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Substance Use and Its Relationship With Attachment and Early Maladaptive Schemes in Adolescents in Ecuador

Leticia Olave[1] | Janire Momeñe[2] | Laura Macía[2] | Patricia Macía[3] | María Dolores Chávez-Vera[4] | Marta Herrero[2] | Ana Estévez[2] | Itziar Iruarrizaga[5]

[1]Faculty of Health Sciences, International University of Valencia, Valencia, Spain | [2]Department of Personality, Evaluation and Treatments, Faculty of Health Sciences, University of Deusto, Bilbao, Spain | [3]Department of Basic Psychological Processes and their Development, University of the Basque Country, Leioa, Bizkaia, Spain | [4]Department of Social and Behavioral Sciences, Faculty of Humanities and Social Sciences, Technical University of Manabí, Portoviejo, Ecuador | [5]Department of Experimental Psychology, Cognitive Processes and Speech Therapy, Faculty of Social Work, Complutense University of Madrid, Campus de Somosaguas, Madrid, Spain

Correspondence: Itziar Iruarrizaga (iciariru@psi.ucm.es)

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ABSTRACT

Given the scarcity of studies addressing substance consumption and its relationship with attachment styles and early maladaptive schemas in adolescents, the present study is proposed. Aims of this study are to analyze the relationship among attachment styles, early maladaptive schemas, and substance use; test the predictive role of attachment styles on substance use; and observe the mediating role of early maladaptive schemas in the relationship between attachment and substance use. The sample consisted of 1533 adolescents from Ecuador (53.9% males) aged between 14 and 18 years ($M = 15.76$; SD = 1.25). The attachment styles of security, value to parental authority, parental permissiveness, parental interference, self-sufficiency and resentment against parents, childhood trauma, and family concern predict substance use (tobacco, alcohol, tranquilizers/sedatives or sleeping pills, hashish or marijuana, cocaine, GHB or liquid ecstasy, ecstasy, amphetamines/speed, hallucinogens, heroin, inhalants/volatiles), and the mediating role of early maladaptive schemas is confirmed (explained variance up to 33.33%). Identifying risk or vulnerability factors, such as attachment and early maladaptive schemas related to substance consumption, is especially relevant for designing and implementing preventive interventions in the adolescent population.

1 | Introduction

Adolescence is a particularly complex period due to the multitude of changes that occur at all levels of the individual. Adolescent youths discover who they are, develop their personalities, and undergo significant social changes, shifting their focus from attachment figures to peers (Brechwald and Prinstein 2011; Chaput-Langlois et al. 2022). Changes also take place at the brain level, with increased secretion of pubertal hormones. Coupled with the underdevelopment of the prefrontal cortex, this places adolescents in a particularly vulnerable life stage associated with the emergence of risky behaviors such as substance consumption. According to the behavioral disinhibition model proposed by the Center for Education and Drug Abuse Research (CEDAR), established by the National Institute of Drug Abuse (NIDA), the decrease in prefrontal cortex response is linked to impulsivity issues and inhibitory control systems, thereby increasing the risk of addiction (Crews and Boettiger 2009; Szerman et al. 2014).

In the socioemotional development of adolescents, attachment theory explains that the ability to regulate emotions depends on

the type of attachment experienced in childhood. The concept of attachment refers to the emotional and affective bond that develops between a person and their primary caregivers, typically during infancy. Psychologist Bowlby (1951) was one of the first to develop attachment theory, whereas Ainsworth et al. (1978) expanded on their work, identifying specific attachment patterns through the "strange situation procedure." Four main types of attachment are identified: (1) Children with secure attachment typically use their caregivers as a secure base to explore the world. They feel comfortable exploring their environment, knowing they can return to their caregivers for emotional support and comfort; (2) children with anxious-ambivalent/resistant attachment tend to show anxiety even when their caregivers are present. They may have difficulty feeling secure and may fear separation; (3) children with avoidant attachment tend to avoid or minimize emotional closeness with their caregivers. They may appear independent and less affectionate; (4) children with disorganized attachment lack clear strategies for coping with stress or anxiety. There may be contradictory or confusing responses to attachment figures. It is important to note that these attachment patterns are not static and can evolve over time in response to experiences and relationships.

Individuals with a secure attachment are more likely to have better emotion regulation skills (Mikulincer, Shaver, and Pereg 2003), whereas those with an ambivalent attachment are more likely to experience greater difficulties (Loinaz and Echeburúa 2012). Different attachment styles exist, each with distinct emotional characteristics. Secure attachment is characterized by greater emotional regulation (Cooper, Shaver, and Collins 1998; Zapata 2016), better expression and control of anger (Mikulincer 1998), and an adaptive coping style (Páez et al. 2006). On the other hand, avoidant attachment is marked by high emotional control and low emotional expression (Balluerka et al. 2011), with a predominance of feelings of anger and hostility (Garrido-Rojas 2006). Lastly, in the ambivalent attachment style, there is a deficit in anger control and impulsivity (Loinaz 2011; Mikulincer 1998), high emotional expressiveness (Kerr et al. 2003), limited autonomy (Mikulincer, Shaver, and Pereg 2003), and hypersensitivity to negative emotions and heightened expressions of distress (Barroso 2014).

The type of attachment and early maladaptive schemas are closely related, as the initial emotional experiences with attachment figures in early life establish the first schemas about oneself and others (Estévez 2013). Early schemas are crucial because they later influence both how one relates to others and how one thinks, feels, and acts. If early emotional experiences in childhood are negative and involve deficiencies, early maladaptive schemas will form, leading to dysfunctional, generalized patterns about oneself and others (Young, Klosko, and Weishaar 2013). It is noteworthy that cognitive schemas are an intrinsic component of the human experience, influencing how we perceive the world, interact with others, and comprehend ourselves. These schemas begin to form early in life and shape the personality of each individual. If early experiences are predominantly negative and there are deficiencies in the care received from attachment figures, it is likely that these initial schemas become maladaptive, resulting in dysfunctional patterns of behavior and relationships both with oneself and with others (Young, Klosko, and Weishaar 2013).

Early schemas also vary across attachment styles. Secure attachment is associated with positive schemas about oneself and others, anxious attachment is related to negative self-schemas, and avoidant attachment is linked to negative schemas about others (Estevez et al. 2021; Márquez, Rivera, and Reyes 2009). Cognitive schemas are organized into five main domains: (1) disconnection and rejection, which involves expecting that one's needs for security, acceptance, and respect will not be met by others; (2) impaired autonomy, which relates to a negative view of oneself and the context in terms of the ability to succeed or develop independence from others; (3) impaired limits, covering difficulties in establishing internal boundaries and taking responsibility for others; (4) other-directedness, encompassing cognitive schemas related to fulfilling others' desires and feelings; and (5) overvigilance and inhibition, referring to schemas associated with the need to be perfect and avoid disapproval from others (Estévez and Calvete 2007; Young 1999).

Attachment styles have also been linked to the initiation and maintenance of substance consumption (Chaput-Langlois et al. 2022; Chiang et al. 2022; Tuncay, Kıran, and Çakmak 2021). Adolescents who perceive having a close and healthy relationship with their parents exhibit lower substance consumption (Becoña Iglesias et al. 2014; Kostelecky 2005). However, in families of adolescent consumers, an insecure attachment style is common, where the mother exhibits an anxious attachment style, the father is ambivalent, and the adolescent displays an avoidant style (Schindler et al. 2007, 2005). On the other hand, adolescents with a strong attachment to substance-using parents perceive greater drug availability while also tending to associate with other consuming peers (Drapela and Mosher 2007). Furthermore, specific early maladaptive schemas, such as abandonment, insufficient self-control, mistrust, vulnerability, emotional inhibition, and entitlement/grandiosity, are linked to alcohol consumption in university populations (Gantiva Díaz et al. 2010).

