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PSICOLOGÍA Y ADICCIONES

PROPUESTAS PSICOLÓGICAS PARA EL ANÁLISIS Y LA INTERVENCIÓN
" UNA VISIÓN CRÍTICA "

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introduction

Psychology and drug dependence

Disorders due to drug abuse currently constitute one of the most important public health problems, and both the use of drugs and its consequences are priority concerns for all Western countries, which dedicate large quantities of resources and personnel to their prevention and treatment.

The so-called bio-psycho-social model is, according to experts, the essential model of reference for the field of drug-dependence. The addictive behaviour (drug abuse) cannot be reduced to a neurochemical event that occurs in the brain. The probability that a person will consume a drug or become an addict is related not only to the biological effects of the substance, but also to individuals' degree of vulnerability (one of whose components is the biological substrate), their environment, and the processes of reinforcement involved.

The consequences of this perspective, as an alternative to the traditional medical model, are many and varied. For example, the concept of addiction does not necessarily imply that the addicted person will never be able to give up the behaviour in question. Phenomena such as self-change or natural recovery demonstrate this possibility; moving from high-risk to low-risk consumption or abstinence is fairly common. As occurs with other disorders, addictions can evolve favourably if the conditions for behavioural change come about.

Another clear implication of this model is that substance-abuse disorders require a multimodal approach, in the fields of both prevention and treatment. Thus, many risk and protection factors in relation to drug use are of an eminently psychological nature. Such factors constitute the essential objectives of prevention programmes, be they applied in the school, family or community context. The prevention of drug use is today a crucial area of activity, and the effective techniques and components of these programmes are based on solid psychological principles with a lengthy tradition.

From the healthcare and treatment perspective, despite the recent growth of pharmacological treatment, it is important to underline here the significant role of the psychological treatment of drug dependence. According to the reports and treatment guides on which the most important entities in this field have based their approaches in recent years, psychological treatments constitute a crucial element in the effective treatment of addiction. There is ample scientific support for the efficacy of certain psychological techniques, particularly behaviour therapy (including the cognitive-behavioural model), with or without pharmacological support.

It can thus be affirmed without any doubt that psychological intervention is essential for both the prevention and treatment of drug dependence.

In Spain, recent years have seen considerable progress in the implementation and dissemination of preventive and treatment programmes in the field of drug dependence. Nevertheless, there are still some shortcomings that must be corrected. Two clear examples are the focus on damage-limitation programmes, whose numbers have increased to the detriment of intervention initiatives of a psychosocial nature, and the implementation of prevention programmes in an unsystematic way and without adequate standards of quality.

The articles that follow here are aimed at informing the reader of Psychology's point of view on the evolution and current state of knowledge and professional activity in this area of intervention. We sincerely hope that the ideas set out in this issue are of interest, and can be of help in revitalizing the role of our discipline in the field of drug dependence.

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THEORETICAL MODELS OF ADDICTIVE BEHAVIOUR AND NATURAL RECOVERY. ANALYSIS OF RELATIONSHIPS AND CONSEQUENCES

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The prevention and treatment of drug-dependence are not independent of the theoretical model that explains its nature and determinants. The biomedical model makes up a large part of the theoretical substrate currently underlying policies on drug-dependence, and an ever-growing proportion of research presented in journals and at conferences focuses on biological factors. However, the phenomenon of self-change or natural recovery from addictions calls into question the predominant biomedical model, favouring a bio-psycho-social perspective more in line with psychological tradition and research. The present work reviews the most relevant empirical findings from research on self-change in problematic drug use, and analyzes the consequences of these findings for the current theoretical models in the field. Finally, some recommendations are made in relation to the implementation of drug-dependence programs that can help change both in those who recover naturally and those who require treatment.

Key words: *Drug Abuse, Natural Recovery, Psychopathological Models*

La prevención y el tratamiento de la drogodependencia no son independientes del modelo teórico que explica la naturaleza y los determinantes de la adicción a las drogas. El modelo bio-médico conforma buena parte del sustrato teórico que subyace hoy a las políticas de atención a la drogodependencia, y buena parte de la investigación que se puede ver en publicaciones y congresos presta cada vez mayor atención a los determinantes biológicos. Sin embargo, el fenómeno del auto-cambio o la recuperación natural en las adicciones ponen en cuestión el modelo bio-médico predominante y favorecen un enfoque bio-psico-social más acorde con la tradición y la investigación psicológicas. En el presente trabajo se exponen los datos empíricos más relevantes que se han obtenido de la investigación sobre el auto-cambio en el consumo problemático de drogas, y se analizan las consecuencias de estos hallazgos sobre los modelos teóricos en liza. Por último, se formulan algunas recomendaciones en la implantación de los servicios de atención a drogodependientes que favorezcan el cambio tanto en sujetos que se recuperan naturalmente como en aquellos que deban acudir a tratamiento.

Palabras clave: *Abuso de drogas, Recuperación Natural, Modelos Psicopatológicos.*

TWO COMPETING MODELS

Drug dependence, or the addictive consumption of drugs, legal or otherwise, is a somewhat controversial concept. The psychopathological categorization systems currently in use (CIE and DSM) recognize drug addiction as a disorder or illness. The DSM considers two concepts, abuse and dependence, which describe different degrees of adherence to the pathological habit of using one or various psychotropic substances with addictive potential.

For the purposes of this article we shall focus on the notion of dependence, since the concept of abuse lacks relevance, being a residual category that refers to a maladaptive or dangerous pattern of use with somewhat ill-defined limits. Abuse might be considered as a possible stage on the way to dependence, which in contrast does contain the essential elements determining the pathological condition of drug addiction, such as loss of self-control, the degradation of social behaviour, tolerance and withdrawal symptoms.

