individuals harbour suspicions about the external world, often misinterpreting the intentions of society, thus this false belief that societal rules and norms are intended to harm them elicits rule breaking conduct as a means of self-protection or rebellion (Steindl et al., 2015).

Theories in sociology and trauma psychology propose that all memories, traumatic events, childhood experiences, and early life events of any kind exert severe influences on the development of children (Lamb & Tamis-LeMonda, 2004). Parents play an essential role throughout their children's lives to foster optimal cognitive development. While recent studies have focused on the positive influence of primary caregivers, there is a relative

scarcity of studies investigating the impact of dysfunctional family environments on the development of paranoid ideation (Bentall et al., 2012).

To fully comprehend negative life events in adulthood, it is imperative to clarify the diathesis-stress model. It proposes that individuals exhibit different degrees of vulnerability, referred to as diathesis, to psychological disorders, which, when interacting with stressful life experiences, can precipitate these disorders to manifest (Broerman, 2020). Stated differently, negative life events combine with antecedent risks, thus affecting the evolution of psychopathology in later life.

The "Integrated Cognitive Antisocial Potential" theory proposed by Farrington and McGee (2017) integrates various criminological ideas such as rational choice, control, or strain, being the key for understanding the antisocial potential. The theory aims to explain how antisocial potential in individuals translates into rule breaking behaviour through cognitive processes (Gomes et al., 2023). Long-term antisocial potential can be conditioned by negative life events, impulsiveness, and strain, whereas short-term antisocial potential is influenced by motivation, situational responses, and environmental factors, governed by the decision-making process of weighting the costs and benefits of engaging in criminal activities (G. M. Davies & Beech, 2017). The long-term differences in antisocial potential across individuals tend to remain consistent throughout time, nonetheless the absolute levels of antisocial potential fluctuate with maturity, peaking during adolescence years due to developmental changes, including peer groups impacts or the diminishing role of parental supervision (Farrington, 2019).

An individual exposed to low socio-economic conditions or delinquent parents may develop a high long-term antisocial potential, yet people with high intelligence and strong socialization processes might still adopt rule breaking behaviour if affected by societal pressure or other short-term indicators (G. M. Davies & Beech, 2017). Therefore, the rule

breaking behaviour is a result of learning and cognitive processes where reinforcement and punishment play a pivotal role in determining the future of long-term antisocial potential.

Related to social control theory, Agnew (1992) developed the general strain theory, which proposes that individuals engage in rule breaking behaviour as a reaction to stress and pressure. People who are not able to achieve societal goals through legitimate ways experience strain, which can lead to involvement in criminal activities and rule breaking behaviour.

Recent research has shown that individuals who experience childhood trauma and neglect are more likely to experience symptoms of psychosis and hallucinations in adulthood, outlining a causal relationship between these variables (Read et al., 2005). Specifically, emotional abuse has been found significantly correlated with paranoid delusions in clinical populations (Ashcroft et al., 2012). Moreover, Janssen et al. (2003) demonstrated that adverse childhood experiences predicted proneness to psychotic symptoms. Paranoid thoughts seem to be common in the general population of the United Kingdom, with approximately one third of individuals reporting such thoughts (Freeman et al., 2005). Thus, childhood traumatic events appear to best explain paranoid thinking and its symptomatology, as they contribute to the development of insecure attachment style and negative self-schemas (Humphrey et al., 2022).

Childhood adverse experiences were also associated with rule breaking behaviour, particularly when individuals are exposed to four or more types of negative childhood events (Hunt et al., 2017). Hesselink (2023) suggests that maltreatment, antisocial parents, delinquent peers, and hostile family settings during early years are predisposing factors for deviant behaviour in adult life. Nonaggressive rule breaking behaviours, such as alcohol consumption, theft, or running away from home, are present during adolescence because of peers' manipulation or a desire for rebellious acts, but they tend to diminish with age (Givens

& Reid, 2018). However, Hopwood et al. (2009) showed that when individuals are exposed to childhood trauma, rule breaking behaviour still persists into adulthood.

