

A Psychiatric and Psychological Forensic Approach of Maladaptive Cognitive Schemas in Juvenile Delinquency

Cristian Delcea^{1*}, Manuela Gyorgy², Maria Pescaru³

¹Department of Medicine, 'Iuliu Hațieganu' University of Medicine and Pharmacy, Cluj-Napoca, Romania. ²Department of Psychology, 'Dimitrie Cantemir' University of Targu Mures, Targu Mures, Romania. ³Department of Pitesti, University Politehnica of Bucharest, Bucharest, Romania.

Abstract

The present paper approaches the issue of maladaptive cognitive schemas in juvenile delinquency from a psychological and forensic perspective. We sought to highlight the differences in terms of maladaptive cognitive schemas depending on the criminal record and gender. A sample of 104 female and male minor participants, aged between 15 and 17 years, was selected, taking into account their criminal history. The data was collected with the Young Cognitive Schema Questionnaire (YSQ-L3a). Significant differences were obtained between the minors with and without criminal records. The work entitled Psychiatric and Psychological Forensic Approach of Maladaptive Cognitive Schemas in Juvenile Delinquency combined the trans theory of cognitive, medico-legal, psychiatric, and psychological schemas in the description and conceptualization of juvenile delinquency. Based on the instrument for the evaluation of cognitive schemas, significant results were obtained that can support the hypothesis of the current research. There were obtained as well significant gender differences in terms of maladaptive cognitive schemas for juvenile delinquents.

Keywords: Psychological, Forensic, Maladaptive cognitive schemas, Juvenile delinquency

INTRODUCTION

Currently, juvenile delinquency represents a large-scale problem in society, considering the forms of manifestation, as well as the degree of danger. The criminal phenomenon among minors has seen an alarming rise recently, requiring a distinct approach to the causal determinism of this type of behavior [1].

Exploring the influence of maladaptive schemas on decision-making capacity is a problem addressed by numerous studies that have focused predominantly on the impact of cognitive schemas in individuals with a criminal record [2].

The criminal pattern shows several personality traits, based on the theory of antisocial behavior, which involves a personality vulnerability characterized by mood disorders, low self-control difficulty controlling impulses, and dysfunctional negative emotions [3]. Individuals with low self-control and tolerance for uncertain conditions tend to increase emotional distress, generating blocks mediated by dysfunctional maladaptive emotions that are indicators of mental vulnerability or personality [4].

The very long and complex path that the child goes through from biological to social existence is essentially the path of humanization and socialization [5]. This phenomenon of deep transformation of the child is gradually achieved through the continuous expansion and perfecting of relations with the

environment, which equates to his elevation from primary, lower behaviors to higher, social behaviors [6].

In terms of juvenile delinquency, a single theory cannot cover the complexity of the field. Theories provide explanations specific to a certain level of approach, without exhausting the explanatory possibilities. It is necessary to consider theories as plausible hypotheses and alternatives for exploring the phenomenon, located in a possible completion or complementarity. Manifested by going beyond the framework of social normativity, juvenile delinquency has a causality and multiple conditionings [7]. Thus, it requires a complex, multidimensional analysis of psychological factors, related to the sometimes deviant personality of individuals, in

Address for correspondence: Cristian Delcea, Department of Medicine, 'Iuliu Hațieganu' University of Medicine and Pharmacy, Cluj-Napoca, Romania. cristian.delcea.cj@gmail.com

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close connection with the sociological ones, at the micro-social level, such as the family, the school, the peer group and those of macro-social level, concerning society as a whole.

The degree of individual moral development, specific personality traits and disorders, parental and family patterns, the punishments and rewards system, the presence of conflictual relationships, the education level of the parents, and the type of environment frequented by the vulnerable adolescent are just a few influencing factors of juvenile delinquency and the depth of its spread in society [8].

The definition of juvenile delinquency has concerned a large number of researchers, starting from highlighting the specific characteristics of the juvenile delinquent's personality. Thus, a "psychological profile" was outlined: the inclination towards aggressiveness, either latent or manifest aggression, which is based on a background of hostility, denial of socially accepted values, the emotional instability generated by educational deficiencies and, ultimately, by the fragility of the ego; social maladjustment, resulting from the exacerbation of the feeling of insecurity, which the minor seeks to suppress by frequent change of address, vagrancy or by avoiding organized forms of life and work; the duplicity of conduct, manifested in the discord between two plans: the secret, intimate behavior in which the crime is prepared and the behavioral level of relationship with society, through which the crime is most often betrayed; existential imbalance, expressed through passions, vices, perversions [9].