The traditional biomedical medical, which underlies the two classification systems mentioned above, is based on the belief that dependence on one or more drugs is a chronic illness of a recidivistic nature (Casas, Duro & Pinet, 2006). The consequences of this perspective are fairly clear:

1. There is no recovery in the absence of treatment. The chronic nature of the disorder and the associated loss of control mean that drug-dependent patients fail in their multiple attempts to give up use of the substance by themselves. Treatment is therefore the only possible response.
2. The concept of cure is not applicable, since the supposed biological vulnerability is always present and relapses may occur. Such relapses should be seen

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not as a failure of the treatment, but rather as the result of the chronic evolution of the disorder in its relationship, not always effective, with ongoing supervision and treatment. In this sense, relapses are proof of the underlying chronicity of the disorder.

3. There is no possibility of maintaining permanent self-controlled contact with the drug or drugs. The aim of treatment should always be abstinence, given that the subject's contact with the drug will lead to immediate relapse. From this perspective, "controlled consumption" in people who have been dependent on a substance is considered impossible, based on the argument that either the diagnosis is insufficient or erroneous or the accuracy of the reports is in doubt (Vaillant, 2005).

On the other hand, the bio-psycho-social model understands drug dependence as a behaviour or habit regulated by biological, psychological and social factors. According to this model, addictive behaviour and drug dependence are not chronic conditions of the individual, but rather the result of the interaction of psychological, biological and social determinants at a given time. The consequences of this perspective are also quite clear:

1. There can be recovery without treatment. Moving from high-risk to low-risk consumption is a reasonably common phenomenon. In a similar way to the case of natural recovery in neuroses (Eysenck, 1952), addictions can develop favourably given the conditions that determine, in each case, the change in behaviour. Not all subjects can modify their addictive behaviour without external help, either due to the extent of the habit or to the serious deterioration of their personal and social conditions. But natural recovery appears to be the route followed by the majority of people who have "problems" with drugs (Cunningham, 1999; Dawson et al., 2005; Hasin & Grant, 1995; Klingemann et al., 2001; Sobell, Cunningham, & Sobell, 1996).
2. Relapse during treatment results from the interaction of the different factors that determine the presence of the habit. It should be seen not as evidence of an underlying biological vulnerability, but as evidence of the failure of the subject's mechanisms for coping with the contextual factors conditioning his or her behaviour.
3. The objective of treatment can be "controlled consumption". As in the case of relapse, incapacity for self-control is not a chronic characteristic of a person, but should rather be seen as the result of contextual determinants and the person's ability to cope.

Choice of the bio-medical model is having significant effects on forms of prevention and treatment of drug dependence. Some of the most relevant are as follows:

- ✔ Anti-drugs policies have been, and are becoming more and more, guided by a strict healthcare or medical perspective, heavily influenced by the bio-medical model.
- ✔ Despite the high profile of prevention in the rhetoric of public anti-drugs policy, its development and implementation reflect a clear lack of conviction. The prevention of drug dependence has a predominant psycho-social dimension with substantial repercussions in the legal, educational and community fields. In contrast to the prevention of infectious diseases, the biomedical components are not relevant. This goes a long way to explaining the lack of commitment and resource allocation by the healthcare sector to preventive initiatives.
- ✔ Treatment is becoming more and more medicalized, with new pharmacological prescriptions and approaches continually emerging in the field of treatment, monopolizing the attention of conferences and symposia and with growing presence in specialist journals. Despite the existence of important psycho-social treatment options for dependents, the "chronic illness" model still provides the rationale for many healthcare resources (e.g., through the adoption of abstinence as the sole objective). Finally, it is significant that the authorities are insisting on more involvement by primary care agents in the prevention and treatment of drug dependence. To those with any knowledge of primary attention it is clear that such types of appeal to an eminently medical – and already overloaded – service could only be made from a totally biomedical perspective.

What are the reasons behind the maintenance of a bio-medical model of addictions? Is there any scientific justification for the use of this model, as opposed to the bio-psycho-social one, in the explanation and analysis of the phenomena that can be observed in addictive behaviour?

It is outside the brief of this work to enter into a detailed analysis of evidence in favour of one model or the other. It may well be that the scientific, social and economic factors underpinning the biomedical model in its explanation of behavioural habits, such as addictions, in

Western societies, are not so different from those that have been adduced for interpreting the current biomedical enthusiasm in the analysis of other psychopathological disorders (Blech, 2005).

The focus of our interest here will be the study of the implications of the phenomenon of natural recovery from addiction for the understanding, prevention and treatment of drug dependence. We shall begin with a brief consideration of the nature of natural recovery and the research findings in the area. We shall then move on to an analysis of its coherence with the theoretical models currently proposed. Finally, we shall draw some conclusions in relation to the prevention and treatment of drug dependence.

NATURAL RECOVERY OR SELF-CHANGE IN ADDICTIVE BEHAVIOURS

When a drug-dependent person recovers without the intervention of formal treatment, it is said that the person in question has recovered "naturally", that there has been "spontaneous recovery", or that they have improved through a process "guided by themselves", or by means of "self-change".

Such definitions involve three basic elements (drug dependence, recovery and formal treatment) that require some clarification.

Studies on natural recovery in the field of addiction have concerned themselves with being clear about the initial state or starting point of the patient who recovers. This concern derives from the need to know whether the process of natural recovery occurs in truly drug-dependent people or only in those with drug "problems". Relying on a somewhat circular definition of dependence as the central concept of addiction, experts have gone as far as saying that if subjects change their substance habit by themselves, they are not truly addicted to (or dependent upon) it (Chiauzzi & S., 1993). In spite of the fact that some studies take into account only clinical consumption criteria (quantity, frequency, types of drugs, etc.) for assessing the seriousness of the dependence, others, in setting cut-off points, use established nosological criteria, such as those from the DSM, which permit comparison of the "route" to recovery taken by treated subjects and that of those who have not sought treatment and recovered "naturally". In this way it is attempted to guarantee that the comparison is made once (in either case) a certain threshold of seriousness of dependence has been surpassed. The use of this assessment strategy, based on nosological systems clearly inspired by medical perspectives, is not free from criticism, much of it coming indeed, somewhat paradoxically, from the staunchest advocates of the medical model (Vaillant, 2005). In any case, the assessment of drug dependence is made with both continuous criteria (number and seriousness of the different symptoms or behaviours of dependence) and discontinuous/categorical criteria (the criterion set by the nosological system employed is reached or not).