Exposure to negative life events in adulthood can progress the development of persecutory ideas about the world (Carvalho et al., 2016). However, some people experiencing these events might trigger psychotic episodes. Even though individuals encounter adverse life events, not all of them develop paranoid beliefs, nonetheless, the causal relationship is not extensively researched (Kingston et al., 2023). Certain factors, such as elevated levels of warmth, effective coping mechanisms, compassion, and self-actualization, can serve as protective strategies which mitigate the progression of paranoid thinking (Mækelæ et al., 2021).

While recent research has focused more on exploring rule breaking behaviour during adolescence than in adulthood (Josephine et al., 2019; Perez et al., 2016), it is paramount to highlight the pathways through which negative life events contribute to engagement in deviant behaviour during adulthood. The disruption of normal psychological development due to stressors often leads individuals to internalize their emotions, spurring them to engage in rule breaking behaviour as a coping strategy for distress (Eisenberg et al., 2000).

Childhood traumatic experiences are consistently linked to psychopathology in adult life (Daníelsdóttir et al., 2024), including enduring exposure to negative life events. The psychological effects formed in childhood prompt individuals to adopt disruptive coping mechanisms, such as substance misuse or dysfunction household behaviours, thereby heightening susceptibility to adverse life events in adulthood (Dube et al., 2003). Carlson and Shafer (2010) have found that individuals in nonclinical population who have undergone childhood traumatic events are highly likely to also encounter negative adult life events. Furthermore, personality traits such as antisocial behaviour and neuroticism, as well as stress

sensitisation stemming from environmental factors and disinhibition, collectively contribute to an expanded likelihood of experiencing negative life events (Pos et al., 2016).

Since emotional experiences are interconnected with behavioural responses (Spytska, 2023), paranoid individuals tend to display elevated levels of rule breaking behaviour (Podubinski et al., 2012), as a coping mechanism to protect themselves. Due to cognitive distortions, individuals misinterpret social cues, perceiving others as hostile, influencing them to adopt rule breaking behaviour as a form of retaliation (Schaerer et al., 2021). Therefore, individuals may engage in retaliation when they perceive a transgression, even when an actual violation is not present, leading to rule breaking behaviour (Dodge & Cole, 1987).

Previous studies exhibit several limitations, which the current study aims to address. Although Hovens et al. (2010) emphasize that childhood adverse events are significantly correlated with anxiety and depressive disorders, particularly emotional neglect, this study did not focus on the correlations with paranoid thinking, being a variable that requires investigation. Furthermore, although research in clinical psychology has advanced significantly, Bailey et al. (2007) place more emphasis on childhood rather than adulthood regarding the interconnection between rule breaking behaviour and paranoid thinking.

Aggelidou and Georgaca (2017) concluded that negative life events in adulthood do not result in paranoid thinking if psychological interventions for persecutory delusions are implemented to develop heathy coping mechanisms, while Janssen et al. (2003) illustrated that only childhood abuse is linked with the growth of positive psychotic symptomatology, without considering the negative life events occurring in adulthood.

In the current research study, it will be investigated whether exposure to negative life events in individuals and adverse childhood experiences can serve as primary factors in the development of paranoid thinking and rule breaking behaviour. This topic is underexplored in the specialized literature since most studies exclusively focus on a limited period of life,

namely adolescence. There has been limited research conducted to explore the current evidence regarding the relationship between paranoid thinking and rule breaking behaviour in adults. While there is a body of research analysing each of these factors independently, there is a notable gap in comprehending how they overlap and influence one another over the lifespan. Additionally, it is essential to explore both childhood and adulthood to deeply understand the long-term effects of trauma, by examining the variables collectively and longitudinally to complete the gaps in the literature.