Other research [10-12] supports that the definition of delinquency should be based on the concept of social maturation. The delinquent appears to us as an individual with insufficient social maturation and difficulties integrating into society, who comes into conflict with the requirements of a certain value-normative system, including legal norms. The delinquent presents a socialization deficit, determined by the disruption or insufficiency of the sociocultural environmental requirements and norms [13]. In most delinquents, a dissonant character of social maturation and, implicitly, of personality development is manifested in various ways. Thus, we encounter gaps between the level of intellectual maturation, on the one hand, and the level of affective-motivational and character-action development, on the other hand, gaps between intellectual development, moral judgments, and feelings. Low intellectual abilities predispose children to school adjustment difficulties and each of these is associated with delinquent behavior. Low intellectual abilities are associated with psychosocial difficulties, and increased delinquency represents a manifestation of these difficulties [14].

There are studies [15-18] that prove the fact that delinquent minors have a moral deficiency that prevents them from understanding what is good and what is bad and that the limits of this appreciation remain at their discretion. In general, self-esteem refers to the individual's perception of himself in terms of competence and success, as well as his potential.

Starting from the studies related to the factors involved in juvenile delinquency [19-21] as well as the factors favoring criminal acts, this present paper addressed the problem of maladaptive cognitive schemes focusing on their influence on the adolescent's decision-making act. Therefore, the main goal was to assess the differences in maladaptive cognitive schemas between minors with a criminal history and minors without a criminal history and also to evaluate potential gender differences in maladaptive cognitive schemas in minors with a criminal history.

MATERIALS AND METHODS

Instruments

The data was collected electronically (Young Cognitive Schema Questionnaire (YSQ-L3a)).

Procedures and Methods

The selection procedure was started in the period 2022-2023, based on convenience. Minors with a criminal history were selected from the Institute of Forensic Medicine in Cluj-Napoca and were subjected to medico-legal expertise. Juveniles with no criminal history were randomly selected voluntarily.

Inclusion/Exclusion Criteria

All participants included in the present research met the study eligibility criteria as follows: to be under 18 years old, not have mental disorders or other neurodevelopmental problems or neurocognitive disorders, and to have the parental or legal representative's consent to participate in this research.

Ethical Aspects

The participants' legal representatives' consent was given in the online form regarding the research objective and the participation in the testing session, as well as regarding certain aspects of EU Regulation (UE) 2016/679 on the protection of natural persons' personal data processing and the free circulation of such data and with regard to the abrogation of Law no. 506/2004 on personal data processing and private life protection, as well as with regard to the research team's obligation to manage personal data safely and solely for the specified purposes. The data required were: email address (optional), socio-demographic data, and subjective answers to questionnaires.

Methods

Each participant completed the assessment instrument. The collected data was uploaded to the cloud system for storage. Subsequently, all data were analyzed in SPSS 26 and processed in tabular form using the ANOVA and T-Student test. The preliminary results of the statistical data indicated that the answers given by the participants were free from material errors and that all the items were fully completed.

Participants

The research included 104 female and male minor participants, aged between 15 and 17 years, taking into account their criminal history. Thus, the sample was divided into two samples, the group of minors with criminal records and the group of minors with no criminal record (**Table 1**).

Table 1. Demographic characteristics of the sample

	N	min.	max.	Mean	St.D.
Age	104	15.00	17.00	16.0158	0.52223

The average age is 16 years +/- 0.52. The statistical distribution of the variable is normal, the values of the skewness and kurtosis being within the +/-1.96 range. See the **Table 2**.

Table 2. Particular characteristics of the sample

			gender		Total
			male	women	
Criminal record	Without criminal record	% of Total	33.7%	32.7%	66.4%
	With criminal record	% of Total	16.8%	16.7%	33.6%
	Total	% of Total	50.5%	49.5%	100.0%

The statistical analysis shows that in the group without a criminal history, 33.7% are boys, 39.7% are girls, and regarding minors with a criminal history, 16.8% are boys, 9.7% are girls. See **Table 3**.

RESULTS AND DISCUSSION

To create an overall picture, we performed a descriptive analysis of the obtained results for each maladaptive cognitive scheme.

