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THE EXTENDED SUMMARY OF THE DOCTORATE THESIS

Multidimensional Investigation of Juvenile Delinquency: Psycho-social, Cognitive and Behavioral Factors

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Key words: juvenile delinquency, anti-social behavior, criminogenic cognitions, cognitive distortions, coping mechanisms, social support, parental styles.

Chapter 1. THEORETICAL FRAMEWORK

1.1. General considerations

Juvenile delinquency is often considered a major social problem at a global and national levels and it is seen as a component of society as a whole, including family, school, education, religion, interpersonal relationships, values and norms of society, deprivation of resources, marginalization and social anomaly (Agnew, 1992; Murzea, 2015; Rădulescu & Damboianu, 2003). According to the literature, social anomaly is a condition in which society offers little moral guidance to individuals (Gerber & Macionis, 2010). The crime rate of juvenile delinquents has risen throughout the world in the last half of the 20th century (Rutter, Giller & Hagell, 1998), and at national level, juvenile delinquency is also a problem regarding the prevalence of this phenomenon.

To deeply understand the phenomenon of juvenile delinquency in general and in Romania, in particular, a multidimensional approach is recommended, i.e. to take into account the biological, psychological and social dimensions associated with delinquency, which may represent predictors or triggers of this phenomenon. In case of phenomena such as juvenile delinquency, we believe that there can be no single explanation or cause that can describe it in all its complexity. In literature there are mentioned several biological, psychological and social dimensions that have been more extensively studied from the perspective of diagnosis, prevention and development of intervention programs for understanding, preventing and alleviating delinquent behavior or other behaviors associated with it (Berindei, 2006 Marica, 2007; Shoemaker, 2009; Shoemaker, 2010).

The overall objective of this thesis is to investigate the psychological, individual and social factors within three groups of adolescents from Romania: delinquents (D), non-delinquents (ND) and at risk adolescents (AR) in terms of delinquent or anti-social behavior, as well as to investigate standardized educational prevention programs in order to identify potential attitudinal and behavioral changes (towards their social desirability), which are supposed to be associated with the attendance of these programs.

1.2. Adolescence and Identity Crisis

Developmental Psychology has given a special importance to the adolescence period, studying how young individuals are developing during this time and aspects that refer to identity formation, as well as social models that can help adolescents to find a range of sustainable solutions and adaptation methods that can be suitable for the living conditions they face (Steinberg & Morris, 2001).

Literature describes adolescence as the period between childhood and adulthood, involving significant biological, psychological and social development (Mwale, 2012). From an educational perspective, the adolescence period overlaps with the period of high school. Adolescence includes several sub-topics, such as pre-adolescence (from 10 to 14 years), adolescence (14 to 18 years old), and prolonged adolescence (18 to 25 years); the period of adolescence is represented by a stage of the ontogenetic development, which is extremely rich in the acquisition of psycho-behavioral and emotional acquisitions and changes (Șchiopu, 1997).

The adolescent crisis often appears on the background of personality instability tendencies, when the adolescent forms a normative and motivational concept directed towards the rejection and disapproval of the adult models and the search for their own models (Șchiopu, 2008). According to literature, the crisis that can develop in adolescence may also be understood as a crisis of identity, therefore from a psychoanalytic perspective, some authors claim that the identity crisis can be considered an intensive analysis and an exploration of the Ego, usually through marked trends of experimenting with the new; but it is also a critical point in a person's life because the paths and directions in identifying oneself are multiple (Erikson, 1968). Certain manifestations of this crisis may

be dangerous, risky or illegal activities and behaviors, such as the use of illegal or alcoholic substances, engaging in unprotected sexual activities and anti-social behaviors (Steinberg & Scott, 2003).

1.3. Juvenile delinquency

According to the definitions in literature, juvenile delinquency is described as the attribution of illegal behavior by minors, i.e. individuals younger than the legal age of the majority (Siegel & Welsh, 2011). From a psychological perspective, it is represented by the manifestation of anti-social behaviors by minors (Bartol & Bartol, 2011). Some of the behaviors that are considered forbidden for minors (such as risk behaviors: alcohol consumption or school absenteeism) would not be illegal if the individual who performs these behaviors over the age of 18 (Matsumoto, 2009). However, if a person behaves in a manner considered illegal for any age category (such as murder, rape or arson), the individual will be criminally responsible for the offenses committed (Matsumoto, 2009). Anti-social behavior is represented by the actions of an individual that have a negative impact or do not take into account the well-being of others (Berger, 2003).

1.4. Theories of Crime

The next section reviews various theories and perspectives on the juvenile delinquency phenomenon, which will help to better understand it.

From the point of view of the *differential association* theory, delinquency or anti-social behavior can be an act learned through association (Sutherland, 1947). Interactions with people who have anti-social behavior can be considered a major cause of crime, and the presence of delinquent groups can provide accessibility for learning criminal behavior by association. Hence, the crime rate in areas where there are anti-social groups can increase due to the easy access to models that have a criminal construct (Shoemaker, 2009).

An alternative perspective to the theory of differential association is provided by *socio-cultural theory* developed by Vygotsky (1929), which suggests that people are embedded in a socio-cultural matrix, and human behavior cannot be understood independently of this continuously present matrix. Vygotsky points out that culture determines the skills and knowledge that children need acquire by providing tools such as language, technology, and strategies to function in culture and society (Miller, 2011).

The theory of differential association can also be understood through the *social learning theory* developed by Albert Bandura (1986), which states that learning of the social behavior is accomplished in a social context following the process of observation, imitation and behavioral consolidation.

In the light of the theories presented above, the *ecological model of human behavior* suggests that child development is strongly influenced by family, school, friends, community and society (Bronfenbrenner, 1979). This model identifies five systems (microsystems, mesosystems, exosystems, macrosystems and chronostems) from the environment in which the individual develops and interacts, providing the framework from which psychologists can study the relationships of the individual in different contexts within communities and broader society (Bronfenbrenner, 1994).

Another theory that explains the phenomenon of juvenile delinquency is the theory of *social disorganization* (Bursik, 1988), which refers to those areas where individuals live in poverty and economic deprivation, resulting in the inability of the community members to achieve common values or to solve shared issues.

From the perspective of *social anomaly* (Durkheim, 1933), a phenomenon that generally arises from a mismatch between personal or group standards and wider social standards (or the lack of a social ethic that can lead to moral misconduct and the absence of legitimate aspirations), the development of the juvenile delinquency and anti-social behavior may be due to the fact that

individuals who are at a relative disadvantage to legitimate economic activities are usually seen as being motivated to engage in criminal activities (Shoemaker, 2010).

An alternative explanation for social anomaly is given by Merton (1957), which presents the *strain theory*. From this perspective, criminality is caused by the difficulty of the individuals (who find themselves in disadvantaged community) to achieve socially valued goals through legitimate and socially accepted means.

From the perspective of the *subculture theory* (Cohen, 1955), criminality can occur when young people conform to the rules of deviant subcultures. Cohen (1955) suggests that juvenile delinquency in the lower classes is a reaction against the social norms of the middle classes, i.e. young individuals from financially unfavorable environments (where opportunities are limited) may be susceptible to adopt specific rules for those places.

Another theory that can offer a different perspective on juvenile delinquency is the *social control theory* (Hirschi, 1969), which refers to strong attachments to certain social aspects and significant social connections, that have the purpose to discourage delinquent acts, as well as to encourage acceptance and respect for the moral and social norms. As far as juvenile delinquency is concerned, it can be determined by the failure of proper socialization, which may be a result of the inability of family, school, and community to integrate and enforce conformity (Marica, 2007).

Following the investigation of the *labeling theory* (Tannenbaum, 1938), criminality can occur when adolescents are labeled as offenders, meaning that if an individual is labeled by the legal system or by society as being an offender, then that individual will believe that he is an offender and will identify himself with this image. For example, children from financially disadvantaged backgrounds are prone to receiving a deviant label, which may increase the chance of associating with this label; this can explain the high number of offenders from disadvantaged areas (Ojo, 2012).

1.5. The minor from a legal perspective in the Romanian legislation

Based on the legislation from Romania in 2016, it is found that minors who are under the age of 14 will not be criminally liable for the committed acts (Art. 113, Alin. 1, Cod Penal 2014, <http://www.avocatura.com/l1491-noul-cod-penal.html>); juveniles aged between 14 and 16 years will only be criminally liable if it is proved that the crime was committed with discernment (Art. 113, Alin. 2, Cod Penal 2014, <http://www.avocatura.com/l1491-noul-cod-penal.html>); and minors who have reached the age of 16 will be held criminally liable under the law (Art. 113, Alin. 3, Cod Penal 2014, <http://www.avocatura.com/l1491-noul-cod-penal.html>).

If the individual's age is between 14 and 18 at the time of the offense, then an educational measure will be taken that will not involve imprisonment (Art. 114, Alin. 1, Cod Penal 2014, <http://www.avocatura.com/l1491-noul-cod-penal.html>). A measure of imprisonment shall be taken only if: the juvenile has committed an offense for which an educational measure was enforced prior to the commission of the offense for which he is accused or if the punishment prescribed by the law for the offense is foreseen with 7 years or more imprisonment (Art. 114, Alin. 2, Cod Penal 2014, <http://www.avocatura.com/l1491-noul-cod-penal.html>).

Educational measures of non-imprisonment are: civic training, supervision, end of the week reporting or daily assistance; and measures of imprisonment are: being booked in an educational center or in a detention center (Art. 115, Alin. 1, Cod Penal 2014, <http://www.avocatura.com/l1491-noul-cod-penal.html>).

1.6. The coping mechanisms

Coping mechanisms are represented by the investment of a conscious effort to solve personal and interpersonal problems, with the aim of trying to control, minimize or tolerate stress and conflict (Snyder, 1999; Weiten & Lloyd 2008). The effectiveness of the coping effort depends on three

important factors: individual factors, contextual factors and the type of stress; coping responses are particularly controlled by the nature of the stressful environment and partly controlled by the personality and social environment (Carver & Connor-Smith, 2010).

As far as juvenile delinquency is concerned, there are studies that have explored how adolescents belonging to this category are adapting to stressful situations and how they use coping mechanisms (Agnew, 1992; Agnew, 2001; Ko, Yu & Kim, 2003; Rector & Roger, 1996; Shulman & Cauffman, 2011; Kort-Butler, 2009), pointing out that adaptive coping mechanisms can discourage the manifestation of anti-social behavior.

1.6.1. Social Support

Research on stress and coping has shown that among the most effective coping mechanisms that individuals use when experiencing stressful events are those that are opting for social support (Taylor et al., 2004). In the case of juvenile delinquency, social support can be an important factor in preventing or alleviating antisocial behavior (Cullen, 1994; Wright, Cullen, & Miller, 2001; McConnell, Breitzkreuz & Savage, 2011; Kort-Butler, 2010). Social support is an important component that could help to further understand the phenomenon of juvenile delinquency.

Social support is represented by the perception or experience of the individual that he is loved and cared for, appreciated and that he belongs to a social network with assistance and mutual obligations (Wills, 1991). Cullen (1994) argues that, theoretically, social support is important in criminology because it can serve as a protective, preventive or rehabilitative purpose of delinquent behavior.

1.7. Criminal attitudes and cognitions

Criminal attitudes encompass a number of terminologies such as anti-social attitudes (Andrews & Bonta, 2003), criminal thinking (Walters, 1995), social cognitions (Blackburn, 1993) and self-serving cognitive distortions (Barriga et al., 2000). From the perspective of social psychology, attitudes have been the best predictor in anticipating human behavior, and these are represented by an evaluation process in which an individual has a willingness to respond favorably or unfavorably to another individual, an object, an institution or an event (Ajzen, 1988). Investigations on origins, development and maintenance of antisocial behavior underline the importance of self-serving cognitive distortions on the social cognitions of juvenile delinquents (Gibbs, 2003).

In order to explain cognitive distortions that are associated with outsourcing behaviors such as aggression or delinquency, some authors use the term *self-serving cognitive distortions* (Barriga et al., 2000) which, regardless of the theoretical approach, can play a very important role in providing some explanations regarding anti-social behavior (Barriga et al., 2001). These patterns of thinking may be criminogenic because they isolate the individual from fault or a negative sense of self (Barriga et al., 2000). In the Romanian literature, a translated analogy of this term may be encountered under the name of self-serving bias (*eroarea atribuirii instrumentale*; Gavreliuc, 2006).

1.8. Parental styles

A healthy development of any individual is supposed to start at home (within the origin or adoptive family) and developmental psychology indicates that the family is a complex of factors that contribute to the development of the existential foundations of every human being; during childhood, the family provides the basic education in which the behavior of a child is manifested through positive or negative consolidation (Moitra & Mukherjee, 2010; Dishion & Patterson, 2006; Bandura 1977).

It is considered that there is no unique cause that can provide a clear explanation regarding the phenomenon of delinquency and violence among adolescents, but a common factor found in literature is usually represented by a certain degree of dysfunction within a family (Mendel, 2000). Literature suggests that family dysfunctions (such as inefficient or too severe discipline and low parental

supervision) and educational issues (such as academic failure and school absenteeism) can cause associations with delinquent colleagues, which can lead to delinquency and minors usually commit delinquent acts in groups (Patterson et al., 1998; Zimring, 1981).

1.9. Emotional Intelligence (EI)

Adolescence is a period full of contradictions and widespread fluctuations in mood and emotional management (Mwale, 2012). It is a time when development, exploration, learning and emotions are in full swing (Matsumoto, 2009). Therefore, how an individual understands and uses emotions is known as emotional intelligence (Salovey & Mayer, 1990).

The concept of EI is important in the analysis of juvenile delinquency as it is stated in literature (Santesso et al., 2006; Siu, 2009; Mavroveli & Sanchez-Ruiz, 2011; García-Sancho et al., 2014) that low emotional intelligence traits associated with externalizing behaviors such as aggression, delinquency and low school performance; a high level of emotional intelligence is usually associated with non-violent and non-delinquent behaviors. Also, the features of emotional intelligence are in a positive relationship with functional coping strategies (Mikolajczak et al., 2009), which in turn are associated with behaviors that discourage delinquency (Shulman & Cauffman, 2011; Ko, Yu & Kim, 2003; Kort-Butler, 2009).

1.10. The conceptual map of juvenile delinquency

The theoretical framework of this PhD thesis has attempted to highlight the phenomenon of juvenile delinquency and the need to deepen the knowledge of this field from several perspectives, among which are the aspects researched and studied in this project. The theoretical framework has helped to design a conceptual map that aims to explain the possible impact that juvenile delinquency has on certain dimensions of the environment in which the individual develops, as well as how certain aspects of this environment can influence in one way or another juvenile delinquency in adolescents.

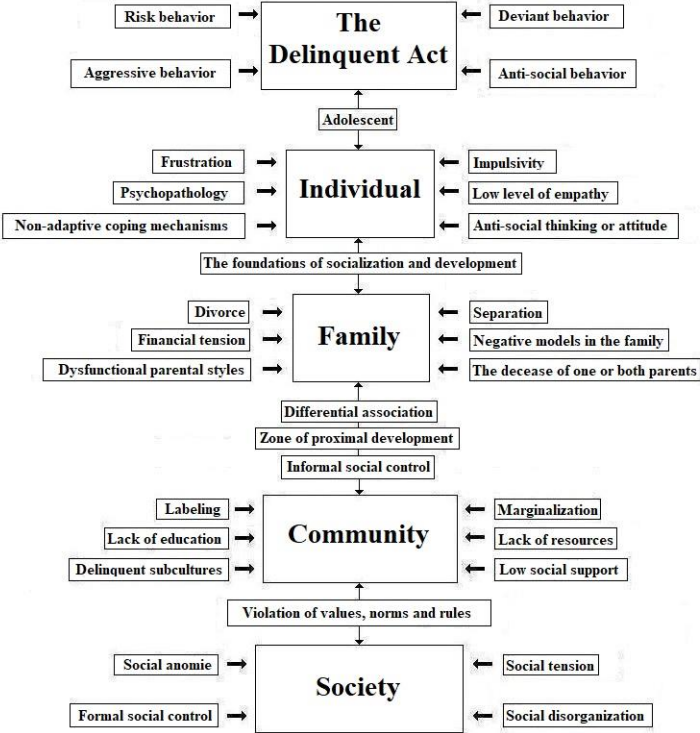


Fig 1. The conceptual map of juvenile delinquency.

Chapter 2. OBJECTIVES AND RESEARCH STEPS

2.1. General Objective

The overall objective of this thesis is to investigate the psychological, individual and social factors within three groups of adolescents from Romania: delinquents (D), non-delinquents (ND) and at risk adolescents (AR) in terms of delinquent or anti-social behavior, as well as to investigate standardized educational prevention programs in order to identify potential attitudinal and behavioral changes (towards their social desirability), which are supposed to associate with the attendance of these programs.

2.2. Specific objectives of the research project

In order to achieve the goal of this doctoral research project, six specific objectives were realized, as follows:

The first objective of the project (Objective 1) is to extend the use of the *How I Think Questionnaires* (HIT, Barriga et al., 2001) and the *Measure of Parental Style Questionnaire* (MOPS, Parker et al., 1997) in order to evaluate self-serving cognitive distortions (Self-Centered, Blaming Others, Minimizing/Mislabeled, Assuming the Worst) and dysfunctional parental styles (parental abuse, indifference and over-control). Thus, the first objective is represented by the linguistic validation of these instruments, from the original versions (which are in English) in the Romanian language (the target variants of this study). This linguistic validation aims to effectively use these tools to evaluate certain dimensions (such as self-serving cognitive distortions and dysfunctional parenting styles) associated with delinquent behavior.

It is hypothesized that the instruments in the original language (English) are equivalent to the translated versions (Romanian) in terms of the measurement of the target variables.

Objective 2 of the project refers to the investigation of association relationships and differences between self-serving cognitive distortions, anti-social behaviors, coping mechanisms and perceived dysfunctional parenting styles on three groups of adolescents from Romania: delinquents (D), non-delinquents (ND), and at risk adolescent (AR).

The existence of association relationships (with dignostical and educational value, towards prevention) as well as significant differences in coping mechanisms, self-serving cognitive distortions, anti-social behaviors and styles parental dysfunction between the three groups of adolescents from Romania mentioned above will be investigated.

The third objective (objective 3) of this PhD thesis is to investigate intra-group relations between the level of education, criminal history, the parental presence, the level of social support, self-serving cognitive distortions, anti-social behaviors, coping mechanisms and perceived dysfunctional parenting styles in adolescents the D and AR groups.

The hypotheses will test the existent association with (with dignostical and educational value, towards prevention) regarding coping mechanisms, self-serving cognitive distortions, anti-social behaviors, perceived dysfunctional parenting styles, the level of education, criminal history, the presence of parents and the level of social support offered in real time within the two groups of adolescents from Romania mentioned above.

The fourth objective of this doctoral thesis (objective 4) is to compare the significant correlation coefficients between the variables investigated under Objective 2 and Objective 3 among the three adolescent groups (ND, D, AR).

The assumptions under this objective will verify the differences regarding the significant correlation coefficients between the variables investigated under Objective 2 and Objective 3 between the three groups of teenagers (ND, D, AR).

Objective 5 of this PhD thesis (Objective 5) is to investigate the mediation relationships between the analyzed variables: self-serving cognitive distortions and anti-social behaviors, coping mechanisms, perceived dysfunctional parenting styles, the level education, criminal history, parents' presence, and the level of social support within each group (ND, D, AR).

The hypothesis will be tested whether there are mediation relationships with diagnostic and educational value (towards prevention) regarding the variables mentioned for the three groups of adolescents.

After the achievement of the proposed objectives, which will linguistically validate the tools needed to evaluate certain target variables (self-serving cognitive distortions, anti-social behaviors and perceived dysfunctional parental styles) and will highlight the factors associated with delinquent behavior and pro-social behavior, **the sixth objective of this PhD thesis can be proposed (objective 6)**. This objective aims to investigate self-serving cognitive distortions and coping strategies (in the categories of non-delinquent adolescents, delinquent adolescents and adolescents at risk) after a period of 6-8 months (pre- and post-test comparative analysis). During this 6-8 month period, adolescents will participate in a number of education and prevention programs in the institutions where the study will be conducted (Buzias Re-Education Center, Arad Penitentiary, Arad Probation Service, General Child Protection Service Arad - DGASPC), in order to identify the potential attitudinal and behavioral changes (in the direction of their social desirability), which are supposed to associate with the attendance of these programs. The hypothesis will verify whether the educational, psychological and social assistance programs will diminish the intensity of the cognitive distortions and anti-social behaviors and will improve the quality of coping mechanisms used by delinquent adolescents and adolescents at risk.

Chapter 3. RESEARCH METHODOLOGY

3.1. Study 1 - The linguistic translation and validation of the How I Think Questionnaire (HIT, Barriga et al., 2001) and The Measure of Parental Style Questionnaire (MOPS, Parker et al., 1997).

3.1.1. Introduction

a. Cognitive distortions

Adolescent anti-social behaviors are generally associated with a series of risk factors both individual (internal) and environmental (external), such as: increased levels of impulsivity, sadistic personality features, substance abuse, social disadvantage, exposure to stressful events, school failure and family problems, such as dysfunctional communication between child and parent (Bailey & Scott, 2008). The literature investigating the roots, development and maintenance of anti-social behavior emphasizes the importance of self-serving cognitive distortions regarding the social interactions of juvenile delinquents (Gibbs, 2003). The concept of self-serving is represented by a series of distorted cognitive processes that can take shape due to the tendency of a favorable self-perception, generally oversized (Myers, 2015).

To explain cognitive distortions that are associated with externalized behaviors such as aggression or delinquency, some authors use the term self-serving cognitive distortions (Barriga et al., 2000), which, regardless of the theoretical approaches, can play a significant role in the explanation of anti-social behavior (Barriga et al. 2001). Self-serving cognitive distortions can be divided into four categories, as it follows: (1) Self-Centered – represented by attitudes by which individuals focus more on their own opinions, expectations, needs and rights, to the extent in which the opinions and needs of others are only a few, or never taken into account or respected; (2) Blaming Others – involves cognitive schemes for misdirection of guilt resulting from the culprits behavior and externalized to

sources outside the individual; (3) Minimizing/Mislabeling – cognitive distortions in which anti-social behavior is viewed as an acceptable means to achieve certain goals, as well as the dehumanizing and degrading way of referring to the family and other individuals; (4) Assuming the Worst – cognitive distortions represented by attributing hostile intentions to others, taking into account that the most horrible scenario is inevitable or the perception that the personal behavior is beyond the scope for improvement (Gibbs, Potter & Goldstein, 1995).

In the literature, self-serving cognitive distortions have been characterized in *primary* distortions, which are the category of Self-Centered cognitive distortions and *secondary* distortions, which are represented by the category of cognitive distortions Blaming Others, Minimizing/Mislabeling and Assuming the Worst (Gibbs, Potter & Goldstein, 1995). Primary distortions are represented by egocentric misconceptions resulting from self-centered attitudes, beliefs and thoughts, and secondary distortions are rationalizations that arise before or after the violation of the law, which tend to neutralize the consequence, empathy and guilt, thereby protecting the self-image when exerting anti-social behavior (Gibbs, Potter & Goldstein, 1995).

Self-serving cognitive distortions are associated with a number of anti-social features, extracted from DMS-IV (American Psychiatric Association, 1994), such as Opposition-Defiance (non-compliance with rules, laws and authority), Physical Aggression, Lying and Stealing (Barriga et al., 2001). This association emphasizes the importance of self-serving cognitive distortions in antisocial behavior and adolescent delinquency.

b. The How I Think Questionnaire (HIT; Barriga et al. 2001)

The How I Think Questionnaire (Barriga et al. 2001) is used in various areas of psychology (research and education), sometimes to assess several behavioral changes after educational interventions. This is the case for the EQUIP program, which consists in educating moral judgment, pro-social abilities and how to improve errors in the way of thinking, and aims to diminish anti-social behavior by treating cognitive distortions of juvenile offenders (Gibbs, Potter, & Goldstein, 1995). The original version of the HIT questionnaire is in English and has been translated and adapted in various languages, such as Spanish, Dutch and French (Nas et al., 2008; Plante et al., 2012; Fernández et al., 2013). The questionnaire was also validated in the cultural contexts of India and Malaysia (Rahim et al., 2013; Ara & Shah, 2015). Regarding the psychometric properties of the HIT Questionnaire, studies have shown that the tool is reliable and valid (Barriga et al. 2001), having an internal consistency ranging from .92 to .96.

HIT (Barriga et al., 2001) consists of 54 items, with a 6-points Likert type response scale, ranging from disagree strongly (1) to agree strongly (6). The HIT Questionnaire aims to assess self-serving cognitive distortions (Self-Centered, Blaming Others, Minimizing/Mislabeling, Assuming the Worst). HIT (Barriga et al., 2001) consists of 12 scales, meaning that of the 54 items, 39 items evaluate the four "self-serving" cognitive distortions, 8 items evaluate the level of anomalous responding, and 7 items are positive filters (in order to camouflage the 39 items). The 39 items also refer to the four categories of anti-social behavior as presented in DSM-IV (American Psychiatric Association, 1994). These categories are: (1) Opposition-Defiance; (2) Physical Aggression; (3) Lying and (4) Stealing. The sum of Opposition-Defiance and Physical Aggression refers to the Overt Scale, which implies direct confrontation with the victim, and the sum of Lying and Stealing refer to the Covert Scale, which refers to the anti-social behaviours that do not involve direct confrontation with the victim (Barriga et al. 2001). Following the validation process of the How I Think Questionnaire, a significant association was found between self-serving cognitive distortions and specific externalizing behaviors such as anti-social behavior (Barriga et al., 2008; Barriga et al., 2000).

c. Parental styles

The ways in which children are raised and educated can be understood with the help of parenting practices, i.e. parental styles, which are represented by behaviors that parents use to socialize the child, and parenting styles, which are represented by the emotional climate in which parents contribute to the bringing up of their children (Darling & Steinberg, 1993).

