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## Sensation seeking and psychoactive substance consumption: differences between a consumer and a non-consumer sample

Búsqueda de sensaciones y consumo de sustancias psicoactivas: diferencias entre una muestra de consumidores y una de no consumidores

Busca de sensação e consumo de substâncias psicoativas: diferenças entre amostras de um consumidor e um não consumidor

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### ARTICLE INFORMATION

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### ABSTRACT

**Introduction.** Internationally, there have been several studies carried out in order to demonstrate the relationship between a high level of Sensation Seeking and illegal drug abuse. However, few studies in Colombia replicate those results. The objective is to examine the difference of Sensation Seeking personality trait and its subscales in the behaviour of drug abuse on two Colombian samples, consumers and non-consumers, measured through the Sensation Seeking Scale-V (Zuckerman & Kulhman, 1980).

**Methodology.** 341 adult subjects, from both genders, composed the sample, half of them were consumers of illegal drugs and half of them non-consumers, assessed through Sensation Seeking Scale Version V.

**Results.** There is a significant difference between consumers and non-consumers within the general scale and three subscales of the trait (Thrill and Adventure Seeking, Experience Seeking and Disinhibition).

**Discussion.** Differences between the scores of consumers and non-consumers sample regarding the general trait and subtraits show the relevance of personality factors regarding substance abuse, independently than social and learning factors are influential as well.

**Conclusions.** There is a link between Sensation Seeking and substance abuse showing the importance of the level of the trait in the multivariate phenomenon of substance dependence.

#### Key Words:

Risk taking; Street drugs; Substance-related disorders; Personality, Mental health

### RESUMEN

**Introducción.** En varios países se han realizado numerosos estudios para demostrar la relación entre un alto nivel de búsqueda de sensaciones y el abuso de drogas ilícitas. Sin embargo, pocos estudios en Colombia reproducen dichos resultados. El objetivo de este estudio es examinar las diferencias del rasgo de la personalidad conocido como “búsqueda de sensaciones” y sus subescalas relacionadas con el abuso de drogas en dos muestras en Colombia, consumidores y no consumidores, las cuales se medirán por medio de la metodología de escala de búsqueda de sensaciones (forma V).

**Metodología.** La muestra se compone de 341 sujetos adultos, de ambos sexos. La mitad de ellos fueron consumidores de drogas ilícitas y la otra mitad fueron no consumidores; estos grupos se evaluaron por medio de los resultados de la escala de búsqueda de sensaciones (forma V).

**Resultados.** Existe una diferencia significativa entre los consumidores y no consumidores en la escala general del rasgo y en tres subescalas (búsqueda de emociones y aventura, búsqueda de experiencias y desinhibición).

**Discusión.** Las diferencias entre los puntajes de los consumidores y no consumidores con respecto al rasgo general y los subrasgos demuestran la importancia de los factores de personalidad en el abuso de sustancias, pese a que los factores sociales y de aprendizaje también influyen en esto.

**Conclusiones.** Existe una relación entre la búsqueda de sensaciones y el abuso de sustancias, lo que demuestra la importancia del nivel del rasgo en el fenómeno multivariante de la dependencia de sustancias.

#### Palabras clave:

Toma de riesgos; Drogas callejeras; Desórdenes relacionados con el consumo de sustancias; Personalidad; Salud mental

### RESUMO

**Introdução.** Em nível internacional, vários estudos foram realizados para demonstrar a relação entre um alto nível de busca de sensação e abuso de drogas ilícitas. No entanto, não há estudos em Bucaramanga e sua área metropolitana para replicar esses resultados. O objetivo é examinar o efeito do traço de personalidade busca de sensações e suas subescalas no comportamento de abuso de drogas em uma amostra colombiana, medindo a referida característica através da escala de busca de sensação versão V.

**Métodos.** A amostra foi composta por 341 sujeitos adultos de ambos os sexos, metade dos quais usuários de drogas ilícitas e metade deles não-consumidores, aos quais foi

aplicada a escala de busca de sensações versão V.

**Resultados.** Existem diferenças significativas entre consumidores e não consumidores na escala geral e nas três subescalas do traço (busca de emoções e necessidade de aventura, de novas experiências e desinibição).

**Discussão.** As diferenças entre a pontuação da amostra de consumidores e não consumidores em relação ao traço geral e às subdimensões mostram a relevância dos fatores de personalidade no que diz respeito ao abuso de substâncias, independentemente da influência dos fatores sociais e de aprendizagem.

**Conclusões.** Existe uma ligação entre a busca de sensações e o abuso de substâncias que mostra a importância do nível do traço no fenômeno multivariado da dependência de substâncias.

#### **Palavras-Chave:**

Assunção de riscos; Drogas ilícitas; Transtornos Relacionados ao Uso de Substâncias; Personalidade; Saúde mental.

## **Introduction**

The addiction phenomenon significantly affects the quality of life of young people (1). This phenomenon often occurs at a time when young people begin to be influenced by their peer group. Families, in many cases, do not recognize effective ways to guide young people to appropriately manage negative peer pressure (2). In addition to the lack of parenting guidelines, there are plenty of possible menacing situations that may arise within the family or individual level. For Quiroz, inadequate management of emotions, lack of communication, lack of support and low capacity in conflict resolution foster a strong influence on the onset of addictive behaviour (3).