The way recovery is conceptualized is also crucial. For some, normally on the basis of medical or moral models, recovery can only be equated with abstinence. However, it would seem evident that the opposite of abusive or dependent consumption – whose essential characteristic is not so much the quantity consumed as the consumer's lack of control – is controlled consumption. It is important to take into account that the idea of "recovery", in the case of studies of natural recovery and as far as alcohol is concerned, normally signifies not "abstinence" but rather "non-dangerous consumption". This "non-dangerous" use is actually defined according to the norms of the WHO (World Health Organization, 1998). The consequences of adopting one criterion or another are important for clarifying the significance of natural recovery. It is estimated that the non-inclusion of moderate drinkers could exclude 40% of problem drinkers who recover without therapeutic help (Klingemann et al., 2001; Sobell, Ellingstad, & Sobell, 2000). In the cases of tobacco and illegal drugs there is no "safe consumption", so that the recovery criterion is abstinence (Carballo et al., 2007). This criterion may be called into question in relation to the seriousness of the consequences of controlled and long-term consumption of substances such as cannabis, or even cocaine and heroin, though it is fully in accordance with current official health guidelines.

As regards the notion of "formal treatment", it is not always easy to be clear about what it means. This is also a crucial issue, because there is no radical difference between the changes observed during treatment and those that emerge as a consequence of the self-change process. If in what happens to the subject there is no substantial difference, then it becomes highly important to clarify what is understood by therapeutic help and how it differs from the external help received by addicts who opt for natural recovery. It is difficult to distinguish what is treatment from what is not. For the purpose of studies on natural recovery, Klingemann et al. (2001) have defined treatment as different types of resources or thera-

peutic services aimed at achieving change in addictive behaviours, including: self-help groups, psychological or psychiatric treatment, resources related to social services, psychiatric hospitals, doctors' or nurses' advice, hospital services and detox centres. As it can be seen, this is an extremely broad definition that excludes all help with recovery defined as structured therapeutic activity, from brief advice and institutional psychosocial support to more sophisticated and prolonged treatments, be they of a psychological or a psychiatric nature. It should be borne in mind, nevertheless, that some recent studies have failed to consider as treatment attendance at three sessions or less of self-help groups (Ellingstad, Sobell, Sobell, Eickleberry, & Golden, 2006; Sobell, Sobell, & Toneatto, 1992; Sobell, Sobell, Toneatto, & Leo, 1993; Toneatto, Sobell, Sobell, & Rubel, 1999), especially if subjects feel their experience at these groups was irrelevant to the process of recovery.

Taking into account all that has been said up to now about drug dependence, recovery and treatment provides us with a first impression on natural recovery in addictions. Studies in this area have not focused solely on "problem" and abusive consumption, which would restrict their scope, but have also looked into the possibilities of natural recovery in dependent subjects, defining dependence according to the criteria of the nosological systems currently in force. Moreover, the concept of recovery has not been limited to abstinent subjects, in the case of alcohol, but has also included, as valid recovery, that of those who return to controlled use with low health risk. From the perspective of natural recovery there is no reason to maintain abstinence as a criterion, thus distancing it from the circular reasoning that dependence always requires abstinence, and from a moralistic stance that ignores the clinical criteria for alcohol set by international organizations such as the WHO. Finally, and with the aim of giving maximum consistency to the concept of self-change or "natural change", the definition of treatment has been greatly extended to cover all regulated forms of intervention in the field of drug dependence, though some limits have been set in the case of self-help, given the frequency with which these types of therapeutic strategies are explored but soon abandoned.

NATURAL RECOVERY IN EMPIRICAL RESEARCH

The phenomenon of self-change or natural recovery occurs successfully in all types of addiction to psychoactive substances. One of the most widely cited early studies explored the improvement without any kind of therapeutic intervention that took place among some of the Vietnam veterans addicted to heroin on returning to their homes in the USA (Robins, 1993). Most subsequent work has dealt with alcohol and tobacco, though more and more research is including studies with other substances, such as cannabis, cocaine or heroin (Carballo et al., 2007).

With research data from extensive surveys among the general population, very high rates of self-change have been found (Dawson et al., 2005). Thus, in the case of alcohol the figures have ranged from 67% to 83% of "self-changers" for "dependents" or "abusers", respectively (Hasin & Grant, 1995), or around 77% if the inclusion criterion was that they were habitual drinkers with an intake of 7 Standard Drink Units (SDU) per day (which is no small amount (Sobell, Cunningham, & Sobell, 1996). It is not surprising that such results lead to the conclusion that "...a large majority of people with alcohol problems can overcome them, and indeed, do overcome them, without formal treatment or self-help groups" (Klingemann et al., 2001).

As already mentioned, in the case of illegal drugs the data obtained are scarcer, though they would appear to be in the same direction. In an extensive study carried out in Canada it was found that 84% of cannabis users, 85.9% of LSD users, 84% of crack or cocaine users, 79.6% of speed users and 65.5% of heroin users could be self-changers (Cunningham, 1999).

The self-change process is more likely to occur when the addiction is less serious (Bischof, Rumpf, Hapke, Meyer, & John, 2002; Weisner, Matzger, & Kaskutas, 2003), though it can occur in any type of dependent person, without being subject to the person's history of abuse or personal characteristics. Seriousness of the addiction refers to a construct whose variables include the extent of dependence prior to onset of the change process and the number, duration and significance of the consequences of the addictive behaviour. Studies comparing the characteristics of subjects who seek treatment with those of natural recoverers have found that, on average, those who recover naturally tend to present a less serious addiction profile and have more personal resources for coping with the process of change (DiClemente, 2006). This does not mean, however, that self-change process cannot occur in subjects with serious addictions, or with few resources.