Scientific literature (Baumrind 1966, 1967, 1971, 1991; Maccoby & Martin, 1983) indicates four types of parental styles, which can be represented by the level of control or expectations and the level of communication or receptivity, as it follows: **1. Authoritative parenting style** – in this category, parents have adequate expectations for their child's development, maintaining control when needed, but at the same time they are receptive and affectionate, communicating effectively with their children. Taking into account the expectations of this category, children are usually forgiven when they make mistakes (Kathleen, 2011); **2. Authoritarian parenting style** – in this category, parents have high expectations of their child, exerting strong control, showing poor signs of affection and communicating very poorly with the child. Parents in this category tend to focus more on obedience and the use of strict rules, usually using disciplinary methods, demanding absolute standards, restricting the child's autonomy, being cold in terms of affection and not offering explanations for their absolutist demands (Kawabata et al., 2011); **3. Permissive parenting style** – in this category, parents have low expectations for children, exercise minimal control and are very receptive and affectionate. Parents in this category have little or no authority, have very few requirements and are very emotionally involved in their relationship with their children (Santrock, 2007); **4. Neglectful parenting style** - in this category, parents express little expectation regarding their children, tend to exercise minimal control over their behavior, show little affection towards them, and tend to communicate very little with them. Also, parents in this category maintain a less affectionate and distant relationship with their children, and most of the time, these parents respond with hostility and rejection to the perceived intrusions of their children (Simons & Conger, 2007).

d. The Measure of Parental Style (MOPS, Parker et al., 1997)

The MOPS (Parker et al., 1997) questionnaire was designed to evaluate perceived dysfunctional parenting aspects, such: as abuse, indifference and over-control, at the onset of mental disorders such as anxiety or depression of the respondents. The MOPS questionnaire was designed and adapted from the Parental Bonding Instrument (PBI; Parker et al., 1997; Parker et al., 1979). The psychometric data on the usage of MOPS indicate that the tool is a reliable and valid instrument (Parker et al., 1997), having the values of the alpha Cronbach coefficient as .88 for abuse, .92 for indifference and .77 for over-control (Kohlhoff & Barnett, 2013).

The MOPS questionnaire consists of 15 items, with a 4-point Likert type response scale, varying from 0 (not true at all) to 3 (extremely true). Each item has options of response both for the perceived maternal behavior and for the perceived paternal behavior (i.e., on one hand the questionnaire evaluates the perceived parental style that relates to the mother's behavior, on the other hand it evaluates the perceived parental style referring to the father's behavior). The questionnaire addresses three dysfunctional parental dimensions (3 sub-scales), such as: indifference (represented by 6 items), abuse (represented by 5 items) and over-control (represented by 4 items). A high score on this questionnaire indicates an increased level of dysfunctional parental behavior (Parker et al., 1997).

3.1.2. Study purpose and hypotheses

The objective of this study is to extend the use of the How I Think Questionnaires (HIT, Barriga et al., 2001) and the Measure of Parental Style Questionnaire (MOPS, Parker et al., 1997) in order to evaluate self-serving cognitive distortions (Self-Centered, Blaming Others, Minimizing/Mislabeling, Assuming the Worst) and dysfunctional parental styles (parental abuse, indifference and over-control).

Thus, the objective is represented by the linguistic validation of these instruments, from the original versions (which are in English) in the Romanian language (the target variants of this study). The linguistic validation of the instruments is based on the method described in a previous study (Copaci, Soos & Rusu, in the press) addressing the translation and validation in Romanian of the Civic Attitudes and Skills Questionnaire (Moely et al., 2002).

It is hypothesized that the instruments in the original language (English) are equivalent to the translated versions (Romanian) in terms of the measurement of the target concepts.

3.1.3.Participants

Regarding the linguistic validation of the HIT questionnaire (Barriga et al., 2001), a total of 44 persons participated voluntarily in this study. All participants were undergraduate and graduate students from Arad, Romania, having the latest studies in high school, bachelor's degree or master's degree, with a knowledge level of the English language ranging from beginner to very advanced. The English version was administered at an interval of two weeks after the completion of the Romanian version. Before completing the translated version (Romanian language) and the original version (English language) of the HIT (Barriga et al. 2001), the participants were given an informed consent consisting in an agreement of participation to the research and an assurance on the confidentiality of the collected data. The two versions of the instrument were uploaded on the Google Forms platform and the participants were asked to respond as sincerely as possible to the statements of the two versions. The participants of this study were comprised of 42 females and 2 males (N = 44), aged between 19 and 40 years (M = 26.82; SD = 6.94). The gender distribution of the sample reflects the female majority of students in the Psychology specialization of „Aurel Vlaicu” University of Arad, Romania.

Regarding the linguistic validation of the MOPS questionnaire (Parker et al., 1997), both variants of the questionnaire were validated, i.e. the variant regarding the perception of the father dysfunctional parenting style (MOPS father) and the variant regarding the perception of the mother's dysfunctional parenting style (MOPS mother).

For the *MOPS variant that refers to the father's perceived behavior* (Parker et al., 1997), a total of 33 persons participated voluntarily in this study. All participants were undergraduate and graduate students from Arad, Romania, having the latest studies in high school, bachelor's degree or master's degree, with a knowledge level of the English language ranging from beginner to very advanced. Before completing the translated version (Romanian language) and the original version (English language) of MOPS (Parker et al., 1997), the participants were given an informed consent consisting in an agreement of participation to the research and an assurance on the confidentiality of the collected data. The two versions of the instrument were uploaded on the Google Forms platform and the participants were asked to respond as sincerely as possible to the statements of the two versions. The participants of this study were comprised of 32 females and 1 male (N = 33), aged between 19 and 45 years (M = 26.24, SD = 7.07). The gender distribution of the sample reflects the female majority of students in the Psychology specialization of “Aurel Vlaicu” University of Arad, Romania.

For the MOPS variant that refers to the mother's perceived behavior (Parker et al., 1997), a total of 31 persons participated voluntarily in this study. All participants were undergraduate and graduate students from Arad, Romania, having the latest studies in high school, bachelor's degree or master's degree, with a knowledge level of the English language ranging from beginner to very advanced. Before completing the translated version (Romanian language) and the original version (English language) of MOPS (Parker et al., 1997), the participants were given an informed consent consisting in an agreement of participation to the research and an assurance on the confidentiality of the collected data. The two versions of the instrument were uploaded on the Google Forms platform and the

participants were asked to respond as sincerely as possible to the statements of the two versions. The participants of this study were comprised of 30 females and 1 male (N = 31), aged between 19 and 45 years (M = 26.13, SD = 7.28). The gender distribution of the sample reflects the female majority of students in the Psychology specialization of “Aurel Vlaicu” University of Arad, Romania.

3.1.4. Translation of the instruments

For the translation and validation of HIT (Barriga et al., 2001) and MOPS (Parker et al., 1997) the consent of the authors of the original instrument was required, which was later obtained by email. For the translation, two qualified local translators were required. The translators were native speakers of the Romanian language and authorized professionally in terms of using the English language. One of the translators was asked to translate the English version (original version) instrument into the Romanian language (the target version of this study), and the other translator was asked to translate the Romanian version instrument back into English without having access to the original version. The translators have been asked to focus on clarity and simplicity, avoiding literary translation and pursuing the conceptual equivalence of the items. In addition to calling for professional translators, a team of experts was developed in order to analyze the translated instruments and to agree upon the final version of the questionnaire. The team contained an English teacher, the first author of this study and a Psychology Professor from a Romanian High Education Institution. The translated instruments were analyzed item-by-item and processed in terms of comprehensibility within the team of experts.

3.1.5. Research design

For the linguistic adaptation of HIT (Barriga et al., 2001) and MOPS (Parker et al., 1997), the variants that are in Romanian (the target variants of the study) were administered, followed by the English variants (original versions). The design of the research is a correlational one, which consists in testing the similarity (linguistic equivalence) between the variants in Romanian and the English variants of HIT (Barriga et al., 2001) and MOPS (Parker et al., 1997), meaning the two linguistic versions (Romanian and English) of the studied instruments will be correlated.

3.1.6. Experimental procedure

In order to carry out this study it was necessary to analyze the literature on the linguistic validation processes regarding the linguistic validation of an instrument (Beaton et al., 1998; Beaton et al., 2007; Brislin, 1986; Copaci, Soos & Rusu, in press; World Health Organization, http://www.who.int/substance_abuse/research_tools/translation/en/). Therefore, a six-step plan for linguistic validation of HIT (Barriga et al., 2001) and MOPS (Parker et al., 1997) has been developed, as follows: (1) initial translation of the instruments; (2) analysis and synthesis of the translated tools; (3) reversed translation of the synthesized instruments; (4) analysis and final synthesis of the instruments; (5) testing and reviewing the instruments (6) elaboration of the final variants of the studied instruments.

3.1.7. Results

The How I Think Questionnaire (HIT; Barriga et al., 2001)

First, by using the SPSS system version 17.0, the descriptive statistics and the internal consistency of the HIT questionnaire (Barriga et al., 2001) were analyzed and processed for the scales and sub-scales of both language versions (Romanian and English). The Alpha Cronbach coefficients for the scales and sub-scales of the translated version (Romanian language) of the HIT questionnaire (Barriga et al., 2001) vary between .531 (Positive Filters) and .863 (Overt Scale), with a coefficient on the whole questionnaire of .914. Regarding Alpha Cronbach coefficients for the scales and sub-scales of

the original version (English language), results vary between .742 (Opposition-Defiance) and .894 (Covert Scale), with a coefficient on the whole questionnaire of .922.

Subsequently, the linguistic equivalence between the translated version (Romanian language) and the original version (English language) of the HIT instrument (Barriga et al, 2001) was verified using the Wilcoxon Signed Ranks Test. The results indicated that there are no significant differences between the two versions of the HIT questionnaire ($Z = -1.027$; $p = .304$), nor between its scales and sub-scales: Overt Scale ($Z = -.106$; $p = .915$), Covert Scale ($Z = -.630$; $p = .529$), Self-Centered ($Z = -.871$; $p = .384$), Blaming Others ($Z = -.580$; $p = .562$), Minimizing/Mislabeling ($Z = -.710$; $p = .478$), Assuming the Worst ($Z = -.263$; $p = .792$), Opposition-Defiance ($Z = -.651$; $p = .515$), Physical Aggression ($Z = -.049$; $p = .961$), Lying ($Z = -.746$; $p = .456$), Stealing ($Z = -.214$; $p = .831$), Anomalous Responding ($Z = -1.130$; $p = .259$) and Positive Filters ($Z = -1.837$; $p = .066$), which illustrates that the two versions (Romanian language and English language) are linguistically equivalent.

As well, the Wilcoxon Signed Ranks Test was used for each pair of items (Romanian language and English language) of the HIT questionnaire (Barriga et al, 2001). In 7 out of 54 items statistically significant differences were found, as follows: item 3 ($Z = -2.974$; $p = .003$), item 6 ($Z = -2.065$; $p = .039$), item 8 ($Z = -3.023$; $p = .002$), item 21 ($Z = -2.284$; $p = .022$), item 38 ($Z = -2.359$; $p = .018$), item 46 ($Z = -2.397$; $p = .017$) and item 48 ($Z = -2.620$; $p = .009$). The global analysis of the item pairs shows that the two versions (Romanian language and English language) of the HIT questionnaire are in a proportion of 87.04% linguistically equivalent.

The next step was to calculate the Spearman correlations for the HIT scale and sub-scales (Barriga et al, 2001) in order to verify the association between the two versions of the instrument (Romanian language and English language). It was found that the scales and the sub-scales of the HIT Questionnaire (Barriga et al, 2001) of the translated version (Romanian) and the original version (English) presented positive significant correlations between them, ranging between $r = .612^{**}$ (Positive Filters) and $r = .830^{**}$ (Lying), $p < 0.01$. Regarding the correlation between the global scores of the two versions (Romanian and English) of the HIT Questionnaire (Barriga et al, 2001), the results indicated a significant positive correlation between the two versions with $r = .761^{**}$, $p < 0.01$.

Spearman correlations were also calculated for each item pair of the original and translated version regarding the HIT Questionnaire (Barriga et al, 2001). With the exception of a single item all correlations proved to be statistically significant, ranging from $r = .303^*$ ($p < 0.05$; item 27) and $r = .748^{**}$ ($p < 0.01$; item 35), except for item 39 ($r = .283$; $p > 0.05$).

The Measure of Parental Style - Father (MOPS)

The descriptive statistics and the internal consistency of the MOPS questionnaire (Father variant; Parker et al., 1997) were analyzed and processed for the sub-scales of both language versions (Romanian and English) by using the SPSS system version 17.0. The Alpha Cronbach coefficients for the sub-scales of the translated version (Romanian language) of the MOPS questionnaire (Father variant; Parker et al., 1997) had the following values: .920 (indifference), .625 (abuse) and .747 (over-control), with a coefficient on the whole questionnaire of .842. The Alpha Cronbach coefficients for the sub-scales of the original version (English language) of the Father variant were: .970 (indifference), .894 (abuse) and .630 (over-control), with a coefficient on the whole questionnaire of .921.

Subsequently, the linguistic equivalence between the translated version (Romanian language) and the original version (English language) of the MOPS instrument (Father variant; Parker et al., 1997) was verified using the Wilcoxon Signed Ranks Test. The results indicated no significant differences between the two versions of the MOPS questionnaire – Father variant ($Z = -1.294$; $p = .196$), nor between its sub-scales: indifference ($Z = -.682$; $p = .495$), abuse ($Z = -1.891$; $p = .059$) and over-

control ($Z = -1.852$; $p = .064$), which illustrates that the two versions (Romanian language and English language) are linguistically equivalent.

Wilcoxon Signed Ranks Test was performed for each pair of items (Romanian language and English language) of the MOPS questionnaire (Father variant; Parker et al., 1997). Statistically significant differences were found in one out of 15 items, i.e. item 1 ($Z = -2.365$; $p = .018$; translation: „*A fost supra-protector / -oare*”; original: „*Overprotective of me*”). The global analyses of the item pairs indicate that the two versions (Romanian language and English language) of the MOPS questionnaire (Father variant) are in a proportion of 93.33% linguistically equivalent.

The next step was to calculate the Spearman correlations for the MOPS sub-scales (Father variant; Parker et al., 1997) in order to verify the association between the two versions of the instrument (Romanian language and English language). It was found that the subscales of the MOPS Questionnaire (Father variant; Parker et al., 1997) of the translated version (Romanian) and the original version (English) presented positive significant correlations between them, i.e. $r = .693^{**}$ (indifference), $r = .743^{**}$ (abuse) and $r = .814^{**}$ (over-control), $p < 0.01$. Regarding the correlation between the global scores of the two versions (Romanian and English) of the MOPS Questionnaire (Father variant; Parker et al., 1997), the results indicated a significant positive correlation between the two versions i.e. $r = .773^{**}$, $p < 0.01$.

Spearman correlations were calculated for each pair of items of the original and translated version of the MOPS Questionnaire (Father variant; Parker et al., 1997). All correlations proved to be statistically significant, ranging from $r = .426^*$ ($p < 0.05$; item 7) to $r = .857^{**}$ ($p < 0.01$; item 12).

The Measure of Parental Style - Mother (MOPS)

The descriptive statistics and the internal consistency of the MOPS questionnaire (Mother variant; Parker et al., 1997) were analyzed and processed for the sub-scales of both language versions (Romanian and English) by using the SPSS system version 17.0. The Alpha Cronbach coefficients for the sub-scales of the translated version (Romanian language) of the MOPS questionnaire (Mother variant; Parker et al., 1997) had the following values: $.671$ (indifference), $.792$ (abuse) and $.525$ (over-control). The Alpha Cronbach coefficient on the whole questionnaire (in Romanian language, Mother variant) was $.822$. Regarding Alpha Cronbach coefficients for the sub-scales of the original version (English language, Mother variant), the results are: $.837$ (indifference), $.677$ (abuse) and $.612$ (over-control), with a coefficient on the whole questionnaire of $.819$.

The linguistic equivalence between the translated version (Romanian language) and the original version (English language) of the MOPS instrument (Mother variant; Parker et al., 1997) was verified using the Wilcoxon Signed Ranks Test. The results indicated that there are significant differences between the two versions of the MOPS questionnaire at level of global scores ($Z = -2.866$; $p = .004$) and between the over-control sub-scale ($Z = -1.992$; $p = .046$). However, no significant differences were found between the two versions of the Mother variant regarding the indifference sub-scale ($Z = -.907$; $p = .364$) and the abuse sub scale ($Z = -1.717$; $p = .086$), which illustrates that the two versions (Romanian language and English language of the MOPS Mother variant) are partially linguistically equivalent.

Wilcoxon Signed Ranks Test was used for each pair of items (Romanian language and English language) of the MOPS questionnaire (Mother variant; Parker et al., 1997). In 1 out of 15 items statistically significant differences were found, as follows: item 1 ($Z = -2.206$; $p = .027$; translation: *A fost supraprotector/ are*”; original: *Overprotective of me*”). The global analysis of the item pairs indicates that the two versions (Romanian language and English language) of the MOPS questionnaire (Mother variant) are in a proportion of 93.33% linguistically equivalent.

The next step was to calculate the Spearman correlations for the MOPS sub-scales (Mother variant; Parker et al., 1997) in order to verify the association between the two versions of the

instrument (Romanian language and English language). It was found that the sub-scales of the MOPS Questionnaire (Mother variant; Parker et al., 1997) of the translated version (Romanian) and the original version (English) presented positive significant correlations between them, i.e. $r = .653^{**}$ (indifference), $r = .600^{**}$ (abuse) and $r = .662^{**}$ (over-control), $p < 0.01$. Regarding the correlation between the global scores of the two versions (Romanian and English) of the MOPS Questionnaire (Mother variant; Parker et al., 1997), the results indicated a significant positive correlation between the two versions with $r = .786^{**}$, $p < 0.01$.

Spearman correlations were calculated for each item pair of the original and translated version regarding the MOPS Questionnaire (Mother variant; Parker et al., 1997). All correlations proved to be statistically significant, ranging from $r = .418^*$ ($p < 0.05$; item 2) to $r = .776^{**}$ ($p < 0.01$; item 3), except for item 7 ($r = .337$, $p > 0.05$; translation: "Avea un comportament imprezibil față de mine", original: "Unpredictable towards me") and item 8 ($r = .265$, $p > 0.05$; translation: "Nu se îngrijea de mine", original: "Uncaring of me").

3.1.8. Discussions and conclusions

The *How I Think Questionnaire* (HIT; Barriga et al., 2001) and *The Measure of Parental Style Questionnaire* (MOPS; Parker et al., 1997) are relevant tools for the evaluation of self-serving cognitive distortions (HIT) and perceived dysfunctional parental styles (MOPS), with the purpose to understand how anti-social behaviors emerge in young individuals and the links they have with dysfunctional families (Graham & Bowling, 1995). This study aimed to translate and linguistically validate the How I Think Questionnaire (HIT, Barriga et al., 2001) and The Measure of Parental Style Questionnaire (MOPS, Parker et al., 1997) in order to use them as valid diagnostic tools and to evaluate psychological and educational intervention programs for juvenile delinquents in Romania, by obtaining semantic and conceptual equivalence between the two languages (language Romanian and English).

The results of this study showed that at a psychometric level, the scales and sub-scales of the HIT Questionnaire (Barriga et al., 2001) of the translated version (Romanian language) had a good internal consistency, which certifies that the Romanian translated version can function as a reliable psychological instrument in Romanian language.

The correlation-based findings support the hypothesis of this study, which assumed that there will be conceptual and semantic equivalence between the two versions of the questionnaire (Romanian and English forms). The results indicate that there are no significant differences between the two linguistic versions, nor between its scales and sub-scales, which illustrates that the two versions (Romanian and English) are linguistically equivalent. Based on the results obtained for each pair of items (Romanian and English), statistically significant differences were found in 7 out of 54 items, as follows: item 3 (translation: „Uneori trebuie să minți pentru a obține ce îți dorești”; original: „Sometimes you have to lie to get what you want”), item 6 (translation: „Dacă am greșit, e din cauză că m-am încurcat cu persoanele nepotrivite”; original: „If I made a mistake, it's because I got mixed up with the wrong crowd”), item 8 (translation: „Nu poți avea încredere în oameni, deoarece te vor minți întotdeauna”; original: „You can't trust people because they will always lie to you”), item 21 (translation: „E în regulă să minți dacă cineva e suficient de prost să creadă ce spui”; original: „It's OK to tell a lie if someone is dumb enough to fall for it”), item 38 (translation: „Am ascuns lucruri pe care le-am făcut”; original: „I have covered up things that I have done”), item 46 (translation: „Când alții mă înfurie se întâmplă să-mi pierd cumpătul”; original: „When I lose my temper, it's because people try to make me mad”) and item 48 (translation: „Toți au nevoie de ajutor câteodată”; original: „Everybody needs help once in a while”). Based on an in depth analysis of these items, it has been found that the formulation in the translated version of item 46 is slightly different from the formulation in the original version. Therefore, we suggest that this item should be presented as: „Când îmi pierd

cumpătul este din cauză că oamenii încearcă să mă everveze'' . Taking into account the fact that there were no significant differences regarding the scales and sub-scales of this questionnaire between the two versions, the differences that occurred in the 6 remaining items may be due to the relatively small number of subjects (N = 44) or to the fact that they have reflected more with the translated version (Romanian). The global analysis of the item pairs between the two versions (Romanian and English) indicates that they are linguistically equivalent 87.04%.

The relationship between the two versions of the HIT Questionnaire (Barriga et al, 2001; Romanian & English), between its scales and sub-scales and between the pairs of items was analyzed using Spearman correlations. Results indicated that the correlations between the two versions (Romanian and English) and between its scales and sub-scales proved to be very strong. Lastly, the correlations that were computed on each pair of items were found to be statistically significant except for item 39 (translation: *„Dacă gădesc un portmoneu pe care cineva neglijent l-a pierdut, merit să-l am*'' , original: *„If someone is careless enough to lose a wallet, they deserve to have it stolen*''). Considering the fact that there were strong correlations regarding the scales and sub-scales of this questionnaire for the two versions, a possible explanation for the insignificant correlation of item 39 may be due to the relatively small number of participants or to the fact that they identified themselves more with the Romanian translated version (Romanian). A closer look at this item indicates that the formulation in the translated version (Romanian language) is slightly different from the formulation in the original version. Therefore, we decided that the final form of this item will be presented as: *„Dacă cineva e suficient de neglijent astfel încât să-și piardă portmoneul, merită să-l aibă furat.*''

The results of this study are promising and relevant in opening the possibility to use the Romanian version of the How I Think Questionnaire (Barriga et al, 2001) to successfully evaluate Self-Serving Cognitive Distortions of juvenile delinquents from Romania. Therefore, it can be concluded that based on the results of this study, the two versions (Romanian and English) of the HIT Questionnaire (Barriga et al., 2001) are linguistically equivalent.

The results of this study indicated that at psychometric level, the sub-scales of the MOPS Questionnaire (Father & Mother variants; Parker et al., 1997) of the translated version (Romanian language) had a good internal consistency, which certifies that the Romanian translated version can function as a reliable psychological instrument in Romanian language.

The results obtained by Wilcoxon Signed Ranks test support the hypothesis of this study, which assumed that there will be conceptual and semantic equivalence between the two versions of the questionnaire (Romanian and English forms).

Regarding the MOPS variant that refers to the father's perceived behavior (Parker et al., 1997), results indicated that there are no statistically significant differences between the two linguistic versions, nor between its sub-scales, which illustrates that the two versions (Romanian and English) are linguistically equivalent. Based on the results obtained for each pair of items (Romanian and English, Father variant), statistically significant differences were found in one out of 15 items, as follows: item 1 (translation: *“A fost supra-protector/are*'' ; original: *“Overprotective of me*''). Taking into account the fact that there were no significant differences regarding the sub-scales of this questionnaire (Father variant) between the two versions, the differences that occurred in item 1 may be due to the relatively small number of subjects (N = 33) or to the fact that they have reflected more on the content of this item of the translated version (Romanian language). The global analysis of the item pairs between the two versions (Romanian and English, Father variant) indicates that they are linguistically equivalent (93.33%).

Regarding the MOPS variant that refers to the mother's perceived behavior (Parker et al., 1997), results indicated there are significant statistical differences between the general scores of the two versions of the instrument (Romanian and English language) and between the over-control sub-scale. Further analysis indicated that there are no significant differences regarding the indifference subscale

and the abuse sub scale, which illustrates that the two versions (Romanian language and English language, Mother variant) are partially linguistically equivalent. Taking into account the results obtained at the MOPS variant that refers to the father's perceived behavior (Parker et al., 1997), the differences that occurred at the MOPS variant that refers to the mother's perceived behavior may be due to the fact that most of the participants in this study belonged to the female gender. In this sense, the scientific literature suggests that the mother-daughter relationship is a particular one (Branje, 2008; Lefkowitz & Fingerman, 2003; Willson et al., 2003), meaning that in this form of interaction, mothers tend to manifest a stronger control over their daughters (the differences that occurred at the over-control sub-scale), and the dynamics of the mother daughter relationship is a more emotional and ambivalent one, i.e. there is a tendency to oscillate between a harmonious relationship and a hostile relationship (this can be seen in the differences that occurred at the MOPS variant that refers to the mother's perceived behavior, between the pre and post-test stages). Based on the results obtained for each pair of items (Romanian and English, Mother variant), statistically significant differences were found in 1 out of 15 items, as it follows: item 1 (translation: "*A fost supra-protector / -oare*"; original: "*Overprotective of me*"). Taking into account the results obtained for the sub-scales of this questionnaire (Mother variant), the differences that occurred in item 1 may be due to the particular maternal relationship since the majority of the participants in this study belonged to the female gender. The global analysis of the item pairs between the two versions (Romanian and English, Mother variant) indicates that they are linguistically equivalent (93.33%).

The relationship between the two versions of the MOPS Questionnaire (Parker et al., 1997; Romanian & English, Father and Mother variants), between its sub-scales and between the pairs of items was analyzed using Spearman correlations.

Regarding the MOPS variant that refers to the father's perceived behavior (Parker et al., 1997), results indicated that the correlations between the two versions (Romanian and English) and between its sub-scales proved to be very strong. The correlations that were computed on each pair of items were found to be statistically significant as well. These results suggest that the English and Romanian versions of the Father variant of the instrument are linguistically equivalent.

Regarding the MOPS variant that refers to the mother's perceived behavior (Parker et al., 1997), results indicated that the correlations between the two versions (Romanian and English) and between its sub-scales proved to be very strong. The correlations that were computed on each pair of items were found to be statistically significant, except for item 7 (translation: "*Avea un comportament imprezibil față de mine*", original: "*Unpredictable towards me*") and for item 8 (translation: "*Nu se îngrijea de mine*", original: "*Uncaring of me*"). A possible explanation for the insignificant correlations of item 7 and item 8 (Mother variant) may be due to the relatively small number of subjects (N = 31) or the fact that they identified more with the translated version (Romanian).

