

Non-authoritative parents and impact on drug use: the perception of adolescent children

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Abstract

Objective: To evaluate the association between drug use and parenting styles perceived by Brazilian adolescent children.

Methods: This cross-sectional study enrolled adolescents aged 14 to 19 years that used the Serviço Nacional de Orientações e Informações sobre a Prevenção do Uso Indevido de Drogas (VIVAVOZ). A total of 232 adolescents participated in the study. Phone interviews were conducted using the Parental Responsiveness and Demandingness Scale, which classifies maternal and paternal styles perceived by adolescent children as authoritative, neglectful, indulgent or authoritarian. Sociodemographic variables were collected and an instrument was used to assess monthly drug use and abuse.

Results: Maternal and paternal parenting styles perceived as neglectful, indulgent or authoritarian (non-authoritative) were significantly associated with drug use (odds ratio [OR] = 2.8; 95% confidence interval [95%CI], 1.3-5.7 for mothers and OR = 2.8; 95%CI, 1.3-6.3 for fathers). Non-authoritative styles also had a significant association with tobacco use in the previous month in the analysis of maternal (OR = 2.7; 95%CI, 1.2-6.5) and paternal (OR = 3.9; 95%CI, 1.4-10.7) styles, and use of cocaine/crack in the previous month (OR = 3.9; 95%CI, 1.1-13.8) and abuse of any drug (OR = 2.2; 95%CI, 1.0-5.1) only for the paternal style. Logistic regression revealed that maternal style (OR = 3.3; 95%CI, 1.1-9.8), adolescent sex (OR = 3.2; 95%CI, 1.5-7.2) and age (OR = 2.8; 95%CI, 1.2-6.2) were associated with drug use.

Conclusions: Adolescents that perceived their mothers as non-authoritative had greater chances of using drugs. There was a strong association between non-authoritative paternal styles and adolescent drug abuse.

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Introduction

The relationships between parents and adolescent children and the impact of parenting styles on their psychosocial development have been the focus of several studies.¹⁻³ In adolescence, several adaptations and changes in interpersonal skills take place⁴ and, therefore, the family environment should provide sheltering and guidance in face of the complexity of the emotions experienced.⁵

Extremely strict disciplinary practices in family relationships or difficulties in setting limits for adolescent behaviors may affect the satisfactory organization of this phase and lead to risk behaviors,⁵ such as drug use and abuse.

Therefore, several studies have investigated the associations of behaviors that suggest drug abuse among adolescents based on established parent-child

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relationships.^{6,7} The set of parental attitudes adopted in raising children may be defined as parenting styles. Specifically, parenting styles describe how parents deal with discipline, hierarchy and emotional support in relation to their children.^{8,9} Maccoby & Martin⁹ developed a theoretical model of parenting styles with two fundamental dimensions in parenting practices: demandingness and responsiveness. Parental demandingness consists of parental attitudes to control and monitor their children's behavior by imposing limits and setting rules. Responsiveness is the set of understanding attitudes that parents have and whose purpose is, by means of emotional support and two-way communications, to favor the development of their children's autonomy and self-concept.

Four parenting styles are defined according to these dimensions: authoritative, neglectful, indulgent and authoritarian. The term authoritative is used for the parenting style that combines high levels of control and affection. This term is widely used in Brazilian literature.¹⁰⁻¹² Parents with high levels of responsiveness, affection and support displays and, at the same time, who demand and appropriately exercise authority and set limits are classified as authoritative. Parents with low responsiveness, few demonstrations of affection and control, and no interest in their children's activities, partners or concerns are classified as neglectful. Indulgent parents are affective but little demanding. Authoritarian parents are very demanding, rule imposition is predominant, and they do not perceive the relevance of their children's opinions. They are little affective and show little support for their adolescent children.⁹

One of the several factors that may contribute to drug use is a non-authoritative parenting style, which includes neglectful,^{6,13} indulgent and authoritarian styles.⁶ The association of these styles and the use of drugs has not been extensively described in Brazilian populations, although their identification may play an important role in planning interventions for parents and their adolescent children, particularly in preventing drug use.

This study investigated the association between drug use by adolescents that called a phone service in search of guidance and information about prevention of illicit drug use, the characteristics of this use and the parenting styles perceived by the adolescents.

Methods

This cross-sectional case-control study enrolled Brazilian adolescents aged 14 to 19 years that called the Serviço Nacional de Orientações e Informações sobre a Prevenção do Uso Indevido de Drogas (VIVAVOZ) from February 2009 to June 2010.