The primary objective of the present study is to uncover nuanced insights into how childhood adverse experiences and life stressors in adulthood shape individuals' tendencies towards paranoid thinking and rule breaking behaviour within the nonclinical population worldwide, providing a holistic approach. Levels and severity of negative life events and adverse childhood experiences of individuals will be examined, extending beyond the realm of clinical psychology often studied by incorporating a criminological element: deviant behaviour. Recent studies enable the advancement of current research through a correlational, cross-sectional design that explores how trauma traverses from childhood into adulthood. In a developmental manner, it is highlighted the crucial role of raising awareness about the topic, with the aim of improving the mental health of future generations and reducing criminal behaviours across the lifespan.

Therefore, through hypothesis formulation, the study expects: (1) a positive correlation between paranoid thinking and rule breaking behaviour, (2) that adverse childhood experiences and adult life events will contribute to the development of paranoid thinking, and (3) that adverse childhood experiences, adult life events, and paranoid thinking will lead into a low rule following behaviour.

Method

Participants and Procedure

G*Power was used to calculate the optimal sample size, using an alpha level of .05, a power of .80, and assuming an effect size of .10. A total of 114 participants were estimated to provide sufficient statistical power. An initial total of 150 male and female participants took part in this research. However, after cleaning for missing data, 138 participants remained, with an average age of 31.50 years (SD=11.82).

To participate, the participants need to be able to converse in English and be between 18 and 65 years old. The sample was drawn from the general population and not selected from a clinical population. It was advised that individuals with post-traumatic disorder or other trauma-related conditions should not participate.

The sample was collected through convenience sampling, predominantly distributed in Romania, but also in the United Kingdom. Participants were recruited online via different social media networks, by administering a questionnaire created in Qualtrics. Participants answered questions about themselves (experiences of childhood trauma, negative events, and rule breaking behaviour) as well as about others' beliefs about them (paranoid thoughts). At the beginning of the questionnaire, participants were informed about the research objectives, provided with a brief description of their participation in the study, and the potential consequences and benefits.

The information sheet for participants included information from the GDPR document, and participants subsequently provided their consent to begin completion. Participation in this study is completely voluntary, and they can withdraw at any time without any consequences.

Instruments

Adverse childhood experiences were assessed using the Adverse Childhood Experiences Questionnaire (Felitti et al., 1998). This instrument comprises 10 items related to neglect, child maltreatment, sexual and physical abuse, domestic violence, and other factors. The internal consistency coefficient for the adverse childhood experiences measure in the participant sample was $\alpha = .77$.

The negative life events in adulthood were measured by Life Event Scale (Weathers et al., 2013). This instrument comprises 17 items related to stressful events. The internal consistency coefficient for the negative life events measure in the participant sample was $\alpha = .86$.

Rule breaking behaviour was assessed using the Antisocial Behavioural Items (Bendixen & Olweus, 1999). However, questions about substance abuse were removed since the study does not focus on substance consumption and high levels of endorsement undermine the scale. Therefore, there are only 28 items. The internal consistency coefficient for the rule breaking behaviour was: for the group activity scale $\alpha = .79$, for the violence scale $\alpha = .81$, for sanctions scale $\alpha = .72$, for the low-prevalence scale $\alpha = .55$ and for the high-prevalence scale $\alpha = .60$.

Paranoid thinking was measured by the Revised Green et al., Paranoid Thoughts Scale (R-GPTS; Freeman et al., 2019). The internal consistency coefficient for the paranoid thinking was: for the reference scale $\alpha = .89$ and for the persecution scale $\alpha = .93$.

Design

The present study adopts a non-experimental, cross-sectional, correlational design. The independent variables are adverse childhood experiences and negative life events, and the dependent variables are paranoid thinking and rule breaking behaviour.

Analysis

Before conducting data analysis, data screening was performed. Initially, data from 150 participants was collected, however, 12 responses were removed because they were incomplete, resulting in a total of 138 participants available for analysis.