The results of this study are promising and relevant in opening the possibility to use the Romanian version of the Measure of Parental Style Questionnaire (MOPS, Parker et al., 1997) to successfully evaluate perceived dysfunctional parenting styles of juvenile delinquents and other young people from Romania. Therefore, based on the results of this study, it can be concluded that the two versions (Romanian and English) of the MOPS Questionnaire (Parker et al., 1997) are linguistically equivalent. Specifically, the linguistic validation of the instrument is part of a study aiming to investigate different dimensions and the relationships they have with regard to juvenile delinquency in Romania. The perceived dysfunctional parenting styles are among the studied dimensions.

3.2. Study 2 - Correlational, comparative and mediation analysis study on and between 3 groups of adolescents from Romania: delinquent, non-delinquents and adolescents at risk: cognitive distortions, anti-social behaviors, coping mechanisms and perceived parenting styles

3.2.1. Introduction

Juvenile delinquency and antisocial acts performed by young individuals give shape to the key difficulties our civilization faces, and this can be explained by the multiple and diverse variables that may be possible causes or may be associated with this phenomenon. These explanations can be constructed using individual factors (biological and psychological) and social factors, including educational/ school and family factors (Shoemaker, 2009; Shoemaker, 2010; Marica, 2007; Ojo, 2012).

An important component that is associated with the development and maintenance of antisocial behavior is represented by the self-serving cognitive distortions (Gibbs, 2003; Barriga et al., 2001). The concept of self-serving is described in the literature as a series of distorted cognitive processes that can take shape due to the tendency of a generally oversized self-perception (Myers, 2015).

Explanations in literature claim that some individuals manifest delinquent or deviant behavior as a coping mechanism in order to adapt to stressful living conditions (Agnew, 2001). These explanations argue that association with deviant individuals, social situation, social pressure, financial tensions, injustice, inability to achieve socially valued goals, dysfunctional family environment and low levels of education can represent possible conditions in choosing crime and deviance as a coping mechanism (Agnew, 2001; Shoemaker, 2009; Marica, 2007; Moitra & Mukherjee, 2010).

The way individuals use coping mechanisms in stressful situations can represent an important factor in the relationship between stress factors, psychopathology, and delinquency (Agnew, 2001; Rector & Roger, 1996; Shulman & Cauffman, 2011; Zeidner & Sakalofske, 1996). This can indicate that the use of coping strategies can lead to the direct protection (by eliminating or changing the stressors) or indirect protection (changing the way to respond to unchangeable stressors) against negative influences of stress factors (Zeidner & Sakalofske, 1996). Also, the coping strategies that adolescents use to cope with stress can provide some indication of their psycho-emotional well-being (Rector & Roger, 1996).

Studies on stress and coping have shown that the most efficient coping mechanisms that individuals use when dealing with stressful situations are those that are achieved through the means of social support (Taylor et al., 2004). In the case of individuals with delinquent behavior, social support can be an important element in preventing or rehabilitation of such behavior (Cullen, 1994; Wright, Cullen & Miller, 2001; McConnell, Breikreuz & Savage, 2011; Kort-Butler, 2010).

Stress factors and harsh living conditions can also affect the parents of the adolescents and young individuals who are developing in such families. For example, a low socio-economic status might cause parents to experience a higher level of stress, which may lead to or associate with an inappropriate parental style, which may have a negative impact on the family environment, resulting in possible behavioral problems for adolescents who live in such a family situation (McConnell, Breikreuz & Savage, 2011).

The relationship between dysfunctional parenting styles and antisocial and delinquent behavior is well documented in many studies (Farrington, 2002; Graham & Bowling, 1995; Moitra & Mukherjee, 2010; Simons & Conger, 2007) in which the environment in which the young individual develops may represent an important factor in the emergence and evolution of anti-social behavior. Therefore, if parents adopt an appropriate parenting style, there is a possibility that young people or teenagers who develop with such parents may have a high level of interest in education and a low level of delinquent behavior (Simons & Conger, 2007).

3.2.2.Objectives and hypotheses

Objective 1 (O1): First objective of this study refers to the investigation of association relationships and differences between self-serving cognitive distortions, anti-social behaviors, coping mechanisms and perceived dysfunctional parenting styles on three groups of adolescents from Romania: delinquents (D), non-delinquents (ND), and at risk adolescent (AR).

- Hypothesis 1: There will be an association relationship between self-serving cognitive distortions, anti-social behaviors and coping mechanisms within each category of adolescents. Direction and intensity of correlation may be different in the three categories.
- Hypothesis 2: There will be an association relationship between self-serving cognitive distortions, anti-social behaviors and perceived dysfunctional parental styles within each category of adolescents. Direction and intensity of correlation may be different in the three categories.
- Hypothesis 3: There will be an association relationship between coping mechanisms and perceived dysfunctional parental styles within each category of adolescents. Direction and intensity of correlation may be different in the three categories.
- Hypothesis 4: There will be differences in self-serving cognitive distortions, anti-social behaviors, coping mechanisms and perceived dysfunctional parenting styles among the three groups of adolescents (delinquent, non-delinquent and adolescent at risk).

Objective 2 (O2): The second objective of this study is to investigate intra-group relations between the level of education, criminal history, the presence of parents, the level of social support, self-serving cognitive distortions, anti-social behaviors, coping mechanisms and perceived dysfunctional parenting styles in adolescents the D and AR groups.

- Hypothesis 1: There will be a negative association between the level of education and self-serving cognitive distortions and anti-social behaviors in adolescents from D and AR groups.
- Hypothesis 2: There will be a positive association between the level of education and coping mechanisms in adolescents from the D and AR groups.
- Hypothesis 3: There will be a negative association between the level of education and perceived dysfunctional parenting styles in adolescents from D and AR groups.
- Hypothesis 4: There will be a negative association between the presence of parents and self-serving cognitive distortions and anti-social behaviors in adolescents from D and AR groups.
- Hypothesis 5: There will be a positive association between the presence of parents and coping mechanisms in adolescents from D and AR groups.
- Hypothesis 6: There will be an association between the presence of parents and perceived dysfunctional parenting styles in adolescents that belonged to the D and AR groups. Direction and intensity of correlation may be different in the three categories.
- Hypothesis 7: There will be a negative association between the level of social support and self-serving cognitive distortions and anti-social behaviors in adolescents from D and AR groups.
- Hypothesis 8: There will be a positive association between the level of social support and coping mechanisms in adolescents that belonged to the D and AR groups.
- Hypothesis 9: There will be a negative association between the level of social support and perceived dysfunctional parenting styles in adolescents from D and AR groups.
- Hypothesis 10: There will be a positive association between criminal history and self-serving cognitive distortions and anti-social behaviors in adolescents from D and AR groups.
- Hypothesis 11: There will be a negative association between criminal history and coping mechanisms in adolescents that belonged to the D and AR groups.

- Hypothesis 12: There will be a positive association between criminal history and perceived dysfunctional parenting styles in adolescents that belonged to the D and AR groups.
- Hypothesis 13: There will be an association between the level of education, the presence of parents, the level of social support and criminal history in adolescents from D and AR groups. Direction and intensity of correlation may be different in the three categories.

Objective 3 (O3): This objective aims to compare the significant correlation coefficients between the variables investigated under Objective 2 and Objective 3 among the three adolescent groups (ND, D, AR).

- Hypothesis 1: There will be significant differences between the significant correlation coefficients that were registered between the self-serving cognitive distortions, anti-social behaviors and coping mechanisms in the ND, AR, and D groups.
- Hypothesis 2: There will be significant differences between the significant correlation coefficients that were registered between the self-serving cognitive distortions, anti-social behaviors and dysfunctional parenting styles in the ND, AR, and D groups.
- Hypothesis 3: There will be significant differences between the significant correlation coefficients that were registered between the coping mechanisms and dysfunctional parental styles in the ND, AR, and D groups.

Objective 4 (O4): Is to investigate the mediation relationships between the analyzed variables: self-serving cognitive distortions and anti-social behaviors, coping mechanisms, perceived dysfunctional parenting styles, the level education, criminal history, parents' presence, and the level of social support within each group (ND, D, AR).

- Hypothesis 1: The relationship between the perceived general dysfunctional mother's behavior and the development of antisocial behavior will be mediated by substances and alcohol consumption (as a potential coping mechanism) in the ND adolescent group.
- Hypothesis 2: The relationship between the perceived mother's over-control and the development of direct antisocial behavior will be mediated by substances and alcohol consumption (as a potential coping mechanism) in the ND adolescent group.
- Hypothesis 3: The relationship between the perceived mother's over-control and physical aggression will be mediated by substances and alcohol consumption (as a potential coping mechanism) in the ND adolescent group.
- Hypothesis 4: The relationship between the perceived mother's indifference and blaming others will be mediated by substances and alcohol consumption (as a potential coping mechanism) in the ND adolescent group.
- Hypothesis 5: The relationship between the perceived general dysfunctional mother's behavior and avoidant coping will be mediated by the development of antisocial behavior in the ND adolescent group.
- Hypothesis 6: The relationship between the perceived mother's abuse and denial will be mediated by the development of antisocial behavior in the ND adolescent group.
- Hypothesis 7: The relationship between the perceived mother's abuse and substances and alcohol consumption will be mediated by the development of antisocial behavior in the ND adolescent group.
- Hypothesis 8: The relationship between the perceived mother's abuse and denial will be mediated by the development of direct antisocial behavior in the ND adolescent group.
- Hypothesis 9: The relationship between the perceived mother's abuse and substances and alcohol consumption will be mediated by the development of direct antisocial behavior in the ND adolescent group.

- Hypothesis 10: The relationship between the perceived mother's abuse and denial will be mediated by blaming others in the ND adolescent group.
- Hypothesis 11: The relationship between the perceived mother's abuse and substances and alcohol consumption will be mediated by blaming others in the ND adolescent group.
- Hypothesis 12: The relationship between the perceived mother's abuse and denial will be mediated by assuming the worst in the ND adolescent group.
- Hypothesis 13: The relationship between the perceived mother's abuse and substances and alcohol consumption will be mediated by physical aggression in the ND adolescent group.
- Hypothesis 14: The relationship between the perceived mother's abuse and denial will be mediated by opposition-defiance in the ND adolescent group.
- Hypothesis 15: The relationship between the level of education and the development of antisocial behavior will be mediated by the level of social support in the D adolescent group.
- Hypothesis 16: The relationship between the level of education and the development of indirect antisocial behavior will be mediated by the level of social support in the D adolescent group.
- Hypothesis 17: The relationship between the level of education and stealing will be mediated by the level of social support in the D adolescent group.
- Hypothesis 18: The relationship between the level of education and minimizing/mislabeling will be mediated by the level of social support in the D adolescent group.
- Hypothesis 19: The relationship between criminal history and the development of direct antisocial behavior will be mediated by the level of social support in the D adolescent group.

3.2.3. Participants

This study included 96 non-delinquent adolescents (ND), 27 at risk adolescents (AR) and 55 adolescents belonging to the group of delinquents (D) from Romania. The participants were selected from the Buziaş Re-education Center, the Arad Penitentiary, the Arad Probation Service, the Arad Child Protection Service and the Economic High-Schol of Arad.

Within the ND group (N = 96), 52 participants belonged to the female gender (54.2%), 43 participants belonged to the male gender (44.8%) and 1 participant did not say the gender (1%), with the ages between 14 and 20 years and an average age of 16.05 (SD = 1.21).

Regarding the AR group (N = 27), 10 participants belonged to the female gender (37%) and 17 participants belonged to the male gender (63%), with the ages between 13 and 18 years, the mean age of 15.04 (SD = 1.74).

For the D group (N = 55), 6 participants belonged to the female gender (10.9%) and 49 participants belonged to the male gender (89.1%), with the ages between 15 and 19, the average age being 17.13 (SD = .92).

3.2.4. Instruments

The COPE Questionnaire (Carver et al., 1989) – Initially, this questionnaire was developed by Carver et al. (1989), assesses how individuals manage stress from a dispositional perspective and integrates the stress model developed by Lazarus & Folkman (1987). Carver et al., 1989 have described 4 categories of coping mechanisms as follows: Problem focused coping (Active approach, Planning and Deletion of concurrent activities), Emotion focused coping (Positive interpretation and growth, Restraint, Acceptance and Religious approach), Social support focused coping (Use of social-instrumental support, Use of social-emotional support and Expressing the emotions) and Avoidant coping, Denial, Mental deactivation and Behavioral deactivation). Over the years, the COPE questionnaire has undergone some changes, and it has been translated, adapted and validated on the

Romanian population by Craşovan & Sava (2013), with 60 items representing 15 coping mechanisms. Each of these 15 strategies is represented by 4 items. The questionnaire presents an internal consistency ranging from .48 to .92, having the average alpha coefficient of .70 subscale (Craşovan & Sava, 2013).

The answering system to this tool is represented by a Likert type scale, ranging from one to four, where 1 is "I usually do not do it at all" and 4 is "I usually do that to a great extent".

The 15 coping strategies are: Problem focused coping (1 - Active approach, 2- Planning and 3 - Deletion of concurrent activities), Emotion focused coping (4 - Positive interpretation and growth, 5 - Restraint, 6 - Acceptance and 7 - Religious approach), Social support focused coping (8 - Use of social-instrumental support, 9 - Use of social-emotional support and 10 - Expressing the emotions) and Avoidant coping (11 - Denial, 12 - Mental deactivation and 13 - Behavioral deactivation), 14- Substance and alcohol consumption and 15 - Humor (Craşovan & Sava, 2013).

How I Think Questionnaire (HIT) – in order to measure adolescent anti-social behavior, The How I Think Questionnaire (Barriga et al. 2001) was used, which was conceived to measure self serving cognitive distortions (Self-Centered, Blaming Others, Minimizing/Mislabeling, Assuming the Worst) and 4 types of anti-social behaviors (Opposition-Defiance, Physical Aggression, Lying and Stealing). HIT (Barriga et al., 2001) consists of 54 items, with a 6-points Likert type response scale, ranging from disagree strongly (1) to agree strongly (6). HIT (Barriga et al., 2001) consists of 12 scales, meaning that of the 54 items, 39 items evaluate the four "self-serving" cognitive distortions, 8 items evaluate the level of anomalous responding, and 7 items are positive filters (in order to camouflage the 39 items). The 39 items also refer to the four categories of anti-social behaviors. The sum of Opposition-Defiance and Physical Aggression refers to the Overt Scale, which implies direct confrontation with the victim, and the sum of Lying and Stealing refer to the Covert Scale, which refers to the anti-social behaviors that do not involve direct confrontation with the victim (Barriga et al. 2001). HIT was linguistically validated in a previous study with an internal consistency ranging between .531 (Positive filters) and .863 (Overt Scale), with an alpha-Cronbach coefficient for the whole questionnaire of .914 (Demeter et al., 2018).

The Measure of Parental Style (MOPS) – The MOPS (Parker et al., 1997) questionnaire was designed to evaluate perceived dysfunctional parenting aspects, such: as abuse, indifference and over-control, at the onset of mental disorders such as anxiety or depression of the respondents. The MOPS questionnaire was designed and adapted from the Parental Bonding Instrument (PBI; Parker et al., 1997; Parker et al., 1979).

The MOPS questionnaire consists of 15 items, with a 4 point Likert type response scale, varying from 0 (not true at all) to 3 (extremely true). Each item has options of response both for the perceived maternal behavior and for the perceived paternal behavior (i.e., on one hand the questionnaire evaluates the perceived parental style that relates to the mother's behavior, on the other hand it evaluates the perceived parental style referring to the father's behavior). The questionnaire addresses three dysfunctional parental dimensions (3 sub-scales), such as: indifference (represented by 6 items), abuse (represented by 5 items) and over-control (represented by 4 items) (Parker et al., 1997). MOPS questionnaire was linguistically validated in a previous study with an internal consistency ranging from .525 (perceived mothers over-control) and .920 (perceived fathers indifference) with a coefficient on the whole questionnaire of .842 (variant referring to father's perceived behavior) and .822 (variant referring to the mother's perceived behavior) (Demeter et al., 2017).

Institutional evaluation sheet – This standardized data sheet includes information on the level of education, criminal history, the presence of parents (single parent, no parent or double parent families) and the level of social support (number of visits, telephone conversations and material support). The data was obtained for each individual participant from the institutional psychological /individual

evaluation sheet provided by the Arad Penitentiary from Romania, the Buzias Re-education Center from Romania, Probation Service from Arad and the Child Protection Service from Arad.

3.2.5.Design

In this study, a correlational and comparative design (according to the formulated hypotheses) will be carried out, analyzing the differences and association relationships for the variables assessed for each group: delinquent adolescents, non-delinquent adolescents and adolescents at risk.

The studied **variables** are: self-serving cognitive distortions: Overt Scale (Opposition-Defiance and Physical Aggression), Covert Scale (Lying and Stealing), Self-Centered, Blaming Others, Minimizing/Mislabeled, Assuming the Worst(assessed with HIT; Barriga et al., 2001); coping mechanisms: Problem focused coping (Active approach, Planning and Deletion of concurrent activities), Emotion focused coping (Positive interpretation and growth, Restraint, Acceptance and Religious approach), Social support focused coping (Use of social-instrumental support, Use of social-emotional support and Expressing the emotions), Avoidant coping (Denial, Mental deactivation and Behavioral deactivation), Substance and alcohol consumption and Humor (assessed with COPE; Carver et al., 1989);perceived dysfunctional parenting styles: parental indifference, abuse and over-control (assessed with MOPS; Parker et al., 1997); level of education, criminal history, presence of parents and level of social support (obtained from the institutional evaluation sheet).

For the **first 3 hypotheses of the first objective (O1)** a correlative design will be used, with the **dependent variables** being the scales and sub-scales of HIT (Barriga et al., 2001) and the scales and sub-scales of COPE (Carver et al., 1989) (for hypothesis 1); the scales and sub-scales of HIT (Barriga et al., 2001) and the scales and sub-scales of MOPS (Parker et al., 1997) (for hypothesis 2); and the scales and sub-scales of COPE (Carver et al., 1989) and the scales and sub-scales of MOPS (Parker et al., 1997) (for hypothesis 3). **For hypothesis 4 of O1**, a non-experimental comparative design will be used, with the **independent variable** being the personal status of the participants categorized into three categories: delinquents, non-delinquents and at risk adolescents, and the **dependent variables** being the scales and sub-scales of HIT (Barriga et al., 2001, linguistically adapted), COPE (Carver et al., 1989) and MOPS (Parker et al., 1997, linguistically adapted).

For the **hypotheses of the second objective (O2)** a correlative design will be used, with the **dependent variables** being the level of education and the scales and sub-scales of HIT (Barriga et al., 2001) (for hypothesis 1); the level of education and the scales and sub-scales of COPE (Carver et al., 1989) (for hypothesis 2); the level of education and the scales and sub-scales of MOPS (Parker et al., 1997) (for hypothesis 3); presence of parents and the scales and sub-scales of HIT (Barriga et al., 2001) (for hypothesis 4); presence of parents and the scales and sub-scales of COPE (Carver et al., 1989) (for hypothesis 5); presence of parents and the scales and sub-scales of MOPS (Parker et al., 1997) (for hypothesis 6); the level of social support and the scales and sub-scales of HIT (Barriga et al., 2001) (for hypothesis 7); the level of social support and the scales and sub-scales of COPE (Carver et al., 1989) (for hypothesis 8); the level of social support and the scales and sub-scales of MOPS (Parker et al., 1997) (for hypothesis 9); criminal history and the scales and sub-scales of HIT (Barriga et al., 2001) (for hypothesis 10); criminal history and the scales and sub-scales of COPE (Carver et al., 1989) (for hypothesis 11); criminal history and the scales and sub-scales of MOPS (Parker et al., 1997) (for hypothesis 12); the level of education, presence of parents, the level of social support and criminal history (for hypothesis 13).

For the **hypotheses of the third objective (O3)** a non-experimental comparative design will be used, with the **independent variable** being the group of participants (ND, AR și D) and the **dependent variables** being the significant correlation coefficients that occurred for each group between the scales of HIT(Barriga et al., 2001) and COPE (Carver et al., 1989) (for hypothesis 1), between the scales of HIT(Barriga et al., 2001) and MOPS (Parker et al., 1997) (for hypothesis 2)

and between the scales of COPE (Carver et al., 1989) and MOPS (Parker et al., 1997) (for hypothesis 3). This procedure is possible if comparisons are carried out on the same variables in two different groups and if the correlation coefficients to be further compared are statistically significant; the way to do this can be done by converting correlation coefficient values or *r* values into *z* scores (Statistics Solutions, n.d.). This transformation, also known as the Fisher *r* transformation, is made in such a way that the *z* scores can be compared and analyzed to see if differences are statistically significant by obtaining observable scores (Statistics Solutions, n.d.).

For the **hypotheses of the third objective** (O4) a non-experimental mediation analysis design will be used, having as variables in the group of **non-delinquents**: for hypothesis 1, the **independent variable** (IV) – general dysfunctional mother’s behavior, the **dependent variable** (DV) – the development of antisocial behavior and the **mediator variable** (VM) – substances and alcohol consumption; for hypothesis 2, **independent variable** (IV) – the perceived mother’s over-control, the **dependent variable** (DV) – the development of direct antisocial behavior and the **mediator variable** (MV) – substances and alcohol consumption; for hypothesis 3, **IV** – The perceived mother’s over-control, **DV** – Physical aggression and **MV** – Substances and alcohol consumption; for hypothesis 4, **IV** – Perceived mother’s indifference, **DV** – Blaming others and **MV** – Substances and alcohol consumption; for hypothesis 5, **IV** – General dysfunctional mother’s behavior, **DV** – Avoidant coping and **MV** – The development of antisocial behavior; for hypothesis 6, **IV** – Perceived mother’s abuse, **DV** – Denial and **MV** – The development of antisocial behavior; for hypothesis 7, **IV** – Perceived mother’s abuse, **DV** – Substances and alcohol consumption and **MV** – The development of antisocial behavior; for hypothesis 8, **IV** – Perceived mother’s abuse, **DV** – Denial and **MV** – the development of direct antisocial behavior; for hypothesis 9, **IV** – Perceived mother’s abuse, **DV** – Substances and alcohol consumption and **MV** – the development of direct antisocial behavior; for hypothesis 10, **IV** – Perceived mother’s abuse, **DV** – Denial and **MV** – Blaming others; for hypothesis 11, **IV** – Perceived mother’s abuse, **DV** – Substances and alcohol consumption and **MV** – Blaming others; for hypothesis 12, **IV** – Perceived mother’s abuse, **DV** – Denial and **MV** – Assuming the worst; for hypothesis 13, **IV** – Perceived mother’s abuse, **DV** – Substances and alcohol consumption and **MV** – Physical aggression; for hypothesis 14, **IV** – Perceived mother’s abuse, **DV** – Denial and **MV** – Opposition-defiance; in the group of **delinquents**: for hypothesis 15, **IV** – Level of Education, **DV** – Anti-social behavior and **MV** – Level of Social Support; for hypothesis 16, **IV** – Level of Education, **DV** – Indirect anti-social behavior and **MV** – Level of Social Support; for hypothesis 17, **IV** – Level of Education, **DV** – Stealing and **MV** – Level of Social Support; for hypothesis 18, **IV** – Level of Education, **DV** – Minimizing/mislabeling and **MV** – Level of Social Support; and for hypothesis 19, **IV** – Criminal history, **DV** – Direct anti-social behavior and **MV** – Level of Social Support;

In order to calculate the mediation effect, a series of steps were followed (Baron & Kenny, 1986; Shrout & Bolger, 2002; Hayes, 2013; Kahn, 2014): 1. Verifying if the studied variables O4 associate with each other in a statistically significant way ($p < .05$) way; 2. Determining path *c* – by regressing the dependent variable on the independent variable for the confirmation that the IV is a significant predictor of the dependent variable, for each hypothesis (O4); 3. Determining the path *a* – by regressing the mediator on the independent variable to affirm that the IV is a significant predictor of MV, for each hypothesis (O4); 4. Determining the paths *b* and *c'* – by regressing the dependent variable on both the mediator and independent variable to confirm that the mediator is a significant predictor of the dependent variable (path *b*) for each hypothesis (O4); path *b* must be statistically significant; path *c'* must be reduced in significance (partial mediation) or even become non-significant (full mediation); 5. Using bootstrapping procedures and the Sobel test – to test the significance of the indirect effect by utilizing the PROCESS macro version 2.16 (Hayes, 2012-2018) on SPSS Statistics version 20.

3.2.6. Procedure

The acquisition of the data collection agreement consisted in the implementation of a standard applications form approved by Babeş Bolyai University, Cluj Napoca, in order to ensure access to the institutions (Arad Penitentiary, Buzias Reeducation Center, Arad Probation Service, Child Protection Service of Arad and Arad High-School of Economic) and the institutional evaluation sheets. COPE (Carver et al., 1989), HIT (Barriga et al., 2001) and MOPS (Parker et al., 1997) were administered to the participants by the pen and paper method and they were informed that they were participating in a research on adolescents. Subjects have also been granted the confidentiality of data. The level of social support, criminal history and education level were extracted from the institutional evaluation sheet. Data collection took place between October 2017 and January 2018, and completion of the questionnaire package took approximately 40 minutes for each participant.

3.2.7. Results

The data was processed using the SPSS 17 software. Besides the variables mentioned above, the scores for the Anomalous Responding (scale that measures the sincerity of the responses) scale of the HIT Questionnaire (Barriga et al., 2001) were calculated in order to control the sincerity of the answers given in this study. According to literature (Barriga et al., 2001), if the score on the Anomalous Responding scale is higher than 4.00, then the protocol is suspect as to the sincerity of the response; if the score is higher than 4.25 then the protocol may not be considered as valid. The mean values for the Anomalous Responding scale of the studied groups were: $M = 3.21$ ($SD = .95$) for non-institutionalized adolescents ($N = 96$), $M = 3.04$ ($SD = .84$) for adolescents at risk ($N = 27$) and $M = 3.23$ ($SD = 1.15$) for the delinquent adolescents ($N = 55$). These values indicate that the participants provided unbiased answers to the questionnaire elements.

For each questionnaire and group of adolescents, the following **psychometric properties (alpha-cronbach)** were obtained.

The Alpha Cronbach coefficients for the group of non-delinquent adolescents are as follows: For the HIT questionnaire, the coefficients range from .710 (Opposition-Defiance) to .923 (Total HIT); for the COPE questionnaire, the coefficients range from .305 (Mental deactivation) to .921 (Substance and alcohol consumption); for the MOPS questionnaire, the coefficients range from .645 (Mother's over-control) to .952 (Father's indifference).