In research carried out in Spain by the authors of the present article, and which has yet to be published, it was

found that self-changers presented fewer symptoms of dependence at the beginning of the change process than those who received treatment. Moreover, those who sought treatment had more associated psychopathological disorders (comorbidity) than those who did not seek treatment, and more commonly reported polyconsumption. The presence of comorbid disorders and the use of multiple substances could be interpreted as increasing related problems and at the same time reducing one's personal resources for coping with them (DiClemente, 2006).

Self-change appears to involve cognitive processes similar to those that can be found in subjects who recover through treatment. According to the transtheoretical model (Prochaska & DiClemente, 1984), in cases of recovery there is always the will to change, commitment, planning and effective decision-making in the person involved. It is a matter of debate whether this process of change is confined to a pre-fixed set of stages, as described in the transtheoretical model, which would serve to predict "the degree to which an individual is motivated to change a problem behaviour" (Klingemann et al., 2001); what is less in doubt, given the volume of evidence, is that disposition to change is the result of the interaction of multiple behavioural, cognitive and environmental factors.

Certain factors are known to influence the decision for self-change and its success. Among these are contextual and developmental determinants, problems associated with drug use and the available resources. The environmental determinants most commonly emerging in the literature are important life changes (moving house, changing job, change of marital status, etc.) and those related to social pressure, be it in the context of family, friends, work, or any other (Bischof, Rumpf, U., Meyer, & John, 2001; Rumpf, Bischof, Hapke, Meyer, & John, 2002). From the developmental point of view, researchers have hypothesized that maturation can explain the ease with which certain addicts give up their habit on reaching a certain age; some studies have shown the effect of the link between age and certain consumption habits, and how, after a critical period in life, healthier behaviours are resumed (Drew, 1968; Winick, 1962, 1964). In relation to these latter points, the study of predictor variables linked to natural recovery or self-change may be of great utility for revealing the future importance of certain pathological drug habits associated with adolescence (Vik, Cellucci, & Ivers, 2003). In this regard, it is clear that not all those aged 12 to 18 with abusive patterns of alcohol, tobacco or other drug use will degenerate into adults with serious addictions.

Other factors influencing the decision are those deriving directly from the drug use itself. Health is frequently cited as a reason for giving up alcohol. Use of drugs may go hand in hand with a direct or indirect assault on the person's health. It is not surprising that 52.9% of studies that report reasons for change indicate health as one of them (Carballo et al., 2007). Other important factors linked directly to consumption are financial difficulties and legal complications. Abusive consumption, be it of legal or illegal substances (most especially in the latter case) may be associated with deterioration in the person's job performance, the constant search for sources of money to feed the habit, and lawbreaking. With this in mind, it makes sense that economic and legal factors are cited as important determinants of both the initiation and maintenance of change (Carballo et al., 2007).

The resources available may constitute a determining factor in choosing the self-change route. It is likely that subjects with higher level of education and better financial and social resources will be able to cope sooner and more effectively with the process of change, thus avoiding the stigmatization and conditioning factors of treatment programmes. Such aspects emerge in the majority of studies in which participants are asked about their reasons for not seeking formal treatment (Carballo et al., 2007; Sobell et al., 2000). Even so, it should be taken into account that such resources cannot be abstracted from the seriousness of the addiction, since it is precisely the type of subject with most resources that presents the least serious addictions.

Finally, it is highly probable that social acceptance of the self-change phenomenon also has a substantial influence on the generation of self-change strategies among subjects with problem consumption. The choice between treatment and self-change is modulated by factors such as the treatment programmes available and their accessibility, the experiences of others that have given up harmful consumption habits, confidence in the utility of services on offer, the availability of self-help groups, community attitudes and beliefs vis-à-vis drug addiction and recovery, past experience with treatment, and so on (Klingemann et al., 2001). It is well known that the social context is a crucial factor affecting the prevention and treatment of drug dependence, shaping individual behaviour in relation to them. Examples of the way in

which the social context has an effect might be the "religious or spiritual" influence referred to by some self-changers, or the role of ex-addicts in treatment programmes. Currently, a research project is being carried out in several European cities aimed at surveying the different social attitudes and beliefs on self-change in drug dependence. The results of these surveys may help to reveal the extent of the relationship between the social perception of self-change and how widespread it is among people with problem consumption.

The finding that the course of the natural recovery process does not lead necessarily to abstinence is a matter of great importance in these studies, as we stressed earlier. In a review of research carried out up to the year 2000 it was found that more than three-quarters of those recovering from problem alcohol use choose moderate or controlled consumption (Sobell et al., 2000). This same review also revealed that 46.2% of studies that analyzed recovery from the use of other drugs also took into account limited or controlled consumption.

It has been argued that these findings may be biased, since it cannot be guaranteed that the recoveries in question are stable, or that the information people provide is credible or accurate. This is not the place to deal in any depth with these issues, which have also been subjected to research. Suffice to say that research has taken into account the concept of "stability", setting restrictive time criteria for the acceptance of subjects who have recovered "naturally". It is recommended to accept no "natural recovery" that has lasted less than 5 years, given that the first 5 years after the change – be it achieved through treatment or through self-change – are considered to constitute the period of maximum instability (Sobell et al., 2000). Some studies with lengthy follow-up have shown the stability of natural recovery in alcohol abuse self-changers, both abstinent and with moderate consumption, after several years (Rumpf, Bischof, Hapke, Meyer, & John, 2006; Sobell, Sobell, & Kozlowski, 1995). As far as the accuracy of self-reports is concerned, no reasons to distrust this source of information have emerged, though it is recommended to use additional informants to improve accuracy (Sobell et al., 2000).

NATURAL RECOVERY AND MODELS OF ADDICTIVE BEHAVIOUR

The phenomenon of natural recovery, as described up to now, has some clear implications for the debate on the models currently applied in the field of addictions.

The chronic illness model, characteristically biomedical, postulates a disorder that is permanent and, in contact with the substance, progressive, and which cannot be arrested without treatment. According to this conception, the characteristics of individuals that make them dependent are immovably rooted in their physiology, perhaps because they are in their genes. Such perspectives are totally incompatible with the phenomenon of natural recovery or self-change that we have described here.