In fact, there are two specific cognitive schemas associated with substance use in adolescents, grouped under the domain of impaired limits, namely, grandiosity and insufficient self-control (Bakhshi Bojed and Nikmanesh 2013; Young and Klosko 1993; Karami et al. 2015). The cognitive schema of grandiosity encompasses a belief in superiority over others and involves difficulties recognizing the limits of life, akin to dysfunctional narcissism (Barry et al. 2007). Individuals with this schema feel special and struggle to delay their needs or desires (Young 1999). On the other hand, the maladaptive schema of insufficient self-control is related to the belief that a person is incapable of achieving personal goals due to difficulties in controlling their own impulses. Substance consumption has also been associated with interpersonal difficulties in university students (Cota et al. 2016).

Given the limited number of studies analyzing the relationship among impulsive behaviors, attachment in adolescent populations, and their connection to early maladaptive schemas (Estévez et al. 2018, 2021; Helbert and Lacayo 2019), there is a need to address this issue, especially in Ecuador, where no such research has been conducted. Ecuador is one of the countries with higher substance consumption rates in Latin America, with an incidence of 51% in the general population, whereas 67% of the population started their consumption between the ages of 15 and 19 (c). According to data from the Fourth National Survey

TABLE 1 | Socio-demographic data of the participants.

Variable	%
Male	53.9
Female	46.1
Urban	63.86
Rural	36.13

on Drug Use in Students aged 12–17 (National Council for the Control of Narcotic and Psychotropic Substances. National Drug Observatory 2013) from Ecuador, it is observed that 27.8% of respondents had experimented with cigarette consumption at some point in their lives, 44.8% had consumed alcohol, 5.4% had used tranquilizers, 3.8% stimulants, 3.5% inhalants, 6.7% marijuana, 1.2% crack cocaine, 2.2% cocaine, 0.9% heroin, and 1.1% ecstasy.

The main objective is to enhance understanding in order to achieve early detection of risk factors and improve preventive efforts against substance consumption in the adolescent population from Ecuador. We emphasize that the originality of the research is to have been carried out in a context as little explored until now as the Ecuadorian context. The objectives of the present study are to examine the relationship among attachment styles, early maladaptive schemas, and drug consumption, as well as to explore the predictive role of attachment styles in substance consumption. Finally, the mediating role of early maladaptive schemas in the relationship between attachment styles and substance consumption is analyzed.

2 | Materials and Methods

2.1 | Participants

The sample consists of 1533 schooled adolescents of both genders, with 53.9% being males ($n = 826$) and 46.1% females ($n = 707$), aged between 14 and 18 years ($M = 15.76$; SD = 1.25), from 12 public educational units spanning various urban (63.86%; $n = 979$) and rural (36.13%; $n = 554$) socio-demographic sectors in Portoviejo Canton, Manabí Province, Republic of Ecuador (Table 1).

The sample was obtained in accordance with the official entities of Ecuador (National Council for the Control of Narcotic and Psychotropic Substances 2013), now known as the Technical Secretariat for Drugs (SETED). The sample design and size determination were defined and calculated following the same criteria as those used in the Second National Survey of High School Students on Drug Consumption (2005) in the Republic of Ecuador, conducted by the National Council for the Control of Narcotic and Psychotropic Substances. These parameters used for calculation, as referred to in the Council's report, are applied to all studies conducted in the region. The target population was adolescents in the 10th year of basic education and 1st, 2nd, and 3rd years of high school attending public educational units. The selection of educational units was based on the database of the Ministry of Education, Zonal Coordination 4, District 13D01. These units were selected based on their location in the canton, established parish, institutional zone (urban or rural), being publicly funded, and representing different socio-demographic zones within Portoviejo Canton.

For calculating the sample size, the confidence level of the sample and its relationship with the margin of error or variation always present between sample results and population inferences were considered. The employed confidence level is 0.95, with a margin of error criterion of 0.015. Due to the sampling characteristics, a correction factor was applied to amplify the sample size and reduce observation variability; this factor was estimated at 2. Finally, the sample size was increased to account for a 10% potential nonresponse rate.

Each educational unit had a selection probability directly proportional to the number of classes in the 10th year of General Basic Education (EGB) and Unified General Baccalaureate (BGU) (1st, 2nd, and 3rd years of high school). In educational units with more classrooms than the sampling interval, multiple classes could be selected. The selection criteria for the strata were representativeness criteria corresponding to the capital of Manabí, Republic of Ecuador. This study represents both urban and rural parishes of different educational units. The sample was composed of (a) the capital of Manabí, Portoviejo, with 2 parishes: urban and rural, and (b) 12 educational units belonging to the 2 parishes, comprising a total of 1533 adolescents from the 12 educational units and parishes.

It is important to note that, in the sample of this study, there is a higher presence of males compared to females (53.9 and 46.1, correspondingly). However, in the overall Ecuadorian population, the proportion of females is greater than that of males. This disparity may be attributed to differences in the school dropout. According to data from the Instituto Nacional de Evaluación Educativa (2019), the percentage of enrolled students in Ecuador by gender is quite similar; nevertheless, a significant gender gap is observed in the school dropout, being higher in female population.

This is a nonexperimental, cross-sectional correlational study. A probabilistic sampling method was employed using a type of one-stage stratified random sampling with proportional allocation. The distribution was carried out based on the weight or size within the population. To perform the stratification, factors, such as the number of educational units, the number of adolescents per class, urban and rural parishes, and the distribution of courses by gender, were taken into account. The reference population consists of schooled adolescents from public educational units in urban and rural parishes of Portoviejo Canton in the Province of Manabí, Republic of Ecuador. These units encompass different socio-demographic sectors that share common characteristics and constitute the study's focus. Data analysis was conducted using the statistical software IBM SPSS version 20.

2.2 | Procedures

The conduct of the study was preceded by the provision of informed consent to the parents and/or guardians of the adolescents who completed the questionnaires. They were also informed about the completion guidelines, duration, measured aspects, voluntary participation in the study, confidentiality and

anonymity of the obtained data, as well as the contact information (phone numbers and emails) of the designated researchers for communication. As the data collection was carried out in paper format, the researcher remained in the classroom during the questionnaire administration (paper and pencil) until all were completed and returned. It was optional for teachers to remain in the classroom. Participating students in the research were given a pencil and a certificate of participation as a token of appreciation.

This study has been conducted following the principles outlined in the Declaration of Helsinki (World Medical Association 2013), and it has been carried out with the permission of the Ministry of Education of Portoviejo (Ecuador) to administer the questionnaires, and informed consent was obtained from the parents. Furthermore, the Academic Committee of the Doctoral Program in Social Work at the Complutense University of Madrid approved it, considering its scientific quality appropriate and noting no ethical issues for its implementation.

2.3 | Instruments

2.3.1 | Attachment

CaMir-R (Balluerka et al. 2011): This instrument is the reduced version of the CaMir (Pierrehumbert et al. 1996). It measures representations of attachment, assessing present and past experiences of attachment and family functioning. The questionnaire is answered using a Likert scale with five answer options ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). In the present study, Cronbach's alpha for the total scale is 0.90 (attachment security: availability and support $\alpha = 0.90$; family concern $\alpha = 0.85$; parental interference $\alpha = 0.71$; parental authority value $\alpha = 0.83$; parental permissiveness $\alpha = 0.68$; self-sufficiency and resentment against parents $\alpha = 0.69$; childhood trauma $\alpha = 0.83$). It consists of 32 items divided into 7 dimensions, of which 5 refer to the representations of attachment (*security: availability and support of attachment figures*, *family concern*, *parental interference*, *self-sufficiency and resentment against parents*, and *childhood trauma*), and the other two remaining refer to representations of family structure (*parental authority* and *parental permissiveness*). The *security scale: availability and support of attachment figures* refers to the perception of having felt loved and of being able to trust and dispose of their attachment figures if required. The *family concern* scale refers to an intense anxiety of separation from loved ones and excessive worry at the present time for attachment figures. The *parental interference* scale refers to childhood memories of being overprotected, fearful, and showing concern about being abandoned. The *parental authority value* scale is about the positive evaluation toward family values of authority and hierarchy, whereas the *parental permissiveness scale* shows childhood memories of having suffered from a lack of parental boundaries and guidance. The scale *of self-sufficiency and resentment against parents* refers to the rejection of feelings of dependence and affective reciprocity and resentment toward loved ones. Finally, the *childhood trauma* scale refers to childhood memories of having suffered lack of availability, violence, and threats from attachment figures.