For the at risk adolescents group, the Alpha Cronbach coefficients are as follows: For the HIT questionnaire, the coefficients range from .511 (Anomalous Responding) to .876 (Total HIT); for the COPE questionnaire, the coefficients range from .246 (Denial) to .861 (Emotion focused coping); for the MOPS questionnaire, the coefficients range from .244 (Father's over-control) to .837 (Mother's indifference).

For the group of delinquent adolescents, the Alpha Cronbach coefficients are as follows: for the HIT questionnaire, the coefficients range from .736 (Lying) to .931 (Total HIT); for the COPE questionnaire, the coefficients range from .013 (Positive interpretation and growth) to .915 (Substance and alcohol consumption); for the MOPS questionnaire, the coefficients range from .473 (Mother's over-control) to .914 (Total father's perceived behavior).

Due to the fact that in the group of at risk adolescents the Alpha Cronbach coefficient for the Father's over-control scale was $-.140$ (.360 for non-delinquents and .594 for delinquents), item 1 from the MOPS questionnaire was eliminated from the equation for all groups to increase the scale's value. As a consequence, the Alpha values were recalculated for Total father's perceived behavior scale as well (because this scale also contains item 1, which was removed from the father's over-control scale). Alpha Cronbach for Total father's perceived behavior scale (with item 1 included) were .890 for non-delinquents, .737 for at risk adolescents and .899 for delinquent adolescents.

In the case of the very small coefficients that registered in two subscales (Positive interpretation and growth and Restraint) in the case of the delinquent adolescents, their verification was carried out by standard procedures (recalculation, check of inverse quotations). It is possible for these items to have a lower level of comprehensiveness than others (Examples of items in Romanian language in the Positive interpretation and growth subscale would be: *Încerc să mă dezvolt ca persoană ca rezultat al experienței mele de viață*, or *Încerc să văd problema în lumină diferită, pentru a o face să pară mai pozitivă*; examples of items to the Restraint subscale would be: *Amân a face ceva în legătură cu problema până situațiao permite* or *Mă oblig să aștept momentul propice pentru a face ceva*).

In order to determine the type of statistical procedures that were further used in this study, the distribution of normality with the Shapiro-Wilk test for each scale and sub-scale of the studied instruments used, for each group (ND, AR, D), was calculated.

For the non-delinquent adolescent group, the scales that did not respect a normal distribution are: Total HIT, Overt scale, Covert scale, Self-Centered, Blaming Others, Minimizing/Mislabeling, Assuming the Worst, Physical Aggression, Stealing, Planning, Positive interpretation and growth, Restraint, Religious approach, Use of social-instrumental support, Use of social-emotional support, Avoidant coping, Denial, Mental deactivation, Behavioral deactivation, Substance and alcohol consumption, Humor, Total father's perceived behavior, Father's indifference, Father's abuse, Father's over-control, Total mother's perceived behavior, Mother's indifference, Mother's abuse and Mother's over-control.

For the at risk adolescent group, the scales that did not respect a normal distribution are: Self-Centered, Religious approach, Use of social-emotional support, Substance and alcohol consumption, Father's indifference, Father's abuse, Father's over-control and Mother's over-control.

For the delinquent group, the scales that did not respect a normal distribution are: Overt scale, Covert scale, Assuming the Worst, Physical Aggression, Stealing, Active approach, Planning, Positive interpretation and growth, Religious approach, Social support focused coping, Use of social-instrumental support, Use of social-emotional support, Mental deactivation, Substance and alcohol consumption, Humor, Total father's perceived behavior, Father's indifference, Father's abuse, Father's over-control, Total mother's perceived behavior, Mother's indifference and Mother's abuse. The subsequent statistical analysis was based on these data distribution results.

Objective 1

Hypothesis 1

Given that the null hypothesis for a large number of scales in the three groups regarding the normality distribution (which states that the distribution of the data will be normal), the Spearman correlation test is used. Therefore, in order to verify that there is a connection relationship between the mentioned variables, Spearman correlation will be used for each group.

For the group of non-delinquent adolescents, the following **positive** correlations were obtained: the scores from Total HIT with the scores from Avoidant coping ($r = .337, p < .01$), Denial ($r = .340, p < .01$), Behavioral deactivation ($r = .264, p < .01$), Substance and alcohol consumption ($r = .387, p < .01$) and Humor ($r = .302, p < .01$); the scores from Overt scale with the scores from Avoidant coping ($r = .356, p < .01$), Denial ($r = .342, p < .01$), Behavioral deactivation ($r = .218, p < .05$), Substance and alcohol consumption ($r = .431, p < .01$) and Humor ($r = .306, p < .01$); the scores from Covert scale with the scores from Avoidant coping ($r = .289, p < .01$), Denial ($r = .300, p < .01$), Behavioral deactivation ($r = .298, p < .01$), Substance and alcohol consumption ($r = .303, p < .01$) and Humor ($r = .250, p < .05$); the scores from the Self-Centered cognitive distortions with the scores from Problem focused coping ($r = .243, p < .05$), Active approach ($r = .205, p < .05$), Planning ($r = .225, p < .05$), Denial ($r = .255, p < .05$), Substance and alcohol consumption ($r = .212, p < .05$) and Humor ($r = .292, p < .01$); the scores from the Blaming Others cognitive distortions with the scores from Avoidant

coping ($r = .342, p < .01$), Denial ($r = .351, p < .01$), Behavioral deactivation ($r = .264, p < .01$), Substance and alcohol consumption ($r = .392, p < .01$) and Humor ($r = .245, p < .05$); the scores from the Minimizing/Mislabeling cognitive distortions with the scores from Avoidant coping ($r = .272, p < .01$), Denial ($r = .242, p < .05$), Behavioral deactivation ($r = .317, p < .01$), Substance and alcohol consumption ($r = .347, p < .01$) and Humor ($r = .217, p < .05$); the scores from the Assuming the Worst cognitive distortions with the scores from Avoidant coping ($r = .411, p < .01$), Denial ($r = .338, p < .01$), Mental deactivation ($r = .240, p < .05$), Behavioral deactivation ($r = .274, p < .01$), Substance and alcohol consumption ($r = .401, p < .01$), Humor ($r = .322, p < .01$) and Acceptance ($r = .230, p < .05$); the scores from Opposition-Defiance with the scores from Avoidant coping ($r = .343, p < .01$), Denial ($r = .322, p < .01$), Mental deactivation ($r = .234, p < .05$), Substance and alcohol consumption ($r = .358, p < .01$) and Humor ($r = .296, p < .01$); the scores from Physical Aggression with the scores from Problem focused coping ($r = .225, p < .05$), Deletion of concurrent activities ($r = .210, p < .05$), Avoidant coping ($r = .325, p < .01$), Denial ($r = .335, p < .01$), Behavioral deactivation ($r = .214, p < .05$), Substance and alcohol consumption ($r = .453, p < .01$), Humor ($r = .292, p < .01$) and Acceptance ($r = .207, p < .05$); the scores from Lying with the scores from Avoidant coping ($r = .303, p < .01$), Denial ($r = .278, p < .01$), Behavioral deactivation ($r = .280, p < .01$) Substance and alcohol consumption ($r = .319, p < .01$) and Humor ($r = .239, p < .05$); the scores from Stealing with the scores from Denial ($r = .242, p < .05$), Substance and alcohol consumption ($r = .211, p < .05$) and Humor ($r = .235, p < .05$). **Negative** correlations were: the scores from the Assuming the Worst cognitive distortions with the scores from the use of social-emotional support ($r = -.230, p < .05$).

For the at risk adolescents group, the following **positive** correlations were obtained: the scores from HIT with the scores from Deletion of concurrent activities ($r = .417, p < .05$), Acceptance ($r = .387, p < .05$), Expressing the emotions ($r = .415, p < .05$) and Denial ($r = .394, p < .05$); the scores from Overt scale with the scores from Avoidant coping ($r = .459, p < .05$), Denial ($r = .544, p < .01$), Deletion of concurrent activities ($r = .530, p < .01$), Acceptance ($r = .474, p < .05$) and Expressing the emotions ($r = .548, p < .01$); the scores from the Self-Centered cognitive distortions with the scores from Deletion of concurrent activities ($r = .480, p < .05$), Acceptance ($r = .468, p < .05$), Expressing the emotions ($r = .459, p < .05$) and Behavioral deactivation ($r = .436, p < .05$); the scores from the Blaming Others cognitive distortions with the scores from Avoidant coping ($r = .396, p < .05$), Denial ($r = .453, p < .01$), Expressing the emotions ($r = .430, p < .05$) and Substance and alcohol consumption ($r = .438, p < .01$); the scores from Opposition-Defiance with the scores from Expressing the emotions ($r = .500, p < .01$) and Denial ($r = .422, p < .05$); the scores from Physical Aggression with the scores from Deletion of concurrent activities ($r = .458, p < .05$); the scores from Stealing with the scores from Substance and alcohol consumption ($r = .422, p < .05$).

For the group of delinquent adolescents, the following **positive** correlations were obtained: the scores from HIT with the scores from Avoidant coping ($r = .478, p < .01$), Denial ($r = .437, p < .01$) Mental deactivation ($r = .313, p < .05$), Behavioral deactivation ($r = .319, p < .05$), Substance and alcohol consumption ($r = .557, p < .01$), Humor ($r = .327, p < .05$) and Deletion of concurrent activities ($r = .287, p < .05$); the scores from Overt scale with the scores from Avoidant coping ($r = .461, p < .01$), Denial ($r = .377, p < .01$) Mental deactivation ($r = .329, p < .05$), Behavioral deactivation ($r = .340, p < .05$), Substance and alcohol consumption ($r = .505, p < .01$), Humor ($r = .290, p < .05$) and Deletion of concurrent activities ($r = .311, p < .05$); the scores from Covert scale with the scores from Avoidant coping ($r = .462, p < .01$), Denial ($r = .451, p < .01$) Mental deactivation ($r = .279, p < .05$), Behavioral deactivation ($r = .309, p < .05$), Substance and alcohol consumption ($r = .572, p < .01$), Humor ($r = .376, p < .01$), Deletion of concurrent activities ($r = .267, p < .05$) and Expressing the emotions ($r = .274, p < .05$); the scores from the Self-Centered cognitive distortions with the scores from Avoidant coping ($r = .379, p < .01$), Denial ($r = .355, p < .01$), Substance and alcohol consumption ($r = .541, p < .01$) and Humor ($r = .368, p < .01$); the scores from

the Blaming Others cognitive distortions with the scores from Avoidant coping ($r = .356, p < .01$), Denial ($r = .296, p < .05$), Mental deactivation ($r = .271, p < .05$), Behavioral deactivation ($r = .268, p < .05$), Substance and alcohol consumption ($r = .504, p < .01$), Humor ($r = .274, p < .05$), Deletion of concurrent activities ($r = .270, p < .05$) and Restraint ($r = .336, p < .05$); the scores from the Minimizing/Mislabeling cognitive distortions with the scores from Avoidant coping ($r = .428, p < .01$), Denial ($r = .455, p < .01$), Behavioral deactivation ($r = .271, p < .05$), Substance and alcohol consumption ($r = .507, p < .01$) and Humor ($r = .308, p < .05$); the scores from the Assuming the Worst cognitive distortions with the scores from Avoidant coping ($r = .526, p < .01$), Denial ($r = .415, p < .01$), Mental deactivation ($r = .355, p < .01$), Behavioral deactivation ($r = .371, p < .01$), Substance and alcohol consumption ($r = .445, p < .01$) and Humor ($r = .310, p < .05$); the scores from Opposition-Defiance with the scores from Avoidant coping ($r = .591, p < .01$), Denial ($r = .496, p < .01$), Mental deactivation ($r = .455, p < .01$), Behavioral deactivation ($r = .401, p < .01$), Substance and alcohol consumption ($r = .429, p < .01$) and Humor ($r = .282, p < .05$); the scores from Physical Aggression with the scores from Substance and alcohol consumption ($r = .453, p < .01$) and Deletion of concurrent activities ($r = .360, p < .01$); the scores from Lying with the scores from Emotion focused coping ($r = .320, p < .05$), Restraint ($r = .349, p < .01$), Social support focused coping ($r = .345, p < .01$), Use of social-instrumental support ($r = .337, p < .05$), Expressing the emotions ($r = .395, p < .01$), Avoidant coping ($r = .513, p < .01$), Denial ($r = .372, p < .01$), Mental deactivation ($r = .415, p < .01$), Behavioral deactivation ($r = .375, p < .01$), Substance and alcohol consumption ($r = .315, p < .05$) and Humor ($r = .287, p < .05$); the scores from Stealing with the scores from Avoidant coping ($r = .331, p < .05$), Denial ($r = .385, p < .01$), Substance and alcohol consumption ($r = .591, p < .01$) and Humor ($r = .315, p < .05$).

Hypothesis 2

Given that the null hypothesis for a large number of scales in the three groups regarding the normality distribution (which states that the distribution of the data will be normal), the Spearman correlation test is used. Therefore, in order to verify that there is a connection relationship between the mentioned variables, Spearman correlation will be used for each group.

For the group of non-delinquent adolescents, the following **positive** correlations were obtained: the scores from HIT with the scores from The total mother's perceived behavior ($r = .242, p < .05$) and Mother's abuse ($r = .304, p < .01$); the scores from Overt scale with the scores from Father's abuse ($r = .217, p < .05$), The total mother's perceived behavior ($r = .325, p < .01$), Mother's indifference ($r = .236, p < .05$), Mother's abuse ($r = .371, p < .01$) and Mother's over-control ($r = .271, p < .01$); the scores from the Blaming Others cognitive distortions with the scores from The total mother's perceived behavior ($r = .237, p < .05$), Mother's indifference ($r = .215, p < .05$) and Mother's abuse ($r = .298, p < .01$); the scores from the Minimizing/Mislabeling cognitive distortions with the scores from Mother's abuse ($r = .216, p < .05$); the scores from the Assuming the Worst cognitive distortions with the scores from Father's abuse ($r = .290, p < .01$), The total mother's perceived behavior ($r = .375, p < .01$), Mother's indifference ($r = .275, p < .01$), Mother's abuse ($r = .396, p < .01$) and Mother's over-control ($r = .301, p < .01$); the scores from Opposition-Defiance with the scores from Father's abuse ($r = .215, p < .05$), The total mother's perceived behavior ($r = .280, p < .01$), Mother's abuse ($r = .301, p < .01$) and Mother's over-control ($r = .226, p < .05$); the scores from Physical Aggression with the scores from The total mother's perceived behavior ($r = .339, p < .01$), Mother's indifference ($r = .279, p < .01$), Mother's abuse ($r = .389, p < .01$) and Mother's over-control ($r = .283, p < .01$); the scores from Lying with the scores from Father's abuse ($r = .212, p < .05$), The total mother's perceived behavior ($r = .225, p < .05$) and Mother's abuse ($r = .296, p < .01$).

For the at risk adolescents group, the following **positive** correlations were obtained: the scores from HIT with the scores from The total mother's perceived behavior ($r = .571, p < .05$) and Mother's

abuse ($r = .602, p < .05$); the scores from Overt scale with the scores from Father's over-control ($r = .594, p < .05$), The total mother's perceived behavior ($r = .588, p < .05$) and Mother's abuse ($r = .644, p < .01$); the scores from Covert scale with the scores from The total mother's perceived behavior ($r = .517, p < .05$); the scores from the Self-Centered cognitive distortions with the scores from The total mother's perceived behavior ($r = .495, p < .05$); the scores from the Blaming Others cognitive distortions with the scores from Father's over-control ($r = .614, p < .05$), The total mother's perceived behavior ($r = .646, p < .01$) and Mother's abuse ($r = .730, p < .01$); the scores from the Minimizing/Mislabeling cognitive distortions with the scores from The total mother's perceived behavior ($r = .505, p < .05$); the scores from the Assuming the Worst cognitive distortions with the scores from The total mother's perceived behavior ($r = .491, p < .05$) and Mother's abuse ($r = .643, p < .01$); the scores from Opposition-Defiance with the scores from The total mother's perceived behavior ($r = .580, p < .05$) and Mother's abuse ($r = .587, p < .05$); the scores from Physical Aggression with the scores from The total mother's perceived behavior ($r = .628, p < .01$) and Mother's abuse ($r = .701, p < .01$); the scores from Lying with the scores from The total mother's perceived behavior ($r = .496, p < .05$); the scores from Stealing with the scores from The total father's perceived behavior ($r = .516, p < .05$), Father's abuse ($r = .602, p < .01$) and Father's over-control ($r = .622, p < .05$).

For the group of delinquent adolescents, the following **positive** correlations were obtained: the scores from HIT with the scores from The total father's perceived behavior ($r = .325, p < .05$), Father's indifference ($r = .352, p < .05$), The total mother's perceived behavior ($r = .402, p < .01$), Mother's indifference ($r = .337, p < .05$) and Mother's abuse ($r = .345, p < .05$); the scores from Overt scale with the scores from The total father's perceived behavior ($r = .327, p < .05$), Father's indifference ($r = .391, p < .01$), The total mother's perceived behavior ($r = .372, p < .01$), Mother's indifference ($r = .373, p < .01$) and Mother's abuse ($r = .311, p < .05$); the scores from Covert scale with the scores from The total father's perceived behavior ($r = .304, p < .05$), Father's indifference ($r = .305, p < .05$), The total mother's perceived behavior ($r = .410, p < .01$), Mother's indifference ($r = .282, p < .05$) and Mother's abuse ($r = .377, p < .01$); the scores from the Self-Centered cognitive distortions with the scores from The total father's perceived behavior ($r = .375, p < .05$), Father's indifference ($r = .346, p < .05$), Father's abuse ($r = .346, p < .05$), The total mother's perceived behavior ($r = .496, p < .01$), Mother's indifference ($r = .381, p < .01$) and Mother's abuse ($r = .490, p < .01$); the scores from the Blaming Others cognitive distortions with the scores from Father's indifference ($r = .303, p < .05$), The total mother's perceived behavior ($r = .398, p < .01$), Mother's indifference ($r = .412, p < .01$) and Mother's abuse ($r = .346, p < .05$); the scores from the Minimizing/Mislabeling cognitive distortions with the scores from The total mother's perceived behavior ($r = .291, p < .05$); the scores from the Assuming the Worst cognitive distortions with the scores from Father's indifference ($r = .348, p < .05$) and The total mother's perceived behavior ($r = .282, p < .05$); the scores from Opposition-Defiance with the scores from The total mother's perceived behavior ($r = .355, p < .01$), Mother's indifference ($r = .312, p < .05$) and Mother's abuse ($r = .297, p < .05$); the scores from Physical Aggression with the scores from The total father's perceived behavior ($r = .300, p < .05$), Father's indifference ($r = .430, p < .01$) and Mother's indifference ($r = .356, p < .01$); the scores from Lying with the scores from The total mother's perceived behavior ($r = .387, p < .01$), Mother's indifference ($r = .322, p < .05$) and Mother's abuse ($r = .307, p < .05$); the scores from Stealing with the scores from The total mother's perceived behavior ($r = .360, p < .01$), Mother's abuse ($r = .319, p < .05$) and Mother's over-control ($r = .304, p < .05$).

Hypothesis 3

Given that the null hypothesis for a large number of scales in the three groups regarding the normality distribution (which states that the distribution of the data will be normal), the Spearman correlation test is used. Therefore, in order to verify that there is a connection relationship between the mentioned variables, Spearman correlation will be used for each group.

For the group of non-delinquent adolescents, the following **positive** correlations were obtained: the scores from Expressing the emotions with the scores from Mother's over-control ($r = .209, p < .05$); the scores from Avoidant coping with the scores from The total mother's perceived behavior ($r = .304, p < .01$), Mother's abuse ($r = .295, p < .01$) and Mother's over-control ($r = .315, p < .01$); the scores from Denial with the scores from Mother's abuse ($r = .240, p < .05$); the scores from Mental deactivation with the scores from The total mother's perceived behavior ($r = .266, p < .05$), Mother's abuse ($r = .227, p < .05$) and Mother's over-control ($r = .275, p < .01$); the scores from Substance and alcohol consumption with the scores from The total father's perceived behavior ($r = .251, p < .05$), Father's indifference ($r = .214, p < .05$), Father's abuse ($r = .231, p < .05$), The total mother's perceived behavior ($r = .349, p < .01$), Mother's indifference ($r = .250, p < .05$) Mother's abuse ($r = .337, p < .01$) and Mother's over-control ($r = .353, p < .01$). **Negative** correlations were: the scores from Emotion focused coping with the scores from Mother's indifference ($r = -.279, p < .01$); the scores from Restraint with the scores from Mother's indifference ($r = -.257, p < .05$); the scores from Religious approach with the scores from Mother's indifference ($r = -.327, p < .01$); the scores from Social support focused coping with the scores from Mother's indifference ($r = -.264, p < .05$); the scores from Use of social-emotional support with the scores from Mother's indifference ($r = -.250, p < .05$).

For the at risk adolescents group, the following **positive** correlations were obtained: the scores from Emotion focused coping with the scores from Father's over-control ($r = .603, p < .05$); the scores from Positive interpretation and growth with the scores from Father's over-control ($r = .561, p < .05$); the scores from Acceptance with the scores from The total father's perceived behavior ($r = .635, p < .05$), Father's abuse ($r = .569, p < .05$), Father's over-control ($r = .695, p < .01$), and Mother's over-control ($r = .563, p < .05$); the scores from Religious approach with the scores from Father's over-control ($r = .578, p < .05$); the scores from Social support focused coping with the scores from Father's over-control ($r = .592, p < .05$) and Mother's over-control ($r = .497, p < .05$); the scores from Use of social-emotional support with the scores from Father's over-control ($r = .523, p < .05$); the scores from Expressing the emotions with the scores from Father's over-control ($r = .528, p < .05$); the scores from Avoidant coping with the scores from Father's over-control ($r = .633, p < .05$); the scores from Denial with the scores from Father's over-control ($r = .584, p < .05$); the scores from Mental deactivation with the scores from Father's over-control ($r = .594, p < .05$); the scores from Deletion of concurrent activities with the scores from Father's over-control ($r = .527, p < .05$), The total mother's perceived behavior ($r = .510, p < .05$) and Mother's abuse ($r = .540, p < .05$). **Negative** correlations were: the scores from Restraint with the scores from Mother's indifference ($r = -.602, p < .05$); the scores from Use of social-emotional support with the scores from Mother's over-control ($r = -.594, p < .05$).

For the group of delinquent adolescents, the following **positive** correlations were obtained: the scores from Social support focused coping with the scores from The total father's perceived behavior ($r = .385, p < .01$), Father's abuse ($r = .355, p < .05$), Father's over-control ($r = .399, p < .01$) and Mother's over-control ($r = .286, p < .05$); the scores from Use of social-emotional support with the scores from Father's over-control ($r = .321, p < .05$); the scores from Expressing the emotions with the scores from The total father's perceived behavior ($r = .497, p < .01$), Father's indifference ($r = .354, p < .05$), Father's abuse ($r = .457, p < .01$), Father's over-control ($r = .445, p < .01$) and The total

mother's perceived behavior ($r = .303, p < .05$); the scores from Avoidant coping with the scores from Father's over-control ($r = .397, p < .01$) and The total mother's perceived behavior ($r = .310, p < .05$); the scores from Denial with the scores from Mother's over-control ($r = .319, p < .05$); the scores from Mental deactivation with the scores from Father's over-control ($r = .460, p < .01$) and The total mother's perceived behavior ($r = .334, p < .05$); the scores from Positive interpretation and growth with the scores from Father's over-control ($r = .366, p < .05$), The total mother's perceived behavior ($r = .371, p < .01$), Mother's abuse ($r = .279, p < .05$) and Mother's over-control ($r = .356, p < .01$).

Hypothesis 4

In order to verify if there are significant differences between the three groups of participants (D, ND and AR), regarding the studied variables, the ANOVA Welch test will be used because the three groups are not equally distributed ($N = 96; 27; 55$) and some variables did not respect the homogeneity of variance.

The scales to which the homogeneity of variations has not been observed are as follows: Covert scale, Blaming Others, Minimizing/Mislabeling, Opposition-Defiance, Stealing, Problem focused coping, Emotion focused coping, Positive interpretation and growth, Restraint, Acceptance, Religious approach, Avoidant coping, Substance and alcohol consumption, The total father's perceived behavior, Father's abuse, The total mother's perceived behavior, Mother's indifference and Mother's abuse. For comparative analysis of the studied groups, the ANOVA method is used because it has been shown in literature that this test is robust and can be used even if no normal distribution is observed (Schmider et al., 2010; Blanca et al., 2017).

Significant differences at $p < .01$ were recorded within the scales: Total HIT (2, 67.115), Welch = 5.651, Covert scale (2, 65.893), Welch = 6.508, Blaming Others (2, 66.925), Welch = 6.932, Minimizing/Mislabeling (2, 66.350), Welch = 5.073, Stealing (2, 65.448), Welch = 13.169, Problem focused coping (2, 65.737), Welch = 21.489, Active approach (2, 62.877), Welch = 21.147, Planning (2, 65.650), Welch = 11.040, Deletion of concurrent activities (2, 65.405), Welch = 8.676, Emotion focused coping (2, 61.780), Welch = 25.180, Positive interpretation and growth (2, 61.950), Welch = 8.464, Restraint (2, 60.315), Welch = 13.260, Religious approach (2, 67.803), Welch = 21.609, Social support focused coping (2, 65.157), Welch = 10.191, Use of social-instrumental support (2, 65.230), Welch = 12.100, Use of social-emotional support (2, 68.612), Welch = 6.330, Avoidant coping (2, 61.799), Welch = 5.063, Behavioral deactivation (2, 61.446), Welch = 7.279, The total father's perceived behavior (2, 36.986), Welch = 7.865, Father's indifference (2, 36.685), Welch = 7.164, Father's abuse (2, 34.450), Welch = 7.564, The total mother's perceived behavior (2, 42.215), Welch = 8.613, Mother's indifference (2, 37.176), Welch = 13.234 și Mother's abuse (2, 39.644), Welch = 10.418.

Significant differences at $p < .05$ were recorded within the scales: Overt scale (2, 68.502), Welch = 3.653, Self-Centered (2, 67.667), Welch = 3.912, Opposition-Defiance (2, 65.422), Welch = 3.711, Physical Aggression (2, 69.100), Welch = 3.256, Denial (2, 70.272), Welch = 3.310, Substance and alcohol consumption (2, 67.245), Welch = 3.535, Father's over-control (2, 38.070), Welch = 4.715 and Mother's over-control (2, 42.516), Welch = 4.513.

