



BRIEF REPORT

VARIABLES MODULATING STRESS AND COPING THAT DISCRIMINATE DRUG CONSUMERS FROM LOW OR NONDRUG CONSUMERS

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Abstract — The present study assesses how certain stress and coping variables relate to drug use. A total of 124 subjects (85 men, 39 women) took part. They were divided into two groups: consumers and low or nonconsumers. Results indicate that consumers show significantly lower scores in self-control than low or nonconsumers. This research is of interest because it analyzes the relationship among assertiveness, self-control, self-efficacy, and drug use. We consider it worthwhile to take these variables into account when planning prevention programs. © 2000 Elsevier Science Ltd

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Drug addiction is a phenomenon in which multiple causes such as pharmacological characteristics, social factors, learning processes, and variables linked to stress and coping intervene. Some recent investigations highlight how certain variables (e.g., assertiveness, self-control, and efficacy) are linked to drug use as opposed to abstinence. Studies by Chaney, O'Leary, and Marlatt (1978); Van Hasselt, Null, Kempton, and Bukstein (1993); and Wills, Baker, and Botvin (1989) have found that individuals who have difficulties interacting socially and coping with risk situations (especially those in which they are under pressure to take drugs or alcohol) may become drug addicts. Heather (1995); Kahler, Epstein, and McCrady (1995); Room (1989); Santacreu and Froján (1992); and Shiffman and Wills (1985) referred to the role of self-control as a distinctive element between drug dependents and nondependents. Finally, we mention studies that link drug consumption with self-efficacy. It appears that self-efficacy has to do with all stages of alcohol and drug abuse (Avant, Margolin, Kosten, & Cooney, 1995; Baldwin, Oei, & Young, 1993; Bell, Ellickson, & Harrinson, 1993; Has, Klepp, Laberg, & Edward, 1995; Litman, Fiser, Rawson, & Oppenheim, 1977; Reilly et al., 1995; Shiffman & Wills, 1985).

The aim of our investigation was to ascertain whether or not and to what extent stress and coping variables (e.g., assertiveness, self-control, and self-efficacy) differentiate alcohol and drug consumers from low or nonconsumers.

M E T H O D

Subjects

A total of 124 (85 men, 39 women) drug consumers and low or nonconsumers took part in our investigation (age: $M = 26.2$, $SD = 4.75$, range = 18–39 years). Subjects were recruited from drug addiction centers and from the general population, including friends and relatives of subjects undergoing treatment and people from the neighborhood who had heard about our research and volunteered to participate. The subjects were assigned to two groups: consumers and low or nonconsumers. As the research proceeded, we assigned subjects to groups, matching age, sex, years of education, and occupational status. The groups were formed as follows:

- *Low or nonconsumers* ($n = 40$) included 22 men and 18 women (age: $M = 25.85$, $SD = 5$, range = 18–38 years). On an addiction behavior questionnaire surveying frequency of alcohol, hashish, cocaine, and/or heroin consumption, they answered “never,” “less than once a year,” “a few times throughout the year” or “between one and three times a month,” and “once a week.”
- *Consumers* ($n = 84$) included 65 men and 19 women (age: $M = 26.27$, range = 18–38). On the same questionnaire, they had reported their frequency of consumption of alcohol, hashish, cocaine, and/or heroin to be “two or three times a week,” “four of five times a week,” “almost every day,” or “every day.”

Measures

The following measures were used:

- Rathus Assertiveness Inventory (RAI; Rathus, 1973).
- Rosenbaum Self-Control Questionnaire (RSC; Capatóns & Barreto, 1989).
- Sherer and Maddux’s Self-Efficacy Scale (SES; Sherer & Maddux, 1982).
- Addictive Behavior Questionnaire: This measure was developed for our research, and, as the name suggests, it inquires into subjects’ behavior regarding alcohol, hashish, cocaine, or heroin consumption, noting frequency of consumption, age of first consumption, and perceived affects on behavior. The questionnaire contains 16 items, divided into four groups, with each one referring to one of these substances. Each one is scored according to frequency of use on a scale ranging from A (every day) to H (never), cost in economic terms, method of intake, perceived secondary effects, and years of addiction.

Procedure

At an initial personal interview (at the drug treatment centers), subjects were told about the research project and asked if they wished to take part. We had observed in other projects that subjects had been interested to know how they fared on the questionnaires and scales, and we offered to give them a copy of their results as additional motivation to participate. If subjects from the general population wished to take part, they were asked to come accompanied by a friend or relative (for the purpose of contrasting information given by them).

Procedures were standardized as follows: In a private room, with only the investigator and one subject present, the subject sat at a table and was handed the questionnaires and asked to write his or her name on them and read the instructions. The investigator clarified any doubts, and the subject proceeded to complete the questionnaires. The investigator remained present until all the questionnaires were completed, clarify-

ing any other doubts at the subject's request only but otherwise not interfering in any way. The order of completion was counterbalanced.

At the end of the interview, data given by subjects on the addiction behavior and education and occupational status questionnaires were contrasted, in the case of patients undergoing treatment, with their clinical history provided by medical staff and, in the case of subjects from the general population, with information given by an accompanying friend or relative.

R E S U L T S

Two analyses of variance (ANOVAs) were carried out in a unifactorial between-groups design (consumers vs. low or nonconsumers) to compare differences between groups in the age and education variables. Results show that there were no significant differences between groups in age, $F(1, 122) = 0.32$, $MSE = 22.661$, $p = .5714$, or education, $F(1, 122) = 3.77$, $MSE = 1.992$, $p = .0546$. We concluded, therefore, that homogeneity in age and education had been satisfactorily controlled.

