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The emotional and psychiatric problems of adolescents on parole whose parents are substance users

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The Emotional and Psychiatric Problems of Adolescents on Parole Whose Parents are Substance Users: A Brazilian Cross-Sectional Study

Abstract:	The aim of this study is to evaluate the associations between having parents with substance use problems, and having suffered neglect within the family, and behavioural problems (psychological and drug use) amongst adolescents. All the participants were enrolled on the socio-educational parole scheme, 'Assisted Freedom' (AF). A cross-sectional study of 150 adolescents were interviewed using the Drug Abuse Screening Test, Teen Addiction Severity Index and Childhood Trauma Questionnaire. Ninety-five percentof the participants were male [n =143], aged 13-17. Thirty percent of adolescents had a parent who used substances and had experienced neglect from their families. Those adolescents who were living with both parents (Odds Ratio Adjusted [ORA] 2.7 95% CI 1.13;6.37), from a low income family (6.7 ORA 95%CI 1.85;24.22), experienced hallucinations (ORA 2.8 95%CI 1.25;6.14), had problems controlling violent behaviour (ORA 2.6 95%CI 1.12;5.87) and were physically neglected (3.0 ORA 95%CI 1.24;7.49) were more likely to have parents who used substances and to have experienced parental neglect. This paper concludes that adolescents, who are on parole, come from families with high level of psychosocial vulnerabilities, including substance use, experience neglect by their families leading to adverse emotional and psychological states.

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ABSTRACT

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Key words: Adolescent, Child Abuse, Child Maltreatment, Substance-Related Disorders, Parenting, Juvenile Delinquency

Introduction

Substance use is a social and public health problem in many countries; with significantly contribution to the increase in the global burden of diseases and diverse consequences for the individuals, for families and society (Kepple, 2017; Global Burden Disease, 2018). The impact of alcohol use and other substances by parents on the physical and psychological health of their children has been well documented in the literature, including Brazilian studies (Brazilian National Alcohol and Drugs Survey [BNADS], 2013; Institute of Medicine [IOM] and National Research Council [NRC], 2014).

It is estimated that about 2.1 million children in the United States of America (USA) may be suffering as a consequence of substance use within their families, and 2.9% of children under 18 live in households with at least one parent who is a substance user (IOM and NRC, 2014). Brazilian data confirm that social vulnerabilities in households impact on both individuals and the whole family nucleus; for every substance user there are four other people living with the problem in their homes (BNADS, 2013). Half of the Brazilian population consumes alcohol and the problems related to abuse of alcohol are very common. Substance use prevalence in the last 12 months and in life by the Brazilian population (age ≥18 years old) is considerably: tranquilizers (6.0 and 9.6%), marijuana (2.5% and 6.8%), cocaine (1.7% and 3.8%), crack (0.7% and 1.3%), respectively (BNADS, 2013).

Substance use by parents has been associated with abuse, mistreatment and family neglect (Solis et al., 2012;) resulting in physical injury and the development of psychological and psychiatric distress; including, sleep disorders, depression, anxiety, post-traumatic stress disorder, and suicidal behavior amongst their children (Leeb et al., 2011; WHO, 2014). Given the environment that the children of parents who use substances grow up in, there is an increased risk of experiencing various forms of violence

(mainly domestic violence) and family dysfunctional, as well, as precarious access to basic necessities such as food and clothing (Horgan, 2011; Winters, 2014).

The destitution of family cohesion, the reversal of roles models in the family with children taking responsibility and care of parents and other siblings (Solis et al., 2012) are also consequences of parental substance use. Additionally, parental substance use (PSU) may threaten the realization of children's potential by exposing them to stressful, chaotic and often frightening pressures in their homes. Child maltreatment (CM) contributes both directly and indirectly to various health and welfare damages, affecting the development of children and adolescents, resulting in low performance, repetition and school dropout (Berg et al., 2016). PSU use is an important risk factor for the development of psychological problems (shyness, impulsivity, low self-esteem, low problem solving ability, high levels of pessimism, fear, guilt, relationship difficulties, loss of self-confidence and insecurity) (Berg et al., 2016). Additionally, there is an increased chance of mental disorders (e.g. depression, anxiety, conduct disorder, social phobia and suicide), risk behaviors (teenage pregnancy and sexually transmitted infections) and violence, continuing into adulthood (Elgán et al., 2016).

Furthermore, there is an increased risk of substance use, with children who grow up in these environments showing higher rates of alcohol and tobacco use when they become adults (WHO, 2014; Meyers et al., 2018). International studies have reported associations between risky alcohol consumption and childhood abuse (WHO, 2014). Only four out of every ten countries carry out research into CM and 60% of these studies come from high-income European countries (WHO, 2014).

From an economic perspective, whilst the costs of child abuse are substantial (with an increase burden on the judiciary, health and social services) the costs of substance use-related mistreatment remain largely under investigated. Due to the different

methodologies used in studies and variety of countries, it is difficult to make comparisons between results. Additionally, there is frequently bias in studies due to underreporting of CM to the health sector and /or to the judiciary (WHO, 2014).