Currently, increasing frequency of substance addiction is a worrying issue. This data highlights that there is a wide availability of psychoactive substances in Colombia. Inequities of social and economic factors preceding the trend reinforce the consumption of these substances, predominantly in young population groups (4). It was determined that 5.9 % of population consume illegal drugs (marijuana, cocaine, crack cocaine or heroin), estimated at over one million one hundred thousand men, as well as three hundred thousand women. There is a steady increase in the consumption of these substances parallel to the level of schooling, reaching the highest value in the incomplete university level (13.8 %), then decreasing as the education level continues to increase. In 2009, Simich et. al concluded that around 180 thousand people (0.8 %) actively consumed psychoactive substances. Consumption significantly predominates between 18 and 24 year-olds (1.7 %) (5). Between 2008 and 2012, percentages of students who use marijuana and other illicit drugs increased from 1.9 % to 4.0 %; the use of other substances, such as cocaine, increased by 52 % (4). Data suggests that drug abuse is more prevalent within younger age groups (6-9).

Different research carried out in countries such as Argentina, United States and France show that personality trait Sensation Seeking is significantly correlated with the execution of risky behaviour and an important factor in the strengthening of addictive behaviours (10-12). Sensation Seeking is defined as the search of intense, new, varied and complex experiences involving the participation of conducts associated with physical and social risk (13-16). Within this context, the word “search” is used because it implies an active stance that characterizes the subjects that score high in this dimension. It reflects the positive nature of the actions associated with this trait. In “poor” stimuli situations, high sensation-seekers dynamically pursue greater activity, creating or accessing to sources of risk to alleviate their discomfort.

Marvin Zuckerman, the author of the Sensation Seeking theory, made major contributions by way of providing a conceptual and methodological framework from which empirically measure the relationship between substance use and stimulation necessity. Since its inception in the 1960s, Sensation Seeking has continued to be the focus of a wide avalanche of studies. These studies have approached its functional operation, relation to other dimensions of personality, biological foundations, social determinants and their demographic, cognitive, attitudinal and behavioural correlates. The study of the Sensation Seeking personality dimension appears strongly linked to what research tradition refers to as “optimal level of stimulation” or “optimal level of arousal” (13).

There is evidence across several different cultures that Sensation Seeking is a trait involved in addictive behaviour (12, 13, 17-19). Unfortunately, there are few studies in Colombia that explore the relationship between the Sensation Seeking trait and drug abuse, so it

is considered necessary to search for a relation between both particular personality trait and risky behaviour in order to enrich the state of art of the drug consumption problematic. In addition, it is important to see if results from other countries replicate in Colombian samples, with different social and economic backgrounds than the populations previously studied.

## Methodology

The present research uses a quantitative non-experimental cross-sectional design.

## Participants

A sample of 341 adult subjects, aged 18 – 41, 171 consumers of psychoactive drugs and 169 non-consumers of psychoactive drugs, from Bucaramanga, Colombia, evaluated with Sensation Seeking Scale V (Zuckerman & Kulhman, 1980). Sample was selected in order to find differences between consumers and non-consumers.

## Instrument

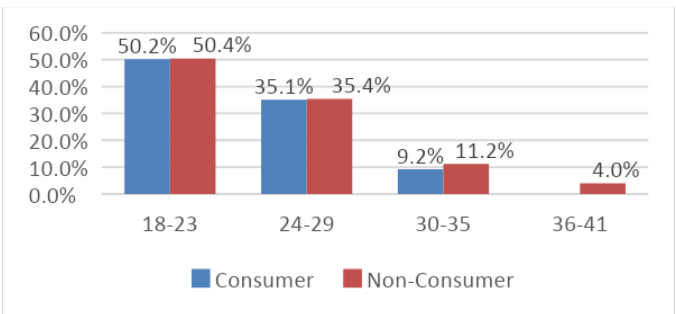
Sensation Seeking Scale version V by Zuckerman & Kulhman, standardized for Spanish speaking countries. The scale has 40 items and includes the subscales Thrill and Adventure Seeking (TAS), ES, Dis, BS, and a total sensation seeking score. The psychometric properties of the Spanish version are very similar to those observed in the original English version (14, 18). Cronbach alpha coefficients for the total score ranged from 0.83 to 0.86, and 0.6 to 0.8 for the subscales.

## Procedure

Every participant filled an informed consent before answering the test, granting anonymity. For the consumer group sample was found in drug rehabilitation facilities, while non-consumer sample was selected within students who declared they did not consume tobacco or any illegal drug, were not in any intoxication state and did not take more than 5 drinks of alcoholic beverages per week. Data was gathered and then analysed using statistical software SPSS.