The generality of the self-change processes, in terms of age, culture, types of drug, seriousness of addiction, and so on, suggests a reasonably common process in relation to drug use, making it impossible to maintain the idea of drug dependence being explained solely on a biological basis. The varied characteristics of the self-change phenomenon clearly indicate the appropriateness of a complex aetiology involving the interaction of diverse factors (psychological, social and biological), as opposed to a simple one based on biology. Moreover, the nature of the factors that trigger and maintain processes of self-change, and the similarity of these factors to those that also operate in the case of treatment (Bischof, Rumpf, Hapke, Meyer, & John, 2000; Bischof et al., 2002; Blomqvist, 1999; Tucker, Vuchinich, & Rippens, 2002), support a bio-psycho-social model, more in accordance with a plurality of addictive routes.

The treatment of drug-dependent people should be seen as assistance for the process of self-change generated by subjects themselves. If the discrepancy between the stimuli to consume and the subject's resources for coping with them is very large, then motivated subjects will seek treatment. These two components, the stimuli associated with consumption and the subject's coping resources, maintain a dynamic relationship that allows for many potential entrances and exits in the addiction, which are a common feature in those using drugs. This form of understanding treatment is totally incompatible with a biology-based reductionism, since one of the equilibrium solutions available to the former drug-dependent person is that of "controlled consumption". The demonstrated fact that dependence and "problem" drug use are not solved solely by total abstinence openly challenges the notion of chronic predisposition or "illness" concept underlying the biomedical model. It seems clear that the control of addictive behaviour can take two different forms (abstinence and controlled consumption), whose viability will depend on multiple psychological, biological and social factors.

BY WAY OF CONCLUSION: SOME PRACTICAL CONSEQUENCES

The empirical reality and the nature of the self-change phenomenon make a reductionist biomedical approach untenable. It seems clear that the adoption of the idea that drug dependence is a chronic illness, with a fundamentally biological substrate, flies in the face of the observable reality and severely distorts strategies of prevention and treatment, adversely affecting their efficacy.

The fact that the extent of the self-change phenomenon in drug dependence has been revealed by widespread research should lead to certain changes in preventive and therapeutic perspectives.

Prevention should take into account the natural recovery phenomenon. This self-change concept should be promoted to encourage individuals who are abusing drugs, and who wish to change their consumption habits without seeking formal treatment, to trust in their possibilities and set the process of change in motion. To this end, public information campaigns and education should indicate that it is possible to recover from problem use of drugs and alcohol by oneself, and that this is the route most commonly taken (Sobell & Sobell, 2005). A strategy of this type might have positive influence even on those incapable of recovering by themselves, since it appears to make them more favourably disposed towards seeking help (Sobell et al., 2002).

If self-change is seen as the essential basis of the process of moving from dependence to responsible and controlled consumption or to abstinence, regardless of whether treatment is involved, then the focus of interest of treatment programmes and therapeutic interventions should shift towards the determinants, characteristics and individual processes of change. The psycho-social approach in the treatment of addictions should prevail rather than, as now, the biomedical model.

An immediate consequence of combining the adoption of this perspective with the promotion and encouragement of self-change in addictions is the need to support the creation and funding of so-called "moderation services" (whose function is to reduce risk) aimed at those large sections of the population that wish to reduce their alcohol intake but are reluctant to turn to the formal treatment programmes available. This strategy would have the obvious advantage of attracting such people toward interest in seeking some kind of solution.

Obviously, in order to guarantee the success of such a strategy, there would be a pressing need to train professionals in assessment and treatment techniques and in the formulation of objectives more in line with a bio-psycho-social model of addiction, which differ from those commonly formulated in drug-dependence services within the traditional "chronic illness" healthcare framework.

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PSYCHOLOGICAL BASES OF THE PREVENTION OF DRUG ABUSE

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Drug consumption has become an important social problem in recent years throughout the developed world. One way of dealing with and containing this problem is through prevention. Psychology has always had a notable role in the prevention of drug consumption, in relation to understanding and explaining this behaviour based on psychological processes – especially why some people use drugs and others do not – and to developing theories and models of consumption behaviour; moreover, its role in the development of effective preventive and treatment programmes has been crucial. Drug-use behaviour is of great relevance for psychology given its high prevalence and the serious problems (physical, psychological and social) it causes in many individuals. The results obtained with drug-dependence prevention programmes are good, though the extent of their implementation does not always reach the desirable level.
Key words: *Prevention, drugs, psychology, theory.*

El consumo de drogas se ha convertido en un importante problema social en los últimos años en todos los países desarrollados. Un modo de contener o atajar este problema es a través de la prevención del consumo de drogas. La psicología siempre ha tenido un papel destacado en la prevención del consumo de drogas, tanto para comprender y explicar esta conducta desde los procesos que estudia la psicología, a la realización de estudios para explicar por qué unas personas consumen drogas y otras no, como elaborar teorías y modelos para explicar e intervenir en los consumidores y, de modo especial, en el desarrollo de programas preventivos eficaces, como de tratamiento. Esta conducta, la del consumo de drogas, tiene una gran relevancia para la psicología por su alta prevalencia y los graves problemas que acarrea a muchos individuos (físicos, psicológicos y sociales). Los resultados obtenidos con los programas de prevención del consumo de drogas son buenos aunque no siempre su implantación llega al nivel deseable.
Palabras clave: *Prevención, drogas, psicología, teorías.*

PSYCHOLOGY AND DRUG USE. WHY DO PEOPLE USE DRUGS? WHY SHOULD WE PREVENT DRUG USE?

On attempting to explain the use of drugs we would do well to begin by defining psychology so as, on the basis of that definition, to determine our role. A simple definition of psychology would be the science that studies behaviour and mental processes (Atkinson, Atkinson, Smith, Bem and Nolen-Hoeksema, 1996). To put it perhaps more clearly, we might say that psychology is the science that studies human behaviour, in order to understand observable acts and behaviour, mental processes (cognitions, sensations, thoughts, memory, motivation) and all those processes that permit us to explain behaviour in particular contexts. Therefore, it focuses on the observable (behaviour) and on mediating (mental) processes, but without neglecting to consider social processes (culture, socialization, social system) and biological ones (genetic, perinatal, postnatal, illnesses), as long as these permit the explanation of human behaviour.