In the USA, for example, 35% of individuals who committed offenses, and who suffered parental abuse, had consumed alcohol or drugs at the time of the incident (WHO, 2014). Adolescents who have suffered maltreatment are more likely to engage in vandalism, crimes against property, physical fights, bearing or threat with weapons. The triad of adolescence, delinquency, and substance use are issues of crucial importance as they may be predictive factors for a chronic pattern of violent offending into in adulthood (Leeb et al., 2011; Cicchetti and Handley, 2019).

Adolescent offending can be viewed as a dramatic result of the difficulties that families face. The association between CM, criminal activity, family neglect and PSU are important social and public health problems and have implications for health and social services, as well as, the judiciary. Nevertheless, these associations are underexplored in the literature, especially in low-income countries such as Brazil (WHO, 2014).

Understanding the contexts of parental substance use is a requirement in the public policies of some countries (Velleman and Templeton, 2016) as opposed to how children and adolescents affected by parental consumption who have become involved in criminality and subsequently with social services or judiciary services. Currently there is health (Torvik et al., 2011; IOM and NRC, 2014; Diehl et al., 2018), community service (Figlie et al., 2004), schools (Filov et al., 2014) and general population (WHO, 2014) related research on the subject. There has been limited published literature investigating the outcomes for adolescents, who come from families with a substance using parents (Winters, 2014; Nadel and Thornberry, 2017), who have been involved the judiciary, hence this present study.

Aim

The aim of this study is to evaluate the associations between having a parent who used alcohol/ drugs problematically, having experienced some neglect or abuse from their parents and the emotional/ behavioral problems (for example, psychological and drug use) experienced by adolescents enrolled on a Brazilian parole scheme.

Methods

A cross-sectional study was carried out with a sample of 150 (62.7%) adolescents from a total population of 239 (100%) who, in 2018, were enrolled in a Municipality in the Interior 'Assisted Freedom'(AF), socio educational parole scheme in the state of São Paulo, Brazil. AF is a measure provided for by Law 8069/1990 in Brazil for offenders who have committed an offence but are yet to reach the age of majority, allowing them to remain in the community to serve his or her sentence under the supervision of a social worker and an authority designated by the judicary (Ortegal, 2011). Therefore, it is a non-custodial socio-educational sentence imposed by the courts aimed at assisting young people back into some form of stable living environment. AF aims to address the adolescent's attitudes and develop important family community values. The work is done through educational interventions focused on personalized service, guaranteeing the social promotion of the adolescents through orientation, maintaining family and community ties, schooling, introduction into the labor market and/ or vocational and training courses (Ortegal, 2011).

Participants for this study were adolescent (aged between 12 and 18 years old incomplete) and enrolled in AF, regardless of offence. Participants who were unable to give consent and/ or cognitive impairment (evaluated through a clinical interview) or

were under the influence of alcohol and/ or drugs at the time of the interview were excluded from the study. Formal authorization was requested from Judges from the relevant municipality and the coordinators of the Non-Governmental Organizations (NGOs), in order to carry out data collection. Data collection was from October 2016 to April 2017. The interviews were conducted individually and in private rooms. Each interview lasted up to one and a half hours. The interviews were conducted by an experienced researcher, trained in the application of the instruments. A pilot test had been previously conducted with 10 adolescents who met the socio-educational measures, which allowed standardizing the instruments for the researched population.

Instruments

- **Socio-demographic data:** age, sex, school attendance, religion, race, composition of family, how the family income is generated were all noted.

- **Childhood Trauma Questionnaire (CTQ):** a retrospective self-report instrument that measures the various forms of emotional, physical, and sexual abuse, emotional and physical neglect in adolescence (age 12 years-old) and adults (Grassi-Oliveira et al., 2014). The Brazilian version of CTQ consists of 28 statements related to situations that may have occurred, and frequency, in childhood using a five-point Likert scale. The score ranges from 28 to 140 points. A study that evaluated the internal structure of the questionnaire, composed of five factors (abuse: sexual / physical and negligence: physical / emotional), demonstrated that the instrument had good internal consistency in Brazilian Portuguese (Grassi-Oliveira et al., 2014). In addition, the reliability of CTQ was analyzed by test-retest and found to be stable. In the present study, the dependent variable was used, *"I have alcoholic parents or drug users and experienced neglect in family care"*.

We provide further evidence for the validity and reliability of the CTQ within the Brazilian samples 1,925 participants from eight different clinical and non-clinical samples including adolescents, adults and elders. In this study the alternative five-factor solution Cronbach's alpha revealed acceptable levels of internal consistency (Emotional Abuse 0.80, Physical Abuse = 0.80, Sexual Abuse = 0.90, Emotional Negligence 0.91) (Grassi-Oliveira et al., 2014).