It's worth mentioning that a higher score on the dimensions indicates a stronger presence of that attachment style in an individual. Therefore, higher score on *the security scale: availability and support of attachment figures* means a higher presence of secure attachment, because higher score on *family concern*, *parental interference*, *self-sufficiency and resentment against parents*, and *childhood trauma* mean a higher presence of insecure attachment.

2.3.2 | Cognitive Schemes

Schema Questionnaire-Short Form (SQ-SF, Young and Brown 1994): This questionnaire evaluates early maladaptive schemes proposed by Young that must be answered according to a six-point Likert scale ranging from 1 (*totally false*) to 6 (*it describes me perfectly*). A higher score on the scales indicates a greater presence of early maladaptive schemes. In this research, 60 items were used to evaluate the following early maladaptive schemes: from the Disconnection and rejection domain, *emotional deprivation*, *abandonment*, *abuse/distrust*, *social isolation*, and *imperfection* were evaluated; of the impaired autonomy domain, *failure*, *dependence/incompetence*, and *vulnerability to danger and attachment* were evaluated; from the impaired limits domain, *grandiosity* and *insufficient self-control* were evaluated; from the domain orientation toward others, *subjugation*, *self-sacrifice*, and *need for approval and self-punitive* were evaluated; from the domain excessive vigilance and inhibition, *emotional inhibition*, *unattainable goals*, and *negativity* were evaluated.

2.3.3 | Substance Use

State Survey on Drug Use in Secondary School Students—ESTUDES (National Plan on Drugs 2012): The ESTUDES survey is a component of an ongoing series of biennial surveys conducted in Spain since 1994. Its primary objective is to gain insight into the patterns and trends of drug use among students aged 14–18 attending secondary education. It consists of 89 questions that gather information about basic characteristics related to the adolescent or their immediate environment (P.1–P.17), the activities they can engage in during their leisure time (P.18–P.20), the lifetime, past-year, or past-month use of tobacco (P.21–P.31), alcohol consumption (P.32–P.43), tranquilizers/sedatives and sleeping pills (P.44), over-the-counter tranquilizers/sedatives and sleeping pills (P.45), other types of drugs (P.46–P.61), problems experienced in the last 12 months and family rules (P.62–P.75), availability (P.76 and P.77), information (P.78–P.81), perception of problem (P.82 and P.83), renewed use of hashish or marijuana (P.84), other questions that are part of international questionnaires (P.85 and P.86) (P.87 and P.88), and suggestions for improving the questionnaire (P.89). In this study, the following aspects are analyzed: how many days you have consumed in the last 30 days, frequency of alcohol consumed in the last 30 days on weekdays, frequency of alcohol consumed in the last 30 days on weekends, amount of alcohol consumed in the last 30 days on weekdays, and amount of alcohol consumed in the last 30 days on weekends.

2.4 | Analytical Procedure

First, the associations between early maladaptive schemas and attachment styles were analyzed through a bivariate correlation

analysis using Pearson's *r*. Second, the relationships between attachment styles and drug use were measured, and third, correlations between early maladaptive patterns and drug use were analyzed.

Then, the influence of early maladaptive schemes on the relationship between attachment and substance use was analyzed. Initially, the predictive capacity of attachment styles on drug use was analyzed through a multiple linear regression analysis in order to test the effect of the predictor variables on the drug use. Considering that different attachment styles were significantly associated with drug use (as can be observed in the bivariate analyses), a multiple regression analysis was conducted linearly with each of the drugs, as we aimed to analyze the influence of all the attachment styles (as different predictors) on drug use. Only significant results are going to be shown in the regression analysis table.

Finally, considering early maladaptive schemes that were associated with drug use, controlling the association between attachment and drug use (in previous multiple linear regression analyses), a mediation analysis was conducted in order to explore the role of early maladaptive schemes as mediators in the relationship between attachment styles and drug use. Variables related to early maladaptive schemes that were statistically significant in the previous correlation analysis will be incorporated as possible mediating variables in a global mediation analysis for exploring their effect in the relationship between attachment and drug use. The SPSS-IBM statistical software program (SPSS Inc. 2013) was used for all analyses.

3 | Results

First, the relationships between early maladaptive schemes and attachment styles were analyzed (Table 2). The results showed how absolutely all early maladaptive schemes were positively and statistically significantly associated with attachment styles of *self-sufficiency and resentment against parents* and *childhood trauma*. On the other hand, except for the early maladaptive scheme of *abandonment*, the rest of the early maladaptive schemes were positively related to the attachment style of *parental interference*. The same happens with the attachment style *of family concern*, which obtains positive relationships with all schemes excluding those of *emotional deprivation*, *abandonment*, *distrust*, *social isolation*, *dependence*, *self-sacrifice*, and *insufficient self-control*. The attachment style of *parental permissiveness* was positively linked to the schemes of *dependence*, *vulnerability*, *attachment*, *self-sacrifice*, and *unattainable goals*. Regarding the style of attachment *of value to parental authority*, except for the schemes of *emotional deprivation*, *dependence*, *self-sacrifice*, and *insufficient self-control*, positive relationships were observed with the rest of the early maladaptive schemes. Finally, *security* was negatively related to the schemes *of emotional deprivation*, *dependence*, and *self-sacrifice*, as well as in a positive sense with the *search for recognition* and *negativity*.

Second, the relationships between attachment styles and drug use were measured. The results obtained in a statistically significant manner are shown in Table 3.

The data obtained suggested that the consumption in the last 30 days of all the drugs studied, as well as the frequency at the time of getting drunk and the consumption of five or more glasses of alcohol on the same occasion, is negatively related to the styles of attachment of *security* and *value to parental authority*. It should also be noted that all drugs were negatively related (except amphetamines and hallucinogens) to the attachment style of *family concern*. Similarly, all drugs (excluding tobacco, tranquilizers/sedatives or sleeping pills, and hashish or marijuana) were positively associated with *parental permissiveness* attachment style. In addition, it should be noted that, the consumption of alcohol, hashish or marijuana, five or more glasses of alcohol on the same occasion, and getting drunk were positively linked to the attachment style of *childhood trauma*.

Regarding the frequency of alcohol consumed in the past 30 working days, beer/cider consumption was negatively related to the attachment style of *value to parental authority*, as well as wine/champagne or cava to the attachment styles of *security*, *family concern*, and *value to parental authority*. On the other hand, in reference to the frequency of alcohol consumed last month on weekends, the results indicated how wine/champagne or cava, beer/cider, and fruit liqueurs were negatively related to *security*, *family concern*, and *value to parental authority*, whereas hard liquors did so with *parental interference* and *value to parental authority*.

Finally, regarding the amount of alcohol consumed in the last 30 working days, the results reflected negative relationships between the consumption of hard liquors and the attachment styles of *parental permissiveness* and *self-sufficiency and resentment against parents*. Regarding the amount of alcohol consumed in the last month on weekends, the consumption of fruit liqueurs was negatively related to the *value to parental authority* and *self-sufficiency and resentment against parents*, whereas the consumption of wine/champagne or cava did so in a positive sense with *parental permissiveness*.

Third, the relationships between early maladaptive schemes and drug use were examined. The statistically significant results are shown in Table 4.