In order to determine which of the groups (ND, AR and D) had significant differences in the studied scales, the post-hoc method with the Games-Howell test would be used.

The significant differences that were recorded were as follows: to the Total HIT scale, between: ND < AR, with a mean difference of -.46; and ND < D, with a mean difference of -.38; to the Covert scale, between: ND < AR, with a mean difference of -.53; and ND < D, with a mean difference of -.4; to the Self-Centered scale, between: ND < AR, with a mean difference of -.53; to the Blaming Others scale, between: ND < AR, with a mean difference of -.48; and ND < D, with a mean difference of -.50; to the Minimizing/Mislabeling scale, between: ND < AR, with a mean difference of -.51; to the

Opposition-Defiance scale, between: ND < D, with a mean difference of -.43; to the Stealing scale, between: ND < AR, with a mean difference of -.80; and ND < D, with a mean difference of -.56; to the Problem focused coping scale, between: ND < D, with a mean difference of -.51; and AR < D, with a mean difference of -.54; to the Active approach scale, between: ND < D, with a mean difference of -.60; and AR < D, with a mean difference of -.76; to the Planning scale, between: ND < D, with a mean difference of -.49; and AR < D, with a mean difference of -.52; to the Deletion of concurrent activities scale, between: ND < D, with a mean difference of -.45; to the Emotion focused coping scale, between: ND < D, with a mean difference of -.45; and AR < D, with a mean difference of -.47; to the Positive interpretation and growth scale, between: ND < D, with a mean difference of -.25; and AR < D, with a mean difference of -.61; to the Restraint scale, between: ND < D, with a mean difference of -.54; to the Religious approach scale, between: ND < D, with a mean difference of -.85; and AR < D, with a mean difference of -.60; to the Social support focused coping scale, between: ND < D, with a mean difference of -.41; and AR < D, with a mean difference of -.41; to the Use of social-instrumental support scale, between: ND < D, with a mean difference of -.50; and AR < D, with a mean difference of -.56; to the Use of social-emotional support scale, between: ND < D, with a mean difference of -.44; to the Avoidant coping scale, between: ND < D, with a mean difference of -.28; to the Behavioral deactivation scale, between: ND < D, with a mean difference of -.40; to the Substance and alcohol consumption scale, between: ND < D, with a mean difference of -.39; to The total father's perceived behavior scale, between: ND < AR, with a mean difference of -.48; and ND < D, with a mean difference of -.45; to the Father's indifference scale, between: ND < AR, with a mean difference of -.78; to the Father's abuse scale, between: ND < D, with a mean difference of -.53; to the Father's over-control scale, between: ND < D, with a mean difference of -.53; to the total mother's perceived behavior scale, between: ND < D, with a mean difference of -.37; to the Mother's indifference scale, between: ND < AR, with a mean difference of -.99; and ND < D, with a mean difference of -.45; to the Mother's abuse scale, between: ND < AR, with a mean difference of -.34; and ND < D, with a mean difference of -.51; to the Mother's over-control scale, between: AR < D, with a mean difference of -.64.

Objective 2

Due to the fact that some of the variables are not scalar (education level, criminal history, presence of parents and the level of social support) and a large number of scales from the studied instruments did not respect the distribution of normality, the Spearman correlation test will be used. Therefore, in order to verify the 13 hypotheses from this object, the Spearman correlation test for the two studied groups (AR and D) will be used.

For the at risk adolescents group, the following **positive** correlations were obtained: The level of Education with the scores from Opposition-Defiance ($r = .441, p < .05$); The presence of parents with the scores from Substance and alcohol consumption ($r = .405, p < .05$) and Mother's over-control ($r = .596, p < .05$); The level of social Support with the scores from Active approach ($r = .523, p < .01$) and Use of social-instrumental support ($r = .401, p < .05$).

For the group of delinquent adolescents, the following **positive** correlations were obtained: Criminal history with the scores from the Overt scale ($r = .278, p < .05$), the Minimizing/Mislabeling cognitive distortions ($r = .311, p < .05$), Opposition-Defiance ($r = .313, p < .05$) and Mental deactivation ($r = .276, p < .05$); The presence of parents with the scores from Problem focused coping ($r = .284, p < .05$), Emotion focused coping ($r = .321, p < .05$) and Religious approach ($r = .324, p < .05$); The level of social support with the scores from the level of education ($r = .364, p < .01$). **Negative** correlations were: The level of Education with the scores from Total HIT ($r = -.291, p < .05$), Covert scale ($r = -.309, p < .05$), the Minimizing/Mislabeling cognitive distortions ($r = -.336, p < .05$), Stealing ($r = -.290, p < .05$), Emotion focused coping ($r = -.290, p < .05$), Acceptance ($r = -.275, p < .05$).

.05), Religious approach ($r = -.273, p < .05$), Social support focused coping ($r = -.285, p < .05$), Use of social-emotional support ($r = -.342, p < .05$) and Active approach ($r = -.288, p < .05$); The level of social support with the scores from Total HIT ($r = -.564, p < .01$), Overt scale ($r = -.505, p < .01$), Covert scale ($r = -.540, p < .01$), the Self-Centered cognitive distortions ($r = -.455, p < .01$), Blaming Others ($r = -.506, p < .01$), Minimizing/Mislabeling ($r = -.610, p < .01$), Assuming the Worst ($r = -.456, p < .01$), Opposition-Defiance ($r = -.430, p < .01$), Physical Aggression ($r = -.485, p < .01$), Lying ($r = -.376, p < .01$), Stealing ($r = -.553, p < .01$), Denial ($r = -.291, p < .05$), Substance and alcohol consumption ($r = -.422, p < .01$), Criminal history ($r = -.460, p < .01$).

Objective 3

Testing this hypothesis on this object was made possible by using an online calculator (Lenhard & Lenhard, 2014) designed to verify the differences between significant correlation coefficients that occurred between two groups.

Hypothesis 1

Significant differences were registered at: the significant correlation coefficients that took place between Opposition-Defiance and Avoidant coping between the ND ($r = .343^{**}, N = 96$) and D groups ($r = .591^{**}, N = 55$), with an observable Z score = -1.86, $p < .05$; the significant correlation coefficients that took place between Self-Centered and Substance and alcohol consumption between the ND ($r = .212^*, N = 96$) and D groups ($r = .541^{**}, N = 55$), with an observable Z score = -2.25, $p < .05$; the significant correlation coefficients that took place between Stealing and Substance and alcohol consumption between the ND ($r = .211^*, N = 96$) and D groups ($r = .591^{**}, N = 55$), with an observable Z score = -2.69, $p < .01$; and the significant correlation coefficients that took place between the Covert scale and Substance and alcohol consumption between the ND ($r = .303^{**}, N = 96$) and D groups ($r = .572^{**}, N = 55$), with an observable Z score = -1.95, $p < .05$.

Hypothesis 2

Significant differences were registered at: the significant correlation coefficients that took place between Blaming Others and The total mother's perceived behavior between the ND ($r = .237^*, N = 91$) and AR groups ($r = .646^{**}, N = 17$), with an observable Z score = -1.83, $p < .05$; the significant correlation coefficients that took place between Blaming Others and Mother's abuse between the ND ($r = .298^{**}, N = 91$) and AR groups ($r = .730^{**}, N = 17$), with an observable Z score = -2.16, $p < .05$ and the significant correlation coefficients that took place between Blaming Others and Mother's abuse between the AR ($r = .730^{**}, N = 17$) and D groups ($r = .346^*, N = 53$), with an observable Z score = 1.88, $p < .05$.

Hypothesis 3

There were no significant differences between the compared correlation coefficients.

Objective 3

Hypothesis 1

Table 1. Coefficients of the mediation effect.

Path	R ²	F	p	B	SE(B)	β	p	95% CI
c	.12	11.81	< .01	.62	.18	.34	< .01	.26, .98
a	.17	18.67	< .01	.72	.17	.42	< .01	.39, 1.04
b & c'	.21	11.33	< .01					
c'				.38	.19	.21	> .05	-.002, .75
b				.34	.11	.33	< .01	.13, .56

a*b	.14
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R² = Explained variation /total variation; F = ANOVA; B = Non-standardized coefficients; SE = Standard error; β = standardized coefficients; p = threshold of significance; 95% CI = 95.0% Confidence interval for B;

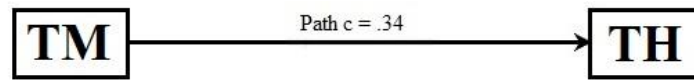


Fig. 1. Path c between the variables TM (the total mother’s perceived behavior) and TH (total HIT).

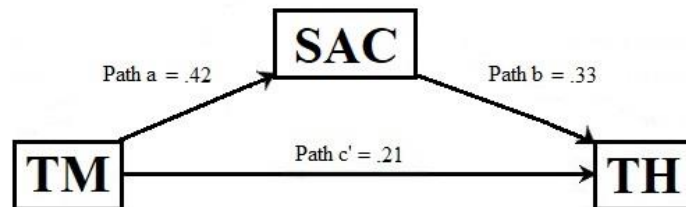


Fig. 2. Path a, b and c’ of TM (the total mother’s perceived behavior), SAC (Substance and alcohol consumption) and TH (total HIT).

Hypothesis 2

Table2. Coefficients of the mediation effect.

Path	R ²	F	p	B	SE(B)	β	p	95% CI
c	.09	8.391	< .01	.35	.12	.29	< .01	.11, .59
a	.09	9.130	< .01	.31	.10	.31	< .01	.11, .52
b& c’	.22	12.12	< .01					
c’				.21	.12	.18	> .05	-.02, .44
b				.44	.11	.38	< .01	.21, .66
a*b						.12		

R² = Explained variation /total variation; F = ANOVA; B = Non-standardized coefficients; SE = Standard error; β = standardized coefficients; p = threshold of significance; 95% CI = 95.0% Confidence interval for B;

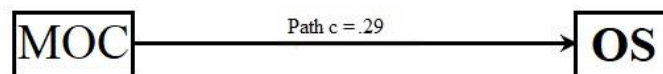


Fig. 3. Path c between the variables MOC (Mother’s over-control) and OS (Overt scale).

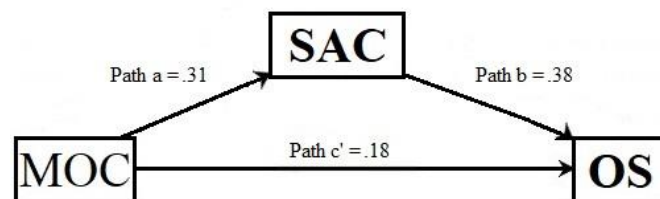


Fig. 4. Path a, b and c’ of MOC (Mother’s over-control), SAC (Substance and alcohol consumption) and OS (Overt scale).

Hypothesis 3

Table3. Coefficients of the mediation effect.

Path	R ²	F	p	B	SE(B)	β	p	95% CI
c	.10	9.956	< .01	.43	.14	.32	< .01	.16, .71
a	.09	9.130	< .01	.31	.10	.31	< .01	.11, .52
b& c’	.23	13.22	< .01					

c'	.28	.13	.20	< .05	.01, .54
b	.50	.13	.38	< .01	.24, .76
a*b			.12		

R² = Explained variation /total variation; F = ANOVA; B = Non-standardized coefficients; SE = Standard error; β = standardized coefficients; p = threshold of significance; 95% CI = 95.0% Confidence interval for B;

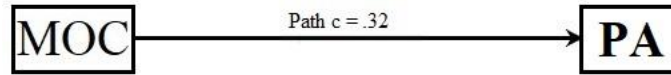


Fig. 5. Path c between the variables MOC (Mother's over-control) and PA (Physical Aggression).

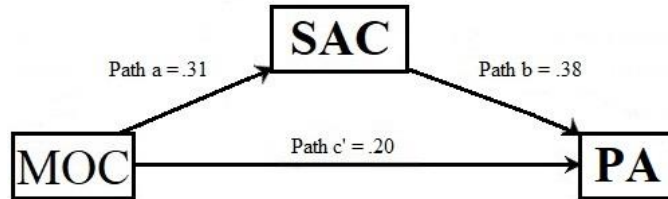


Fig. 6. Path a, b and c' of MOC (Mother's over-control), SAC (Substance and alcohol consumption) and PA (Physical Aggression).

Hypothesis 4

Table4. Coefficients of the mediation effect.

Path	R ²	F	p	B	SE(B)	β	p	95% CI
c	.09	8.783	< .01	.46	.16	.30	< .01	.15, .77
a	.10	9.792	< .01	.48	.14	.32	< .01	.16, .73
b& c'	.21	11.79	< .01					
c'				.28	.15	.18	> .05	-.02, .59
b				.40	.11	.37	< .01	.18, .62
a*b						.12		

R² = Explained variation /total variation; F = ANOVA; B = Non-standardized coefficients; SE = Standard error; β = standardized coefficients; p = threshold of significance; 95% CI = 95.0% Confidence interval for B;

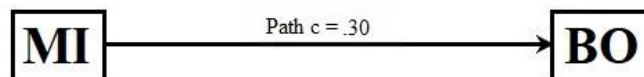


Fig. 7. Path c between the variables MI (Mother's indifference) and BO (Blaming Others).

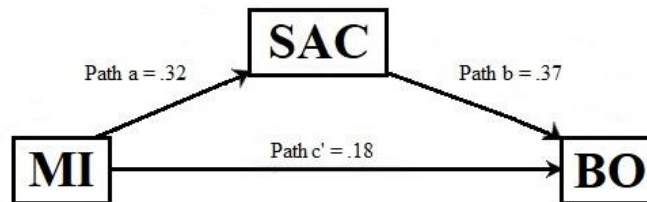


Fig. 8. Path a, b and c' of MI (Mother's indifference), SAC (Substance and alcohol consumption) and BO (Blaming Others).

Hypothesis 5

Table5. Coefficients of the mediation effect.

Path	R ²	F	p	B	SE(B)	β	p	95% CI
c	.07	7.147	< .01	.29	.11	.27	< .01	.08, .51

a	.12	11.81	< .01	.62	.18	.34	< .01	.26, .98
b& c'	.12	5.939	< .01					
c'				.21	.11	.20	> .05	-.02, .44
b				.13	.06	.23	< .05	.01, .26
a*b						.08		

R² = Explained variation /total variation; F = ANOVA; B = Non-standardized coefficients; SE = Standard error; β = standardized coefficients; p = threshold of significance; 95% CI = 95.0% Confidence interval for B;

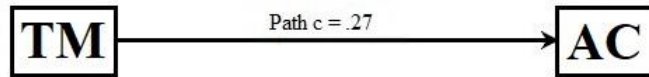


Fig. 9. Path c between the variables TM (The total mother’s perceived behavior) and AC (Avoidant coping).

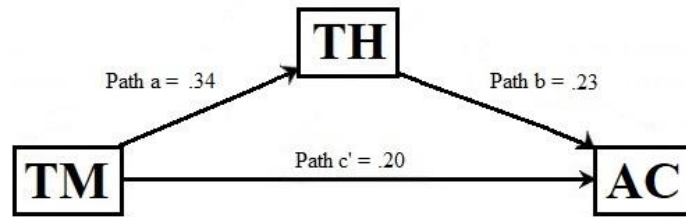


Fig. 10. Path a, b and c’ of TM (The total mother’s perceived behavior), TH (Total HIT) and AC (Avoidant coping).

Hypothesis 6

Table6. Coefficients of the mediation effect between MA, D and TH.

Path	R ²	F	p	B	SE(B)	β	p	95% CI
c	.07	7.205	< .01	.45	.17	.27	< .01	.12, .78
a	.16	16.31	< .01	.73	.18	.39	< .01	.37, 1.10
b& c'	.13	6.697	< .01					
c'				.28	.18	.17	> .05	-.07, .64
b				.23	.10	.26	< .05	.04, .42
a*b						.10		

R² = Explained variation /total variation; F = ANOVA; B = Non-standardized coefficients; SE = Standard error; β = standardized coefficients; p = threshold of significance; 95% CI = 95.0% Confidence interval for B;

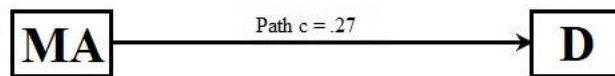


Fig. 11. Path c between the variables MA (Mother’s abuse) and D (Denial).

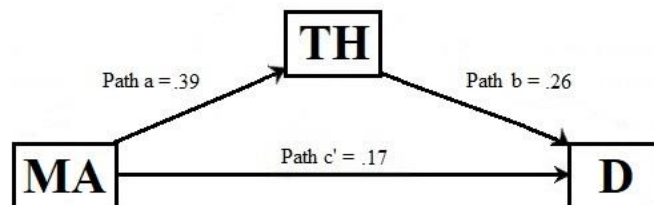


Fig. 12. Path a, b and c’ of MA (Mother’s abuse), TH (Total HIT) and D (Denial).

Hypothesis 7

Table7. Coefficients of the mediation effect.

Path	R ²	F	p	B	SE(B)	β	p	95% CI
c	.14	14.08	< .01	.65	.17	.37	< .01	.31, 1.00
a	.16	16.31	< .01	.73	.18	.39	< .01	.37, 1.10
b& c'	.22	12.45	< .01					
c'				.43	.18	.25	< .05	.07, .79
b				.30	.10	.32	< .01	.11, .49
a*b						.13		

R² = Explained variation /total variation; F = ANOVA; B = Non-standardized coefficients; SE = Standard error; β = standardized coefficients; p = threshold of significance; 95% CI = 95.0% Confidence interval for B;

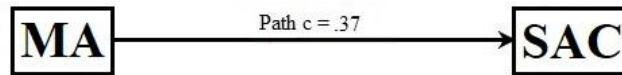


Fig. 13. Path c between the variables MA (Mother's abuse) and SAC (Substance and alcohol consumption).

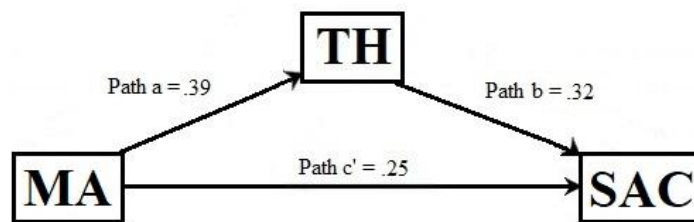


Fig. 14. Path a, b and c' of MA (Mother's abuse), TH (Total HIT) and SAC (Substance and alcohol consumption).

Hypothesis 8

Table8. Coefficients of the mediation effect.

Path	R ²	F	p	B	SE(B)	β	p	95% CI
c	.08	7.205	< .01	.45	.17	.27	< .01	.12, .78
a	.18	19.15	< .01	.86	.20	.42	< .01	.47, 1.24
b& c'	.13	6.571	< .01					
c'				.27	.18	.17	> .05	-.09, .63
b				.21	.09	.26	< .05	.03, .39
a*b						.11		

R² = Explained variation /total variation; F = ANOVA; B = Non-standardized coefficients; SE = Standard error; β = standardized coefficients; p = threshold of significance; 95% CI = 95.0% Confidence interval for B;

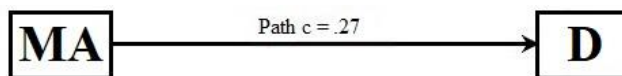


Fig. 15. Path c between the variables MA (Mother's abuse) and D (Denial).

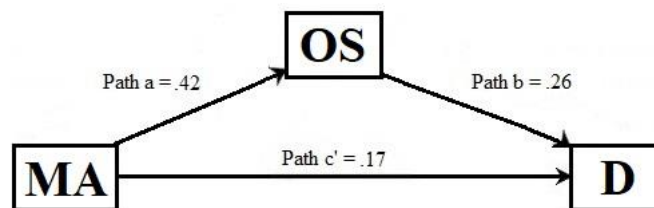


Fig. 16. Path a, b and c' of MA (Mother's abuse), OS (Overt scale) and D (Denial).

Hypothesis 9

Table9. Coefficients of the mediation effect.

Path	R ²	F	p	B	SE(B)	β	p	95% CI
c	.14	14.08	< .01	.65	.17	.37	< .01	.31, 1.00
a	.18	19.15	< .01	.86	.20	.42	< .01	.47, 1.24
b& c'	.23	13.13	< .01					
c'				.40	.18	.23	< .05	.04, .76
b				.29	.09	.34	< .01	.11, .47
a*b						.16		

R² = Explained variation /total variation; F = ANOVA; B = Non-standardized coefficients; SE = Standard error; β = standardized coefficients; p = threshold of significance; 95% CI = 95.0% Confidence interval for B;

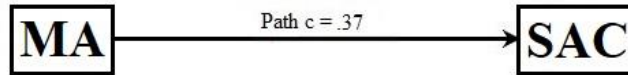


Fig. 17. Path c between the variables MA (Mother’s abuse) and SAC (Substance and alcohol consumption).

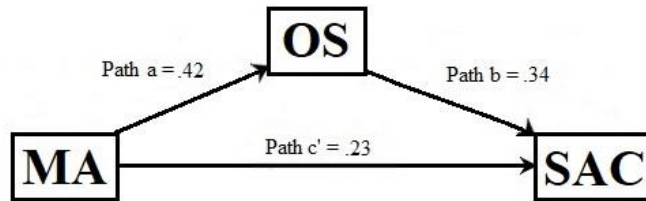


Fig. 18. Path a, b and c' of MA (Mother’s abuse), OV (Overt scale) and SAC (Substance and alcohol consumption).

Hypothesis 10

Table10. Coefficients of the mediation effect (group ND).

Path	R ²	F	p	B	SE(B)	β	p	95% CI
c	.08	7.250	< .01	.45	.17	.27	< .01	.12, .78
a	.15	15.29	< .01	.74	.19	.38	< .01	.36, 1.11
b& c'	.14	7.372	< .01					
c'				.27	.18	.17	> .05	-.08, .62
b				.24	.09	.28	< .01	.06, .43
a*b						.11		

R² = Explained variation /total variation; F = ANOVA; B = Non-standardized coefficients; SE = Standard error; β = standardized coefficients; p = threshold of significance; 95% CI = 95.0% Confidence interval for B;

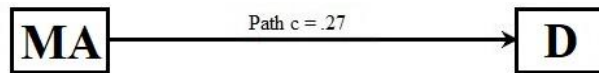


Fig. 19. Path c between the variables MA (Mother’s abuse) and D (Denial).

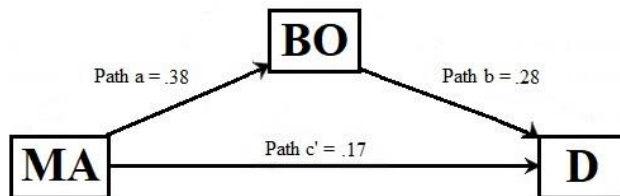


Fig. 20. Path a, b and c' of MA (Mother’s abuse), BO (Blaming Others) and D (Denial).

Hypothesis 11

Table 11. Coefficients of the mediation effect (group ND).

Path	R ²	F	p	B	SE(B)	β	p	95% CI
c	.14	14.08	< .01	.65	.17	.37	< .01	.31, 1.00
a	.15	15.29	< .01	.74	.19	.38	< .01	.36, 1.11
b& c'	.23	13.21	< .01					
c'				.43	.18	.24	< .05	.07, .78
b				.31	.09	.33	< .01	.12, .49
a*b						.13		

R² = Explained variation /total variation; F = ANOVA; B = Non-standardized coefficients; SE = Standard error; β = standardized coefficients; p = threshold of significance; 95% CI = 95.0% Confidence interval for B;

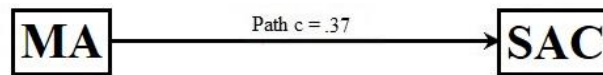


Fig. 21. Path c between the variables MA (Mother's abuse) and SAC (Substance and alcohol consumption).

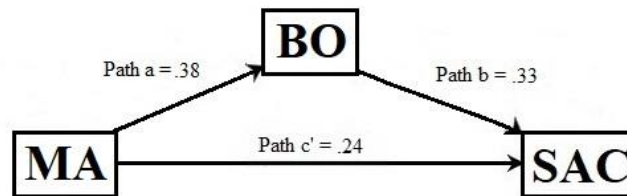


Fig. 22. Path a, b and c' of AM (Mother's abuse), BO (Blaming Others) and SAC (Substance and alcohol consumption).

Hypothesis 12

Table 12. Coefficients of the mediation effect between MA, D and AW (group ND).

Path	R ²	F	p	B	SE(B)	β	p	95% CI
c	.08	7.205	< .01	.45	.17	.27	< .01	.12, .78
a	.23	26.32	< .01	.95	.18	.48	< .01	.58, 1.31
b& c'	.14	6.882	< .01					
c'				.23	.18	.14	> .05	-.14, .60
b				.23	.09	.28	< .05	.05, .42
a*b						.13		

R² = Explained variation /total variation; F = ANOVA; B = Non-standardized coefficients; SE = Standard error; β = standardized coefficients; p = threshold of significance; 95% CI = 95.0% Confidence interval for B;

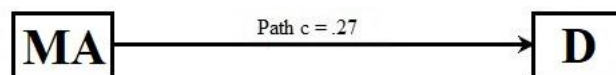


Fig. 23. Path c between the variables MA (Mother's abuse) and D (Denial).

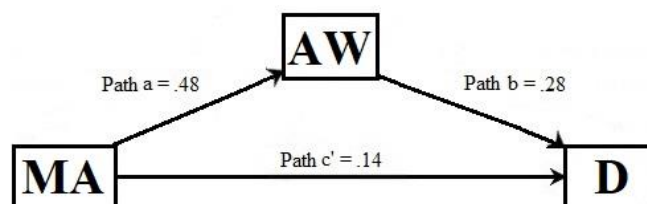


Fig. 24. Path a, b and c' of MA (Mother's abuse), AW (Assuming the Worst) and D (Denial).

Hypothesis 13

Table 13. Coefficients of the mediation effect between MA, SAC and PA (group ND).

Path	R ²	F	p	B	SE(B)	β	p	95% CI
c	.14	14.08	< .01	.65	.17	.37	< .01	.31, 1.00
a	.20	21.68	< .01	1.04	.22	.44	< .01	.59, 1.48
b& c'	.23	13.30	< .01					
c'				.38	.18	.22	< .05	.02, .75
b				.26	.08	.35	< .01	.10, .42
a*b						.15		

R² = Explained variation /total variation; F = ANOVA; B = Non-standardized coefficients; SE = Standard error; β = standardized coefficients; p = threshold of significance; 95% CI = 95.0% Confidence interval for B;

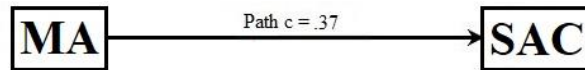


Fig. 25. Path c between the variables MA (Mother's abuse) and SAC (Substance and alcohol consumption).