VIVAVOZ is a phone service created by the Secretaria Nacional de Políticas sobre Drogas (SENAD) and Universidade Federal de Ciências da Saúde de Porto Alegre (UFCSA) to

provide free and anonymous reactive phone counseling to the population. It specializes in providing guidance and information about drugs using unbiased language.¹⁴ The interviews were made by phone and lasted about 30 minutes. Specific software was used to enter call records. A team of 40 students pursuing degrees in health sciences were trained in drug abuse, software operation and reactive phone counselling¹⁵ and acted as counselors. To apply the study instruments, counselors received additional training with lectures about the use of drugs in adolescence and its association with parenting styles, and were trained to use the Parental Responsiveness and Demandingness Scale. To preserve anonymity in the phone service, self-report of drug use was chosen to evaluate study outcomes. Self-reports are reliable when used in studies that evaluate drug use according to both detailed clinical evaluation and tests of biological material.¹⁶⁻¹⁸

After participants granted informed consent, the instrument to evaluate drug use and abuse and the Parental Responsiveness and Demandingness Scale were applied. The instrument of the National Household Survey on Drug Abuse (NHSDA) was used to evaluate drug use and abuse.¹⁹ According to this instrument, the diagnosis of drug abuse is made when the user meets at least two of the following criteria: a) spends a lot of time to get drugs, to use them or to recover from their effects; b) uses drugs at greater amounts or at greater frequencies than wished; c) tolerance (needs to use a greater amount of the substance to produce the same effect); d) was in a situation of physical risk under the effect or after the effect of drugs; e) had personal problems due to drug use (with family, police or school, emotional or psychological difficulties); f) wishes to reduce or discontinue drug use.

The scale used to evaluate parenting styles was adapted from an American study,²⁰ validated by Teixeira et al.,¹⁰ previously tested in a Brazilian sample,¹¹ and shown to be adequate for phone application in a pilot study conducted by us. The instrument uses a five-point frequency scale that ranges from never to always for each item. It was used to define parenting styles according to the 14- to 19-year-old adolescents.¹⁰ It has 24 items, 12 of which are associated with demandingness and 12, with responsiveness of the parenting practices of fathers and mothers separately. The items associated with demandingness refer to parenting practices of control and supervision of children's activities, expressed in items such as: "Controls your school grades". The responsiveness items denote the transmission of affection, support, involvement in the relationship between parents and children, as in, for example, the following item: "You can count on your father's/mother's help in case you have some problem." The four types of parenting styles are obtained according to the estimation of median values in the sample for the parental demandingness and responsiveness subscales.¹⁰ For the analysis of styles, the authors suggested

the exclusion of the cases whose scores were identical to the median values for maternal and paternal demandingness and responsiveness.¹⁰ Median values in this study were 37 for maternal demandingness and 40 for responsiveness, and 33 for both paternal subscales. In the absence of the mother, the father or both, the parenting style of substitute parents was evaluated.

The study included all adolescents aged 14 to 19 years that called VIVAVOZ, accepted to participate and granted informed consent. Some adolescents did not give responses to the items about father or mother parenting style because of the absence of one of them in their lives. We classified adolescents as drug users if they reported the use of a specific drug at least once in the previous month,⁷ that is, the sporadic user of any drug was not included in the analysis. Sample size was calculated according to a study about the use of drugs among adolescents,⁷ and according to the prevalence of the neglectful style, considered as high risk for drug use and the most prevalent in the sample under study (31%). Sample size was calculated as 168 adolescents for a level of significance of 0.05 and a statistical power of 80%.²¹ The total number of adolescents that sought the service during the study was 2,370: 34% refused to participate, 20% reported no time for the interview at the occasion, and the call was lost for 46%. Therefore, 287 adolescents responded the questionnaire, and 232 met inclusion criteria.

First, descriptive analyses were conducted for several sociodemographic variables and characteristics of drug use and abuse. Bivariate analyses used a chi-square test to detect statistically significant associations between drug use variables and neglectful, indulgent and authoritarian parenting styles. In addition, odds ratio (OR) and corresponding confidence intervals (95%CI) were estimated. Logistic regression was used to reduce confounding factors between the association of parenting styles and use of drugs. Drug use was the dependent variable, and sociodemographic variables and mother and father parenting styles were the independent variables. Variables that reached $p < 0.20$ in bivariate analysis were selected and included in a stepwise forward regression model for multivariate analyses. The Statistical Package for Social Sciences (SPSS 18.0) was used for statistical analyses, and the level of significance was set at $p < 0.05$. This study was approved by the Ethics in Research Committee of Universidade Federal de Ciências da Saúde de Porto Alegre (UFCSA) under process no. 451/09 and approval no. 805/09.