To perform descriptive statistics and correlations between the variables, Spearman's correlation analysis was utilized. Multiple linear regression analyses were also conducted to examine whether adverse childhood experiences and negative life events statistically predicted rule-breaking behaviour and paranoid thinking. All statistical analyses were conducted using the Jamovi software.

Results

Table 1. Descriptive statistics

Variables	*M*	SD	Shapiro-Wilk values
1. Adverse childhood experiences	0.74	0.84	0.77***
2. Negative life events	2.31	1.07	0.96*
3. Group activity subscale	0.11	0.28	0.45***
4. Violence subscale	0.24	0.30	0.73***
5. Sanctions subscale	0.32	0.38	0.73***
6. Low-prevalence subscale	0.06	0.16	0.45***
7. High-prevalence subscale	0.40	0.21	0.90***
8. Reference subscale	1.66	0.28	0.97*
9. Persecution subscale	1.47	0.29	0.96**
10. Paranoid thinking	6.65	1.18	0.98
11. Rule breaking behaviour	1.73	0.88	0.94***

*$p < .05$; ** $p < .01$; *** $p < .001$

In Table 1, the means and standard deviations for the variables. Normality was evaluated using the Shapiro-Wilk test, which was significant for almost all of the variables and subscales, highlighting non-normal distribution. Based on this outcome, non-parametric tests were used.

Table 2. Spearman correlations between the research variables

Variables	1	2	3	4	5	6	7	8	9	10	11
1. Adverse childhood experiences	-										
2. Negative life events	.32***	-									
3. Group activity subscale	.30***	.25**	-								
4. Violence subscale	.19*	.36***	46***	-							
5. Sanctions subscale	.29***	.32***	.44***	.53***	-						
6. Low-prevalence subscale	.40***	.24**	.39***	.46***	.40***	-					

7. High-prevalence subscale	.28***	.35***	.30***	.42***	.33***	.49***	-				
8. Reference subscale	.16	.14	.07	.07	.17*	.21*	.20*	-			
9. Persecution subscale	.20*	.07	.07	.07	.07	.20*	.22**	.75***	-		
10. Paranoid thinking	.20*	.11	.08	.09	.17*	.22**	.23**	.91***	.94***	-	
11. Rule breaking behaviour	.32***	.45***	.51***	.72***	.72***	.54***	.80***	.19*	.20*	.22**	-

*$p < .05$; **$p < .01$; ***$p < .001$

In Table 2, the correlations between the research variables are reported. A statistically significant positive association was observed between adverse childhood experiences and negative life events (*rho* = .32, *p* = .001). There is a statistically significant positive relationship between adverse childhood experiences and group activity (*rho* = .30, *p* = .001) and also between adverse childhood experiences and violence (*rho* = .19, *p* = .05). A statistically significant positive association was observed between adverse childhood experiences and sanctions (*rho* = .29, *p* = .001) and between adverse childhood experiences and low-prevalence (*rho* = .40, *p* = .001).

A statistically significant positive relationship exists between negative life events and group activity (*rho* = .25, *p* = .01) and also between negative life events and violence (*rho* = .36, *p* = .001). There is also a statistically significant positive relationship between negative life events and sanctions (*rho* = .32, *p* = .001). A significant positive relationship is shown between sanctions and reference (*rho* = .17, *p* = .05), however, sanctions did not significantly correlate with the other scale of paranoid thinking: persecution (*rho* = .07, *p* = .07).

A statistically significant positive association was observed between low-prevalence and reference (*rho* = .21, *p* = .05) and also between low-prevalence and persecution (*rho* = .20, *p* = .05). Interestingly, negative life events did not significantly correlate with either reference (*rho* = .14, *p* = .09), or persecution (*rho* = .07, *p* = .37).