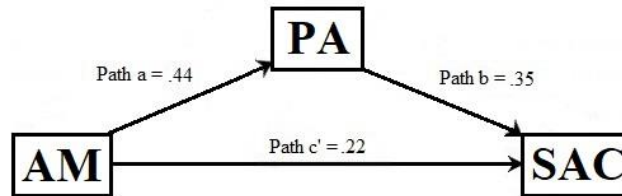


Fig. 26. Path a, b and c' of MA (Mother's abuse), PA (Physical Aggression) and SAC (Substance and alcohol consumption).

Hypothesis 14

Table 14. Coefficients of the mediation effect between MA, D and OD (group ND).

Path	R ²	F	p	B	SE(B)	β	p	95% CI
c	.08	7.205	< .01	.45	.17	.27	< .01	.12, .78
a	.12	12.06	< .01	.67	.19	.35	< .01	.29, 1.06
b& c'	.14	6.998	< .01					
c'				.30	.17	.18	> .05	-.05, .64
b				.23	.09	.27	< .05	.05, .40
a*b						.09		

R² = Explained variation /total variation; F = ANOVA; B = Non-standardized coefficients; SE = Standard error; β = standardized coefficients; p = threshold of significance; 95% CI = 95.0% Confidence interval for B;

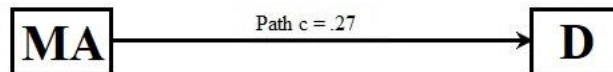


Fig. 27. Path c between the variables MA (Mother's abuse) and D (Denial).

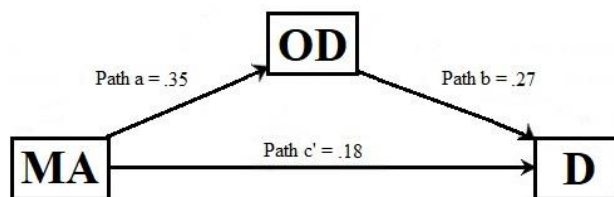


Fig. 28. Path a, b and c' of AM (Mother's abuse), OD (Opposition-Defiance) and D (Denial).

Hypothesis 15

Table15. Coefficients of the mediation effect (group D).

Path	R ²	F	p	B	SE(B)	β	p	95% CI
c	.08	4.811	< .05	-.33	.15	-.29	< .05	-.63, -.03
a	.14	8.827	< .01	.35	.12	.38	< .01	.11, .58
b& c'	.32	12.28	< .01					
c'				-.10	.14	-.09	> .05	-.38, .18
b				-.65	.15	-.53	< .01	-.96, -.34
a*b						-.20		

R² = Explained variation /total variation; F = ANOVA; B = Non-standardized coefficients; SE = Standard error; β = standardized coefficients; p = threshold of significance; 95% CI = 95.0% Confidence interval for B;

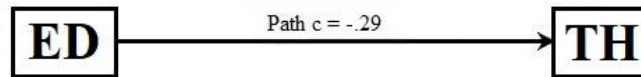


Fig. 29. Path c between the variables ED (Education) and TH (Total HIT).

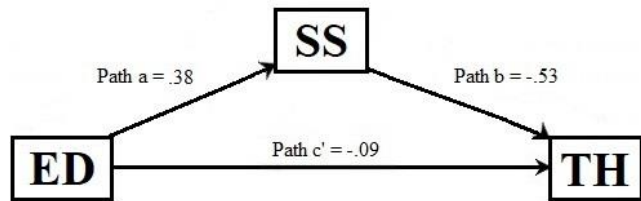


Fig. 30. Path a, b and c' of variablele ED (Education), SS (Social Support) and TH (Total HIT).

Hypothesis 16

Table16. Coefficients of the mediation effect between ED, CS and SS (group D).

Path	R ²	F	p	B	SE(B)	β	p	95% CI
c	.09	5.345	< .05	-.37	.16	-.30	< .05	-.70, -.05
a	.14	8.827	< .01	.35	.12	.38	< .01	.11, .58
b& c'	.31	11.81	< .01					
c'				-.14	.15	-.11	> .05	-.44, .17
b				-.68	.17	-.51	< .01	-1.02, -.35
a*b						-.19		

R² = Explained variation /total variation; F = ANOVA; B = Non-standardized coefficients; SE = Standard error; β = standardized coefficients; p = threshold of significance; 95% CI = 95.0% Confidence interval for B;

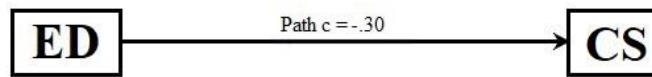


Fig. 31. Path c between the variables ED (Education) and CS (Covert scale).

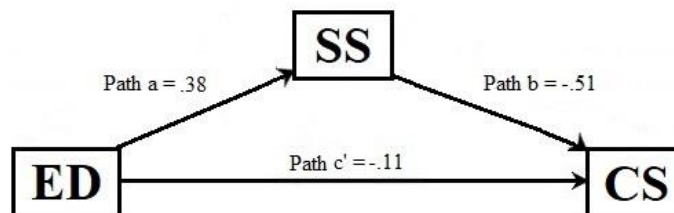


Fig. 32. Path a, b and c' of ED (Education), SS (Social Support) and CS (Covert scale).

Hypothesis 17

Table 17. Coefficients of the mediation between ED, Sand SS (group D).

Path	R ²	F	p	B	SE(B)	β	p	95% CI
c	.10	5.942	< .05	-.46	.19	-.32	< .05	-.83, -.08
a	.14	8.827	< .01	.35	.12	.38	< .01	.11, .58
b& c'	.38	16.05	< .01					
c'				-.15	.17	-.10	> .05	-.48, .19
b				-.89	.18	-.57	< .01	-1.26, -.52
a*b						-.22		

R² = Explained variation /total variation; F = ANOVA; B = Non-standardized coefficients; SE = Standard error; β = standardized coefficients; p = threshold of significance; 95% CI = 95.0% Confidence interval for B;

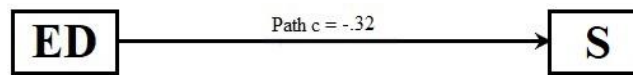


Fig. 33. Path c between the variables ED (Education) and S (Stealing).

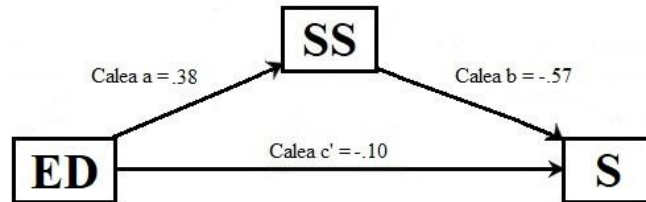


Fig. 34. Path a, b and c' of ED (Education), SS (Social Support) and S (Stealing).

Hypothesis 18

Table 18. Coefficients of the mediation effect between ED, MM and SS (group D).

Path	R ²	F	p	B	SE(B)	β	p	95% CI
c	.10	5.842	< .05	-.43	.18	-.32	< .05	-.78, -.07
a	.14	8.827	< .01	.35	.12	.38	< .01	.11, .58
b& c'	.38	16.20	< .01					
c'				-.13	.16	-.10	> .05	-.45, .19
b				-.85	.17	-.58	< .01	-1.20, -.50
a*b						-.22		

R² = Explained variation /total variation; F = ANOVA; B = Non-standardized coefficients; SE = Standard error; β = standardized coefficients; p = threshold of significance; 95% CI = 95.0% Confidence interval for B;

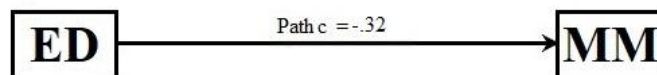


Fig. 35. Path c between the variables ED (Education) and MM (Minimizing/Mislabeling).

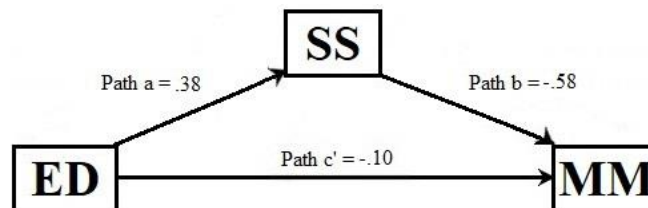


Fig. 36. Path a, b and c' of ED (Education), SS (Social Support) and MM (Minimizing/Mislabeling).

Hypothesis 19

Table 19. Coefficients of the mediation effect (group D).

Path	R ²	F	p	B	SE(B)	β	p	95% CI
c	.08	4.582	< .05	.54	.25	.28	< .05	.03, 1.04
a	.22	14.90	< .01	-.75	.19	-.47	< .01	-1.14, -.36
b & c'	.28	9.849	< .01					
c'				.09	.26	.05	> .05	-.42, .60
b				-.60	.16	-.50	< .01	-.92, -.28
a*b						.24		

R² = Explained variation /total variation; F = ANOVA; B = Non-standardized coefficients; SE = Standard error; β = standardized coefficients; p = threshold of significance; 95% CI = 95.0% Confidence interval for B;

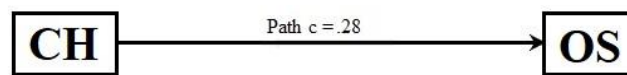


Fig. 37. Path c between the variables CH (Criminal history) and OS (Overt scale).

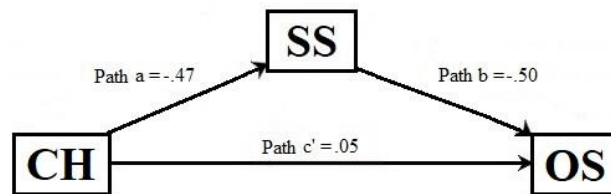


Fig. 38. Path a, b and c' of CH (Criminal history), SS (Social Support) and OS (Overt scale).

3.2.8. Discussions and conclusions

This study aimed to investigate the association relationships and differences between self-serving cognitive distortions, anti-social behaviors, coping mechanisms and perceived dysfunctional parenting styles on three groups of adolescents from Romania: delinquents (D), non-delinquents (ND), and at risk adolescent (AR). Also, to investigate intra-group relations between the level of education, criminal history, the presence of parents, the level of social support, self-serving cognitive distortions, anti-social behaviors, coping mechanisms and perceived dysfunctional parenting styles in adolescents the D and AR groups, to compare the significant correlation coefficients between the variables investigated under the first two objectives among the three adolescent groups and to investigate the mediation relationships between the analyzed variables: self-serving cognitive distortions and anti-social behaviors, coping mechanisms, perceived dysfunctional parenting styles, the level education, criminal history, parents' presence, and the level of social support within each group (ND, D, AR).

The summary regarding the results of this study highlights the importance of the family environment (especially the mother's behavior) in the development of antisocial behavior, regardless of category (delinquent, non-delinquent, at risk adolescent), with the delinquent and at risk adolescents coming from families with a higher perceived level of dysfunctionality than the non-delinquent adolescents. In their turn, dysfunctional parenting styles or anti-social behaviors can be associated with maladaptive coping mechanisms that can in turn encourage and support the development of anti-social behavior. All these aspects can also interact with the educational factor, demonstrated in this study by the fact that at risk adolescents and delinquents adolescents have a lower level of education than non-delinquent adolescents. This study also indicated that an effective way to reduce the manifestation of anti-social behaviors in delinquent adolescents is by the means of social support provided in real time. In literature, it is argued that social support can diminish the potential negative consequences (in the present case, anti-social and delinquent behavior) arising from stressful factors (Thoits, 1995).

Developmental psychology indicates that family environment contains a number of factors that contribute with to the development of the existential basis of each individual (Moitra & Mukherjee, 2010, Dishion & Patterson, 2006, Bandura, 1977, Bronfenbrenner, 2005). Therefore, a possible solution to a family environment perceived as dysfunctional could be a parent-centered course or type of intervention in order to improve and / or optimize the family climate and to reduce the development of behavioral problems of adolescents and young people who live in such family environments (Jarrett, 1999; Todd, 2004; Beyer, 2008). Such a program or intervention might include information and techniques that aim to develop the efficient parent/ child communication, to develop non-aggressive disciplinary methods, and identifying children's socio-emotional needs, in order to prevent anti-social behaviors.

In order to reduce the level of criminogenic cognition and anti-social behaviors in adolescents, it is recommended to explore the existing educational programs in literature. For example, an effective educational program, which is often referred to as an example of good practice, is the EQUIP program (Gibbs, Potter & Goldstein, 1995). The EQUIP program is a multi-structural support plan aimed at reducing recidivism among delinquent teenagers by diminishing the level of cognitive distortions, by developing and remodeling social competences, and by stimulating and cultivating the development of their moral judgment (Brugman & Bink, 2011). The data presented in this paper indicates the need to consider the implementation of educational programs aimed at reducing the level of criminogenic thinking and anti-social behavior in the Romanian categories of at risk adolescents and delinquent ones.

3.3. Study 3 –Investigating the effects of institutional educational programs on cognitive distortions and coping strategies for delinquent and adolescents atrisk.

3.3.1. Introduction

A significant factor in preventing or alleviating delinquent or anti-social behavior is provided by the formal education, which aims to assimilate and internalize the rules of conduct by the subjects of education in order for them to adopt a pro-social behavior (Dragomirescu, 1976; Millie, 2009; Heilbrun, Goldstein, & Redding, 2005).

For example, an effective educational program often mentioned in the literature is the EQUIP program (Gibbs, Potter & Goldstein, 1995). The EQUIP program is a multi-dimensional support plan aimed to reduce recidivism anti-social behavior among adolescents and juvenile delinquents by diminishing the levels of cognitive distortions, by developing and remodeling pro-social skills and abilities, by correcting thinking errors, by teaching anger management and by stimulating and cultivating the development of moral judgment (Gibbs, Potter & Goldstein, 1995; Brugman & Bink, 2011).

Another example of an educational program is presented in a study conducted in South Korea, where the rehabilitation program focused on improving adaptive coping mechanisms through the method of counseling groups that apply the technique of finding solutions; this technique has positive effects on stress factors (Ko, Yu & Kim, 2003). Young people entering a prison environment for the first time may experience various somatic and psychological changes, such as weight loss, insomnia, temporal disorientation, lower limb pain, and emotional reactions that manifest in sadness (Gheorghe, 1996; Steiner, Garcia, & Matthews, 1997). So there are authors who suggest that it is necessary to investigate the importance of coping mechanisms of young individuals in order to optimize their psycho-emotional state during the period of detention, especially in the early stages of the detention, period which can be perceived as being very stressful for the individual (Shulman & Cauffman, 2011).

In Romania, on the basis of Order no. 1322 / C / 2017 published in the Official Monitor of Romania, Part I no. 432 of June 12, 2017, young people in detention will follow educational, psychological and social assistance programs(<http://www.monitoruljuridic.ro>). These programs aim to re-empower detained youth by removing anti-social behavior and by preventing the reappearance of such behavior. They are based on the attendance in the educational activities and psychological /social assistance programs, which are represented by the semi-structured stages, knowledge-oriented, personal development, aptitudinal, vocational, leisure, or creative stimulation factors(<http://www.monitoruljuridic.ro>).

Depending on the specificity of the case, based on Order no. 1322 / C / 2017 published in the Official Monitor of Romania, Part I no. 432 of June 12, 2017, the educational area can be represented by the programs and activities of learning, training, aptitude development, vocational orientation, moral-religious education, creativity development, recreational development which aim to encourage or highlight pro-social behavioral patterns, in order to facilitate the social reintegration of incarcerated young individuals. The area of psychological assistance and social assistance may contain all the specific processes (psychological and social assessment, psychological or social counseling) that aim to offer qualified support in order to solve psychological (frustration, anger, aggression, depression, learning difficulties, etc.) and social difficulties (dysfunctional social and family environment) of the detained young individuals during the execution of the punishment in order to prepare them for society(<http://www.monitoruljuridic.ro>).

In the case of the individuals sanctioned with an educational measure that does not require imprisonment in Romania, they will be processed by the probation system, which aims to socially rehabilitate the offenders, to reduce the danger of committing new crimes in order to preserve the security in the community, to reduce the social aspects costs of the execution of the criminal penalties

and measures, by decreasing the population from the penitentiary units and valuing the socio-economic potential of criminals; this process involves the assignment of a case manager (supervisor) to the sanctioned individual, who will create a personalized intervention plan, depending on the specificity of the case (<http://legislatie.just.ro>).

For minors who are at risk and not processed within the legal system, they are usually processed by the Child Protection System. Adolescents at risk are those minors who suffer from disabilities or behavioral disorders and have been abused, neglected, abandoned or exploited (<http://legislatie.just.ro/Public/DetaliiDocument/50380>). In this light, based on order no. 21 of February 26, 2004, published in the Official Monitor of Romania, no. 222 of March 15, 2004, adolescents at risk will benefit from the Child Protection system with: hosting, emotional support, care, education and training for proper reintegration or integration into the family and social environment (<http://legislatie.just.ro/Public/DetaliiDocument/50380>).

3.3.2.Objective and hypothesis

The objective of this study aims to investigate self-serving cognitive distortions and coping strategies (in the categories of non-delinquent adolescents, delinquent adolescents and adolescents at risk) after a period of 6-8 months (pre- and post-test comparative analysis). During this 6-8 month period, adolescents will participate in a number of education and prevention programs in the institutions where the study will be conducted (Buzias Re-Education Center, Arad Penitentiary, Arad Probation Service, General Child Protection Service Arad - DGASPC), in order to identify the potential attitudinal and behavioral changes (in the direction of their social desirability), which are supposed to associate with the attendance of these programs.

Hypothesis: The hypothesis will verify whether the educational, psychological and social assistance programs will diminish the intensity of the cognitive distortions and anti-social behaviors and will improve the quality of coping mechanisms used by delinquent adolescents and adolescents at risk.

3.3.3. Participants

In this study, 34 non-delinquent, (ND), 21 at risk (AR) and 33 delinquent (D) adolescents from Romania participated in this study. Participants were selected from Buzias Re-Education Center, Arad Penitentiary, Arad Probation Service, General Child Protection Service Arad – DGASPC and Economic High School from Arad.

In the ND adolescent group (N = 34), 13 participants belonged to the female gender (38.2%) and 21 participants belonged to the male gender (61.8%), aged between 14 and 17 years with an average age of 15.38 (SD = .74).

As for the adolescent group of AR (N = 21), 6 participants belonged to the female gender (28.6%) and 15 participants belonged to the male gender (71.4%), aged between 13 and 18 years, with an average age of 14.81 (SD = 1.69).

In the D adolescent group (N = 33), 6 participants belonged to the female gender (18.2%) and 27 participants belonged to the male gender (81.8%), aged between 16 and 19, with an average age of 17.06 (SD = .86).

The participants who were selected for the post-test phase are those who could be found after 6-8 months in the institutions where the study took place. The reasons why the other participants missed this stage are the following: (1) in case of the ND group: transfer to other schools, school dropout, completion of the lyceum cycle, moving out of the city, health problems and absenteeism itself during the data collection period; (2) in case of the AR group - completing the service provided by DGASPC; (3) in case of the D group - completing the sentencing and detention programmes, transferring to other detention facilities, conditional release and medical problems that required hospitalization. It can be

assumed that these reasons could not be controlled and manifested themselves in a random way, therefore the selection of the participants at this stage can be considered a randomized one (from the whole group that participated in the first stage of the research).

3.3.4. Instruments

(1). The COPE Questionnaire (Carver et al., 1989) – Initially, this questionnaire was developed by Carver et al. (1989), assesses how individuals manage stress from a dispositional perspective and integrates the stress model developed by Lazarus & Folkman (1987). Over the years, the COPE questionnaire has undergone some changes, and it has been translated, adapted and validated on the Romanian population by Crașovan & Sava (2013), with 60 items representing 15 coping mechanisms. Each of these 15 strategies is represented by 4 items. The answering system to this tool is represented by a Likert type scale, ranging from one to four, where 1 is "I usually do not do it at all" and 4 is "I usually do that to a great extent". The 15 coping strategies are: Problem focused coping (1 - Active approach, 2 - Planning and 3 - Deletion of concurrent activities), Emotion focused coping (4 - Positive interpretation and growth, 5 - Restraint, 6 - Acceptance and 7 - Religious approach), Social support focused coping (8 - Use of social-instrumental support, 9 - Use of social-emotional support and 10 - Expressing the emotions) and Avoidant coping (11 - Denial, 12 - Mental deactivation and 13 - Behavioral deactivation), 14 - Substance and alcohol consumption and 15 - Humor (Crașovan & Sava, 2013). The questionnaire presents an internal consistency ranging from .48 to .92, having the average alpha coefficient of .70 subscale (Crașovan & Sava, 2013).

(2). How I Think Questionnaire (HIT) – in order to measure adolescent anti-social behavior, The How I Think Questionnaire (Barriga et al. 2001) was used, which was conceived to measure self-serving cognitive distortions (Self-Centered, Blaming Others, Minimizing/Mislabeling, Assuming the Worst) and 4 types of anti-social behaviors (Opposition-Defiance, Physical Aggression, Lying and Stealing). HIT (Barriga et al., 2001) consists of 54 items, with a 6-points Likert type response scale, ranging from disagree strongly (1) to agree strongly (6). HIT (Barriga et al., 2001) consists of 12 scales, meaning that of the 54 items, 39 items evaluate the four "self-serving" cognitive distortions, 8 items evaluate the level of anomalous responding, and 7 items are positive filters (in order to camouflage the 39 items). The 39 items also refer to the four categories of anti-social behaviors. The sum of Opposition-Defiance and Physical Aggression refers to the Overt Scale, which implies direct confrontation with the victim, and the sum of Lying and Stealing refer to the Covert Scale, which refers to the anti-social behaviors that do not involve direct confrontation with the victim (Barriga et al. 2001). HIT was linguistically validated in a previous study with an internal consistency ranging between .531 (Positive filters) and .863 (Overt Scale), with an alpha-Cronbach coefficient for the whole questionnaire of .914 (Demeter et al., 2018).

3.3.5. Design

In this study, a quasi-experimental design will be used to analyze the differences between the evaluated variables that were recorded between the pre-test and the post-test phase for each group of adolescents: delinquents, non-delinquents and adolescents at risk.

The studied variables are: (1) the **self-serving cognitive distortions**: Overt Scale (Opposition-Defiance and Physical Aggression), Covert Scale (Lying and Stealing), Self-Centered, Blaming Others, Minimizing/Mislabeling and Assuming the Worst (assessed with HIT; Barriga et al., 2001) and (2) the **coping mechanisms**: Problem focused coping (Active approach, Planning and Deletion of concurrent activities), Emotion focused coping (Positive interpretation and growth, Restraint, Acceptance and Religious approach), Social support focused coping (Use of social-instrumental support, Use of social-emotional support and Expressing the emotions), Avoidant coping (Denial,

Mental deactivation and Behavioral deactivation), Substance and alcohol consumption and Humor (assessed with COPE; Carver et al., 1989).

Specifically, to test the hypothesis associated with the objective of this study, a quasi-experimental comparative design will be used, with the independent variables being the educational and rehabilitation programs attended in the 6-8 months, and as dependent variables being the scales and sub-scales of HIT (Barriga et al., 2001) and COPE (Carver et al., 1989).

3.3.6. Procedure

The acquisition of the data collection agreement consisted in the implementation of a standard applications form approved by Babeş Bolyai University (Doctoral School of Education, Reflection, Development), Cluj Napoca, in order to ensure access to the institutions (Arad Penitentiary, Buzias Reeducation Center, Arad Probation Service, Child Protection Service of Arad and Arad High-School of Economic). COPE (Carver et al., 1989) and HIT (Barriga et al., 2001) were administered to the participants by the pen and paper method and they were informed that they were participating in a research on adolescents. Subjects have also been granted the confidentiality of data.

Data collection took place between April 2018 and September 2018, and completion of the questionnaire package was approximately 20-30 minutes for each participant.

This study was conducted in three stages: 1. The pre-test stage, which consisted of the initial testing of the three groups (ND, AR and D); 2. Checking whether the averages of the pre-test participants (ND, AR, and D) selected for this study are statistically similar with the whole group averages (ND, AR and D, participants who were investigated in the second study of this PhD thesis), in terms of the studied variables; 3. The incubation stage, which took place over a period of 6-8 months. At this stage, the AR and D groups followed educational and rehabilitation programs, specific to the host institutions, such as: educational programs, psychological and social assistance, hosting, care, education and training programs for reintegration or integration into the family and society. The ND group did not follow educational or preventive programs; they were classified as the post-test control group. At the detention facilities, all participants were able to benefit from these programs, and the participation in these programs was based on the individual and personalized intervention plan. In addition, participation in these programs has been associated with various rewards in the form of credits (www.monitoruljuridic.ro). In the case of the at risk adolescents, when they were enrolled in the child protection system, participation in the intervention programs was continuous, since inclusion in this system required participation in various activities that were organized according to the specific case; 4. The post-test phase consisted of re-testing the participants (ND, AR and D), by applying the questionnaire package identical to the pre-test period. The participants who were selected for the post-test phase are those who could be found after 6-8 months in the research institutions.

3.3.7. Results

The data was processed using the SPSS 17 software. Besides the variables mentioned above, the scores for the Anomalous Responding (scale that measures the sincerity of the responses) scale of the HIT Questionnaire (Barriga et al., 2001) were calculated in order to control the sincerity of the answers given in this study. According to literature (Barriga et al., 2001), if the score on the Anomalous Responding scale is higher than 4.00, then the protocol is suspect as to the sincerity of the response; if the score is higher than 4.25 then the protocol may not be considered as valid.

The mean values for the Anomalous Responding scale of the pre-test groups were: $M = 3.41$ ($SD = .90$) for the non-delinquent adolescents ($N=34$), $M = 2.98$ ($SD = .87$) for the at risk adolescents ($N=21$) and $M = 3.00$ ($SD = .99$) for the delinquent adolescents ($N = 33$). These values indicate that the participants provided unbiased answers to the questionnaire elements.

The mean values for the Anomalous Responding scale of the post-test groups were: $M = 3.42$ ($SD = 1.06$) for ND ($N=34$), $M = 3.40$ ($SD = .97$) for AR ($N=21$) and $M = 3.03$ ($SD =1.06$) for D ($N = 33$). These values indicate that the participants provided honest answers to the questionnaire elements.