- Drug Abuse Screening Test (DAST-20): is composed of 20 items that assess abuse, dependence, abstinence (signs and symptoms), social harm, family relationships, legal implications, medical problems and previous treatment. The DAST-20 can be applied as self-reporting or in interview format (Yudko et al., 2007). In the present study, a Brazilian version were used, with good reliability (DAST-20) have a Cronbach's alpha (α) range from 0.82–0.96 (Diehl et al., 2014; Diehl et al., 2016) in the versions, either for clinical use (Cronbach's α = 0.74) and / or as a research tool (Cronbach's α = 0.96) (Yudko et al., 2007). This classification used was recoded at zero - five points = no problems and six or more points (medium to severe problems) (Diehl et al., 2014; Diehl et al., 2016).

- Teen Addiction Severity Index (T-ASI): aims to assess the severity of drug use, abuse or dependence in adolescents as well as other problems experienced in their lives. The Brazilian version of T-ASI is a semi-structured interview consists of 153 items with dichotomous responses, divided into seven domains: 1) substances use; 2) school situation; 3) employment / livelihood; 4) family relationships; 5) friends / social relationships 6) legal status: with a direct question about "whether you have ever been caught by the police in possession of drugs (cannabis, cocaine and/or crack) to traffic dealing" and, 7) psychiatric status (Sartes et al., 2009). In the present study, two domains were used: substance use of alcohol, tobacco, cannabis, inhalants in the last 30 days and

8

psychiatric status (Depression, Severe anxiety or tension, Hallucinations, Problems controlling violent behaviour and problems with cognition, concentration or memory). This scale has been validated for use in Brazil and presented good index of Cronbach's alpha in areas: substance use (α =0.89), legal (α =0.81), and psychiatric (α =0.80) (Sartes et al., 2009).

Ethics

Ethical approval was obtained from the University of São Paulo (USP) (protocol number 1672/04), followed the ethical presuppositions recommended by Brazilian Resolution 466/2012 for research with human beings. All the participants signed an assent forms at the start of the interview. As the participants were adolescents, their legal guardians signed the assent terms in accordance with The Free, Prior and Informed Consent (FPIC) process. The participants did not receive any funds or compensation for participating in this study.

Statistical analysis

The data were analyzed using Stata version 12 software. Statistical analyses included the Chi-square test (χ^2) and Degrees of freedom (df) for all samples in the bivariate analysis. Socio-demographic characteristics, substance use (T-ASI and DAST-20), maltreatment (CTQ) and, mental health problems (ASI-Teen) were described by PSU and neglect of family care and the values with p <0.05 were considered statistically significant. Logistic regression analysis was performed. Adjusted odds ratios (ORA) with 95% confidence intervals (CI) were calculated for the associations between co-variables: information socio-demographic, substance use (T-ASI), type of abuse associated with maltreatment (CTQ) experienced by adolescents and, symptoms and mental health problems (T-ASI) and the dependent variable (PSU and neglect of family care). However,

variables such as tobacco and emotional abuse were not included in the multivariate analysis, but were considered when significant compared to the non-adjusted OR because we seek a parsimonious model, a model using the fewest possible variables. The significance level of 5% was used for all statistical tests.

Results

Sociodemographic Profile

The participants were male 143 (95.3%), 17 – 18 years old, black 112 (74.6%), half of the sample 83 (55.3%) did not profess any religion and a third came from low-income families 50 (33.3%). The majority of participants 116 (77.3%) did not live with their parents; those living with their parents had families consisting of an average three or four people 63 (42.0%) and five or more people 73 (48.7%), and 73 (48.7%) of the families were financially supported by robberies, theft or drug trafficking. Living with parents ($\chi^2(1) = 5.13$; p = 0.023), and financially supported by robberies, theft or drug trafficking ($\chi^2(1) = 4.81$; p = 0.028**)** having low family income ($\chi^2(3) = 10.35$; p = 0.015) were variables associated with belonging to a family with parents used substances and neglected family care with values statistically significant in the bivariate and multiple analysis (See Table 1).

As for the parents' educational level, half of the adolescents had mothers with an average level of schooling, 51 (34%) did not know how to respond, 13 (8.7%) had primary education and only two (1.3%) had a higher education level. Regarding the father, although 89 (59.3%) did not know how to respond, only one third had high school, 11 (7.3%) had primary education and two (1.3%) had higher education. Parents' schooling did not present a statistically significant value when compared to the dependent variable (Data were not presented in the table).

Amongst participants, 100 (65.3%) were detained for being in possession of drugs (cannabis, cocaine and/or crack) to traffic dealing and were complying with the AF scheme. Only 27 (27.0%) of the adolescents involved in trafficking had a substance using parent and experienced neglect in family care, with no statistically significant differences in the sample ($\chi^2(1) = 0.408$; p = 0.523) (data were not presented in the table). In the multiple analysis, the odds ratio shows the contribution of each variable to the increase in probability. Therefore, the adolescents living with both parents in families with 1-2 the minimum wage (MW) were at higher risk (Odds Ratio Adjusted = 6.7 CI 95% = 1.85; 24.22) of having alcohol-dependent parents and/ or drug users who neglected their family members.

[*Insert Table 1*]

Family Neglect and Substance Use

A quarter of participants reported that they had family problems, of which almost half came from families whose parents had problems related to substance use and neglecting family care (Yes 42.1% versus No 24.1%; χ^2 4.495 $p = 0.034$;), data not shown in the table.