A behaviour such as drug use will require a bio-psycho-social explanation, or rather a socio-psycho-biological one, since the most important factors, at a quantitative and qualitative level, for explaining whether a person consumes or not in a given society, such as ours, are the social ones, followed by the psychological ones, and thirdly, the biological ones.

The study of observable human behaviour has been made by means of all we know about learning and psychological processes. Within the field of basic psychological processes research has covered the processes of how we perceive and feel, attention, memory and intelligence, how we learn, how we think, the role of cognition, communication, social influence and social cognition, personality, sometimes as the final result of several of the previous processes, together with others such as consciousness. It has also examined the individual's developmental process and social behaviour.

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In relation to learning, important work has led to the discovery of processes of classical conditioning, operant conditioning and social or vicarious learning. This has been of enormous relevance, since the principles of psychology can currently be classified in two broad groups. On the one hand, those derived from the psychology of learning, and from which have been developed powerful and effective treatment techniques for a range of disorders, and on the other, those derived from the study of cognitive processes, which has revealed processes of thinking and other internal processes that explain behaviour. Techniques based on cognition have also been, and continue to be, of great importance (attributional, cognitive, problem-solving techniques, and so on). The principles to which we refer are those employed in the prevention of drug dependence, and which, given the lack of space and psychologists' familiarity with them, we shall not elaborate upon here, though they are discussed in a wide range of publications in application to drug use (e.g., Becoña, 2002).

There are three main reasons why we should prevent the use of drugs, especially tobacco, alcohol and cannabis, in children and adolescents. The first, and most obvious, is that if we can stop children and adolescents smoking cigarettes or cannabis and drinking alcohol abusively, we shall avoid their becoming addicts or abusers in adulthood. The second reason is that today we know that if people do not consume they will avoid physical illnesses directly related to drug use, such as lung cancer, cirrhosis of the liver or cardiovascular disorders, and we shall also reduce the probability of their presenting mental disorders in adolescent and adult life. It has been clearly shown that the consumption of drugs is associated with a wide range of mental disorders, some of which involve great suffering, such as depression, anxiety disorders or schizophrenia (Becoña, 2003; Comisión Clínica, 2006; Regier et al., 1990). And thirdly, we are aware that the use of alcohol and tobacco often leads to the consumption of illegal drugs, such as cannabis, heroin or cocaine (Kandel & Jessor, 2002). We now know, in relation to drug use, that: 1) there are factors which facilitate the onset and maintenance of consumption of different substances in some persons with respect to others, 2) there is a progression from the use of legal drugs to illegal ones in a significant proportion of those who consume the former compared to those who do not consume them, and 3) a range of socio-cultural, biological and psychological variables modulate onset and maintenance factors and the progression (or not) from the use of some substances to others.

Also, from the research in this area (see Becoña, 1999), we can conclude that: 1) there is a significant relationship between the use of legal drugs (alcohol and tobacco) and the subsequent use of cannabis, and between cannabis use and the subsequent consumption of cocaine and/or heroin; 2) although there is a relationship, this (statistical) "relationship" should not be confused with "causality"; 3) there are also other variables related to the use of heroin, as of cannabis, which in turn are often at the basis of previous consumption of cannabis, heroin or cocaine, and which should be taken into account, since they could be those that explain the onset of cannabis use, its maintenance and the progression to the use of cocaine or heroin and other behaviours associated with such use; 4) even so, from a preventive and public health perspective, it is necessary to intervene with respect both to cannabis and to the other variables related to consumption, be they substances further up the chain of consumption (e.g., alcohol, tobacco) or variables of a social (acceptance, availability), biological (predisposition) or psychological nature (e.g., personality traits, learning); and 5) prevention should therefore focus both on implementing actions for preventing drug use directly and on modifying those variables related to the onset, progression and maintenance of the use of the different drugs, concentrating on variables of the individual (e.g., improving their coping strategies) and of the social system (e.g., providing opportunities), as well as on other aspects and behaviours related to the use of drugs (predisposition, delinquent behaviours, low self-esteem, etc.).

THE PSYCHOLOGICAL EXPLANATION OF DRUG USE

Basic psychological processes

The comprehensive explanation of human behaviour requires taking into account in a single human being: the socio-cultural component, or context in which the person was born, has learned, has developed their abilities and currently lives (this means that they have learned things within a specific culture, that they have a conception of the world different from those of other social groups, and that they interact with the world using the values and beliefs of that culture); the psychological component, or form of understanding and dealing with the world from their reality; and the biological component, or physical part that permits them to be, on the one hand, a human being, and

on the other, a social human being, depending on their organic structure and their biological functioning via their senses, organs and innate biological or other characteristics that have been interacting with their psychological and social parts throughout their life (Carlson, 1998). The basic psychological processes, in relation to how we perceive and feel, the role of attention, memory and intelligence, the crucial processes of learning, how we think and the role of cognition, communication, social influence and social cognition, personality, consciousness – all of these aspects should be taken into account in efforts to understand, explain, prevent and treat the abusive consumption of drugs (Becoña, 2002). By way of example, knowing how a person learns is of the utmost relevance. Learning is a basic process in human beings and in animals. Over time people learn about relationships between events in their environment and how these affect their behaviour. The theory of learning explains behaviour as a phenomenon of acquisition that follows certain well-demonstrated laws, those of classical and operant conditioning and social learning.

Together with the basic processes referred to above, which permit us to understand and explain human behaviour from a more psychological perspective, there are other processes related to the social part of individuals and, naturally, to their biological part, since our behaviour occurs in a social context and in accordance with a particular biological substrate. We refer to the importance of knowledge about cultural characteristics in relation to judgements and norms on drug use, of socialization processes, of the role of the family and the family processes affecting the individual in question, and of the family's input in the particular social context that concerns us (rearing styles, control, expectations for one's children, etc.). Also important is knowledge of the person's vulnerability and processes of biological predisposition.