Results

During the study, 287 adolescents agreed to participate in the study; 73 reported using drugs and 214 did not. Fifty-five individuals were excluded, nine users and 46 nonusers, because their parenting scales were incomplete or the median

values for the maternal and paternal demandingness and responsiveness subscales were the same.

The final sample comprised 232 adolescents, 64 (27%) were users of some psychoactive drug. Mean age was 16 ± 2.0 years, and most participants were girls (63%). Analyses revealed that 120 (55%) were attending secondary school, and 135 (66%) had a family income below five times the Brazilian minimum monthly wage. Sociodemographic characteristics of drug users and nonusers are shown in Table 1. There was a significant association between older male users and use of drugs.

Some of the 232 adolescents did not have one of the parents or a substitute parent. Therefore, seven did not give responses to the items that referred to maternal style and 26, to paternal style. Mean maternal demandingness and responsiveness scores ($n = 225$) were 36 ± 8 and 36 ± 11 . The corresponding mean paternal scores were 32 ± 10 and 31 ± 13 . The analysis of styles found in the general sample revealed that 73 (32%) mothers were authoritative, 72 (31%) were neglectful, 42 (20%) were authoritarian, and 38 (17%) were indulgent. For fathers, 76 (37%) were authoritative, 64 (31%) were neglectful, 35 (17%) were indulgent, and 31 (15%) were authoritarian. Table 2 shows the associations between parenting styles and drug use. There are significant differences for maternal and paternal styles associated with drug use. Authoritative mothers are more frequently associated with adolescent nonusers (85%), and the three other non-authoritative styles are associated with drug users in about 30% of the cases. The analysis of paternal parenting styles revealed that authoritative as well as authoritarian styles had important associations, as over 85% of those adolescents were nonusers.

Adolescents that perceived both parents as having non-authoritative parenting styles had a 2.8 greater chance of making use of any drug. When mothers were perceived as neglectful, indulgent or authoritarian, chances were 2.7 times greater for use of tobacco, and the risk of tobacco use was 3.9 times greater when adolescents perceived parents as non-authoritative. Adolescents that perceived parents as neglectful, indulgent or authoritarian had a 3.9 times greater chance of using cocaine or crack. In addition, there were significant associations between abuse of any drug and parents with non-authoritative styles. Table 3 shows the associations between drug use and parenting styles separately. Table 4 shows that maternal non-authoritative styles, as well as male sex and age 17 to 19 years, remained significantly associated with adolescent drug use even after controlling for confounding factors.

Discussion

Data about parenting styles showed that most adolescents included in the study perceived their parents (mother and father) as authoritative or neglectful. Similar

Table 1 - Sociodemographic characteristics of adolescents that called VIVAVOZ, Brazil, 2010: results of comparison between drug users and nonusers

Variables	Drug users n (%)	Drug nonusers n (%)	p
Age (n = 232)			
14 to 16 years	26 (19)	114 (81)	0.000
17 to 19 years	38 (41)	54 (59)	
Sex (n = 232)			
Boys	40 (46)	46 (54)	0.000
Girls	24 (16)	122 (84)	
Schooling (n = 218)*			
Elementary school or less	24 (24)	74 (76)	0.363
Secondary school or higher	37 (31)	83 (69)	
Family monthly income (n = 204)*			
5 times minimum wage or less	32 (24)	103 (76)	0.070
More than 5 times minimum wage	25 (36)	44 (64)	

* Some participants did not give responses to these items.