The results show how tobacco was positively related to the early *self-punitive* maladaptive scheme. Likewise, it should be noted that with the exception of amphetamines, which were positively related to the schemes of *social isolation* and *vulnerability*, the rest of the drugs were positively related to the early maladaptive pattern of *dependence*. It is necessary to mention how the consumption of five or more glasses of alcohol on the same occasion was positively related to all the early maladaptive schemes except the schemes of *failur*e and *search for recognition*, as well as the frequency at the time of getting drunk, which was positively related to all schemes except those of *failure*, *vulnerability*, *grandiosity*, and *search for recognition*. The same happened with tranquilizers/sedatives or sleeping pills, which were positively linked to all maladaptive schemes except *grandiosity* and *recognition-seeking schemes*.

Regarding the frequency of consumption on weekdays of appetizers/vermouth and combined/cubatas, as well as fruit liqueurs and strong liquors during the weekends throughout the last month,

TABLE 2 | Bivariate correlations between early maladaptive schemas and attachment styles.

		Security	Family concern	Parental interference	Value to parental authority	Parental permissiveness	Self-sufficiency and resentment against parents	Childhood trauma
Disconnection and rejection	Emotional deprivation	−0.05*	0.04	0.09**	0.05	0.02	0.18**	0.15**
	Abandonment	−0.05	0.04	0.04	0.05*	−0.00	0.19**	0.11**
	Distrust	−0.04	0.04	0.08**	0.06*	0.03	0.15**	0.14**
	Social isolation	−0.03	0.05	0.09**	0.07**	−0.01	0.16**	0.14**
	Imperfection	−0.01	0.08**	0.11**	0.07**	0.02	0.17**	0.14**
Impaired autonomy	Failure	0.05	0.11**	0.10**	0.12**	0.01	0.13**	0.12**
	Dependence	−0.06*	0.02	0.10**	0.01	0.09**	0.15**	0.18**
	Vulnerability	−0.01	0.08**	0.08**	0.05*	0.05*	0.16**	0.13**
	Attachment	−0.04	0.05*	0.12**	0.06*	0.07**	0.17**	0.17**
Orientation toward others	Subjugation	0.01	0.09**	0.10**	0.12**	0.02	0.15**	0.14**
	Self-sacrifice	−0.06*	0.04	0.10**	0.04	0.05*	0.17**	0.16**
	Search for recognition	0.08**	0.14**	0.10**	0.14**	0.01	0.14**	0.06*
	Self-punitive	−0.04	0.05*	0.10**	0.05*	0.04	0.14**	0.15**
Impaired boundaries	Grandiosity	−0.02	0.07**	0.08**	0.08**	0.01	0.19**	0.14**
	Insufficient self-control	−0.05	0.04	0.06*	0.04	0.03	0.19**	0.14**
Excessive vigilance and inhibition	Unattainable goals	0.01	0.07**	0.12**	0.08**	0.05*	0.16**	0.13**
	Negativity	0.09**	0.12**	0.09**	0.17**	−0.02	0.14**	0.07**
	Emotional inhibition	0.03	0.12**	0.12**	0.10**	0.03	0.15**	0.12**

*$p < 0.05$.
**$p < 0.001$.

TABLE 3 | Bivariate correlations between attachment styles and drug use.

	Security	Family concern	Parental interference	Parental authority value	Parental permissiveness	Self-sufficiency and resentment against parents	Childhood trauma
How many days you have consumed in the last 30 days							
Tobacco	−0.16**	−0.11**	−0.07**	−0.15**	0.03	0.02	0.03
Alcohol	−0.12**	−0.08**	0.01	−0.11**	0.08**	−0.03	0.06*
Five or more glasses of alcohol on the same occasion	−0.12**	−0.08**	−0.02	−0.12**	0.05*	0.02	0.11**
Get drunk	−0.15**	−0.13**	−0.05*	−0.17**	0.02	−0.05	0.08**
Tranquilizers/Sedatives or sleeping pills	−0.13**	−0.09**	−0.03	−0.12**	0.02	0.00	0.03
Over-the-counter tranquilizers/sedatives or sleeping pills	−0.13**	−0.11**	−0.06*	−0.15**	0.02	0.00	0.02
Hashish or marijuana	−0.14**	−0.13**	−0.03	−0.16**	0.04	−0.01	0.06*
Cocaine-based	−0.11**	−0.09**	−0.02	−0.14**	0.08**	−0.00	0.02
Powder cocaine	−0.10**	−0.07**	0.01	−0.12**	0.06*	0.00	0.00
GHB or liquid ecstasy	−0.09**	−0.06*	−0.01	−0.11**	0.08**	0.00	0.03
Ecstasy	−0.08**	−0.06*	−0.04	−0.11**	0.05*	0.01	−0.00
Amphetamines, speed	−0.06*	−0.04	−0.00	−0.10**	0.09**	0.01	−0.02
Hallucinogens	−0.07**	−0.04	0.00	−0.09**	0.06*	0.01	0.01
Heroin	−0.09**	−0.06*	−0.03	−0.12**	0.07**	0.00	−0.00
Volatile inhalants	−0.12**	−0.07**	−0.02	−0.14**	0.08**	0.02	0.04
Frequency of alcohol consumed in the last 30 days on weekdays							
Wine/champagne or cava	−0.12*	−0.13*	−0.09	−0.16*	0.04	0.08	0.04
Beer/cider	−0.09	−0.06	−0.04	−0.11*	−0.02	−0.00	−0.03
Frequency of alcohol consumed in the last 30 days on weekends							
Wine/champagne or cava	−0.16**	−0.16**	−0.06	−0.14**	0.03	−0.05	0.03
Beer/cider	−0.10**	−0.12**	−0.07*	−0.10**	−0.04	−0.09**	−0.05
Fruit liqueurs	−0.14**	−0.18**	−0.09*	−0.15**	−0.00	−0.04	−0.00
Hard liquors	−0.07	−0.07	−0.11*	−0.10*	−0.05	−0.05	−0.01

(Continues)

TABLE 3 | (Continued)

	Security	Family concern	Parental interference	Parental authority value	Parental permissiveness	Self-sufficiency and resentment against parents	Childhood trauma
Amount of alcohol consumed in the last 30 days on weekdays							
Hard liquors	−0.03	0.04	−0.04	−0.02	−0.20*	−0.16*	−0.00
Amount of alcohol consumed in the last 30 days on weekends							
Wine/champagne or cava	−0.00	−0.04	0.03	−0.05	0.09*	−0.05	0.04
Fruit liqueurs	−0.04	−0.07	−0.02	−0.12**	−0.01	−0.10*	0.01

*$p < 0.05$.
**$p < 0.001$.

they obtained positive relationships with the early maladaptive scheme of *dependence*. In the same way, it was observed how the frequency of consumption of combined/cubatas in the last month on weekends was positively related to the early maladaptive schemes of *dependence*, *attachment*, and *emotional inhibition*.

On the other hand, the results showed how the amount of hard liquors consumed in the last 30 working days was negatively related to the *distrust* scheme. In reference to the amount of alcohol consumed on weekends in the last month, beer/cider, fruit liqueurs, and hard liquors were positively linked to the dependency scheme, whereas the combined/cubatas were negatively related to the *emotional inhibition* scheme. Similarly, the consumption of aperitifs/vermouth was negatively related to the schemes of *emotional deprivation*, *vulnerability*, *attachment*, *self-sacrifice*, *emotional inhibition*, *grandiosity*, *insufficient self-control*, and self-punitive, and the consumption of wine/champagne or cava was related to *emotional deprivation*, *distrust*, and *insufficient self-control*.

Fourth, the influence of early maladaptive schemes on the relationship between attachment and substance use was analyzed. Initially, the predictive capacity of attachment styles on drug use was analyzed. The statistically significant results are shown in Table 5.