In the specific case of drug use it is of vital importance to have psychological information on the person's adolescence and early adulthood, since it is normally between the ages of 12 and 20 that there occur – if they are going to occur – the processes of trying out drugs, which may lead to abuse and dependence. Thus, having knowledge about this stage of life is key for professionals, since it is those in this age range who are most commonly in contact with them, and they should be able to monitor closely the mechanisms young people develop for achieving control over their behaviour (Becoña, in press).

Types of family and upbringing

The socialization process is fundamental to the life of any individual, in order to develop as a human being within the cultural group in which he or she was born. Many of the psychological models for explaining drug use include the socialization process as a central element (e.g., Oetting & Donnermeyer, 1998). Especially widely studied has been the role of the family (see Fernández and Secades, 2002).

One of the most relevant aspects for the individual is type of upbringing. It has been shown that the way children are brought up influences their behaviour. In this regard, two variables are crucial: parental control and parental warmth. Parental control refers to how restrictive parents are, while parental warmth refers to the degree of affect and approval exercised in the upbringing of their children. Baumrind (1980) described three types of parenting style: authoritative, authoritarian and permissive; subsequently, Maccoby and Martin (1983) described a fourth type: indifferent. According to Craig (1997), the authoritative parenting style involves great control and great warmth, the authoritarian style great control and little warmth, the permissive style little control and much warmth, and the indifferent style little control and little warmth. Type of upbringing as a result of parenting style has a direct effect on the type of personality the child will develop. Thus, authoritarian parents tend to produce reserved and fearful children, with little or no independence, and who are moody, shy and irritable. In adolescence boys may be rebellious and aggressive, and girls passive and dependent. Permissive parents tend to produce self-indulgent, impulsive and socially inept children, though in some cases they may be active, sociable and creative; in others they may be rebellious and aggressive. The children of authoritative parents tend to be the most well-adjusted and self-confident, and to have high levels of personal control and social competence. Finally, the children of indifferent parents are in the poorest situation, and if their parents are actually negligent, may be inclined to give free rein to their most destructive impulses (Craig, 1997). All of this has clear implications for behaviour such as drug use.

Adolescence and drug use

Adolescence is a critical stage in a person's development, in which the individual has to develop on various levels: physical, emotional, social, academic, and so on. The quest for autonomy and identity are defining elements of

this period, and will be influenced by one's previous life history, by support and understanding (or the lack of them) from one's family and by the presence or absence of problems in the family, peer group and other contexts. It should also be borne in mind that adolescence covers a long period of time without a precise or universal starting point, and which can overlap considerably with "chronological" adulthood. The use of drugs is one of the aspects with which adolescents must cope and decide upon in accordance with their values and beliefs, but also with their sociocultural, family and peer-group context (among others), when they are offered substances or feel the need to try them. Experimentation with drugs has clearly become a common fact among adolescents in developed societies (Blackman, 1996). A large proportion of those trying drugs do so with tobacco and alcohol, followed by cannabis or hashish, and to a lesser degree, other substances. The earlier the experimentation with one substance, the more likely is experimentation with others. The fact that drugs are a relevant feature of adolescent life and that a large percentage of adolescents will try and consume them is something that must be accepted and acknowledged (Funes, 1996) if we are to be able to intervene and help those adversely affected.

Perception of risk is a highly relevant variable for explaining whether or not an adolescent consumes psychoactive substances. People make decisions according to the positive consequences they will obtain and the negative ones they will avoid. If they perceive that an act or behaviour will bring negative consequences they will not perform it. Therefore, the perception one has of different drugs, which depends on use, on beliefs and on the social construction in relation to the substance, will influence their consumption. There may sometimes be biases about the effects of the substances, in one direction or another. It is therefore highly important to provide correct information and to consider at all times that a person's objective is to have sufficient capacity for dealing adequately with their context and for adjusting to it in an appropriate way.

The use of drugs does not normally occur in isolation, but rather combined with other deviant, antisocial or socially problematic behaviours. Detecting adolescents vulnerable to these types of problems is of great relevance both for them and for the rest of society. This also clearly suggests that the improvement of people's social welfare (reduction of unemployment, increased opportunities, good schools for all, etc.), biological welfare (ease of access to healthcare, provision of regular health check-ups, etc.) and psychological welfare (proper upbringing with good family interaction and high levels of affect; ability to develop one's capacities and express opinions; support for preserving mental health; etc.) is one of the best forms of prevention of drug consumption.

Moreover, there are various factors that lead to people not behaving healthily, including (Bayés, 1991; Becoña & Oblitas, 2006): 1) the pleasurable (reinforcing) nature of the majority of the consequences of many harmful behaviours, as well as the immediacy of those consequences or effects, 2) the long time interval that normally separates the practice of harmful behaviours from the appearance of illness in its clinically diagnosable state, 3) the fact that while the unhealthy (e.g., carcinogenic) behaviours always or almost always provide real and immediate satisfaction, the emergence of diseases or other harmful effects is seen as remote and improbable, 4) the conviction of the unlimited power of medicine and technology to solve any problem we may develop, 5) the cultural system, which through different beliefs and by virtue of its deep-rootedness tends to maintain and justify practices that are unhealthy but socially acceptable or correct, and 6) the cyclical and protracted – rather than linear and rapid – nature of the process of change, in many cases characterized by relapse. Moreover, many adolescents do not perceive the problems different drugs may cause or the risks of the behaviours they perform; they concentrate on the short term and see these problems and risks as remote and as not concerning them – if, that is, they even perceive that they may cause problems (e.g., drunkenness) at all.