## Results

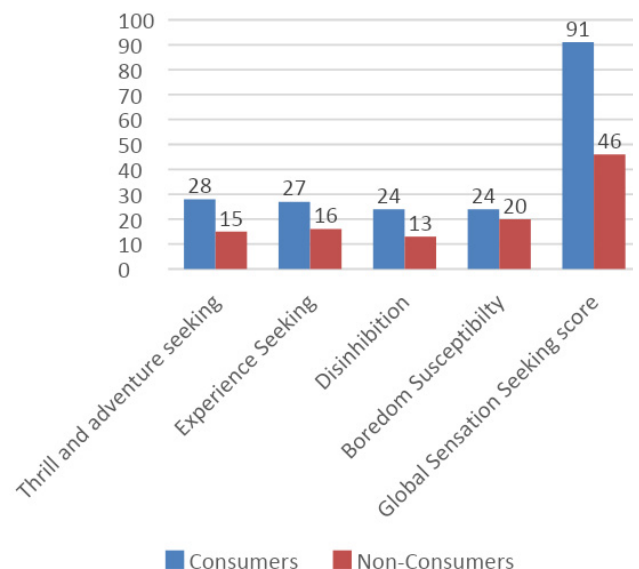
**Figure 1** shows the distribution of the sample by age group, with 50.2 % of consumers sample and 50.4 % of non-consumers sample within the first one (18 to 23 years), 35.1 % and 35.4 % from consumers and non-consumers sample, respectively, within 24 to 29 years, 9.2 % (consumers) and 11.2 % (non-consumers) within 30 to 35 years and only 4 % of the non-consumer sample was classified within 36 to 41 years of age.



**Figure 1.** Percentage of samples according to age group.

Source: Elaborated by the authors

Sensation Seeking scores obtained across the four dimensions of the trait and as a global score from both consumers and non-consumers are presented in **Figure 2**. Consumers scores are classified according to Zuckerman and Zuckerman and Aluja (13, 14), ranging



**Figure 2.** Sensation seeking scale scores (global and subscales) in consumers and non-consumers samples.

Source: Elaborated by the authors

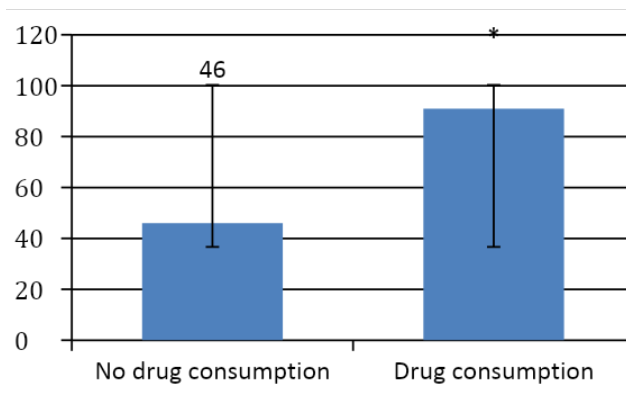
**Table 1.** Mann-Whitney signed rank Test results from the consumers vs non-consumers sample data.

	TAS	ES	Dis	BS	SS
Mann-Whitney test	.9095	.8875	.9541	11827	.9945
SD	1.42	1.184	1.67	2.35	1.88
p-value	.000*	.002*	.005*	.019	.003*

**Source:** Elaborated by the authors

from medium-high to high presence of the trait, meaning that consumers in the sample present an above than average level of the trait. On the other hand, the levels of standardized Sensation Seeking scores obtained in the sample classified as non-consumers show medium presence of the trait (19).

**Table 1** shows the results of Mann-Whitney signed rank test applied to the data obtained from the consumer and non-consumer sample groups. This analysis shows that the null hypothesis is rejected in the total scale and all its subscales except by Boredom Susceptibility (BS). This means that there is a statistically significant difference between both subgroups regarding Sensation Seeking trait, as shown in **Figure 3**. Therefore, Sensation Seeking is a trait involved in the phenomena of drug consumption in the assessed sample.



**Figure 3.** Statistical significance regarding level of Sensation Seeking trait in consumers and non-consumers of psychoactive drugs.

**Source:** Elaborated by the authors

## Discussion

This research shows that there is a statistically significant difference in the level of Sensation Seeking trait between consumers and non-consumers of psychoactive substances, in a Colombian sample, replicating the results found internationally. This is coherent with reports on literature regarding the influence of that particular personality trait (10-13,17-20). There is also statistical difference between subtraits Thrill and Adventure Seeking, Experience Seeking and Disinhibition of consumers and non-consumers, but not in Boredom Susceptibility. These studies have been done in different cultures, showing that the effect could be independent of social differentiations among samples. It is important to address these results into current interventions (both clinical and psychosocial) in order to improve its effects.

## Conclusion

There is a significant difference in Sensation Seeking and three of its subscales (Thrill and Adventure Seeking, Experience Seeking and Disinhibition) between consumers and non-consumers of illegal drugs in the assessed sample. This is coherent with cross-cultural studies in which, uniformly, there is a statistical significant difference shown between consumers and non-consumers of psychoactive drugs (12,13,20). These results are relevant in noticing individual and genetic factors involved in the addressed phenomena and the necessity of designing intervention and prevention programs integrating variables regarding personality and differential subject factors, in order to have better outcomes in prevention and treatment of substance abuse.

## Conflict of interest

The authors have no conflicts of interests to disclose.



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