Of the total sample, more than half of the adolescents reported having experienced physical 139 (92.7%) and emotional 135 (90%) neglect; physical 88 (58.7%), emotional 90 (60%) and sexual six (4%) abuse (CTQ). Emotional abuse was associated with having parents who used substances and had neglected family care [36 (40%) yes versus 07 (11.7%) no, $\chi^2(1) = 14,133$; *p* value <0.001, non-adjusted OR = 5.0; CI 95% 2.06-12.34]. Data presented in a complementary table CI.

Sexual abuse was a factor in six cases, mostly amongst participants whose parents who used substances and had neglected family care [4 (66.7%) Yes versus 2 (33.3%) No,

p value =0.036]. The results showed associations only in the bivariate analysis, between the abuse (sexual and emotional aggressions) and parents with substance use and neglect in family care. Noted that the risk of physical neglect in relation to personal care and hygiene (wearing dirty clothing) risks are tripled (ORA = 3.0 95% CI 1.24-7.49, *p* = 0.02) amongst the participants (Table CII complementary).

Substance use by participants

Regarding substance use, participants had a higher prevalence of marijuana use 86 (57.3%), alcohol 59 (39.3%) and tobacco 47 (33.5%) in the last 30 days.

Additionally, 19 (40.4%) of the participants who had used substances and had been neglected by their family were smokers versus 24 (23.3%) non-smokers ($\chi^2(1) =$ 4,628; *p* = 0.031) and non-adjusted odds ratio OR 2.2 95% CI 1.07-4.68 p = 0.031, (See Table CIII complementary). Of the total sample, 63 (42.0%) were classified with moderate substance use problems (DAST). In the bivariate analysis, no differences were observed between having alcoholic parents who neglected the care and problem levels of DAST-20 (22 (34.9%) moderate versus 22 (24.1%) in the problem; χ^2 (1) = 2,078 p = 0.149) (See Table 3 complementary table III).

Symptoms and mental health problems amongst participants

All symptoms and mental health problems were significantly associated with have substance using parents who had shown neglect in family care. A predominance of those participants whose parents used substances and had neglected family care, had depressive symptoms [14 (42.4%) yes versus 29 (24.8%) no $\chi^2(1) = 3,916$; *p* = 0.048], experienced hallucinations [17 (46.0%) yes versus 26 (23.0%) no; $\chi^2(1) = 7,171$; *p* = 0.007] and had problems controlling their violent behavior [15 (45.5%) yes versus 28 (23.9%) no; $\chi^2(1)$

= 5,831 *p*= 0.016]. Moreover, in the multivariate analysis, those participants were almost three times more likely to have depressive symptoms (ORA 2.8 CI95% 1.25-6.14) and had problems controlling their violent behavior (ORA 2.6 CI 95% 1.12-5.87).

[*Insert Table 2*]

Discussion

Of the total sample, 30% of the participants had a parent who both used substances and had neglected family care; the majority of participants were non-black male adolescents with a low level of education attainment; from single-parent families with low levels of schooling and family income (Table 1). These characteristics could be explained, or justified, as the participants having experienced neglect by parents and living in low socioeconomic circumstances leading to searching for sustenance through the money retrieved from illicit trafficking, robbery and thefts. The profile highlights a group of adolescents with strong environmental and psychosocial risk factors, making them more susceptible to emotional and psychological problems after being exposed to multiple vulnerabilities, including substance use and neglect in their family care.

Likewise, amongst participants who lived in families with an income between one to two times the MW, had a greater potential to experience negligence by parents who use substances. There is evidence pointing to strong associations between poverty and CM in many countries (WHO, 2014; Walsh et al., 2019; Goldberg and Blaauw, 2019). Evidence also suggests that the direct and indirect impacts of poverty interact in complex ways with other factors that affect parenting and increase the risk of abuse and neglect (WHO, 2014; Bywaters et al., 2016). In addition, significant rates of social inequalities related to deprivation were considered as one of the major risk factors for human development often identified in families receiving support with parenting (Cambron et

al., 2019). Studies have shown that socially excluded families are vulnerable to problems related to substance related disorders (WHO, 2014; Aldridge et al., 2018). Children who have parents vulnerable to substance related disorders are at higher risk for developing their own health problems and psychosocial difficulties (Dyba et al., 2019).

Although there are no statistically significant differences were found in the school setting, nonetheless half of the participants had dropped out of education (Table 1). Literature shows that both maltreatment and substance use by parents, regardless of socioeconomic backgrounds and other psychosocial factors, significantly influences school performance (Torvik et al., 2011; IOM and NRC, 2014; Gauffin et al., 2015). Academic performance has been strongly evaluated in the most recent studies with different results. Whilst poverty and deprivation do negatively influence upon education (Torvik et al., 2011; IOM and NRC, 2014; WHO, 2014; Gauffin et al., 2015), children who have experienced maltreatment do not necessarily under perform at school relative to the general population.