Table 2 - Maternal, paternal and combined parenting styles perceived by adolescents that called VIVAVOZ, Brazil, 2010: results of comparison between drug users and nonusers

Style	Drug users n (%)	Drug nonusers n (%)	p
Maternal style			
Neglectful	27 (37)	45 (63)	0.021
Indulgent	12 (32)	26 (68)	
Authoritarian	11 (26)	31 (74)	
Authoritative	11 (15)	62 (85)	
Total	61 (100)	164 (100)	
Paternal style			
Neglectful	25 (39)	39 (61)	0.001
Indulgent	7 (20)	28 (80)	
Authoritarian	4 (13)	27 (87)	
Authoritative	9 (12)	67 (88)	
Total	45 (100)	161 (100)	

data were found in a Brazilian study in which most fathers and mothers were classified as neglectful, followed by authoritative.¹²

This study evaluated the association between drug use and parenting styles perceived by Brazilian adolescent children. Maternal and paternal styles perceived by most drug users were neglectful, and maternal and paternal authoritative parenting styles were more associated with adolescent that did not use drugs. A previous study with only parental authoritative, authoritarian and permissive

styles found that the children of permissive parents tend to use alcohol and tobacco.⁶ This means that in relationships in which there are difficulties in setting limits and the presence of affection and support is infrequent, adolescents have greater susceptibility to drug use than those that experience affection, understanding of imposed or negotiated demands, and bidirectional communications with parents.⁶ The positive association between authoritative styles and no use of drugs, as well as the association of the neglectful style with drug use, has also been found in similar studies.^{7,13}

Table 3 - Odds ratio of drug use between adolescents that called VIVAVOZ in association with perception of maternal and paternal parenting styles, Brazil, 2010

Drug use	Maternal style				Paternal style			
	Non-authoritative*		Authoritative		Non-authoritative*		Authoritative	
	n [†]	n (%)	n (%)	OR (95%CI)	n [†]	n (%)	n (%)	OR (95%CI)
Uses drugs								
Yes	61	50 (82)	11 (18)	2.8 (1.3-5.7) [§]	45	36 (80)	9 (20)	2.8 (1.3-6.3) [§]
No	164	102 (62)	62 (38)	1	161	94 (58)	67 (42)	1
Drug used								
Illicit	47	37 (79)	10 (21)	0.5 (0.1-2.9)	31	25 (81)	6 (19)	1.5 (0.3-6.5)
Licit	14	12 (87)	2 (13)	1	14	10 (73)	4 (27)	1
Use of alcohol in previous month [‡]								
Yes	29	22 (76)	7 (24)	1.9 (0.8-4.8)	23	17 (74)	6 (26)	2.0 (0.8-5.4)
No	164	101 (62)	63 (38)	1	160	93 (58)	67 (42)	1
Use of tobacco in previous month [‡]								
Yes	41	34 (83)	7 (17)	2.7 (1.2-6.5) [§]	33	28 (85)	5 (15)	3.9 (1.4-10.7) [§]
No	183	117 (64)	66 (36)	1	172	101 (59)	71 (41)	1
Use of cannabis in previous month [‡]								
Yes	22	19 (86)	3 (14)	3.3 (0.9-11.7)	16	13 (81)	3 (19)	2.7 (0.7-9.9)
No	202	132 (65)	70 (35)	1	189	116 (61)	73 (39)	1
Use of cocaine/crack in previous month [‡]								
Yes	34	27 (79)	7 (21)	2.0 (0.8-4.9)	21	18 (86)	3 (14)	3.9 (1.1-13.8) [§]
No	190	124 (65)	66 (35)	1	184	111 (60)	73 (40)	1
Abuse of any drug [‡]								
Yes	51	39 (77)	12 (23)	1.9 (0.9-3.9)	38	29 (76)	9 (24)	2.2 (1.0-5.1) [§]
No	163	102 (63)	61 (37)	1	160	94 (59)	66 (41)	1

95%CI = 95% confidence interval; OR = odds ratio.

* Authoritarian, indulgent or neglectful.

† Total number of respondents for each item.

‡ Some participants did not give responses to these items.

§ $p < 0.05$.

At the same time, studies in the literature reported the association of parental practices that restrict privileges and affection with behavioral problems and impulsive attitudes, such as antisocial behaviors,²² which are often associated with drug use.²

This study also had important results for maternal parenting styles. Maternal authoritarian, indulgent or neglectful parenting styles increase threefold the chance of adolescents to use drugs, which assigns greater importance to the interactions established with mothers. The role of fathers does not seem to be as relevant. Mothers often provide counseling and emotional support for their children,²³ and this may explain the result found for the responsiveness dimension, in which the mean value was higher for mothers.

