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RELAPSE PRECIPITANTS IN ADDICTIONS: RESULTS IN A THERAPEUTIC COMMUNITY

Running title: Relapse precipitants in addictions

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ABSTRACT

In this paper, a study examining high-risk situations for relapse is presented. The sample consisted of 72 participants (51 male and 21 female) who had relapsed after having received a residential psychological treatment for drug addiction in a therapeutic community in Spain. In order to analyze what personal, environmental or social factors were the most immediate triggers of relapse, a personal interview, using the Relapse Interview, was administered to each one of the relapsed patients. Results showed that most of the relapses took place during the first year after completing the treatment program. Likewise, the factors most frequently cited for relapse were the following: to cope with negative emotional states (49.5%), to be unable to resist temptations or impulses to consume (17.5%), to test personal control (10.3%) and to cope with interpersonal conflicts (9.3%). As can be observed, most factors were of an intrapersonal nature. Implications of these results for further research and clinical practice are commented upon.

Key words: Addiction. Relapse. Relapse determinants. High-risk situations.

INTRODUCTION

Relapses are a serious and persistent problem in the treatment of drug use disorders (1). In fact, relapse is one of the most common outcomes following initiation of drug abstinence. Related to this factor, substance abuse disorders have long been recognized as chronic relapsing conditions. Considering the high cost of medical care involved in one addiction detoxification and treatment process, treatment repetition continues to be a major concern to all involved (2).

Over the past decades, cognitive-behavioral research on addiction relapse has documented the harmful impact of posttreatment environment for addiction recovery. In this sense, the model for relapse prevention proposed by Marlatt & Gordon (3) is perhaps the most prominent model for addiction relapse to emerge in the past 30 years. A central construct in this model is the "high-risk situation" for relapse. Relapse prevention model seeks to identify high-risk situations in which an individual is vulnerable to relapse and to use both cognitive and behavioral coping strategies to prevent future relapses in similar situations (4).

In order to identify the main immediate precipitants of relapses during addiction abstinence, systematic research on this problem has been developed in the last years (5-13). However, Marlatt & Gordon (3) used a "hierarchical" method of coding in which only one main precipitant was coded for each relapse. However, such procedures for measurement may have oversimplified the concept of a high-risk situation, since some research suggests that high-risk situations may often involve more than one factor (8, 14).

The present study examined relapse determinants reported by patients treated for drug dependence in a residential setting. The major purpose of this study was to provide descriptive data on the first relapse episodes and the specific relapse determinants according to the relapse taxonomy of Marlatt & Gordon (3).

METHOD

Participants

The sample for this study consisted of 72 participants (51 male and 21 female) who had relapsed after having received psychological treatment for drug addiction in a therapeutic community in Spain (*Proyecto Hombre de Navarra*). This is a drug-free program with a total of 30 months of duration.

Those selected for the sample were required to: a) be an adult person (between 18 and 65 years old); b) have received a drug-free psychological treatment in the *Proyecto Hombre de Navarra* Therapeutic Community; c) have maintained drug abstinence for at least 6 months (in order to properly consider it as a long-term relapse); and d) have experimented a relapse after this period of abstinence. All participants took part voluntarily in the study, after having been properly informed of its characteristics.

Regarding the main sociodemographical characteristics of the selected sample, the mean age was 27.4 (SD=4.1). Most of them (57 patients) were single (79.2% of the total sample) and with a low education level (only 7 patients had secondary studies or more). On the other hand, the main drug dependence problem was related to the following: heroin (57; 79.2%), cocaine (7; 9.7%), heroin + cocaine (5; 6.9%), and others (3; 4.2%).

Assessment measures

In order to facilitate the collection of information about patients, a personal interview was administered to each one of the relapsed patients, with the following assessment tools:

The *Structured Clinical Interview* (not published) is an instrument designed to assess sociodemographical and drug use variables in addicted patients.

The *Relapse Interview* (15) is an instrument that allows the analysis of what personal, environmental or social factors are the most immediate precipitants of relapse. Therefore, this interview helps to identify high-risk situations for relapse and it is useful for relapse prevention programs. Briefly, it is composed of two big categories: intrapersonal and interpersonal determinants of relapse.

Procedure

Patients of this study form part of a wider research carried out about the effectiveness of the *Proyecto Hombre de Navarra* Therapeutic Community. All patients were interviewed during the follow-up period (mean time of 6 years after leaving treatment) and when a relapse had taken place, a detailed retrospective personal interview was made with each one of them in order to identify factors that immediately precede relapse episodes. In this study, relapse was defined as three consumptions in separate days of an illegal drug during a period of two consecutive months. The rationale for defining relapse according to this criterion is that it has been used in the only previous study carried out in Spain (16, 17). It makes possible the comparison between results.

In order to provide an evaluation of a more complex concept of high-risk situation, in this study patients were not restricted in the number of relapse precipitants they reported. Participants were free to report more

than one precipitant for a given relapse episode. Once precipitants were reported, they were coded according to the 17 categories described in Marlatt, Stout, Zywiak & the Relapse Research Group (18).