Nonetheless, some literature reviews have shown strong links between CM and low academic performance (Torvik et al., 2011; IOM and NRC, 2014; Gauffin, et al., 2015, Berg et al., 2016). The main problem identified is the higher risk of being impoverished at school and being bullied, more likely to need special education and greater risk of absence, repetition and dropping out of school (Torvik et al., 2011; IOM and NRC, 2014; WHO, 2014; Gauffin et al., 2015; Berg et al., 2016). The same has been observed in children whose parents use alcohol problematically who, when compared to children of non-problematic drinking parents, are found to have a poorer academic performance (Torvik et al., 2011). Low academic achievement is associated with delinquency and school failure (IOM and NRC, 2014; WHO, 2014). Students with low grades are more likely to be involved in violence and other behavior problems such as

non-durable links to school and school dropout which in turn potentiate the risk of involvement with violence (IOM and NRC, 2014; WHO, 2014).

All forms of parental abuse and neglect were evidenced in the bivariate analysis among the participants of the present study (Table CI complementary). Physical and emotional neglect were the most prevalent forms of maltreatment. Adolescents who had alcohol-dependent parents and neglected family care had experienced emotional abuse when compared to other adolescents. Among the main types of emotional violence, verbal abuse that generates feelings of rejection on the part of the adolescent are highlighted. Nonetheless, this finding is contradicted by the finding that the participants do not want to change anything in their family (see table CII complementary). On the other hand, adolescents who experienced physical neglect in the form of "hygiene care" were three times more likely to have alcohol dependent parents.

According to the World Report on Violence Prevention (WHO, 2014) children who experience rejection, neglect, severe corporal punishment and sexual abuse - or who witness violence at home or in the community - are at greater risk of being involved in aggressive behavior and antisocial behavior in later stages of development, including violent behaviors in adulthood (WHO, 2014). This underscores the preponderant role that substance use plays in all forms of abuse, mistreatment and family neglect.

Physical neglect and abuse (See table CI and CII complementary) are severe and widespread forms of maltreatment that occur in childhood and adolescence, with potential long-term consequences and adverse repercussions throughout life. Abuse rates are higher in communities with high levels of unemployment and concentration of poverty (Collins, 2016; Goldberg and Blaauw, 2019). Neglect is closely associated with low schooling and low income, but it is important to identify the best way to distinguish parental neglect from poverty deprivation (WHO, 2014).

As noted in the literature, CM contributes to a wide range of adverse physical and mental health outcomes that will affect both the life of the victimized child and society as a whole. A history of child sexual abuse significantly increases the risk of chronic depression in adults (Nelson et al., 2017) and exposure to sexual abuse doubles the chances of developing anxiety and substance use disorders (SUD) (Teicher and Samson, 2013).

Mothers with SUD have also been considered as potentially at risk of perpetrating child abuse and neglect (Goldberg and Blaauw, 2019). A significant number (54.2%) mothers living in precarious social and economic conditions experience mental illness, 41.9% had a history of criminal involvement and 64.5% had been both physically and sexually abused as children, with 55.4% reporting childhood sexual abuse (Taplin and Mattick, 2011).

In this study, there was considerable marijuana use (57.3%), alcohol (39.3%), tobacco use (31.3%) and moderate problems evaluated by DAST amongst the participants (See Table CIII complementary). Only tobacco was differentiated between the group and adolescents in the sample, it is still noticeable the use of marijuana was highly probable amongst adolescents whose parents who used substances and had neglected family care (OR unadjusted = 2.2) (Table CIII complementary).

There is evidence that the substance use by adolescents are explained both being in a transition phase (adolescence), and also by social economic conditions, family structure and also by the inextricable link between drugs and involvement in criminality (Diehl et al., 2016; Martins and Pillon, 2008). Evidence for this can be seen in that 65.3% of the participants who had been detained for carrying illicit drugs and trafficking and 27% of those had been involved in trafficking had a parent who used substances and had neglected family care (Data not shown in table). A cross-sectional study conducted with

more than 3,000 young adults, children of alcohol dependents, were almost twice as likely to be dependent on alcohol or cannabis compared to individuals without a family history of alcohol dependence (Melchior et al., 2011). Marijuana users are more likely to engage in risky behavior once it is perceived as advantageous to achieve a goal (Rogosch, Oshri and Cicchetti, 2010). It is hypothesized that the onset and frequency of use are associated with the absence of conflict between a behavior and a goal, and adolescents identified the use as a positive reinforcement to achieve a goal or solve a problem (Branje, 2018). As adolescents engage in maladaptive behavior, there is a high probability of engaging in other types of problematic behaviors, such as substance use, which are strongly corroborated the juvenile criminality and delinquency (Martins and Pillon, 2008).

This study examined the symptoms and mental health problems presented by adolescents on parole. In bivariate analysis, anxiety and comprehension, concentration or memory problems were the most prevalent problems and hallucinations almost triple amongst adolescents whose parents who used substances and had neglected family care (Table 2). These findings are corroborated by Gullbrå et al (2016) and Ferreira et al (2018); children of substance using parents are at increased risk of developing emotional, behavioral, and psychosocial problems. Compared with their peers, children with parents who use substances have increased rates of anxiety, depression, oppositional behavior, conduct and aggressive behavior, delinquency, social incongruity and somatic problems, generalized stress and depressed mood, as well as lower levels of self-esteem and social competence.