The maternal demandingness and responsiveness dimensions, according to the adolescents' perceptions,

had higher mean values than those found for the paternal dimensions. Another study also found that mothers, according to their adolescent children, are more affectionate, transmit greater support and interest in their activities and, at the same time, are more demanding than fathers, who, in turn, are perceived as less sensitive and less involved in family interactions.¹²

Results of tobacco use in other studies in the literature are similar to ours. The children of neglectful parents have greater chances of using tobacco.²⁴ A study with French adolescents found a negative association between parental control and drug use, and this association was stronger for tobacco and cannabis use than for alcohol use.²⁵ Different results were found in a study that evaluated the use of cannabis, cocaine and ecstasy and found that lower parental support and control levels were associated with the use of cocaine and ecstasy. In contrast, parent support was

Table 4 - Odds ratio for age, sex, income, maternal and paternal parenting styles perceived by adolescents that called VIVAVOZ, Brazil, 2010: results of crude and adjusted analysis*

Variables	Drug users n (%)	Drug nonusers n (%)	Crude OR (95%CI)	Adjusted OR (95%CI)
Age (n = 232)				
17 to 19 years	38 (41)	54 (59)	3.1 (1.7-5.6) [†]	2.8 (1.3-6.2) [†]
14 to 16 years	26 (19)	114 (81)	1	1
Sex (n = 232)				
Boys	40 (46)	46 (54)	4.4 (2.4-8.1) [†]	3.2 (1.5-7.2) [†]
Girls	24 (16)	122 (84)	1	1
Family monthly income (n = 204) [‡]				
5 times minimum wage or less	32 (24)	103 (76)	0.5 (0.3-1.0)	0.9 (0.4-2.1)
More than 5 times minimum wage	25 (36)	44 (64)	1	1
Maternal style (n = 225)				
Authoritarian/indulgent/neglectful	50 (33)	102 (67)	2.8 (1.3-5.7) [†]	3.3 (1.1-9.8) [†]
Authoritative	11 (15)	62 (85)	1	1
Paternal style (n = 206)				
Authoritarian/indulgent/neglectful	36 (28)	94 (72)	2.8 (1.3-6.3) [†]	1.8 (0.7-4.8)
Authoritative	9 (12)	67 (88)	1	1

95%CI = 95% confidence interval; OR = odds ratio.

* Age, sex, income, maternal style and paternal style.

[†] p < 0.05.[‡] Some participants did not give a response to this item.

classified as higher among adolescents that used cannabis or that did not use any drugs.⁷ In our study, there was also no statistical significance in the association between perceived parenting styles and use of cannabis or alcohol, differently from the results found in a longitudinal study,²⁴ in which there was an association between alcohol use and authoritarian and neglectful parenting styles.

The children that perceived their paternal parenting styles as non-authoritative had twice the risk of developing some drug abuse. Studies show that adolescents start using drugs at an early age, and also report that the earlier the individual starts using alcohol or tobacco, the greater will be their vulnerability to developing abuse or dependence of the same drugs and concomitant use of illicit drugs.^{26,27}

In this sample, the use of drugs was also associated with some sociodemographic characteristics, such as sex and age. The sex of adolescents was significantly associated with drug use in this study sample, and boys used drugs three times more often than girls. In fact, alcohol use seems to be associated with male adolescents,²⁸ as well as drugs in general.²⁶ Older adolescents have almost three times greater risks of using drugs, a result also found in a study that investigated the use of alcohol among adolescents.²⁸

One of the limitations of our study was the fact that it was conducted taking into consideration only the adolescents' perception of parenting styles. Studies to measure

perceptions by both parents and their adolescent children may provide more comprehensive data about the evaluation of parental styles and drug use. Moreover, in adolescence, children tend to have a more negative perception of their relationship with their parents.²⁹ As the perspective of a single cause for drug use may be associated with innocuous or harmful practices and guidelines,⁵ the use of drugs should be understood as a multifactorial phenomenon that comprehends broader aspects of the social, educational and community networks, as well as parenting styles. Another limitation is the fact that, in phone contacts it is not possible to have a biological confirmation of drug use because of collection difficulties when the sample is spread all over a country of continental dimensions as Brazil. At the same time, it has advantages because it ensures anonymity.¹⁴ Several studies have shown the reliability of information provided by drug users about their use^{16,17} and the relevance of adolescents' reports about drug use and associated problems, particularly when threats to the confidentiality of their data are reduced.¹⁸

In conclusion, maternal authoritative styles contribute to preventing drug use, and paternal authoritative styles seem to be associated with not abusing drugs. The association between parenting styles and drug use and abuse may be identified in healthcare services and, thus, contribute to the prevention of these problems and the promotion of healthier family relationships.

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