To ascertain whether there were any differences regarding the professional category, contingency tables were carried out for the group variable (two categories: consumers and low or nonconsumers) and the professional status variable (three categories: unemployed, white-collar worker, manual worker). The likelihood ratio chi-square test was applied. Among the low or nonconsumers, 65.5% were unemployed; among the consumers, 50% were unemployed. White-collar workers accounted for 5% of the low or nonconsuming group and for 2.4% of the consumers. Manual workers made up 32.5% of low or nonconsumers and 47.6% of consumers. Results showed that these percentages were statistically insignificant, $\chi^2(2) = 2.824$, $p = .2436$. Homogeneity, as far as professional status was concerned, also appeared to be adequately controlled.

To measure possible differences due to gender, contingency tables were also carried out for the group variable (low or nonconsumers and consumers) and the gender variable (men and women). The likelihood ratio chi-square was applied. Of the low or nonconsumers, 45% were women, as were 25% of the consumers. Men made up 55% of the low or nonconsuming group, and 75% of the consumers. Results show that these percentages were statistically significant, $\chi^2(1) = 4.898$, $p = .0269$. They are in line with those obtained in epidemiological studies carried out by the Junta de Andalucía (1989, 1992, 1993, 1995; SEIT, 1992), which point out higher consumption of alcohol and drugs in men. Our findings, therefore, reflect present trends in alcohol and drug consumption in the Spanish population.

We then proceeded to verify whether variables intervening in stress and coping discriminated low or nonconsumers from consumers, and men from women. To that end, a multivariate analysis of variance (MANOVA), with a bifactorial intergroup design, was carried out using the variables group (consumers vs. low or nonconsumers) and gender (men vs. women) as factors and the scores of the variables modulating stress and coping (assertiveness [RAI], self-control [RSC], and self-efficacy [SES]) as dependent variables.

Results indicated that neither the Group \times Gender interaction nor the main effect of the gender factor was significant in any of the variables under investigation. The main effect of the group factor showed significant differences between the low or nonconsumers and the consumers (Wilkes's lambda = .9104), $F(3, 118) = 3.86$, $p < .0111$.

As the MANOVA had given statistically significant results in the main effect of the group factor, univariate ANOVAs were then carried out for each dependent variable

using the group factor. These indicated that there were statistically significant differences in RSC, $F(1, 122) = 8.05$, $MSE = 752.99$, $p < .0053$, with the low or nonconsumers presenting higher scores than the consumers. These results can be seen in Table 1. No significant differences were found in assertiveness or self-efficacy.

DISCUSSION AND CONCLUSIONS

The aim of this research was to assess the relationship between certain variables that modulate stress and coping with drug use. Results obtained show that there are differences between consumers and low or nonconsumers regarding one of these variables. This enables us to compare our findings with those of other authors working in the same field.

Our results show that subjects who consume substances present significantly lower scores in self-control than those who do not consume or do so in moderation. Our results lend weight to empirical evidence in this area (Heather, 1995; Kahler et al., 1995; Room, 1989; Santacreu & Froján, 1992) that also points to higher levels of self-control in moderate or nonconsumers.

There exists a lot of controversy concerning the assertiveness variable and its relationship to drug use, and the definition of the term *assertiveness* presents an added difficulty. As Carrasco (1983) pointed out, the various definitions of *assertiveness* refer to different behaviors, and most authors stress that it depends basically on context, cultural setting, and degree of effectiveness, which in turn depends on achievement of objectives. However, if assertiveness is measured using questionnaires, the effectiveness of an individual's behavior will depend on his or her subjective assessment. It is necessary, therefore, to improve instruments to measure this variable.

Contrary to our expectations, our study did not encounter any significant differences between consumers and low or nonconsumers regarding the self-efficacy variable. This surprising result runs contrary to existing literature (Avant et al., 1995; Baldwin et al., 1993; Bell et al., 1993; Has et al., 1995; Litman et al., 1977; Reilly et al., 1995; Shiffman & Wills, 1985). It may be explained in two ways. First, the studies reviewed measure self-efficacy with instruments that refer specifically to the capacity of the individual to refuse alcohol and drugs and not to his or her conviction that he or she is capable of behaving in a certain way in any given situation, as in our study. In this sense, we feel it is important for future studies to ascertain whether self-efficacy (in a wider sense than proposed here) is involved in drug use. Again we consider it necessary to develop more efficient instruments to measure self-efficacy. Second, our results may be obscured because there are two kinds of consumers: those who consider themselves excessively capable of coping with any situation and those who feel that they are not capable at all to cope with any situation. In both cases, self-efficacy

Table 1. Results obtained in the nonuse and use groups

Variables	Non drug users $\bar{X} \pm \sigma_x$	Drug users $\bar{X} \pm \sigma_x$	<i>F</i>	PROB.
RAI	6.40 \pm 20.35	9.40 \pm 16.83	0.75	0.3879
RSC	37.30 \pm 29.53	22.35 \pm 26.40	8.04	0.0053
SES	84.95 \pm 13.26	82.93 \pm 12.75	0.41	0.4169

RAI: Assertiveness; RSC: Self-control; and SES: Self-efficacy.

expectancies are affected, because the first kind of consumer tends to underevaluate the situation whereas the second kind tends to overevaluate it.

In short, our results lead us to conclude that subjects who do not consume alcohol or drugs as well as those who do so in moderation present higher levels of self-control than consumers.

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