Limitations

The results should be interpreted with caution. First, any generalization of the results is limited to young people who are serving socio-educational sentences and who

live in urban environments similar to our sample. Second, the cross-sectional design of the study does not support causal conclusions. Third, the authenticity of the data is at the mercy of human bias, since they were based on the reports of the subjects investigated (sub or overestimated). Another limitation of this study is that parental alcohol use may probably be underestimated, as has been seen in other studies in which the diagnostic criterion is measured by self-reporting, due to "social desirability bias" (Maloney et al., 2010). The information here may also be underestimated as the professionals accompanying the adolescents were collecting information prior to reporting to the judge regarding improvements in the adolescent's health status, behavior and living conditions.

Implications for public health

CM is a global problem, with a serious impact on the physical and mental health of the victim's development and well-being throughout the life, extending throughout society; the inherent cultural and social barriers mean the issue is rarely the subject of global debate (WHO, 2014; Ferrara et al., 2016). Preventing CM has not been a political priority in many countries around the world, despite the scale of the problem and growing awareness of the high social costs (WHO, 2014).

The lack of investment in policy is exacerbated by a lack of understanding among the general population about the serious impacts of maltreatment throughout life on health and behaviors, the burden on society and the cost implication for health and social services. As recent studies have shown, maltreatment and other adversities in childhood and adolescence are associated with a broad spectrum of health and mental health behaviors (Goldberg and Blaauw, 2019; Leeb et al., 2011).

CM can be avoidable. Countries have a responsibility to implement preventive measures to reduce the occurrence of this phenomenon. They can provide protection,

access to justice and care for children and adolescents who may be at risk of maltreatment, including implementing psychosocial programs aimed at children, adolescents, parents and caregivers, as well as creating means to identify, treat and follow known cases of maltreatment (Hughes et al., 2017; Kubik, Docherty and Boxer, 2019;).

The identification of adolescents who during childhood were affected by substance use by parents remains a public health challenge, since problematic drinking often remains hidden in the intimacy of many families (Harwin et al., 2014).

Implications for clinical practice

Screening, traditionally, is the means by which a health problem is identified before signs and symptoms appear. In the case of child and adolescent abuse and neglect, screening presents problems, since it would be necessary to rely on information obtained directly from the offender or from observers. Health professionals have a key role to play in the identification, treatment and referral of cases of abuse and neglect and in reporting suspected cases to relevant authorities. It is vital that cases of child and adolescent abuse are detected early and for the necessary services to intervene as soon as possible in order to minimize the consequences for the child/adolescents.

Importantly, despite the notable association between parental abuse and negative outcomes for children, the alcohol abuse of parents does not explain solely why these children/adolescents are at risk. Co-occurrence of risk factors including other forms of parent psychopathology and family adversity, including poverty, conflict, family (dis)functioning, sometimes better explain the potential risks of these adolescents experiencing substance abuse and neglect histories of parents (Solis et al., 2012).

Conclusion

Links between substance use and family neglect by parents and child abuse has previously been established. This paper demonstrates that adolescents, who are on parole, come from families with high level of psychosocial vulnerabilities, including substance use, experience neglect by their families leading to adverse emotional and psychological states. The findings of the study have implications for the judiciary, health and social services.

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Table 1. Sociodemographic profile of participants