The results revealed how the security attachment style was negatively associated with the days of use of tobacco, alcohol, tranquilizers/sedatives or sleeping pills, and inhalants/volatiles during the past month. It should also be noted how the style of attachment of *value to parental authority* was negatively associated with the consumption of all drugs studied, except alcohol (that did not show any relationship). Similarly, the consumption of five or more glasses of alcohol on the same occasion and the frequency of getting drunk also showed a negative association with *value to parental authority*. In addition, it was negatively associated with the amount of fruit liqueurs consumed in the last month on both weekdays and weekends. Likewise, the attachment style of *parental permissiveness* was positively associated with the consumption of all drugs studied except tobacco, tranquilizers/sedatives or sleeping pills, and hashish or marijuana. This attachment style also showed a negative association with the amount of hard liquors consumed in the last 30 working days and a positive association with the consumption of wine/champagne or cava on weekends. In this regard, the *parental interference* attachment style was positively associated with alcohol and powder cocaine use, as well as the amount of beer/cider consumed on weekends in the past month. Similarly, it is observed how the attachment style of *self-sufficiency and resentment against parents* was associated positively with the consumption of tobacco; and negatively associated to alcohol and getting drunk, with the amount of beer/cider consumed in the last month on weekdays and wine/champagne or cava, beer/cider, fruit liqueurs, and hard liquors consumed on weekends. As for the attachment style of *childhood trauma*, it was positively associated with the consumption of five or more glasses of alcohol on the same occasion, with getting drunk, and with the amount of beer/cider consumed in the last 30 days on weekdays and weekends; however, it was negatively associated with amphetamines/speed. Finally, the *family concern* attachment style was negatively associated with the frequency of consumption of wine/champagne or cava and

TABLE 4 | Correlations between early maladaptive patterns and drug use.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
How many days you have consumed in the last 30 days																	
Tobacco	0.03	0.03	0.05	0.04	0.03	0.02	0.05	0.01	0.02	0.01	0.02	0.01	0.02	0.04	0.01	−0.00	0.06*
Five or more glasses of alcohol on the same occasion	0.06*	0.06*	0.09**	0.09**	0.07**	0.04	0.08**	0.06*	0.08**	0.07**	0.09**	0.07**	0.08**	0.07**	0.06*	0.03	0.08**
Get drunk	0.05*	0.06*	0.08**	0.07**	0.06*	0.03	0.12**	0.04	0.07**	0.05*	0.09**	0.06*	0.09**	0.04	0.05*	0.04	0.08**
Tranquilizers/sedatives or sleeping pills	0.07**	0.06*	0.09**	0.06*	0.08**	0.06*	0.11**	0.07**	0.09**	0.05*	0.08**	0.07**	0.08**	0.05	0.07**	0.04	0.05*
Over-the-counter tranquilizers/sedatives or sleeping pills	0.05*	0.04	0.08**	0.03	0.06*	0.05*	0.09**	0.04	0.07**	0.04	0.07**	0.07**	0.07**	0.03	0.05	0.01	0.01
Hashish or marijuana	0.01	0.03	0.06*	0.04	0.06*	0.04	0.09**	0.03	0.06*	0.03	0.06*	0.03	0.06*	0.01	0.02	−0.00	0.05*
Cocaine-based	0.02	0.02	0.06*	0.03	0.04	0.01	0.09**	0.03	0.05	0.02	0.03	0.04	0.06*	0.03	0.03	−0.00	0.03
Powder cocaine	0.03	0.01	0.06*	0.03	0.05*	0.01	0.08**	0.02	0.03	0.00	0.04	0.04	0.07**	0.01	0.04	0.00	0.04
GHB or liquid ecstasy	0.02	0.02	0.04	0.02	0.05	0.00	0.09**	0.04	0.05	0.01	0.04	0.03	0.06*	0.01	0.04	−0.00	0.03
Ecstasy	0.02	0.01	0.05*	0.01	0.04	0.00	0.10**	0.01	0.05	0.02	0.04	0.04	0.05	0.01	0.04	−0.02	0.02
Amphetamines or speed	0.01	0.01	−0.00	0.05*	0.00	0.03	−0.01	0.08**	0.01	0.04	0.00	0.03	0.04	0.03	0.00	0.03	−0.01
Hallucinogens	0.02	0.01	0.05*	0.01	0.05*	0.01	0.08**	0.02	0.04	0.02	0.06*	0.04	0.06*	0.01	0.04	−0.01	0.03
Heroin	0.01	0.02	0.07**	0.01	0.05*	0.02	0.07**	0.01	0.03	0.00	0.03	0.04	0.05*	0.02	0.03	−0.01	0.03
Volatile inhalants	0.03	0.05*	0.08**	0.04	0.06*	0.03	0.09**	0.03	0.05*	0.03	0.05	0.06*	0.07**	0.03	0.02	−0.00	0.04
Frequency of alcohol consumed in the last 30 days on weekdays																	
Appetizers/vermouth	0.11	0.09	0.13	0.15	0.22**	0.18*	0.29**	0.19*	0.23**	0.15	0.17*	0.20*	0.13	0.19*	0.15	0.17*	0.14
Combined/cubatas	0.06	0.05	0.09	−0.02	0.08	0.12	0.21**	0.11	0.11	0.07	0.07	0.14	0.06	0.15	0.04	0.10	0.06

(Continues)

TABLE 4 | (Continued)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Frequency of alcohol consumed in the last 30 days on weekends																	
Combined/cubatas	0.05	0.06	0.10	0.06	0.06	0.06	0.16*	0.13	0.16*	0.09	0.11	0.16*	0.09	0.07	0.05	0.03	0.06
Fruit liqueurs	0.05	0.05	0.01	0.01	0.04	0.04	0.09*	0.02	0.06	−0.02	0.05	0.05	0.06	0.03	0.01	0.00	0.07
Hard liqueurs	0.03	0.02	0.02	0.00	0.05	0.03	0.10*	0.03	0.08	−0.02	0.00	0.04	0.05	0.01	0.00	−0.02	0.02
Amount of alcohol consumed in the last 30 days on weekdays																	
Hard liqueurs	−0.10	−0.07	−0.14*	−0.08	−0.11	−0.13	−0.04	−0.05	−0.06	−0.01	−0.14	−0.01	−0.07	−0.10	−0.11	−0.11	−0.10
Amount of alcohol consumed in the last 30 days on weekends																	
Wine/Champagne or cava	−0.10*	−0.08	−0.09*	−0.06	−0.06	−0.06	0.04	−0.04	−0.05	−0.08	−0.03	−0.03	0.02	−0.06	−0.09*	−0.08	−0.05
Beer/Cider	−0.05	−0.03	0.00	0.01	0.02	−0.02	0.08*	0.01	−0.02	−0.03	0.00	−0.01	0.03	−0.01	−0.02	−0.04	−0.02
Appetizers/Vermouth	−0.14*	−0.13	−0.04	−0.03	−0.11	−0.11	−0.12	−0.18**	−0.21**	−0.12	−0.15*	−0.17*	−0.14	−0.19**	−0.22**	−0.13	−0.15*
Combined/Cubatas	−0.10	−0.07	−0.00	−0.01	−0.04	−0.08	−0.09	−0.08	−0.07	−0.11	−0.08	−0.15*	−0.10	−0.13	−0.12	−0.11	−0.08
Fruit liqueurs	−0.00	0.00	0.06	0.06	0.04	0.02	0.10*	0.03	−0.01	−0.02	0.05	0.01	0.08	0.00	0.01	−0.01	0.06
Hard liqueurs	−0.02	−0.04	0.00	−0.02	−0.00	0.02	0.10*	−0.00	0.02	−0.02	0.04	0.01	0.04	−0.04	−0.00	−0.01	0.01

Note: (1) emotional deprivation; (2) abandonment; (3) distrust; (4) social isolation; (5) imperfection; (6) failure; (7) dependence; (8) vulnerability; (9) attachment; (10) subjugation; (11) self-sacrifice; (12) emotional inhibition; (13) unattainable goals; (14) grandiosity; (15) insufficient self-control; (16) seeking recognition; (17) self-punitive.