Table 3. Descriptive indices for maladaptive cognitive schemes

	N	Minim	Maxim	Mean	Std.D
ED	104	1.00	34.00	10.4342	5.95749
AB	104	1.00	45.00	11.5763	6.65168
MA	104	1.00	45.00	13.1316	6.46391
SI	104	1.00	39.00	14.2711	6.55786
DS	104	1.00	34.00	14.2105	18.19820
FA	104	1.00	44.00	13.7263	8.93624
DI	104	1.00	48.00	15.8579	9.92695
VH	104	1.00	53.00	16.3211	11.55905
EM	104	1.00	60.00	17.1421	13.19594
SB	104	1.00	62.00	18.7737	14.09135

SS	104	1.00	64.00	22.0974	14.86681
EI	104	1.00	65.00	24.8079	15.94838
US	104	1.00	33.00	24.8395	20.81691
ET	104	1.00	69.00	24.3105	18.80685
IS	104	1.00	69.00	23.9526	20.30670
AS	104	1.00	76.00	32.7737	19.80942
NP	104	1.00	77.00	38.2842	15.23356
PU	104	1.00	73.00	42.9158	12.58295

Following the statistical analysis, it can be seen that the lowest values obtained were score 1. The maximum scores appear for cognitive schemes.

PU (max.=73); at NP (max.=77); at AS (max.=76); followed by IS (max.=69); ET (max.=69); EI (max.=65); SS (max.=64); SB (max.=62) and EM (max.=60).

Regarding the averages obtained at the level of the whole sample, the highest averages were obtained for PU (m=42.91); NP (m=38.28); AS (m=23.95); ET (m=24.31); US (m=24.83); EI (m=24.80), respectively SS (m=22.09);

Differences in Cognitive Schemas According to Criminal History

To investigate the differences in variation that can be found depending on the criminal history, an ANOVA analysis of variance was carried out, taking into account the fact that the groups were not homogeneous.

Following the statistical analysis, higher averages were identified in the group of minors with a criminal history at the level of the following cognitive schemes:

ED (m = 12.6 +/- 6.8); AB (m = 12.6 +/- 7.8); MA (m = 13.9 +/- 7.2); MA (m = 13.9 +/- 5.9); SI (m = 15.0 +/- 7.2); FA (m = 15.8 +/- 6.2); DI (m = 18.5 +/- 65.5); EM (m = 20.7 +/- 6.1); ET (m = 29.0 +/- 6.3); IS (m = 30.2 +/- 7.3); AS (m = 33.2 +/- 16.8); NP (m = 41.2 +/- 15.9), respectively PU (m = 45.8 +/- 15.5)

Higher averages were identified in the group without a criminal history at the level of the following cognitive schemes:

DS (m = 15.9 +/- 1.3); VH (m = 19.6 +/-12.4); SB (m = 22.7 +/- 15.6); SS (m = 12.6 +/- 6.8) EI (m = 29.8 +/- 17.0); US (m = 29.2 +/- 2.0)

Following the statistical analysis of the Levene variance homogeneity test, there were no values that reached a significance threshold lower than 0.05, a result that indicates the meeting of the eligibility conditions to perform the ANOVA variance analysis.

Following the analysis, the values of the Fisher coefficients of variation are centralized in **Table 4**.

Table 4. Coefficients of variation of cognitive schemas according to criminal history

		Fisher	Sig.
ED	Between Groups	30.870	.000
AB	Between Groups	5.071	.075
MA	Between Groups	3.698	.065
SI	Between Groups	7.823	.005
DS	Between Groups	6.111	.014
FA	Between Groups	22.040	.000
DI	Between Groups	42.454	.000
VH	Between Groups	68.322	.000
EM	Between Groups	54.600	.000
SB	Between Groups	64.065	.000
SS	Between Groups	32.366	.122
EI	Between Groups	84.534	.000
US	Between Groups	33.536	.000
ET	Between Groups	73.978	.000
IS	Between Groups	84.214	.000
AS	Between Groups	1.207	.173
NP	Between Groups	49.880	.000
PU	Between Groups	22.406	.000

Significant coefficients of variation were identified for the following cognitive schemas:

ED (F=30.87; p=.000); SI (F=7.823; p=.005); SD (F=6.111; p=.014); FA (F=22.04; p=.000); DI (F=42.454; p=.000); VH (F=68.322; p=.000); EM (F=54.6; p=.000); SB (F=64.065; p=.000); EI (F=84.534; p=.000); US (F=33.536; p=.000); ET (F=73.978; p=.000); SI (F=84.214; p=.000); N (F=49.88; p=.000), PU (F=22.40; p=.000)

Extreme accents were identified in cognitive schemes such as Punishment. Thus, there have been extremes in the belief that people should be harshly criticized and punished for their mistakes. Therefore, strong accents of exaggerated anger tendencies, intolerance, punitiveness, and impatience can be considered both with regard to other people as well as oneself in case of dissatisfaction regarding the expectations or standards imposed. Mistakes are forgotten with great difficulty, without finding arguments regarding the fallible nature of man.