For each questionnaire, group of adolescents and stage, the following **psychometric properties (AlphaCronbach)** were obtained.

The Alpha Cronbach coefficients for the ND adolescent group (**pre-test stage**) are as follows: For HIT, the coefficients vary from .714 (Stealing) to .924 (Total HIT);For COPE, the coefficients vary from .044 (Restraint) to .890 (Humor);At the **post-test** phase, the Alpha Cronbach coefficients for the ND group are as follows: For HIT, the coefficients vary from .685 (Minimizing/Mislabeling) to .909 (Total HIT);For COPE, the coefficients vary from .530 (Mental deactivation) to .915 (Humor).

The Alpha Cronbach coefficients for the AR adolescent group (**pre-test stage**) are as follows: For HIT, the coefficients vary from .531 (Anomalous Responding) to .891 (Total HIT);For COPE, the coefficients vary from .354 (Denial) to .874 (Emotion focused coping);At the **post-test** phase, the Alpha Cronbach coefficients for the AR group are as follows: For HIT, the coefficients vary from .254 (Lying) to .729 (Total HIT);For COPE, the coefficients vary from .228 (Expressing the emotions) to .838 (Use of social-emotional support).

The Alpha Cronbach coefficients for the D adolescent group (**pre-test stage**) are as follows:For HIT, the coefficients vary from .676 („Anomalous Responding”) to .928 (Total HIT);For COPE, the coefficients vary from .024 (Mental deactivation) to .936 (Substance and alcohol consumption);At the **post-test** phase, the Alpha Cronbach coefficients for the D group are as follows:For HIT, the coefficients vary from .698 (Blaming Others) to .948 (Total HIT);For COPE, the coefficients vary from .366 (Denial) to .919 (Substance and alcohol consumption).

Due to the fact that in the group of adolescents at risk, the Alpha Cronbach (**post-test**) coefficient for the Self-Centered cognitive distortion scale was .053 (.819 for non-delinquents and .801 for delinquents), it was decided to eliminate item 7 from the equation (*Dacă văd un lucru ce îmi place, mi-l însușesc*) from the HIT questionnaire (and from all scales that contain this item from all the groups to increase their value). As a result, Alpha coefficients were also recalculated for Total HIT, the Covert scale and the Stealing scale(since these scales also included item 7, which was removed from the the Self-Centered cognitive distortion scale).Alpha Cronbach coefficients for these scales (with Item 7 included) were:For Stealing: .718 (ND), .299 (AR) and .845 (D); for the Covert scale: .807 (ND), .486 (AR) and .907 (D); for total HIT: .909 (ND), .729 (AR) and .948 (D).

Also, in the case of very the low coefficients registered in two subscales(Self-Centered and Lying; in the adolescents at risk group, **post-test stage**),even after the elimination of item 7, the scales were verified by standard procedures but the elimination of numerous items from the HIT questionnaire will affect its quality in the other groups from the post-test phase (where Alpha coefficients had a good value).

Considering that at the **pre-test** stage (in the group of adolescents at risk) there were higher Alpha coefficients (probably they understood the items more correctly at this stage), it is possible that at the **post-test** stage some items had a lower level of comprehensibility than others, possibly associated with a lower level of attention and interest compared to first contact with the tools in the pre-test phase. Also, some of the participants from this group presented difficulties in communication, understanding certain notions, writing and reading.

In the case of the very small coefficients recorded in the COPE questionnaire (Active approach, Deletion of concurrent activities, Positive interpretation and growth, Restraint, Acceptance, Expressing the emotions, Denial, Mental deactivation) in the three groups (ND, AR and D) of the two stages (pre-test and post-test), it was decided to continue the study with the global scores of the COPE questionnaire (Problem focused coping, Emotion focused coping, Social support focused coping, Avoidant coping, Substance and alcohol consumption and Humor) because they have presented

stronger Alpha coefficients. It is possible that the small values recorded in the COPE questionnaire sub-scales are due to the low number of items representing each variable (4 items per sub-scale), or it may be that some items in the questionnaire have had a lower level of comprehensibility than others for all three groups (examples of items from COPE: *Mă apuc de lucru sau de alte activități înlocuitoare pentru a-mi lua gândurile de la anumite lucruri*, or *Mă oblig să aștept momentul propice pentru a face ceva*).

In order to determine what type of statistical procedures to use for this study, the distribution of normality was calculated with the Shapiro-Wilk test for each scale and sub-scale of the used instruments, for each group (ND, AR, D) and for each stage (pre-test and post-test).

For the ND adolescent group (pre-test stage), the scales that did not respect a normal distribution are: Total HIT, Covert scale, Self-Centered, Physical Aggression, Stealing, Substance and alcohol consumption and Humor.

For the AR adolescent group (pre-test stage), the scales that did not respect a normal distribution are: Self-Centered, Substance and alcohol consumption and Humor.

For the D adolescent group (pre-test stage), the scales that did not respect a normal distribution are: Total HIT, Overt scale, Covert scale, Assuming the Worst, Lying, Stealing, Social support focused coping, Substance and alcohol consumption and Humor.

For the ND adolescent group (post-test stage), the scales that did not respect a normal distribution are: Overt scale, Self-Centered, Physical Aggression, Stealing, Avoidant coping, Substance and alcohol consumption and Humor.

For the AR adolescent group (post-test stage), the scales that did not respect a normal distribution are: Overt scale, Problem focused coping, Social support focused coping, Substance and alcohol consumption and Humor.

For the D adolescent group (post-test stage), the scales that did not respect a normal distribution are: Total HIT, Covert scale, Blaming Others, Minimizing/Mislabeled, Assuming the Worst, Stealing, Substance and alcohol consumption and Humor. The subsequent statistical analysis was based on these data distribution results.

Differences were calculated (using the t test method) between the group averages (ND, AR and D, N = 34; 21; 33) selected for this study (pre-test stage) and the group averages (ND, AR and D, N = 96; 27; 55) that were studied in the previous study (population average).

Only two variables were found to register significant differences, as follows: In the group of delinquent adolescents -Assuming the Worst scale ($t = -4.668$, $p < .01$) and in the non-delinquent group - Substance and alcohol consumption scale ($t = -2.263$, $p < .05$). These results indicate that adolescents selected for this study (ND, AR and D, pre-test stage) and the adolescents that participated in the previous study (ND, AR and D, population average) show a strong statistical similarity, suggesting that the participants selected for this study did not violated the null hypothesis.

Table1. The mean values of standard deviations for self-serving cognitive distortions, anti-social behaviors and coping mechanisms between the two stages (pre and post test) according to status (non-delinquent, adolescents at risk and delinquents).

Instrument scales		Non-delinquents		At risk adolescents		Delinquents	
		Pret-test	Post-test	Pret-test	Post-test	Pret-test	Post-test
Total HIT	M	2.51	2.41	2.98	2.71	3.09	2.73
	SD	.73	.68	.81	.54	.98	1.05
	N	34	34	21	21	33	33
Overt scale	M	2.64	2.53	2.99	2.84	3.22	2.99
	SD	.84	.80	.87	.67	.94	1.07
	N	34	34	21	21	33	33

Covert scale	M	2.41	2.31	2.97	2.58	2.99	2.48
	SD	.71	.66	.84	.57	1.07	1.09
	N	34	34	21	21	33	33
Self-Centered	M	2.65	2.58	3.25	2.82	3.30	2.80
	SD	.95	.99	1.09	.77	1.13	1.21
	N	34	34	21	21	33	33
Blaming Others	M	2.52	2.44	2.99	2.78	3.21	2.87
	SD	.79	.73	.83	.72	1.08	.94
	N	34	34	21	21	33	33
Minimizing/Mislabeling	M	2.35	2.23	2.84	2.63	2.92	2.43
	SD	.83	.75	.92	.87	1.14	1.16
	N	34	34	21	21	33	33
Assuming the Worst	M	2.44	2.37	2.83	2.60	2.91	2.81
	SD	.73	.70	.85	.73	1.03	1.16
	N	34	34	21	21	33	33
Opposition-Defiance	M	2.85	2.81	3.10	2.98	3.56	3.20
	SD	.80	.81	.97	.75	.98	1.04
	N	34	34	21	21	33	33
Physical Aggression	M	2.42	2.25	2.87	2.71	2.87	2.78
	SD	.95	.89	.91	.81	1.12	1.21
	N	34	34	21	21	33	33
Lying	M	2.85	2.80	3.11	2.94	3.34	2.72
	SD	.89	.87	1.08	.73	1.09	1.14
	N	34	34	21	21	33	33
Stealing	M	1.96	1.82	2.83	2.22	2.64	2.24
	SD	.66	.65	.84	.63	1.27	1.13
	N	34	34	21	21	33	33
Problem focused coping	M	2.60	2.71	2.51	2.52	3.16	3.07
	SD	.52	.56	.71	.50	.41	.60
	N	34	34	21	21	33	33
Emotion focused coping	M	2.69	2.63	2.55	2.64	3.16	3.15
	SD	.35	.47	.67	.54	.37	.54
	N	34	34	21	21	33	33
Social support focused coping	M	2.68	2.62	2.56	2.71	3.09	3.10
	SD	.56	.66	.63	.62	.47	.59
	N	34	34	21	21	33	33
Avoidant coping	M	2.32	2.21	2.42	2.44	2.70	2.55
	SD	.44	.57	.57	.56	.55	.62
	N	34	34	21	21	33	33
Substance and alcohol consumption	M	1.16	1.60	1.58	1.38	1.80	1.55
	SD	.41	.89	.76	.65	1.06	.88
	N	34	34	21	21	33	33
Humor	M	2.15	2.47	2.12	2.39	2.10	2.08
	SD	.97	1.00	.92	.74	.97	.94
	N	34	34	21	21	33	33

M = mean; SD = standard deviation; N = number of subjects

In order to verify whether if the differences were statistically significant, the Wilcoxon test method was used. This method is used because some important variables have not respected a normal distribution.

In the group of non-delinquent adolescents (control group) the only statistically significant differences between pre- and post-test were recorded at Substance and alcohol consumption ($Z = -2.230^b$, $p < .05$) and Humor ($Z = -2.131^b$, $p < .05$). In the group of adolescents at risk, significant differences were noted in the Covert scale ($Z = -1.964^a$, $p = .05$) and Stealing scale ($Z = -2.763^a$, $p < .01$). Regarding the group of the delinquent adolescents, significant differences between pre- and post-

test were recorded for all variables except for Assuming the Worst, Physical Aggression and the 6 global scales of coping mechanisms.

3.3.8. Discussions and conclusions

This study investigated self-serving cognitive distortions and coping strategies (in the categories of non-delinquent adolescents, delinquent adolescents and adolescents at risk) after a period of 6-8 months (pre- and post-test comparative analysis). During this 6-8 month period, adolescents will participate in a number of education and prevention programs in the institutions where the study will be conducted (Buzias Re-Education Center, Arad Penitentiary, Arad Probation Service, General Child Protection Service Arad - DGASPC), in order to identify the potential attitudinal and behavioral changes (in the direction of their social desirability), which are supposed to associate with the attendance of these programs.

The results of the study suggest that educational, psychological and social assistance programs have the potential to reduce the intensity of cognitive distortions and anti-social behaviors in the group of delinquent adolescents and to reduce the level of stealing in the group of adolescents at risk. Concerning coping mechanisms, the results showed that the educational, psychological assistance and social assistance programs did not improve the quality of the coping mechanisms used by delinquent and at-risk adolescents. This can be explained due to the fact that these groups of adolescents did not have a high level of education and have not resonated optimally in terms of comprehensibility with the COPE questionnaires (the low Alpha scores at the pre-and post-test phases). In the group of delinquent adolescents, the pre-test level of the coping mechanism scores has already been increased.

In the group of adolescents at risk, the low level of stealing in the post-test phase can be explained by the fact that this group of adolescents has been removed from the abusive environment from which they came from and the fact that they did not have contact for 6-8 months with the abusive families (it could be a factor that contributed to the low level of Stealing). The fact that other cognitive distortions and anti-social behaviors did not decrease at the post-test stage complements the explanation given above, which is also supported by the fact that the previous study revealed a significant link between Stealing and the perceived dysfunctional paternal behavior (abusive and over-controlling).

The results of this study are consistent with literature, suggesting that the curriculum of certain educational programs in which the social, emotional and cognitive skills and abilities are developed, the remodeling and cultivation of moral judgment is developed, the information regarding the risks of engaging in anti-social behaviors is given (such as substance abuse) and the improvement of impulse control skills are developed, have the ability to reduce the level of anti-social and delinquent behavior in young individuals and adolescents (Brugman & Bink, 2011, Heilbrun, Goldstein, & Redding, 2005; Shoemaker, 2009; Gibbs, Potter & Goldstein, 1995; Catalano et al., 2004). Educational, psychological and social assistance programs from the detention institutions in which the study was conducted are similar to those in the literature, suggesting that these programs are effective in reducing anti-social or delinquent behavior. It can be said that the significant differences in the post-test phase could have been due to these programs because the control group did not differentiate between the pre-and post-test stage (they did not undergo any educational rehabilitation program).

Chapter 4. DISCUSSIONS AND CONCLUSIONS

The present doctoral research has proposed and managed to investigate a series of individual/psychological (self-serving cognitive distortions and coping mechanisms) and social factors (family climate, the level of education, the level of social support offered in real time and criminal history) associated with anti-social and delinquent behavior in young individuals and adolescents from Romania.

Various theoretical models in the literature suggest that a dysfunctional environment (marginal or disadvantaged community, incomplete, abusive and/ or indifferent family, low socio-economic status, the presence of deviant groups) may encourage young individuals or adolescent to engage in risk behaviors (lack of interest or access to formal education, development of deviant or psychopathological behavioral patterns and development of dysfunctional coping mechanisms). These behaviors, in their turn, have the capacity to develop or encourage the emergence or support of anti-social or delinquent behavior (Marica, 2007; Shoemaker, 2009; Shoemaker, 2010; Agnew, 2001).

Among the many theoretical approaches (Sutherland, 1947; Vygotsky, 1929; Bandura, 1986; Bronfenbrenner, 1979; Bursik, 1988; Durkheim, 1933; Merton, 1957; Cohen, 1955; Hirschi, 1969; Tannenbaum, 1938; Cloward & Ohlin, 1960) that have been used in literature to provide explanations on the effects of the environment in which adolescents and young individuals are developing on their progress in the emergence and evolution of dysfunctional, anti-social or delinquent behavior (the focus of this doctoral research project), this doctoral thesis approached a psycho-social direction in terms of the emergence and rehabilitation of an anti-social or delinquent behavior, to understand and explain this phenomenon.

From the perspective of the **psycho-social** approach, juvenile delinquency and anti-social behavior can be understood through the associations, influences and interactions of the individual with the environment (stress factors, positive or negative interactions, social pressure, access to education, family, etc.) and the effects of these interactions on the individual level (patterns of thinking, behavioral reactions, adaptation modes, etc.). Adoption of such a perspective in the present doctoral thesis was motivated by the fact that different theories centered on this type of approach (psychological and/ or social) provide comprehensive explanations and descriptions that can help to understand different factors from the environments in which young individuals develop and how they evolve from a psycho-social point of view.

4.1. Contributions and theoretical implications

Based on the content presented above, in order to make it possible to investigate the complexity of the studied phenomenon, the **first study** aimed to linguistically validate (from English to Romanian) the How I Think (HIT, Barriga et al., 2001) and Measure of Parental Style (MOPS, Parker et al., 1997) Questionnaires, in order to investigate self-serving cognitive distortions and dysfunctional parenting styles on juvenile delinquents and other adolescent groups from Romania.

In the literature no questionnaires were available in Romanian to allow the evaluation of the proposed variables. As a result, this study facilitates the need for the scientific community to use these tools in the Romanian language. These needs, as well as the benefits of the translation and linguistic validation of such questionnaires, have both a theoretical and a practical nature.

The How I Think Questionnaire (HIT; Barriga et al., 2001) and the Measure of Parental Style'' (MOPS; Parker et al., 1997) have been identified as adequate to achieve the objectives of this doctoral research project with very good psychometric properties (Barriga et al., 2001; Kohlhoff & Barnett, 2013).

The stages of the linguistic validation from English into Romanian, semiotic equivalence and concretization of the items lead to the elaboration of the final versions (proposed for the application

in the Romanian language) of HIT (Barriga et al., 2001) and MOPS (Parker et al., 1997), versions with psychometric properties that made it possible to investigate the complexity of the studied phenomenon.

The results of the first study are promising and relevant in using the versions that are translated in the Romanian language of the How I Think (HIT, Barriga et al., 2001) and Measure of Parental Style (MOPS, Parker et al., 1997) instruments, in order to successfully evaluate the variables of self-serving cognitive distortions and perceived dysfunctional parenting styles on juvenile delinquents from Romania. Consequently, it can be concluded that based on the results of this study, the two versions (Romanian and English language) of HIT (Barriga et al., 2001) and MOPS (Parker et al., 1997) instruments are linguistic equivalents.

An original contribution of the first study was represented by the linguistic validation of MOPS (split into two versions), questionnaire that refer both to the mother's and the father's perceived behavior, as follows: (1) The variant that refers to the perceived dysfunctional mother's behavior and (2) The variant that refers to the perceived dysfunctional father's behavior (Parker et al., 1997). The MOPS questionnaire (Parker et al., 1997) in the original version (English) contains both variants (both versions that refer to the mother's and the father's perceived behavior) on a single copy (one page). In the case of the present doctoral study, it was decided to collect data for the linguistic validation process by presenting the variants of the questionnaire on two different variant, in order not to influence the answers to the second variant with the answers from the first variant (in other words, avoidance of similarity in the provision of the answers between the two versions, the participant were able to identify clearly to which of the parents the items refer to).

Study 2 of the doctoral thesis had as its first objective the to the investigation of association relationships and differences between self-serving cognitive distortions, anti-social behaviors, coping mechanisms and perceived dysfunctional parenting styles on three groups of adolescents from Romania: delinquents (D), non-delinquents (ND), and at risk adolescent (AR).

The second objective of study 2 was to investigate intra-group relations between the level of education, criminal history, the presence of parents, the level of social support, self-serving cognitive distortions, anti-social behaviors, coping mechanisms and perceived dysfunctional parenting styles in adolescents the D and AR groups.

The third objective of study 2 consisted of the comparison of the significant correlation coefficients between the variables investigated under Objective 2 and Objective 3 among the three adolescent groups (ND, D, AR).

The last objective of study 2 was represented by the investigation of the mediation relationships between the analyzed variables: self-serving cognitive distortions and anti-social behaviors, coping mechanisms, perceived dysfunctional parenting styles, the level education, criminal history, parents' presence, and the level of social support within each group (ND, D, AR).

The obtained results partially confirmed the hypotheses of study 2 and highlighted the importance of the family climate perceived as being dysfunctional (especially that of the mother's) in the development of delinquent or antisocial behavior, regardless of the group (delinquent, non-delinquent, adolescent at risk); the delinquent and at-risk adolescents come from families with a higher perceived dysfunction than the non-delinquent adolescents. The results also showed that a parental style perceived as being dysfunctional and/ or the level of anti-social behavior were positively associated with the maladaptive coping mechanisms. Maladaptive coping mechanisms, in turn, have a significant link with the development of anti-social or delinquent behavior. Another outcome revealed in study 2 was that at risk and delinquent adolescents had a lower level of education than the non-delinquent adolescents, thus arguing that the risk factors mentioned above may predispose young individuals to a deteriorated developmental pathway.

Study 2 also emphasized that an effective way to decrease the intensity of anti-social behaviors and encourage education is through the means of social support provided in real time. Thus, the results have shown a significant link between social support provided in real time and the Active Approach coping mechanism to the at risk adolescents group and a negative correlation between the development of risk behavior and the level of social support offered in real time to the group of delinquent adolescents. Also in the group of delinquent adolescents, the results showed a significant positive link between the level of education and the level of social support offered in real time.

In this study it was also found that anti-social thinking and behavior was positively associated with humor in groups of delinquent and non-delinquent adolescents, which may indicate that young individuals and adolescents in Romania are using humor focused strategies that have a violent and/ or aggressive content.

In the case of the coping mechanisms, study 2 revealed that the group of delinquent participants had higher levels of coping mechanisms (adaptive and non-adaptive) than the other groups, indicating that the way individuals use and interpret these mechanisms can be accomplished in a subjective way (for example, the Planning coping mechanism can be interpreted subjectively as a way of developing plans to commit a crime). It can be interpreted that the delinquent participants had a higher number of stressors, which may explain the focus on the diverse adaptation method used by this group.

In conclusion, study 2 succeeded in identifying those factors that would have the capacity to encourage or develop the manifestation of an anti-social or delinquent behavior (perceived dysfunctional parenting styles, maladaptive coping strategies, low levels of education, low socio-economic status, criminal history and absence or a low level of social support offered in real time) and factors that would have the capacity to diminish such behavior (increased levels of social support offered in real time and access to and adherence to education).

Study 3, entitled, *„Investigating the effects of institutional educational programs on cognitive distortions and coping strategies for delinquent and adolescents at risk. ’’*, aimed to investigate self-serving cognitive distortions and coping strategies (in the categories of non-delinquent adolescents, delinquent adolescents and adolescents at risk) after a period of 6-8 months (pre- and post-test comparative analysis). During this 6-8 month period, adolescents have participated in a number of education and prevention programs in the institutions where the study will be conducted (Buzias Re-Education Center, Arad Penitentiary, Arad Probation Service, General Child Protection Service Arad - DGASPC), in order to identify the potential attitudinal and behavioral changes (in the direction of their social desirability), which are supposed to associate with the attendance of these programs.

During the 6-8 month period, young individuals and adolescents followed educational programs (designed and offered at institutional level in order to reduce the level of criminality and to increase psycho-social rehabilitation of delinquent teenagers) in which the social, emotional and cognitive skills and abilities are developed, the remodeling and cultivation of moral judgment is developed, the information regarding the risks of engaging in anti-social behaviors is given (such as substance abuse) and the improvement of impulse control skills are developed.

The obtained results partially confirmed the hypothesis of study 3, indicating that the educational, psychological and social assistance programs were associated with the decrease of the cognitive distortion and the anti-social behavior levels in the group of delinquent adolescents and had the potential to reduce the level of Stealing in the group of adolescents at risk. An exception was presented by the coping mechanisms, i.e. the attendance to the educational, psychological and social assistance programs did not associate with an improvement in the quality of the coping mechanisms in a statistically significant way within the two groups of adolescents (delinquents and those at risk). The analysis of the pre- and post-test scores showed a slight increase in the level of adaptive coping mechanisms (Problem focused coping, Emotion focused coping, Social support focused coping and Humor) in the group of adolescents at risk and indicated a slight decrease of the level of the Substance

and alcohol consumption in both groups (at risk adolescents and delinquents adolescents). In this light, the educational programs at the institutional level have been associated with changes in the quality of the coping mechanisms, but not in a statistically significant way. It is important to note that a series of mistaken variables, such as the quality and frequency of social relationships within the institutions, life experiences, etc., could have had an impact on the results reported in this study.

4.2. Practical implications

The practical contributions of this doctoral research project can be identified both globally and in each study (the three studies described above), in the direction of the psychosocial and educational elements useful in preventing and combating the juvenile delinquency phenomenon.

Particular importance is given to the practical utility with a diagnostic value of the How I Think (HIT, Barriga et al., 2001) and The Measure of Parental Style (MOPS, Parker et al., 1997) instruments adapted in **study 1**. Therefore, in this study, the Romanian versions of two tools are offered to the academic community and are useful in screening the psychosocial risk factors associated with anti-social behavior and juvenile delinquency. Specifically, HIT evaluates the self-serving cognitive distortions and antisocial, while MOPS (Parker et al. al., 1997) evaluates the level of perceived parental dysfunction, both towards the mother's and the father's perceived behavior. These tools can be used in practice to carry out different studies on the Romanian population and/ or can be used to establish a criminal diagnosis (risk factors and the levels of anti-social behavior and thinking) in order to determine the individualized intervention plan.

The results of **study 2** were able to identify relevant information about the factors that would have the capacity to encourage or develop the manifestation of anti-social or delinquent behavior and the factors that would have the capacity to diminish such behaviors. This information can represent a significant practical value because on the basis of these results, programs of behavioral prevention or rehabilitation can be implemented (of antisocial or delinquent behavior).

The practical applicability part that had a direct impact on the anti-social or delinquent behavior is represented by **Study 3**. The results of the last study showed that the educational, psychological and social assistance programs in the investigated institutions from Romania were associated with a reduction of the level of anti-social behaviors and thinking.

4.3. General conclusions

As a general conclusion, it can be said that the results of **study 1** presented theoretical and practical/ applied implications that enabled the realization of this doctoral research project, as well as providing useful tools for identifying the psychosocial and social risk factors associated with juvenile delinquency to the academic community. The results of **study 2** have been able to identify a number of factors associated with delinquent or antisocial behavior (perceived dysfunctional parenting styles, maladaptive coping strategies, low levels of education, low socio-economic status, criminal history and absence or a low level of social support offered in real time) and have succeeded in highlighting some elements that may have the potential to significantly diminish the manifestation of dysfunctional behavior. Finally, **study 3** has managed to investigate the impact of educational, psychological and social assistance programs on reducing anti-social behaviors and thinking, from the perspective of the investigated variables, i.e. self-serving cognitive distortions (Self-Centered, Blaming Others, Minimizing/ Mislabeled), and anti-social behaviors (Opposition-Defiance, Lying, and Stealing). Only variables with statistically significant differences were mentioned here.

4.4. Limits and future directions of research

Within this doctoral research project certain limits have been identified. The limits mentioned in this section are summarized in the results of the three studies and some of them could be treated as future research directions.

Therefore, the limits of this doctoral research project include: the low level of education in the groups of delinquent and at-risk adolescents (as a consequence, these two groups had a low level of comprehensibility of certain items, which resulted in low alpha coefficients to certain scales); low control of the research (selection of participants and conduct of research was largely dependent on the officials of the institutions in which the study was conducted); lack of patience of the participants regarding the task of completing the questionnaires (in total, the respondents answered 144 items, which for some were perceived as too many); limited time access to the delinquent participants (time spent with participants was limited because, according to institutional policy, they had to follow a rigorous program at the institutions where the research took place); the number of participants in the delinquent (N = 55) and at risk (N = 27) adolescent groups (the selection of participants was highly dependent on the institutions responsible for the research, the level of education and cooperation of the participants, the age of the participants and the desire to participate in the study); the relatively low number of participants in the groups of delinquent and at risk adolescents in the post-test phase (the selection of the participants was highly dependent on the attendance and availability of the participants; some of the participants could not be found because of the finalization of detention, transfer to other detention facilities, conditional release, medical problems requiring hospitalization or completion of the service provided by DGASPC).