Overall, rule breaking behaviour is significantly positive correlated with all the variables and subscales, while paranoid thinking is only significantly associated with adverse childhood experiences (*rho* = .20, *p* = .05), sanctions (*rho* = .17, *p* = .05), low-prevalence (*rho* = .22, *p* = .01) and high-prevalence (*rho* = .23, *p* = .01).

Table 3. Multiple regression regarding the predictive power of the adverse childhood experiences and negative life events on paranoid thinking and rule breaking behaviour.

Independent variables	Group activity subscale		Violence subscale		Sanctions subscale		Low-prevalence subscale		High-prevalence subscale		Reference subscale		Persecution subscale	
	β	R^2	β	R^2	β	R^2	β	R^2	β	R^2	β	R^2	B	R^2
Adverse childhood experiences	.26**	.13***	.09	.14***	.20*	.12***	.37***	.19***	.20*	.13***	.11	.03	.19*	.04
Negative life events	.19*		.33***		.23**		.15		.25**		.12		.01	

* $p < .05$; ** $p < .01$; *** $p < .001$

Table 3 presents the results of the linear regression analysis. Adverse childhood experiences and negative life events were included as predictors for rule breaking behaviour and paranoid thinking. Regarding the prediction of group activity, the model is statistically significant with $F(1, 135) = 10.75$, $p = .001$, predicting 13% of the variance in group activity. Therefore, group activity is significantly predicted by adverse childhood experiences ($\beta = .26$, $p = .01$) and by negative life events ($\beta = .19$, $p = .05$).

Regarding the prediction of violence, the model is statistically significant with $F(1, 135) = 11.20$, $p = .001$, predicting 14% of the variance in violence. Thus, violence is significantly predicted by negative life events ($\beta = .33$, $p = .001$). Regarding the prediction of sanctions, the model is statistically significant with $F(1, 135) = 9.78$, $p = .001$, predicting 12% of the variance in sanctions. Consequently, sanctions are significantly predicted by adverse childhood experiences ($\beta = .20$, $p = .05$) and by negative life events ($\beta = .23$, $p = .01$). Regarding the prediction of low-prevalence, the model is statistically significant with $F(1, 135) = 16.79$, $p = .001$, predicting 19% of the variance in low-prevalence. Therefore, low-prevalence is significantly predicted by adverse childhood experiences ($\beta = .37$, $p = .001$). Regarding the prediction of high-prevalence, the model is statistically significant with $F(1, 135) = 10.92$, $p = .001$, predicting 13% of the variance in high-prevalence. Thus, high- prevalence is significantly predicted by adverse childhood experiences ($\beta = .20$, $p = .05$) and by negative life events ($\beta = .25$, $p = .01$).

Nevertheless, regarding the prediction of reference, the model is not statistically significant with $F(1, 135) = 2.61$, $p = .07$, predicting only 0.03% of the variance in reference. Similarly, the model for the prediction of persecution is also not statistically significant with $F(1, 135) = 2.87$, $p = .06$, predicting only 0.04% of the variance in persecution. However, persecution is significantly predicted by adverse childhood experiences ($\beta = .19$, $p = .05$).

Discussion

The objective of the current study is to explore whether there is a relationship between adverse childhood experiences and negative life events in adulthood and paranoid thinking, as well as rule breaking behaviour. Additionally, the relationship between paranoid thinking and rule breaking behaviour is positive, as Coid et al. (2016) showed a significant correlation between paranoid ideation and violent behaviour, suggesting it as a coping mechanism of defensive aggression to protect oneself from perceived threats (Rasche et al., 2016). Specifically, individuals with childhood trauma do not prioritize their emotions and are approval-seeking (Özdin et al., 2017), thereby fostering cognitive distortions. This elucidates why adverse childhood experiences is positively correlated with paranoid thinking, particularly persecutory ideation (Stanton et al., 2019). Furthermore, there is a positive relationship between rule breaking behaviour and adverse childhood experiences and paranoid thinking. In other words, people who experience childhood trauma and paranoid ideation, are predisposed to exhibit antisocial behaviour (Chamberlain & Moore, 2002; Kocsis, 2009), due to disruptions in emotional processing and a deficiency in relational security (Ford & Courtois, 2014).