*$p < 0.05$.

**$p < 0.001$.

TABLE 5 | Attachment styles as predictors of drug consumption.

	B	β	t	Sig.	
Attachment					**How many days you have consumed in the last 30 days**
Security	−0.01	−0.10	−2.79	0.00**	Tobacco
Parental authority value	−0.03	−0.10	−2.70	0.01*	Tobacco
Self-sufficiency and resentment against parents	0.01	0.06	2.11	0.03*	Tobacco
Security	−0.03	−0.10	−2.62	0.01*	Alcohol
Parental interference	0.04	0.07	2.17	0.03*	Alcohol
Parental permissiveness	0.06	0.09	3.09	0.00**	Alcohol
Self-sufficiency and resentment against parents	−0.03	−0.06	−2.05	0.04*	Alcohol
Parental authority value	−0.05	−0.09	−2.41	0.02*	Five or more glasses of alcohol on the same occasion
Childhood trauma	0.03	0.10	3.39	0.00**	Five or more glasses of alcohol on the same occasion
Parental authority value	−0.06	−0.11	−3.02	0.00**	Get drunk
Self-sufficiency and resentment against parents	−0.02	−0.06	−2.05	0.04*	Get drunk
Childhood trauma	0.02	0.08	2.92	0.00**	Get drunk
Security	−0.01	−0.08	−2.17	0.03*	Tranquilizers/sedatives or sleeping pills
Parental authority value	−0.03	−0.08	−2.12	0.03*	Tranquilizers/sedatives or sleeping pills
Parental authority value	−0.04	−0.11	−3.04	0.00**	Tranquilizers/sedatives or sleeping pills without prescription
Parental authority value	−0.08	−0.13	−3.52	0.00**	Hashish or marijuana
Parental authority value	−0.06	−0.14	−3.80	0.00**	Cocaine-based
Parental permissiveness	0.04	0.10	3.51	0.00**	Cocaine-based
Parental interference	0.02	0.08	2.43	0.01*	Powder cocaine
Parental authority value	−0.04	−0.12	−3.16	0.00**	Powder cocaine
Parental permissiveness	0.03	0.08	2.70	0.01*	Powder cocaine
Parental authority value	−0.03	−0.10	−2.60	0.01*	GHB or liquid ecstasy
Parental permissiveness	0.03	0.10	3.44	0.00**	GHB or liquid ecstasy
Parental authority value	−0.03	−0.10	−2.84	0.00**	Ecstasy
Parental permissiveness	0.02	0.08	2.75	0.01*	Ecstasy
Parental authority value	−0.04	−0.12	−3.22	0.00**	Amphetamines/speed
Parental permissiveness	0.03	0.11	3.91	0.00**	Amphetamines/speed
Childhood trauma	−0.01	−0.07	−2.47	0.01*	Amphetamines/speed
Parental authority value	−0.03	−0.10	−2.77	0.01*	Hallucinogens
Parental permissiveness	0.02	0.08	2.59	0.01*	Hallucinogens
Parental authority value	−0.05	−0.13	−3.51	0.00**	Heroin
Parental permissiveness	0.03	0.10	3.41	0.00**	Heroin
Security	−0.02	−0.09	−2.45	0.01*	Inhalants/volatiles
Parental authority value	−0.05	−0.12	−3.34	0.00**	Inhalants/volatiles
Parental permissiveness	0.04	0.10	3.29	0.00**	Inhalants/volatiles

(Continues)

TABLE 5 | (Continued)

	B	β	t	Sig.	
					Frequency of alcohol consumed in the last 30 days on weekends
Family concern	−0.03	−0.15	−2.31	0.02*	Wine/champagne or cava
Family concern	−0.04	−0.17	−2.74	0.01*	Fruit liqueurs
					Amount of alcohol consumed in the last 30 days on weekdays
Self-sufficiency and resentment against parents	−0.22	−0.13	−1.98	0.04*	Beer/cider
Childhood trauma	0.15	0.12	2.00	0.04*	Beer/cider
Parental authority value	−0.40	−0.24	−2.20	0.03*	Fruit liqueurs
Parental permissiveness	−0.35	−0.22	−2.68	0.01*	Hard liqueurs
					Amount of alcohol consumed in the last 30 days on the weekend
Parental permissiveness	0.32	0.11	2.11	0.04*	Wine/champagne or cava
Self-sufficiency and resentment against parents	−0.25	−0.11	−2.06	0.04*	Wine/champagne or cava
Family concern	−0.20	−0.10	−2.02	0.04*	Beer/cider
Parental interference	0.29	0.10	1.99	0.04*	Beer/cider
Self-sufficiency and resentment against parents	−0.33	−0.12	−2.81	0.00**	Beer/cider
Childhood trauma	0.17	0.09	2.13	0.03*	Beer/cider
Family concern	−0.35	−0.25	−2.22	0.03*	Appetizers/vermouth
Parental authority value	−0.66	−0.17	−2.59	0.01*	Fruit liqueurs
Self-sufficiency and resentment against parents	−0.34	−0.11	−2.17	0.03*	Fruit liqueurs
Self-sufficiency and resentment against parents	−0.30	−0.11	−2.14	0.03*	Hard liqueurs

*$p < 0.05$.
**$p < 0.001$.

fruit spirits, as well as the amount of consumption of beer/cider and snacks/vermouth in the last month on weekends.

Finally, early maladaptive schemes were associated with drug use, controlling the association between attachment and drug use. The statistically significant results are shown in Table 6.

As can be seen, the non-standardized coefficient of the *child injury* variable went from 0.03 in the first step to 0.02 in the third step. This means that 33.33% of the variance of the relationship between *childhood trauma* and the consumption of five or more glasses of alcohol on the same occasion in the last 30 days is explained by these early maladaptive schemes. Similarly, the non-standardized coefficient of the variable *value to parental authority* went from being in the first step of −0.06 to −0.05 in the third, so that 16.67% of the variance of the relationship between *value to parental authority* and the frequency of getting drunk in the last month is explained by these early maladaptive schemes. Likewise, the non-standardized coefficient of the *parental permissivity* variable went from 0.04 in the first step to 0.03 in the third, which means that 25% of the variance of the relationship between *parental permissiveness* and cocaine use based on the last 30 days is explained by these early maladaptive schemes. In addition, the non-standardized coefficient of the *parental permissiveness* variable went from 0.03 in the first step to 0.02 in the third. This means that 33.33% of the variance of the relationship between *parental permissiveness* and the consumption of powder cocaine and GHB or liquid ecstasy in the last 30 days is explained by these early maladaptive schemes. Likewise, the non-standardized coefficient of the *parental permissivity* variable went from being −0.35 in the first step to −0.34 in the third; therefore, 2.85% of the relationship between *parental permissiveness* and the amount of hard liquors consumed in the last month on weekdays is explained by these early maladaptive schemes. It is also observed how the non-standardized coefficient of the variable *self-sufficiency and resentment against parents* went from −0.33 in the first step to −0.29 in the third. This means that 12.12% of the relationship between *self-sufficiency and resentment against parents* and the amount of beer/cider consumed in the last 30 days on weekends is explained by these early maladaptive schemes. Finally, the results reflect how the non-standardized coefficient of the variable value to parental authority went from being −0.66 in

TABLE 6 | Early maladaptive schemes as mediators in the relationship between attachment styles and drug use.