		Parental substance use and neglect of family care [n (%)]			
		Yes	**No**	**OR (95%CI)**	**ORA (95%CI)**
Gender	Male	104 (72.7)	39 (27.3)	**Ref.**	
	Female	3 (42.9)	4 (57.1)	3.6 (0.76;16.61)	-
		$\chi^2(1) = 2.912$ $p=0.088$			
Age group (years)	13-14	8 (57.1)	6 (42.9)	2.4 (0.72;8.02)	-
	15-16	48 (76.2)	15 (23.8)	**Ref.**	-
	17-18	51 (69.9)	22 (30.1)	1.4 (0.64;2.97)	-
		$\chi^2(2) = 2.183$ $p=0.336$			
Schooling	No studying	54 (72.0)	21 (28.0)	**Ref.**	-
	Studying	53 (70.7)	22 (29.3)	1.0 (0.53;2.17)	-
		$\chi^2(1) = 0.033$ $p=0.857$			
Religion	None	62 (74.7)	21 (25.3)	1.1 (0.32;3.75)	-
	Catholic	18 (72.0)	7 (28.0)	1.2 (0.30;5.23)	-
	Evangelic	13 (76.5)	4 (23.5)	**Ref.**	-
	Others	14 (56.0)	11 (44.0)	2.5 (0.65;10.06)**	-
		$\chi^2(3) = 3.559$ $p=0.313$			
Skin color	White	27 (71.0)	11 (28.9)	1.0 (0.45;2.29)	-
	Non-White	80 (71.4)	32 (28.6)	**Ref.**	-
		$\chi^2(2) = 0.019$ $p=0.991$			
Living with parents	Yes	19 (55.9)	15 (44.1)*	2.5 (1.12;5.52)**	**2.7** (1.13;6.37)**
	No	88 (75.9)	28 (24.1)	**Ref.**	**Ref.**
		$\chi^2(1) = 5.13$; $p = 0.023$*			
Supported by funds from theft	Yes	46 (63.0)	27 (37.0)*	2.2 (1.08;4.63)**	**2.0** (0.96;4.48)
	No	61 (79.2)	16 (20.8)	**Ref.**	**Ref.**
		$\chi^2(1) = 4.81$; $p = 0.028$*			
Supported by funds from drug trafficking	Yes	84 (68.8)	38 (31.2)	2.0 (0.74;5.89)	-
	No	23 (82.1)	5 (17.9)	**Ref.**	-
		$\chi^2(1) = 1.967$ $p=0.161$			
Familiar income	<1 MW	5 (35.7)	9 (64.3)*	1.6 (0.64;4.15)	1.5 (0.58;4.14)
	1 - 2	25 (69.4)	11(30.6)*	6.6 (1.90;23.27)*	**6.7** (1.85;24.22)*
	≥ 2	29 (74.4)	10 (25.6)	1.3 (0.50;3.27)	1.0 (0.38;2.87)
	Don't know	48 (78.7)	13 (21.3)	**Ref.**	**Ref.**
		$\chi^2(3) = 10.35$; $p = 0.015$*			

Note: Minimum Wage [MW]. (Value of MW in Brazilian Real R$ 937.00).

Chi-square test χ^2 (Degrees of freedom).

**p-value ≤ 0.05 and *p-value ≤ 0.01.

Odds Ratio Unadjusted (OR) and Odds Ratio Adjusted (ORA).

Confidential Interval (CI)

N = 150

Table 2. Symptoms and mental health problems (ASI-Teen) experienced by participants

		PSU and neglect of family care [n (%)]			
		Yes	**No**	**OR (CI95%)**	**ORA (CI95%)**
Depression	Yes	14 (42.4)	19 (57.6)	2.2 (0.99;5.02)	-
	No	29 (24.8)	88 (75.2)	**Ref.**	-
		$\chi^2(1) = 3.916$ p=0.048**			
Severe anxiety or tension	Yes	26 (33.3)	52 (66.7)	1.6 (0.79;3.32)	-
	No	17 (23.6)	55 (76.4)	**Ref.**	-
		$\chi^2(1) = 1.731$ p=0.188			
Halucinations	Yes	17 (46.0)	20 (54.0)	2.8 (1.30;6.21)*	2.8 (1.25;6.14)*
	No	26 (23.0)	87 (77.0)	**Ref.**	**Ref.**
		$\chi^2(1) = 7.171$ p=0.007**			
Problems controlling violent behaviour	Yes	15(45.5)	18 (54.5)	2.6 (1.18;5.93)**	2.6 (1.12;5.87)**
	No	28 (23.9)	89 (76.1)	**Ref.**	**Ref.**
		$\chi^2(1) = 5.831$ p=0.016**			
Problems with cognition, concentration or memory.	Yes	23 (33.3)	46 (66.7)	1.5 (0.75;3.10)	-
	No	20 (24.7)	61 (75.3)	**Ref.**	-
		$\chi^2(1) = 1.361$ p=0.243			

Note: Chi-square test χ^2 (Degrees of Fredom).

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*p-value ≤ 0.01 and **p-value ≤ 0.05

Odds Ratio Unadjusted (OR) and Odds Ratio Adjusted (ORA).

Confidential Interval (CI)

N = 150

Table I. PSU and neglect of family care and Childhood Trauma Questionnaire (CTQ).

	PSU and neglect of family care [n (%)]			
	Yes	**No**	**OR Unadjsted (95%CI)**	**p-value**
Physical Neglect				
Yes	39 (28.1)	100 (71.9)	Ref.	
No	4 (36.4)	7 (63.6)	1.5 (0.41;5.29)	0.56
	$\chi^2(1) = 0.344$ $p=0.558$			
Emocional Neglect				
Yes	36 (26.7)	99 (73.3)	Ref.	
No	7 (46.7)	8 (53.3)	2.4 (0.81;7.11)	0.11
	$\chi^2(1) = 2.641$ $p=0.104$			
Physical Abuse				
Yes	29 (33.0)	59 (67.0)	1.7 (0.80;3.54)	0.17
No	14 (22.6)	48 (77.4)	Ref.	
	$\chi^2(1) = 1.914$ $p=0.166$			
Sexual Abuse				
Yes	4 (66.7)	2 (33.3)	5.4 (0.95;30.58)	0.057
No	39 (27.1)	105 (72.9)	Ref.	
	$\chi^2(1) = 4,413$ $p=0.036$**			
Emocional Abuse				
Yes	36 (40.0)	54 (60.0)	**5.0 (2.06;12.34)**	**<0.01****
No	7 (11.7)	53 (88.3)	**Ref.**	
	$\chi^2(1) = 14,133$ ***p<0.001****			

Note: Chi-square test χ^2 (Degrees of freedom).
*p-value ≤ 0.01 and **p-value ≤ 0.05
Odds Ratio Unadjusted (OR)

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Confidential Interval (CI)
N = 150

Table II. Type of abuse associated with maltreatment (CTQ) experienced by adolescents.