The interviews were carried out by a trained clinical psychologist. No monetary incentive was offered for participation in the study and all patients gave their informed consent to participate in the study.

RESULTS

Time to first relapse

Relapses lasted an average of 23.5 months (SD: 22.4; range: 1-96 months). Data related to the specific moment of relapse are presented in *table 1*.

PLACE TABLE 1 HERE

Most of the relapses took place during the first year after completing the treatment program. Thus, half of the studied patients (52.8% of them) had relapsed during this period. Furthermore, 77.8% of the relapses had taken place during the 2 years after finishing the treatment. Relapses starting after the 2 years were scarce in the studied sample.

On the other hand, most of the relapses involved the use of cannabis (37.4%), followed by cocaine (31.6%), heroin (18.7%) and benzodiazepines (15.5%).

Determinants of relapse

A total of 97 determinants of relapse were referred by the 72 participants of this study (an average of 1.34 determinants per patient; a maximum of three categories reported by a subject). Most of them were

intrapersonal precipitants (82.5% of the total) and only 17.5% were interpersonal determinants of relapse.

Intrapersonal determinants of relapse

The relapse determinant of an intrapersonal nature most frequently reported by subjects was to cope with negative emotional states (49.5%) (*table 2*). The next most frequent choices were to be unable to resist the temptations or impulses to consume (*craving*) (17.5%), to test personal control (10.3%), to cope with negative physical conditions (3.1%) and to optimize positive emotional states (2.1%).

PLACE TABLE 2 HERE

Interpersonal determinants of relapse

Related to interpersonal relapse determinants, the most frequently endorsed by patients was to cope with interpersonal conflicts (9.3%), followed by to optimize positive mood states (6.2%) and social pressure (2.1%).

DISCUSSION

This is an exploratory and descriptive study about reasons that precipitate relapses in addicted patients after completing a drug-free therapeutic community treatment program. The study of high-risk factors for relapse is important in order to implement relapse prevention programs following Marlatt and Gordon's (3) cognitive-behavioral model of relapse. However, there are not many studies on this topic in a Therapeutic Community setting. This is an important feature because the study of

aftercare has been shown as an important factor for relapse prevention (19).

The strong points of this study reside in several important features. First, this research has studied relapses during a long-time follow-up period (mean time of 6 years after leaving treatment). Most of the studies published about relapse precipitants take into account a shorter period of follow-up (mainly, 1 year). Second, this study is based on reports by patients about their own relapse episodes. Third, patients were not restricted in the number of relapse precipitants they reported, in order to provide an evaluation of a more complex concept of high-risk situations. Thus, participants were free to report more than one precipitant for a given relapse episode.

Results showed that most of the relapses took place during the first years of abstinence. To be specific, 77.8% of the relapses had taken place during the 2 years after finishing the treatment, and the average time for the first relapse was 23.5 months. These results are similar to those obtained in other previous studies (9, 11, 17). Therefore, the first follow-up months, once the treatment is completed, are a high-risk moment for relapse. Thus, the implementation of relapse prevention programs after finishing the treatment is important for the maintenance of drug abstinence for a long-time.

On the other hand, in this study participants reported a large heterogeneity of relapse determinants. The most frequently cited factors for relapse were the following: to cope with negative emotional states (49.5%), to be unable to resist the temptations or impulses to consume (*craving*) (17.5%), to test personal control (10.3%) and to cope with interpersonal

conflicts (9.3%). This distribution of determinants is similar to that obtained in other studies (11, 13, 17, 20).

Therefore, multiple factors contributed for relapse events. As occurred in other studies (8, 11), these data suggest that individuals who relapse often perceive the episode to be due to the occurrence of a combination of high-risk situations. Nevertheless, participants most consistently reported relapse determinants of an intrapersonal nature. These results are consistent with both Marlatt and Gordon's (3) initial research and more recent studies on factors triggering relapse episodes following addiction treatment (6, 9, 11, 13).

Regarding intrapersonal precipitants of relapses, the most relevant one found in this study is related to coping with negative emotional states. However, patients had many problems to identify specific emotional states (for example, frustration, anger, anxiety or depression) and they tended to report general emotional states (less strong but more elongate). Anyway, the link between negative affects and relapse has been highlighted by a number of previous studies (7, 8, 11, 21). Moreover, negative affect has recently been identified as the primary motive for both drug use (22) and alcohol consumption (13). These last results could be consistent with an affective model of drug motivation (the self-medication model of dependence).

Any case, emotional states become a nuclear aspect to be contemplated in any relapse prevention program. An emotional alteration hinders patient's rational behavior, and it shrinks the capacity for the development of effective coping strategies in dealing with high-risk situations. Patients, in this kind of situations, remember the short-term

positive consequences of the addictive behavior, and the probability of being implied in drug consumption, as a way of liberating tension (an erroneous form of self-treatment), is increased. Therefore, an important aspect of relapse prevention programs is to contemplate the learning of strategies for coping with adverse emotional states: communications abilities, problem solving techniques, relaxation, implementation of free-time activities, etc.