	B	β	*t*	Sig.	
Attachment and early maladaptive schemes					**How many days you have consumed in the last 30 days**
Security	−0.01	−0.09	−2.43	0.01*	Tobacco
Parental authority value	−0.03	−0.11	−2.89	0.00**	Tobacco
Parental permissiveness	0.01	0.06	2.06	0.04*	Tobacco
Self-sufficiency and resentment against parents	0.01	0.07	2.21	0.03*	Tobacco
Self-punitive	0.01	0.11	2.04	0.02*	Tobacco
Security	−0.03	−0.08	−2.22	0.03*	Alcohol
Parental permissiveness	0.06	0.09	2.91	0.00**	Alcohol
Parental authority value	−0.06	−0.10	−2.78	0.00**	Five or more glasses of alcohol on the same occasion
Childhood trauma	0.02	0.08	2.85	0.00**	Five or more glasses of alcohol on the same occasion
Social isolation	0.03	0.09	2.08	0.04*	Five or more glasses of alcohol on the same occasion
Parental authority value	−0.05	−0.10	−2.78	0.01*	Get drunk
Self-sufficiency and resentment against parents	−0.03	−0.06	−2.14	0.03*	Get drunk
Childhood trauma	0.02	0.07	2.51	0.01*	Get drunk
Dependence	0.04	0.12	2.81	0.00**	Get drunk
Unattainable goals	0.03	0.12	2.38	0.02*	Get drunk
Parental authority value	−0.03	−0.08	−2.21	0.03*	Tranquilizers/sedatives or sleeping pills
Dependence	0.02	0.09	2.17	0.03*	Tranquilizers/sedatives or sleeping pills
Parental authority value	−0.04	−0.12	−3.17	0.00**	Tranquilizers/sedatives or sleeping pills without prescription
Distrust	0.02	0.11	2.45	0.01*.	Tranquilizers/sedatives or sleeping pills without prescription
Emotional inhibition	0.02	0.12	2.35	0.02*	Tranquilizers/sedatives or sleeping pills without prescription
Self-punitive	−0.03	−0.16	−3.78	0.00**	Tranquilizers/sedatives or sleeping pills without prescription
Parental authority value	−0.08	−0.13	−3.56	0.00**	Hashish or marijuana
Emotional deprivation	−0.05	−0.14	−2.70	0.01*	Hashish or marijuana
Dependence	0.03	0.09	2.10	0.04*	Hashish or marijuana
Parental authority value	−0.06	−0.14	−3.62	0.00**	Cocaine-based
Parental permissiveness	0.03	0.09	3.00	0.00**	Cocaine-based
Distrust	0.02	0.11	2.37	0.02*	Cocaine-based
Dependence	0.03	0.11	2.57	0.01*	Cocaine-based
Parental authority value	−0.04	−0.10	−2.73	0.01*	Powder cocaine
Parental permissiveness	0.02	0.07	2.23	0.03*	Powder cocaine
Distrust	0.02	0.11	2.39	0.02*	Powder cocaine
Dependence	0.02	0.10	2.40	0.02*	Powder cocaine
Unattainable goals	0.03	0.12	2.53	0.01*	Powder cocaine
Parental authority value	−0.03	−0.08	−2.18	0.03*	GHB or ecstasy liquid

(Continues)

TABLE 6 | (Continued)

	B	β	t	Sig.	
Parental permissiveness	0.02	0.09	2.90	0.00**	GHB or ecstasy liquid
Dependence	0.02	0.11	2.64	0.01*	GHB or ecstasy liquid
Parental authority value	−0.03	−0.09	−2.53	0.01*	Ecstasy
Parental permissiveness	0.02	0.06	2.15	0.03*	Ecstasy
Distrust	0.02	0.09	1.97	0.04*	Ecstasy
Dependence	0.03	0.17	3.95	0.00**	Ecstasy
Vulnerability	−0.02	−0.10	−2.07	0.04*	Ecstasy
Parental authority value	−0.04	−0.11	−2.86	0.00**	Amphetamines/speed
Parental permissiveness	0.03	0.10	3.29	0.00**	Amphetamines/speed
Childhood trauma	−0.01	−0.08	−2.83	0.00**	Amphetamines/speed
Distrust	0.02	0.12	2.51	0.01*	Amphetamines/speed
Dependence	0.02	0.12	2.89	0.00**	Amphetamines/speed
Emotional inhibition	0.02	0.10	2.05	0.04*	Amphetamines/speed
Parental authority value	−0.03	−0.09	−2.42	0.02*	Hallucinogens
Parental permissiveness	0.02	0.06	2.04	0.04*	Hallucinogens
Dependence	0.02	0.11	2.47	0.02*	Hallucinogens
Parental authority value	−0.05	−0.132	−3.18	0.00**	Heroin
Parental permissiveness	0.03	0.09	2.93	0.00**	Heroin
Emotional deprivation	−0.02	−0.11	−2.14	0.03*	Heroin
Distrust	0.04	0.17	3.64	0.00**	Heroin
Security	−0.02	−0.09	−2.35	0.02*	Inhalants/volatiles
Parental authority value	−0.05	−0.12	−3.29	0.00**	Inhalants/volatiles
Parental permissiveness	0.04	0.09	3.05	0.00**	Inhalants/volatiles
Distrust	0.03	0.12	2.65	0.01*	Inhalants/volatiles
Dependence	0.03	0.10	2.48	0.01*	Inhalants/volatiles
					Frequency of alcohol consumed in the last 30 days on weekdays
Dependence	0.12	0.29	2.01	0.04*	Appetizers/vermouth
Social isolation	−0.15	−0.33	−2.18	0.03*	Combined/cubatas
Dependence	0.14	0.31	2.13	0.03*	Combined/cubatas
					Frequency of alcohol consumed in the last 30 days on weekends
Family concern	−0.03	−0.15	−2.33	0.02*	Wine/champagne or cava
Imperfection	0.04	0.17	2.03	0.04*	Wine/champagne or cava
Vulnerability	−0.03	−0.15	−2.24	0.02*	Beer/cider
Insufficient self-control	−0.03	−0.15	−2.29	0.02*	Beer/cider
Attachment	0.08	0.35	2.29	0.02*	Combined/cubatas
Emotional inhibition	0.06	0.30	2.04	0.04*	Combined/cubatas
Family concern	−0.04	−0.18	−2.78	0.01*	Fruit liqueurs
Subjugation	−0.04	−0.21	−2.48	0.01*	Fruit liqueurs
Negativity	0.04	0.17	2.19	0.03*	Fruit liqueurs
Dependence	0.04	0.16	2.04	0.04*	Hard liqueurs
Attachment	0.05	0.21	2.41	0.02*	Hard liqueurs
Subjugation	−0.04	−0.18	−2.12	0.03*	Hard liqueurs

(Continues)

TABLE 6 | (Continued)

	B	β	t	Sig.	
					Amount of alcohol consumed in the last 30 days on weekdays
Attachment	−0.19	−0.23	−2.02	0.04*	Wine/champagne or cava
Attachment	−0.47	−0.38	−2.13	0.03*	Appetizers/vermouth
Imperfection	0.71	0.42	2.26	0.02*	Combined/cubatas
Negativity	0.86	0.48	3.14	0.00**	Combined/cubatas
Parental authority value	−0.55	−0.33	−2.89	0.00**	Fruit liqueurs
Social isolation	0.29	0.26	2.18	0.03*	Fruit liqueurs
Parental permissiveness	−0.34	−0.22	−2.39	0.02*	Hard liqueurs
					Amount of alcohol consumed in the last 30 days on the weekend
Emotional deprivation	−0.36	−0.20	−2.38	0.02*	Wine/champagne or cava
Dependence	0.47	0.26	3.47	0.00**	Wine/champagne or cava
Subjugation	−0.27	−0.16	−1.97	0.04*	Wine/champagne or cava
Unattainable goals	0.42	0.24	2.87	0.00**	Wine/champagne or cava
Self-sufficiency and resentment against parents	−0.29	−0.10	−2.41	0.02*	Beer/cider
Childhood trauma	0.17	0.08	2.07	0.04*	Beer/cider
Emotional deprivation	−0.45	−0.21	−3.08	0.00**	Beer/cider
Dependence	0.46	0.21	3.61	0.00**	Beer/cider
Distrust	0.50	0.32	2.05	0.04*	Appetizers/vermouth
Social isolation	0.47	0.28	2.11	0.04*	Appetizers/vermouth
Negativity	0.50	0.31	2.38	0.02*	Appetizers/vermouth
Parental authority value	−0.61	−0.16	−2.33	0.02*	Fruit liqueurs
Dependence	0.34	0.15	2.05	0.04*	Fruit liqueurs
Unattainable goals	0.39	0.18	2.14	0.03*	Fruit liqueurs
Dependence	0.41	0.21	2.67	0.01*	Hard liqueurs

*$p < 0.05$.
**$p < 0.001$.

the first step to −0.61 in the third, so that 7.57% of the relationship between *value to parental authority* and the amount of fruit liquor consumed in the last month on weekends is explained by early maladaptive schemes.