Cognitive schemas such as Negativism were also identified, which implies the tendency to exaggerate the negative aspects of life, minimizing the positive ones.

Exaggerated accents can also be observed in the case of seeking approval and recognition, which is the extreme need to seek the attention of others at any cost, and thus the development of self-identity is blocked. Self-esteem is therefore dependent on the reaction of others.

Self-control and insufficient self-discipline are also common, the most participants having difficulty controlling reactions, discipline in achieving goals, insufficient control of emotions and impulses, and low tolerance to frustration.

Extreme emphasis can also be observed in the case of the cognitive schema of Grandomania, being the conviction of the superiority of one's person in relation to other people, and the tendency to claim special rights or privileges. Therefore, reciprocity is not applied, there is a tendency to claim the right to do anything regardless of whether or not there is an anchor in reality, ignoring the consequences on other people.

Likewise, extreme accents are also found regarding emotional inhibition, which involves inhibiting the actions of feelings, spontaneous communication to avoid the disapproval of others, and the tendency to lose control over one's impulses.

Differences in Variation in Cognitive Schemas According to Gender in Juveniles with a Criminal History

To establish the potential gender differences found at the level of cognitive schemes in the case of minors with a criminal history, the Student T comparison test was performed.

Following the statistical analysis, differences were identified at the level of maladaptive cognitive schemes between girls and boys, as follows:

Higher means in the case of girls with a criminal history were identified for the following cognitive schemas:

ED (m=13.7879 +/-7.38296); AB (m=13.6970+/- 7.54468); MA (m=14.6364+/-7.69742); SI(m=14.3030+/-7.12950); SB (m=17.7121+/-5.97370); DS (m=12.7727+/- 5.88295); SS (m=17.7121+/-5.97370); FA (m=12.7273+/-5.99883); DI (m=12.0303+/-5.19236); VH (m=10.7576+/-5.58862); EI (m=17.7121+5.97370); US (m=17.7121+/-5.97370); AS(m=34.9848+/-17.37327); PU(m=38.9394+/-16.04214)

Higher means in the case of boys with a criminal history were identified for the following cognitive schemas:

NP (m=34.8971+/-17.88532); IS (m=12.5735+/-5.89540); ET(m=15.4853+/-6.34692); EM(m=11.6765+/-6.42625)

To identify statistically significant differences between boys and girls with a criminal history, we performed the Student T-test. Comparison coefficients are centralized in **Table 5**.

Table 5. Gender differences in minors with criminal record

		t-coef.	Sig.
ED	Equal variances assumed	-6.519	.012
AB	Equal variances assumed	-1.961	.011
MA	Equal variances assumed	1.474	.000
SI	Equal variances assumed	2.729	.007
DS	Equal variances assumed	3.789	.000
FA	Equal variances assumed	10.017	.141
DI	Equal variances assumed	10.733	.058
VH	Equal variances assumed	9.890	.000
EM	Equal variances assumed	11.958	.098
SB	Equal variances assumed	11.978	.000
SS	Equal variances assumed	13.897	.000
EI	Equal variances assumed	11.363	.071
ET	Equal variances assumed	10.691	.000
IS	Equal variances assumed	10.078	.084
AS	Equal variances assumed	11.346	.000
NP	Equal variances assumed	5.543	.153
PU	Equal variances assumed	3.170	.691

Following the statistical analysis, we obtained statistically significant comparative coefficients at the level of the following variables:

ED ($t=-6.519$; $p=.012$); AB ($t=-1.961$, $p=.011$); MA ($t=1.474$; $p=.000$); SI ($t= 2.729$; $p=.007$); DS ($t=3.789$; $p=.000$); VH ($t=9.890$; $p=.000$); SB ($t=11.978$; $p=.000$); SS ($t=13.897$; $p=.000$); ET($t=10.691$; $p=.000$) ; AS ($t=11.346$; $p=.000$).