The present study found a significant positive relationship between adverse childhood experiences and negative life events. Individuals who have experienced sexual, physical, or emotional abuse, or neglect are more prone to encounter stressful events in adulthoods (Torjesen, 2019). A statistically significant positive association was identified in the current research paper between adverse childhood experiences and all the subscales of rule breaking behaviour: violence, sanctions, group activity, low-prevalence, and high-prevalence.

The results of the present study indicated a positive correlation between adverse childhood experiences and paranoid thinking, especially persecution. However, in the study

carried out by Upthegrove et al. (2015), despite the assertion that childhood traumatic events represent risk factors for the development of psychosis and affective dysfunction, it was demonstrated that adverse childhood experiences were not significantly correlated with persecutory or delusional beliefs. Nonetheless, the specialized literature shows that paranoid thinking is the result of hypervigilance, parental loss, or bullying, which are all mechanisms developed during childhood (Garety et al., 2001), questioning the nature of the impact of adverse childhood experiences on the formation of paranoid thinking.

Interestingly, negative life events in adulthood were not significantly associated with paranoid thinking. This finding is consistent with Beards et al. (2013) who concluded that even though negative life events might advance the progress of psychosis in certain cases, the existing literature on this subject is fragmented and methodologically weak. Moreover, Kingston et al. (2023) suggested that only certain individuals who experienced negative life events develop paranoid thinking, thus the factors impacting this association remaining poorly understood. Nonetheless, the findings suggested that negative life events were associated with rule breaking behaviour and all its subscales.

The results highlighted that group activity and violence did not significantly correlate with paranoid thinking, whereas low-prevalence, high-prevalence and sanctions did. Nevertheless, paranoid thinking was generally associated with rule breaking behaviour, suggesting that paranoid thinking impacts decision-making processes (Sheffield et al., 2023) and engagement in delinquency to some degree, primarily due to cognitive distortions as they amplify perceived threats beyond their actual severity (Asensio-Aguerri et al., 2019).

This study has demonstrated that group activity, sanctions, and high-prevalence are significantly predicted by adverse childhood experiences and negative life events. Furthermore, violence is significantly statistically predicted by negative life events.

Although many studies investigate the repercussions of childhood and adult trauma (Cloitre et al., 2009; Wolff & Shi, 2012), there is a lack of research highlighting these traits within the framework of paranoid thinking and rule breaking behaviour. Therefore, exploring how these variables are associated, it can improve rehabilitation programs that target emotional dysregulation and cognitive distortions among offenders, potentially decreasing recidivism in people with a traumatic history (Gueta et al., 2022).

A limitation of the study is, first and foremost, that the results are not generalizable because of the convenience sampling method. Therefore, future research could investigate clinical populations while considering the same variables as those examined in the current study. Secondly, data were collected through a self-report questionnaire, which introduces the possibility that not all participants answered completely honestly or accurately. A third limitation is the presence of confounding variables that were not controlled in the study, such as mental health disorders, interpersonal trauma, or environmental factors. These variables may significantly affect the dependent variables in the study and influence the results.

This study investigates the relationship between traumatic events, paranoid thinking, and rule breaking behaviour predominantly in Romania, an Eastern European country. Terheggen et al. (2001) illustrate the idea that psychological distress can manifest differently in Western countries. Therefore, future studies should aim to replicate this study with a more culturally diverse sample to obtain more comprehensive information about the relationship between the research variables. Another important future direction is controlling the potential confounding variables.

In conclusion, the present study investigated the relationship between adverse childhood experiences and negative life events in adulthood, and paranoid thinking and rule breaking behaviour. Significant relationships were found between rule breaking

behaviour and traumatic events, and paranoid thinking was significantly correlated with adverse childhood experiences.

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