		PSU and neglect of family care [n (%)]			
		Yes	No	OR (CI95%)	ORA (CI95%)
Emotional Abuse					
People in my family called me things like "stupid", "lazy", or "too ugly.	Yes	21 (44.7)*	26 (55.3)	2.9 (1.41;6.25)*	1.8 (0.72;4.63)
	No	22 (21.4)	81 (78.6)	Ref.	Ref.
		$\chi^2(1)$=8.584 p=**0.003**			
There was nothing I wanted to change in my family.	Yes	26 (40.6)*	38 (59.4)	2.8 (1.34;5.75)*	1.9 (0.88;4.48)
	No	17 (19.8)	69 (80.2)	Ref.	Ref.
		$\chi^2(1)$ = 7.806 p=**0.005**			
I thought that my parents wished that I had never been born.	Yes	18(42.9)*	24 (57.1)	2.5 (1.17;5.31)**	1.1 (0.45;2.87)
	No	25 (23.2)	83 (76.8)	Ref.	Ref.
		$\chi^2(1)$ = 5.744 p=**0.017**			
People in my family said things that hurt or offended me.	Yes	23 (43.4)*	30 (56.6)	2.9 (1.42;6.14)*	1.4 (0.56;3.65)
	No	20 (20.6)	77 (79.4)	Ref.	Ref.
		$\chi^2(1)$ = 8.696 p=**0.003**			
Physical Abuse					
I got beaten so much by somebody from my family that therefore I had to go to a hospital or to see a doctor	Yes	6 (66.7)*	3 (33.3)	5.6 (1.34;23.63)**	2.6 (0.36;18.86)
	No	37 (26.2)	104 (73.8)	Ref.	Ref.
		$\chi^2(1)$ = 6.761 p=**0.009**			
Somebody in my family hit me so much that it left me with marks or bruises	Yes	15 (51.7)*	14 (48.3)	3.5 (1.53;8.26)*	1.4 (0.45;4.42)
	No	28 (23.1)	93 (76.9)	Ref.	Ref.
		$\chi^2(1)$ = 9.347 p=**0.002**			
I got beaten so much that it was seen by a teacher, neighbour or doctor.	Yes	6 (60.0)*	4 (40.0)	4.2 (1.12;15.63)**	0.91 (0.12;6.77)
	No	37 (26.4)	103 (73.6)	Ref.	Ref.
		$\chi^2(1)$ = 5.144 p=**0.023**			
Physical Neglect					
I had to wear dirty clothes.	Yes	16 (50.0)*	16 (50.0)	3.4 (1.49;7.62)*	**3.0** (1.24;7.49)**
	No	27 (22.9)	91 (77.1)	Ref.	Ref.
		$\chi^2(1)$ = 9.053 p=**0.003**			

Note: Chi-square test χ^2 (Degrees of freedom)

*p-value ≤ 0.01 and **p-value ≤ 0.05

Odds Ratio Unadjusted (OR) and Odds Ratio Adjusted (ORA)

Confidential Interval (CI)

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$N = 150$

Table III. Substance used in the last 30 days by adolescents (ASI-Teen and DAST-20).

		PSU and neglect of family care [n (%)]		
		Yes	**No**	**OR (CI95%)**
Tobacco	Yes	19 (40.4)*	28 (59.6)	2.2 (1.07;4.68)*
	No	24 (23.3)	79 (76.7)	**Ref.**
	$\chi^2(1) = 4.628\ p = 0.031$			
Inhalants	Yes	13 (31.7)	28 (68.3)	1.2 (0.56;2.67)
	No	30 (27.5)	79 (72.5)	**Ref.**
	$\chi^2(1) = 0.255\ p=0.614$			
Cannabis	Yes	25 (29.1)	61 (70.9)	1.0 (0.51;2.14)
	No	18 (28.1)	46 (71.9)	**Ref.**
	$\chi^2(1) = 0.016\ p=0.899$			
Alcohol	Yes	20 (33.9)	39 (66.1)	1.5 (0.74;3.11)
	No	23 (25.3)	68 (74.7)	**Ref.**
	$\chi^2(1) = 1.302\ p=0.254$			
DAST-20	Moderate	22 (34.9)	41 (65.1)	1.7 (0.83;3.44)
	No problem	21 (24.1)	66 (75.9)	**Ref.**
	$\chi^2(1) = 2.078\ p=0.149$			

Note: Chi-square test χ^2 (Degrees of freedom).

*p-value ≤ 0.01 and **p-value ≤ 0.05.

Odds Ratio Unadjusted (OR) and Odds Ratio Adjusted (ORA).

Confidential Interval (CI)

N = 150