Therefore, it can be noted that there are gender differences in the research sample in terms of cognitive schemes such as ED, AB, MA, SI, DS, VH, SB, SS, ET, and AS.

No statistically significant differences were identified at the level of cognitive schemes FA, DI, EM, EI, IS, NP, PU., the significance threshold of the resulting comparative coefficients being greater than 0.05.

It can be concluded that male and female participants differ in several early maladaptive cognitive schemas, with pregnancy being more visible in female participants. This difference indicates that girls have more early maladaptive schemas than boys. This finding is in line with previous studies that found gender to be a highly significant component of early maladaptive schemas [22, 23]. Moreover, in other studies, it has been stated that women have more early maladaptive schemas than men [24].

Studies in this field mention that gender has significant effects on the formation of early maladaptive schemas [25] and that socialization practices prescribe different roles for men and women may be more prone to internalize schemas. Stereotypes aimed at men emphasize the traits of autonomy and efficacy, while stereotypes aimed at women focus on social relations [26]. Jiang *et al.* pointed out that the masculine role promotes self-interest, self-assertion, and self-protection and places less emphasis on relationships with others, while the feminine role promotes community and other interests, with less emphasis on self-development. There are studies conducted on adolescents from clinical and non-clinical groups that investigate gender differences in the average vulnerability scores of cognitive schemas of boys and girls. The findings indicate that adolescent girls tend to score higher on several maladaptive cognitive schemas that are also strongly correlated with depressive symptoms compared to adolescent boys [27].

Gender differences in terms of maladaptive cognitive schemas are significant. Girls tend to obtain higher scores than boys. In Shorey, Anderson, and Stuart's study [28], it was shown that women scored significantly higher than men on 14 of the 18 schemas. These 14 schemas include emotional deprivation, abandonment, mistrust/abuse, social isolation, deficiency, failure, dependence, vulnerability, enclosure, insufficient self-control, subjugation, self-sacrifice, approval seeking, and negativity/pessimism. Furthermore, in the same study, it was pointed out that men did not score significantly higher than women on any of the first maladaptive schemas.

Also, the results obtained, according to which it was found that girls scored significantly higher in the schemes of self-sacrifice, containment, failure, abandonment, and deficiency, are aspects also found in the other studies [29].

Regarding social isolation, which tends to be a more significant cognitive schema in boys than in girls, this result can also be found in the study by Protic *et al.* [30] who evaluated the relationship between cognitive schemas and perceptions of parenting behaviors, the big five personality factors and psychopathological symptoms in a sample of 173 non-clinical adolescents aged 12 to 15 years. The researchers found significant differences in cognitive schema scores between boys and girls, however, in the follow-up study only the social isolation schema score was significantly higher for males compared to females.

Also, higher scores were obtained by boys for Entitlement/Grandiosity which involves the belief that they are superior to other people, therefore they claim special rights and privileges. The rule of reciprocity does not work in this case. They claim the right to do what they want, regardless of the consequences for the other person. An exaggerated sense of superiority manifests to gain control and power. Similar results were obtained in the study undertaken by Leroux [31-34].

Our results are also found in other studies that confirm the tendency for females to have much higher scores on cognitive schemes such as self-sacrifice, unrealistic standards, and insufficient self-control. Similar results can be found in the findings of the study by researchers [35-37]. Gender differences in early maladaptive schemas may be attributed to the reflection of gender role differences [38]. Delcea and Manuela [25] argues that male stereotypes emphasize the traits of autonomy and efficacy, while female stereotypes emphasize social relationships. Voiță-Mekereș *et al.* [39] pointed out that the male role promotes self-interest, self-assertion, and self-protection and places less emphasis on relationships with others, while the female role promotes community and other interests with less emphasis on self-development [40]. Thus, it can be concluded that there is a gender role that society assigns to men and women and also to the child, culture-specific growth practices, which may be a possible reason that explains the difference in the number of maladaptive schemas, as well as their pregnancy [41-43]. In addition, research has shown that women are often more likely to experience traumatic childhood experiences than men, such as childhood, sexual abuse, and traumatic experiences [44]. These are arguments that can partially theorize how early maladaptive schemas are shaped. Thus, research is needed to determine the etiological factors that are responsible for gender differences in early maladaptive schemas [45].

CONCLUSION

The study confirms the existence of a significant difference in the presence and prevalence of maladaptive cognitive schemes between minors without a criminal record and delinquent ones. Also, the existence of gender differences was confirmed in terms of the cognitive schemes in minors with a criminal history.

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