The second factor which is the choice by patients as a precipitant of relapse is craving (17.5%). This is possibly the most widely studied and the most poorly understood concept in the study of drug addiction (3, 21). Siegel, Krank & Hinson (24) proposed that both craving and symptoms of withdrawal may act as conditioned drug-compensatory responses, which are often in the opposite direction from the actual unconditioned drug effect. These responses are conditioned by exposure to several drug-related stimuli paired with physiological effects of the drug. Often referred as tolerance, this process is explained by environmental drug cues eliciting a preparatory physiological response to prepare the individual for the drug effects. The preparatory response allows the individual to consume more of a desired substance while reducing the effects of the drug (25). More recently, craving has been broadly defined by conditioned reinforcement models (26), incentive-sensitization models (27), dopamine system regulation (28), social learning theory (29), and cognitive processing models (30). In any case, in this study craving is mainly produced in presence of cues associated to the drugs (16.5%), and only in one case craving appeared without the presence of cues associated to the drugs.

Nevertheless, the association between subjective reports of craving and relapse still remains unclear. While some studies have found a strong association between craving and relapse (6), others have highlighted the lack of a strong association (30, 31). These disappointing results are probably related to the larger problem of measuring this phenomenon (32, 33).

However, factors of importance in other researches are not relevant in this study. For example, in the sample studied, social pressure is only implicated in the relapse of two patients (2.1%), and both cases are related to an indirect social pressure. However, negative social support in the form of interpersonal conflicts is implied in the 10.3% of the cases.

In any case, there are some limitations in this study. First, this is an exploratory and descriptive study in which the sample is probably not large enough. Second, as this study was conducted among patients treated in a residential setting, the results cannot be generalized to a community sample. Third, as in other studies (9), relapse appears as static process, whereas it is fairly well established that the process of dynamic interaction between the individuals and the environment modulates the relapse. Fourth, in this study a retrospective approach has been used to identify relapse precipitants. However, a prospective assessment provides an opportunity to measure possible precipitants in near real time sometime prior to exposure to a high-risk situation (34). Anyway, in this study there was a long lag between the beginning of the relapse and the relapse interview. As it has been suggested by other authors (35), this approach has serious limitations, including the possibility of a retrospective bias (for example, the occurrence of the relapse itself biases later explanations about

it happened or a general decay in the accuracy of memories over time). Finally, it is important to highlight that relapse precipitants are only one part of the relapse process. That what a patient does in a high-risk situation is more important than the specific nature of the high-risk situation. Nevertheless, the results obtained suggest a number of specific ways that drug treatment can be tailored, as, for example, including specific interventions in the treatment guides in order to teach patients how to deal with the high-risk situations identified.

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TABLE 1
MOMENT OF THE FIRST RELAPSE

Years	N (%)		Accumulated frequency	
	N	(%)	N	(%)
1 year	38	(52.8%)	38	(52.8%)
1 month	8	(11.1%)	8	(11.1%)
3 months	5	(6.9%)	13	(18.1%)
6 months	15	(20.8%)	28	(38.9%)
12 months	10	(13.9%)	38	(52.8%)
2 years	18	(25%)	56	(77.8%)
18 months	4	(5.6%)	42	(58.3%)
24 months	14	(19.4%)	56	(77.8%)
3 years	8	(11.1%)	64	(88.9%)
4 years	6	(8.3%)	70	(97.2%)
5 years	0		70	(97.2%)
6 years	2	(2.8%)	72	(100.0%)
TOTAL	72	(100%)	72	(100%)

TABLE 2
DETERMINANTS OF RELAPSES (N=97)

I) INTRAPERSONAL DETERMINANTS	N (%)
A) To cope with negative emotional states	48 (49.5%)
1) To cope with frustration/anger	5 (5.2%)
2) To cope with depression	0
3) To cope with anxiety	0
4) To cope with other negative emotional states	43 (44.3%)
B) To cope with negative physical conditions	3 (3.1%)
1) To cope with physical conditions associated to previous consumption	1 (1.1%)
2) To cope with others physical conditions	2 (2.1%)
C) To optimize positive emotional states	2 (2.1%)
D) To test personal control	10 (10.3%)
E) To be unable to resist the temptations or impulses	17 (17.5%)
1) In presence of cues associated to the drugs	16 (16.5%)
2) Without presence of cues associated to the drugs	1 (1.1%)
TOTAL INTRAPERSONAL DETERMINANTS	80 (82.5%)
II) INTERPERSONAL DETERMINANTS	N (%)
A) To cope with interpersonal conflicts	9 (9.3%)
1) To cope with frustration/anger	0
2) To cope with depression	0
3) To cope with anxiety	0
4) To cope with other negative emotional states	9 (9.3%)
B) Social pressure	2 (2.1%)
1) Direct social pressure	0
2) Indirect social pressure	2 (2.1%)
C) To optimize positive mood states	6 (6.2%)
TOTAL INTERPERSONAL DETERMINANTS	17 (17.5%)