4 | Discussion

The first objective of this study was to analyze the relationship among substance use, attachment styles, and early maladaptive schemes. The results show that dysfunctional attachment styles and early maladaptive schemes are positively related, while having experienced a secure attachment style in childhood is inversely related to early maladaptive schemes, that is, the better attachment less maladaptive schemes, as already indicated by other authors (Jalilian, Momeni, and Jebraeili 2023; Márquez, Rivera, and Reyes 2009).

Regarding attachment styles and drug use, the results go in two directions. On the one hand, it has been found that having experienced a secure attachment style, having a positive evaluation toward the values of parental hierarchy and authority, and having experienced an anxiety of separation from loved ones and current concern for attachment figures is negatively related to drug use, with the frequency of binge drinking and with consumption in the form of binge drinking. This may be because these attachment styles function as a protective factor in relation to substance use. On the other hand, *parental permissiveness* has been found to be positively related to most substances, and having suffered violence, threats, and lack of availability on the part of attachment figures is positively related to the consumption of hashish, with the intake in the form of binge drinking and with a greater number of drunkenness. It could be argued that in the absence or less parental control, adolescents have an easier time-consuming substance. These results are novel because there are few studies that analyze attachment styles and substance use, although they are in the same line as other research, where it was found that having suffered abuse in childhood is a risk factor for developing psychological and behavioral disorders such as, for example, substance use (MacMillan et al. 2001).

On the other hand, the relationships between early maladaptive schemes and drug use have always been positive. This coincides with other studies where it has been observed that early maladaptive schemes are powerful predictors of problems in emotional regulation, inadequate coping strategies, and low resilience in consumers (Khosravani, Alvani, and Seidisarouei 2016; McDonell et al. 2018). While improving emotional regulation skills and promoting secure attachment, social adjustment increases (Farsijani, Besharat, and Moghadamzadeh 2022). In this work, each and every one of the early maladaptive schemes was statistically significantly related to three or more substances except the *grandiosity* scheme, which was only related to binge drinking and *recognition seeking* and did not do so with any substance. The *grandiosity* scheme refers to the belief of superiority with respect to others and the person presenting it believes that he has special rights and privileges. One possible explanation is that young people with narcissistic characteristics reject drug use but not alcohol consumption because it is socially accepted, and they do so in the form of binge eating due to high impulsivity (Calvete and Estévez 2009). These results are equally novel, because there are few studies that investigate the relationship of these variables. On the other hand, it has been observed that early maladaptive schemes (especially *grandiosity* and *insufficient self-control*) were related to high levels of impulsivity and substance use (Bravo de Medina, Echeburúa, and Aizpiri 2007; Calvete and Estevez 2009; Fantín 2006, Gantiva Díaz et al. 2010). If the domains of early maladaptive schemes are taken into account, it is observed that they are all related to drug use. This occurs similarly in other works (Bojed and Nikmanesh 2013; Young, Klosko, and Weishaar 2003) where it is stated that early maladaptive schemes and maladaptive styles are the basis of factors of chronic disorders, such as drug abuse disorders, depression, anxiety, and psychosomatic disorders.

The second objective was to analyze the predictive role of attachment styles on substance use. The results found indicate that all dimensions of dysfunctional attachment (*parental permissiveness*, *parental interference*, *self-sufficiency and resentment against parents*, *childhood trauma*, and *parental concern*) predicted substance use, especially alcohol consumption, in young people in Ecuador. These results coincide with those of other authors, as an insecure or inappropriate attachment style has been identified as a risk factor for children and adolescents that affects brain development, increasing the risk of developing psychological problems, both emotional and behavioral (Baram et al. 2012) as well as higher levels of impulsivity (Estevez et al. 2021; Fernández, Pérez, and Carrasco 2002). However, the results also show that the two dimensions of secure attachment (*security* and *value to parental authority*) predicted substance use. This points to the importance of remembering that, although there is a protective factor such as the secure attachment style, protective factors do not exempt from the possibility of developing consumption (Moncada 1997). Certainly, various modulating variables can influence the relationship between secure attachment and substance use in adolescents. These factors include peer influence, normative beliefs, family history of substance use, risk perception, and perceived drug availability, among others. Therefore, even though secure attachment serves as a protective factor, it is essential not to lose sight of other modulating variables that can act as potential risk factors, such as emotional regulation, anhedonia, attitude toward consumption, health models available for adolescents, and social learning (Espada et al. 2015; Greenwald et al. 2023). In this regard, it is noteworthy that around 21% of Ecuadorian youth state that a family member uses drugs (National Council for the Control of Narcotic and Psychotropic Substances. National Drug Observatory 2013). Therefore, in such contexts, it is more likely that substance use will be normalized and accepted.

Finally, the mediating role of early maladaptive schemes in the relationship between attachment and substance use was analyzed. A relevant result has been the mediating role of early maladaptive schemes among *childhood trauma*, *value of authority*, *self-sufficiency and resentment against parents*, and *parental authority* and substance use, and especially between *parental permissiveness* and use of cocaine in both base and powder form, GHB or liquid ecstasy and hard liquors. As previous studies have indicated, this is probably due to the fact that adolescents with schemes based on the lack of limits and insufficient self-control have less resistance to impulses and prefer immediate gratification (Calvete and Estévez 2009). In a sense, secure attachment works with a protective factor, while a maladaptive attachment style (predominantly insecure) together with the presence of early maladaptive schemes act with risk factors for substance use in the adolescent population.

It is important to highlight the drama of drug use in the child and adolescent population, being one of the most serious problems that lead to different physical, social, and educational problems, such as a decrease in motivation, development of psychopathology, physical damage and delinquency, school failures, and disorders of interpersonal relationships (Bojed and Nikmanesh 2013). Regarding the psychological treatment of these issues, it should be considered that adult attachment is a crucial factor in the development of psychopathology, and its relationship with cognitive schemas should serve as a guide for therapeutic intervention (Platts, Tyson, and Mason 2002).

This work has some limitations. One of them is the transversal design, so causal relationships among the variables cannot be established. Another limitation can be found in the assessment instruments used because, being self-reported, the results can be biased, especially when it comes to assessing attachment. Adolescence is a time of identity construction where greater conflict with parents may appear, and being a retrospective measure of attachment experienced in childhood, memory may be biased (Estevez et al. 2021). In this sense, it should be taken into account that the age of the population sample means that the generalization of results should be carried out with caution.

5 | Conclusion

Despite the existing limitations, the results are novel given the few previous studies that exist analyzing the relationship between attachment styles, early maladaptive schemes, and substance use in adolescents. In this study, it has been possible to verify the predictive role of attachment styles on drug use as well as the important mediating role of early maladaptive schemes in the relationship between attachment and substance use in adolescents. Identifying risk or vulnerability factors such as attachment and early maladaptive schemes related to substance use is especially relevant to design and implement effective

preventive actions in the adolescent population (Ball and Young 2000).

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The data that support the findings of this study are openly available in FigShare at https://figshare.com/account/items/26063353/edit, reference number 10.6084/m9.figshare.26063353.

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