Another limit could be represented by the re-acquisition of anti-social or delinquent behavior by the participants from Study 3, due to the fact that the groups of delinquent and at risk adolescents could return back to the dysfunctional environments after finishing the sentence or the child protection program. The results of study 2 can support the above mentioned argument, as they underlined the importance of the family environment in the development of anti-social behavior or cognition. Therefore, a possible solution to a perceived dysfunctional family environment could be a parent-centered course or type of intervention with the purpose to improve and/ or optimize the family climate and to reduce the development of behavioral problems of adolescents and young people who live in such family environments (Jarrett, 1999; Todd, 2004; Beyer, 2008). The results of study 2 also revealed a strong link between social support provided in real time and low anti-social behavior, therefore programs developed for parents could also improve the quality of social support provided in real time.

In order to improve the quality of pro-social and adaptive coping strategies, it might be worthwhile piloting or implementing an educational program that could focus on the acquisition of adaptive skills that would help to balance stressful situations and diminish the risk of adopting dysfunctional behavior, by following certain standard structures or models existing in literature (Ko, Yu & Kim, 2003; Gibbs, Potter & Goldstein, 1995; Brugman & Bink, 2011). The results of study 2 showed some significant associations and mediation relationships between the family environment perceived as being dysfunctional and maladaptive coping mechanisms, as well as between anti-social behaviors and maladaptive coping mechanisms. This program could help young individuals and adolescents that emerged from a dysfunctional environment adapt more effectively to stressful situations associated with that environment.

Another direction of research could be based on the investigation of the emotional intelligence components in relation to delinquency in adolescents and the variables studied in this paper. Emotional intelligence can be an important factor in the analysis of the juvenile delinquency phenomenon because studies from literature (Santesso et al., 2006; Siu, 2009; Mavroveli & Sanchez-Ruiz, 2011; García-Sancho et al., 2014) showed that low level of emotional intelligence can positively

associate with anti-social behaviors and low levels of academic performance; an increased level of emotional intelligence is usually associated with non-aggressive and pro-social behaviors.

This doctoral thesis can therefore be considered as a contributor to the complexity of the studied phenomenon of delinquency and anti-social behavior, providing results that can contribute to the understanding of the processes of improvement, rehabilitation or prevention of dysfunctional behavior and results which cover the need for content in the Romanian literature on the factors studied in this PhD thesis.

References

- Agnew, R. (1992). Foundation for a general strain theory of crime and delinquency. *Criminology*, 30(1): 47-88.
- Agnew, R. (2001). Building on the Foundation of General Strain Theory: Specifying the Types of Strain Most Likely to Lead to Crime and Delinquency. *Research in Crime and Delinquency*, 38(4): 319-361.
- Ajzen, I. (1988). *Attitudes, personality and behavior*. Chicago: Dorsey.
- American Psychiatric Association (1994). *Diagnostic and Statistical Manual of Mental Disorders (4th ed.)*. Washington, DC: Author.
- Andrews, D.A., & Bonta, J. (2003). *The psychology of criminal conduct, (3rd edition)*. Cincinnati, Ohio: Anderson Publishing.
- Ara, E., & Shah, S.A. (2015). Validating “How I Think” Questionnaire - Measuring Self-Serving Cognitive Distortions among Adolescents in Kashmir. *International Journal of Physical and Social Sciences*, 5(6): 117-130.
- Avocatura (n.d.) Noul Cod Penal 2014. Retrieved from <http://www.avocatura.com/11491-noul-cod-penal.html> on 19 December 2017.
- Bailey, S., & Scott, S. (2008). Juvenile delinquency. In M. Rutter, D. Bishop, D. Pine, S. Scott, J. Stevenson, E. Taylor, & A. Thapar (Eds.), *Rutter's child and adolescent psychiatry* (pp. 1106–1125). Oxford: Blackwell Publishing.
- Bandura, A. (1977). *Social learning theory*. Englewoods Cliff, NJ: Prentice-Hall.
- Bandura, A. (1986). *Social foundation of thought and action: A social cognitive view*. Englewood Cliffs, NJ: Prentice-Hall.
- Baron, R.M., & Kenny, D.A. (1986) The Moderator-Mediator Variable Distinction in Social Psychological Research – Conceptual, Strategic, and Statistical Considerations. *Journal of Personality and Social Psychology*, 51(6): 1173–1182.
- Barriga, A.Q., Gibbs, J.C., Potter, G., & Liau, A.K. (2001). *How I Think (HIT) Questionnaire Manual*. Champaign, IL: Research Press.
- Barriga, A.Q., Hawkins, M., & Camelia, C.R. (2008). Specificity of cognitive distortions to antisocial behaviour. *Criminal Behaviour and Mental Health*, 18(2): 104-116.
- Barriga, A.Q., Landau, J.R., Stinson, B.L., Liau, A.K., & Gibbs, J.C. (2000). Cognitive distortion and problem behaviors in adolescents. *Criminal Justice and Behavior*, 27(1): 36-56.
- Bartol, C.R., & Bartol, A.M. (2011). *Criminal behavior: A psychological approach*. New Jersey, NJ: Pearson.
- Baumrind, D. (1966). Effects of authoritative parental control on child behavior. *Child Development*, 37(4): 887-907.
- Baumrind, D. (1967). Child care practices anteceding three patterns of pre-school behavior. *Genetic Psychology Monographs*, 75(1): 43-88.
- Baumrind, D. (1971). Current patterns of parental authority. *Developmental Psychology*, 4 (1, Pt.2): 1-103.
- Baumrind, D. (1991). Parenting styles and adolescent development. In Brooks-Gunn, J., Lerner, R., and Peterson, A.C. (Eds.), *The Encyclopedia of Adolescence* (pp. 746–758). New York, NY: Garland.
- Beaton, D.E., Bombardier, C., Guillemin, F., & Ferraz, M.B. (1998). *Recommendations for the Cross-Cultural Adaptation of Health Status Measures*. Rosemont, IL: American Academy of Orthopaedic Surgeons Institute for Work & Health.

- Beaton, D.E., Bombardier, C., Guillemin, F., & Ferraz, M.B. (2007). *Recommendations for the Cross-Cultural Adaptation of the DASH & QuickDASH Outcome Measures*. Ontario, CA: Institute for Work & Health.
- Berger, K.S. (2003). *The Developing Person Through Childhood and Adolescence*, (6th edition). New York, NY: Worth Publishers.
- Berindei, R.A. (2006). *Criminalitatea juvenilă*. Iași: Editura Lumen.
- Beyer, M. (2008). Visit Coaching: Building on Family Strengths to Meet Children's Needs. *Juvenile and Family Court Journal*, 59(1): 47-60.
- Blackburn, R. (1993). *The psychology of criminal conduct: theory, research, and practice*. Chichester: Wiley.
- Blanca, M.J., Alarcón, R., Jaime Arnau, J., Bono, R., & Rebecca Bendayan, R. (2017). Non-normal data: Is ANOVA still a valid option? *Psicothema*, 29(4): 552-557.
- Branje, S.J.T. (2008). Conflict management in mother–daughter interactions in early adolescence. *Behaviour*, 145(11): 1627 – 1651.
- Brislin, R.W. (1986). Research instruments. *Field methods in cross-cultural research: Cross-cultural research and methodology series*, 8: 137-164.
- Bronfenbrenner, U. (1979). *The ecology of human development*. Cambridge, MA: Harvard University Press.
- Bronfenbrenner, U. (1994). Ecological models of human development. In *International Encyclopedia of Education, Vol 3, 2nd. Ed.* Oxford: Elsevier. Reprinted in: Gauvain, M. & Cole, M. (Eds.), *Readings on the development of children, 2nd Ed.* (pp. 37-43). New York, NY: Freeman.
- Bronfenbrenner, U. (2005). *Making human beings human: bioecological perspectives on human development*. Thousand Oaks: Sage Publications.
- Brugman, D., & Bink, M.D. (2011). Effects of the EQUIP peer intervention program on self-serving cognitive distortions and recidivism among delinquent male adolescents. *Psychology, Crime & Law*, 17(4): 345-358.
- Bursik, J.R. (1988). Social Disorganization and Theories of Crime and Delinquency: Problems and Prospects. *Criminology*, 26(4): 519–552.
- Carver, C.S., Scheier, M.F., & Weintraub, J.K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology*, 56(2): 267-283.
- Carver, C.S., & Connor-Smith, J. (2010). Personality and Coping. *Annual Review of Psychology*. 61(1): 679–704.
- Catalano, R.F., Berglund, M.L., Ryan, J.A.M., Lonczak, H.S., & Hawkins, J.D. (2004). Positive Youth Development in the United States: Research Findings on Evaluations of Positive Youth Development Programs. *The ANNALS of the American Academy of Political and Social Science*, 591(1): 98-124.
- Cloward, R., & Ohlin, L. (1960) *Delinquency and Opportunity: A Theory of Delinquent Gangs*. New York, NY: Free Press.
- Cohen, A.K. (1955). *Delinquent Boys*. New York, NY: Free Press.
- Copaci, I.A., Soos, A., & Rusu, A.S. (in press). Romanian and Linguistic Validation of the Civic Attitudes and Skills Questionnaire: Implications for Pre-Service Teachers' Evaluation. *Journal of Psychological and Educational Research (JPER)*.
- Crașovan, D.I., & Sava, F.A. (2013). Translation, adaptation, and validation on romanian population of COPE Questionnaire for coping mechanisms analysis. *Cognition, Brain, Behavior*, 17(1): 61-76.
- Cullen, F.T. (1994). Social support as an organizing concept for criminology: Presidential address to the Academy of Criminal Justice Sciences. *Justice Quarterly*, 11(4): 527-560.
- Darling, N., & Steinberg, L. (1993). Parenting style as context: An integrative model. *Psychological Bulletin*, 113(3): 487-496.
- Demeter, E., Balas Timar, D., Ionescu (Pădurean), A., & Rusu, A.S. (2017). Romanian translation and linguistic validation of The Measure of Parental Style. In M. Milcu, M. Stevens & I. Dahl (Coord), *Modern research in health, education and social sciences. From evaluation to intervention* (pp. 183-188). București: Editura Universitară.
- Demeter, E., Balas-Timar, D., Ionescu (Pădurean), A., & Rusu, A.S. (2018). Romanian translation and linguistic validation of the how i think questionnaire. In V. Chis & I. Albulescu (Eds.), *The European Proceedings of Social & Behavioural Sciences EpSBS Volume XLI* (pp. 241-248). Cluj Napoca, CJ: Future Academy.
- Dishion, T.J., & Patterson, G.R. (2006). The development and ecology of antisocial behaviour in children and adolescents. In D. Cicchetti & D.J. Cohen (Eds.), *Developmental psychopathology: Risk, disorder and adaptation, Vol. 3* (pp. 503- 541.). Hoboken, NJ: John Wiley & Sons Inc.

- Dragomirescu, V. (1976). *Psihologia comportamentului deviant*. București: Editura Științifică și Enciclopedică.
- Durkheim, E. (1933). *The Division of Labor in Society*, translated by Simpson, G. London: The Free Press of Glencoe. First published in 1893.
- Erikson, E.H. (1968). *Identity: Youth and crisis*. New York, NY: W.W. Norton.
- Farrington, D.P. (2002). Developmental criminology and risk-focused prevention. In Maguire, M.; et al. (Eds.), *The Oxford Handbook of Criminology (3rd edition)* (pp. 657-701). Oxford: Oxford University Press.
- Fernández, M.E.P., Rodríguez, J.M.A., Barriga, A. & Gibbs, J. (2013). Psychometrical properties of the “How I Think” Questionnaire (HIT-Q) in adolescents. *Psicothema*, 25(4): 542-548.
- García-Sanchoa, E., Salguero, J.M., & Fernández-Berrocá, P. (2014). Relationship between emotional intelligence and aggression: A systematic review. *Aggression and Violent Behavior*, 19(5): 584–591.
- Gavreliuc, A. (2006). *De la relațiile interpersonale la comunicarea socială*. Iași: Polirom.
- Gerber, J.J., & Macionis, L.M. (2010). *Sociology (7th Canadian edition)*. Toronto: Pearson Canada.
- Gheorghe, F. (1996). *Psihologie Penitenciară*. București: Editura Oscar Print.
- Gibbs, J.C. (2003). *Moral development and reality*. Thousand Oaks, CA: Sage.
- Gibbs, J.C., Potter, G.B., & Goldstein, A.P. (1995). *The EQUIP Program: Teaching youth to think and act responsibly through a peer helping approach*. Champaign, IL: Research Press.
- Graham, J. & Bowling, B. (1995). Young People and Crime. *Home Office Research Study No. 145*, London: Home Office.
- Hayes, A.F. (2012-2018). The PROCESS macro for SPSS and SAS. Retrieved from <http://www.processmacro.org/> on 06 July 2018.
- Hayes, A.F. (2013). *Methodology in the social sciences. Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York, NY, US: Guilford Press.
- Heilbrun, K., Goldstein, N.E.S., & Redding, R.E. (2005). *Juvenile Delinquency Prevention, Assessment and Intervention*. New York, NY: Oxford University Press.
- Hirschi, T. (1969). *Causes of Delinquency*. Berkeley, CA: University of California Press.
- Jarrett, R.L. (1999). Successful Parenting in High-Risk Neighborhoods. *The Future of Children*, 9(2): 45-50.
- Kahn, J. (2014). Reporting Mediation and Moderation. Retrieved from <http://my.ilstu.edu/> on 12.07.2017.
- Kathleen, S.B. (2011). *The Developing Person Through the Life Span*. New York, NY: Worth Publishers.
- Kawabata, Y., Alink, L.R.A., Tseng, W.-L., van Ijzendoorn, M.H., & Crick, N.R. (2011). Maternal and paternal parenting styles associated with relational aggression in children and adolescents: A conceptual analysis and meta-analytic review. *Developmental Review*, 31(4): 240-278.
- Ko, M.J., Yu, S.J., & Kim, Y.G. (2003). The effects of solution-focused group counseling on the stress response and coping strategies in the delinquent juveniles. *Taehan Kanho Hakhoe chi*, 33(3): 440-450.
- Kohlhoff, J., & Barnett, B. (2013). Parenting self-efficacy: Links with maternal depression, infant behaviour and adult attachment. *Early Human Development*, 89: 249–256.
- Kort-Butler, L.A. (2009). Coping Styles and Sex Differences in Depressive Symptoms and Delinquent Behavior. *Journal of Youth and Adolescence*, 38(1): 122–136.
- Kort-Butler, L.A. (2010). Experienced and vicarious victimization: Do social support and self-esteem prevent delinquent responses?. *Journal of Criminal Justice*, 38(4): 496–505.
- Lazarus, R.S., & Folkman, S. (1987). Transactional Theory and Research on emotion and coping. *European Journal of Personality*, 1(3): 141-169.
- Lefkowitz, E.S., & Fingerhman, K.L. (2003). Positive and Negative Emotional Feelings and Behaviors in Mother-Daughter Ties in Late Life. *Journal of Family Psychology*, Vol 17(4): 607-617.
- Lenhard, W. & Lenhard, A. (2014). Hypothesis Tests for Comparing Correlations. available: <https://www.psychometrica.de/correlation.html>. Bibergau (Germany): Psychometrica.
- Maccoby, E.E., & Martin, J.A. (1983). Socialization in the context of the family: Parent-child interaction. In Mussen, P.H.; Hetherington, E.M., *Manual of child psychology: Social development, Vol. 4* (pp. 1–101). New York: John Wiley and Sons.
- Marica, M.A. (2007). *Introducere în problematica delinvenței juvenile*. Constanța: Ovidius University Press.
- Matsumoto, D. (2009). *The Cambridge Dictionary Of Psychology*. New York, NY: Cambridge University Press.
- Mavroveli, S., & Sanchez-Ruiz, M.J. (2011). Trait emotional intelligence influences on academic achievement and school behaviour. *British Journal of Educational Psychology*, 81: 112–134.

- McConnell, D., Breikreuz, R., & Savage, A. (2011). From financial hardship to child difficulties: main and moderating effects of perceived social support. *Child Care Health Dev.*, 37(5): 679-691.
- Mendel, R. A. (2000). *Less hype, more help: Reducing juvenile crime, what works—and what doesn't*. Washington, DC: American Youth Policy Forum.
- Merton, R.K. (1957). *Social Theory and Social Structure, rev. ed.* New York, NY: Free Press.
- Mikolajczak, M., Petrides, K.V., & Hurry, J.(2009). Adolescents choosing self-harm as an emotion regulation strategy: The protective role of trait emotional intelligence. *British Journal of Clinical Psychology*, 48(2): 181-193.
- Miller, P.H. (2011). *Theories of Developmental Psychology (Fifth Edition)*. New York, NY: Worth Publishers.
- Millie, A. (2009). *Anti-Social Behaviour*. London: Open University Press.
- Moitra, T. & Mukherjee, I. (2010). Does parenting behaviour impacts delinquency? A comparative study of delinquents and nondelinquents. *Official Journal of the South Asian Society of Criminology and Victimology (SASCV)*, 5(2): 274 – 285.
- Moely, B.E., Mercer, S.H., Ilustre, V., Miron, D., & McFarland, M. (2002). Psychometric properties and correlates of the Civic Attitudes and Skills Questionnaire (CASQ): A measure of students' attitudes related to service-learning. *Michigan Journal of Community Service Learning*, 8(2): 15-26.
- Monitorul Juridic. (2017). Regulament din 25 aprilie 2017 privind organizarea și desfășurarea activităților și programelor educative, de asistență psihologică și asistență socială din locurile de deținere aflate în subordinea Administrației Naționale a Penitenciarelor. Retrieved from <http://www.monitoruljuridic.ro/act/regulament-din-25-aprilie-2017-privind-organizarea-i-desf-urarea-activit-ilor-i-programelor-educative-de-asisten-psihologic-i-asisten-social-din-locurile-de-de-inere-aflate-n-subordinea-administra-iei-190338.html> on 05 October 2017.
- Murzea, I.C.(2015). Delincvența juvenilă - abordări teoretice. *Acta Universitatis George Bacovia. Juridica*, 4(2).
- Mwale, M. (2012). *Adolescent Psychology*. Saarbrücken: LAP LAMBERT Academic Publishing.
- Myers, D.G. (2015). *Exploring Social Psychology (7th Edition)*. New York, NY: McGraw Hill Education.
- Nas, C.N., Brugman, D., & Koops, W. (2008). Measuring Self-Serving Cognitive Distortions with the “How I Think” Questionnaire. *European Journal of Psychological Assessment*, 24(3): 181–189.
- Ojo, M.O.D. (2012). A Sociological Review of Issues on Juvenile Delinquency. *Journal of International Social Research*, 5(21): 468-482.
- Parker, G., Roussos, J., Hadzi-Pavlovic, D., Mitchell, P., Wilhelm, K., & Austin, M.P. (1997). The development of a refined measure of dysfunctional parenting and assessment of its relevance in patients with affective disorders. *Psychological Medicine*, 27(5): 1193-1203.
- Parker, G., Tupling, H. & Brown, L.B. (1979). A Parental Bonding Instrument. *British Journal of Medical Psychology*, 52(1): 1-10.
- Patterson, G.R., Forgatch, M.S., Yoerger, K., & Stoolmiller, M. (1998). Variables that initiate and maintain an early-onset trajectory for juvenile offending. *Development and Psychopathology*, 10(3): 531-547.
- Plante, N., Daigle, M.S., Gaumont, C., Charbonneau, L. Gibbs, J., & Barriga, A. (2012). Validation of the “How I Think Questionnaire” in a population of French-speaking adolescents with externalizing behaviors. *Behav. Sci. Law*, 30(2): 196–210.
- Portal Legislativ. (n.d.). HOTĂRÂRE nr. 1.079 din 11 decembrie 2013 (*actualizată*). Retrieved from <http://legislatie.just.ro/Public/DetaliiDocument/154293> on 04 March 2018.
- Portal Legislativ. (n.d.). Ordin nr. 21 din 26 februarie 2004. Retrieved from <http://legislatie.just.ro/Public/DetaliiDocument/50380> on 18 December 2017.
- Rădulescu, S., & Dâmboianu, C. (2003). *Delincvența juvenilă în România: factori de risc care determină comportamentul delinvent*. Sintează.
- Rahim, K.M., Syariani, M.S.N., Azizah, O., & Ayu, M.S.G. (2013). Factorial validation of “How I Think” questionnaire among male inmates in Malaysia. *Malaysian Journal of Psychiatry*, 22(2): 19-32.
- Rector, N.A., & Roger, D. (1996). Cognitive style and well-being: A prospective examination. *Personality and Individual Differences*, 21(5): 663–674.
- Rutter, M., Giller, H., & Hagell, A. (1998). *Antisocial behavior by young people*. Cambridge: Cambridge University Press.
- Salovey, P. & Mayer, J.D.(1990). Emotional Intelligence. *Imagination Cognition and personality*, 9(3): 185-211.

- Santesso, L.D., Dana, L.R., Schmidt, L.A., & Segalowitz, S.J. (2006). Frontal Electroencephalogram Activation Asymmetry, Emotional Intelligence, and Externalizing Behaviors in 10-Year-Old Children. *Child Psychiatry and Human Development*, 36(3): 311-328.
- Santrock, J.W. (2007). *A topical approach to life-span development (3rd Edition)*. New York, NY: McGraw-Hill.
- Schmider, E., Ziegler, M., Danay, E., Beyer, L., & Buehner, M. (2010). Is It Really Robust? *Methodology European Journal of Research Methods for the Behavioral and Social Sciences*, 6(4): 147-151.
- Șchiopu, U. (1997). *Dicționar de psihologie*, București: Editura Babel.
- Șchiopu, U. (2008). *Psihologia modernă*, București: Editura Rompress.
- Shoemaker, J.D. (2009). *Juvenile Delinquency*. Maryland, MD: Rowman & Littlefield Publishers, Inc.
- Shoemaker, J.D. (2010). *Theories of Delinquency: An Examination of Explanations of Delinquent Behavior (6th Edition)*. Oxford: Oxford University Press.
- Shrout, P.E., & Bolger, N. (2002). Mediation in Experimental and Nonexperimental Studies: New Procedures and Recommendations. *Psychological Methods*, 7(4): 422-445.
- Shulman, E.P., & Cauffman, E. (2011). Coping While Incarcerated: A Study of Male Juvenile Offenders. *Journal Of Research On Adolescence*, 21(4): 818-826.
- Siegel, L.J., & Welsh, B. (2011). *Juvenile Delinquency: The Core* (4th edition). Belmont, CA: Wadsworth/cengage Learning.
- Simons, L.G., & Conger, R.D. (2007). Linking Mother-Father Differences in Parenting to a Typology of Family Parenting Styles and Adolescent Outcomes. *Journal of Family Issues*, 28(2): 212-241.
- Siu, A.F.Y. (2009). Trait emotional intelligence and its relationships with problem behavior in Hong Kong adolescents. *Personality and Individual Differences*, 47(6): 553-557.
- Snyder, C.R. (1999). *Coping: The Psychology of What Works*. New York, NY: Oxford University Press.
- Statistics Solutions (n.d.) Comparing Correlation Coefficients. Retrieved from <http://www.statisticssolutions.com/comparing-correlation-coefficients/> on 04 Oct 2018.
- Steinberg, L., & Scott, E.S. (2003). Less Guilty by Reason of Adolescence: Developmental Immaturity, Diminished Responsibility, and the Juvenile Death Penalty. *American Psychologist*, 58(12): 1009-1018.
- Steinberg, L., Morris, A.S. (2001). Adolescent development. *Annual Review of Psychology*, 52(1): 83 - 110.
- Steiner, H., Garcia, I.V., Matthews, Z. (1997). Posttraumatic Stress Disorder in Incarcerated Juvenile Delinquents. *Journal of the American Academy of Child & Adolescent Psychiatry*, 36(3): 357-365.
- Sutherland, E.H. (1947). *Principles of criminology (4th edition)*. Chicago: J.B. Lippincott Co.
- Tannenbaum, F. (1938). *Crime and Community*. London & New York: Columbia University Press.
- Taylor, S.E., Sherman, D.K., Kim, H.S., Takagi, J.J.K., & Dunagan, M.S. (2004). Culture and Social Support: Who Seeks It and Why?. *Journal of Personality and Social Psychology*, 87(3): 354-362.
- Thoits, P.A. (1995). Stress, coping, and social support processes: Where are we? what next? *Journal of Health and Social Behavior*, Spec No(Extra Issue): 53-79.
- Todd, T. (2004). Solution Focused Strategic Parenting of Challenging Teens: A Class for Parents. *Family Relations*, 49(2): 165-168.
- Vygotsky, L.S. (1929). The Problem of the Cultural Development of the Child. *The Journal of Genetic Psychology*, 36(3): 415-434.
- Walters, G.D. (1995). The Psychological Inventory of Criminal Thinking Styles I: Reliability and preliminary validity. *Criminal Justice and Behavior*, 22(3): 307-325.
- Weiten, W. & Lloyd, M.A. (2008). *Psychology Applied to Modern Life (9th edition)*. Boston, MA: Wadsworth Cengage Learning.
- Wills, T.A. (1991). Social support and interpersonal relationships. In M.S. Clark (Ed.), *Prosocial behavior* (pp. 265-289). Newbury Park, CA: Sage.
- Willson, A.E., Shuey, K.M., Elder Jr., G.H. (2003). Ambivalence in the Relationship of Adult Children to Aging Parents and In-Laws. *Journal of Marriage and Family*, 65(4): 1055-1072.
- World Health Organization. (n.d.). Process of translation and adaptation of instruments. Retrieved from http://www.who.int/substance_abuse/research_tools/translation/en/ on 02 March 2017.
- Wright, J.P., Cullen, F.T., & Miller, J.T. (2001). Family social capital and delinquent involvement. *Journal of Criminal Justice*, 29(1): 1-9.

- Zeidner, M., & Saklofske, D. (1996). Adaptive and maladaptive coping. In M. Zeidner & N.S. Endler (Eds.), *Handbook of coping, theory, research and applications* (pp. 505-531). New York, NY: John Wiley & Sons.
- Zimring, F. E. (1981). Kids, groups and crime: Some implications of a well-known secret. *Journal of Criminal Law and Criminology*, 72(3): 867-88.