Leisure time, recreational life and drug use

Today, leisure and fun are more and more associated with the use of drugs, be it occasional, sporadic or frequent, even though many people have fun without consuming drugs, and it is possible to exercise or develop adequate control and self-control in fun situations, in recreational life and in other contexts of life. The spread and popularization of drugs in the social leisure context has been significant, and the two are frequently associated with one another, though there is no strict correspondence. Such "recreational" use of drugs (Calafat et al., 2000, 2001, 2004), widespread given the low cost of the type of drugs used – well within reach of a large section of the public –, involves the search for a means of enhancing resistance and pleasure in

recreational contexts (e.g., discothèques) and of "escape" in one's free time. Such scenarios also often involve risks. This phenomenon is largely circumscribed to adolescence and early adulthood: its relevance declines – and with it the use of substances in this context and the associated problems – as adult life progresses and the person has to take on responsibilities related to work, relationships, children and so on.

As is well known, recent years have seen, among young people, a significant transformation in recreational pursuits and the consumption habits associated with them. The characteristics of recreational life, "having a good time" and "going out", have changed drastically, becoming qualitatively different phenomena with respect to previous forms. Crucial elements in this new scenario, especially in the early period, have been the use of ecstasy to heighten the fun sensation and "last all night", a low perception of the risks of drug-taking, a change in the recreational timetable with the emergence of after-hours clubs (which open in the middle of the night and close in mid-morning or at midday), the *rutas del bakalao*[11] This term refers to the phenomenon that emerged in Spain in the 1990s whereby certain roads (notably leading from Valencia to other points on the coast) began to be frequented by revellers who would drive between the many discothèques and bars along them. These discothèques and bars, whose number began to grow, were hotbeds of drug dealing and drug use., and so on. A considerable portion of those participating in such new recreational contexts associate them with the use of substances for increasing resistance and having fun for as long as possible, thus providing the crucial link between recreational life and drug use. In any case, it should be borne in mind that when we speak of drug use we must take into account the true epidemiological data, in the sense that there are always more young people who do not consume illegal drugs than there are who do so (Calafat et al., 2001, 2004). Fortunately, consumption is commonly confined to weekends; even so, this type of drug-taking – and especially recreational polyconsumption – increases the probability of a percentage of those involved developing problems of drug or alcohol abuse, and of the early onset of associated problems. We have been witnessing over recent years, then, a change in substance consumption patterns among young people associated with the new recreational scenarios. Moreover, this transformation, while characteristic of young people in Spain, is also occurring in many other European countries (Calafat et al., 2001), in a further indication of a growing homogenization not only in fashion, style concepts and clothes, but also in types of drugs and their consumption patterns.

The transition from adolescence to adulthood. Assumption of adult roles and the role of drugs in the life of the individual

Today we know, thanks to a whole series of follow-up studies covering adolescence and adulthood, that drug use is not the same when one is an adolescent as when one becomes an adult and takes on the adult roles of the specific society in which one lives (Bachman et al., 2002). By way of example, Baer, MacLean and Marlatt (1998), on reviewing several of the longitudinal studies starting in adolescence and continuing right through it or into adulthood, conclude, in reference to alcohol use, that this increases throughout the adolescent period, but that from around age 20 there is a fall-off not only in consumption of alcohol but also in that of substances, the peak of consumption being in adolescence and early adulthood. The causes adduced for this change are related to the assumption of adult roles, the most important of them being those involved in marriage, having children and serious employment. This facilitates moderation in the consumption of alcohol. Put another way, the decrease in time available for drinking and the control exercised by one's partner, one's extended family, the social system itself and one's employment situation all help to reduce the amount of drinking.

It is clear, therefore, that a portion of adolescents' substance use decreases with time, even if such use is associated with different psychosocial problems (Baer et al., 1998). The substance or alcohol problems that do not decrease tend to be associated with early developmental problems such as those related to family conflict and deviant behaviour. This would suggest that in such persons there is a development process different from that of the vast majority of adolescents, and especially from those who even consuming substances have had only moderate problems, and those who even consuming sporadically, or heavily on special occasions, in adulthood, do not develop substance or alcohol problems. A clearer identification and understanding of these aspects is of great relevance, especially for the field of drug-dependence prevention, for the early detection of problem behaviours and for the improvement of

academic performance; it is equally important for adults presenting abusive consumption behaviour. The ability to identify and describe people with different patterns of consumption and different types of problems deriving from them can provide us with a more accurate conception of how such aspects develop from an early age and into adulthood, when the individual becomes a fully-fledged member of society. It is for such reasons that White, Bates and Lebouvie (1998) consider it necessary to shift the focus of research and prevention initiatives, and devote more effort to studying late adolescence and early adulthood. Therefore, it would be relevant to analyze adolescents' risk behaviours in their transitional periods and consider ways of reducing such risks.

All of the above is also related to Moffitt's (1993) distinction between problem behaviours confined to adolescence and those which persist throughout life. The data indicate the pertinence of this distinction in many cases. Moffit (1993) found for the case of delinquent behaviour that there were two types of persons: those who only performed it on certain occasions in adolescence, and those who did so both in adolescence and in adult life. In the case of drug use this is also the most probable scenario, given that the studies analyzed here do not indicate a linear relationship of consumption in adolescence and into adulthood. But these same studies (e.g., Baer et al., 1998) and others (e.g., Donovan, Jessor & Costa, 1999) suggest that the best predictor of drug use in adulthood is consumption during adolescence, or in some cases even earlier. The identification of these types of people is a task for research in this field (Cairns, Cairns, Rodkin & Xie, 1998; Silbereisen, 1998). On the basis of this information, the kind of preventive action most appropriate to each case can be applied. The types of preventive programme currently applied, i.e., universal, selective and prescribed, are in this line – a line that has indeed begun to bear fruit to a reasonable extent in the field of drug-dependence prevention. In turn, and in relation to the above, it is necessary to increase our knowledge not only of drug-use behaviour and the problem behaviour related to it, but also of direct and indirect causal factors related to the former, as is often exemplified by psychiatric comorbidity (Regier et al., 1990); all of this will help us to better understand drug consumption, its maintenance and its cessation. Such improved knowledge facilitates the task of drug-dependence prevention.

EXPLANATORY THEORIES OF DRUG USE FROM THE PSYCHOLOGICAL PERSPECTIVE

In any science it is of enormous importance to develop models and theories in support of it. But these are not simply the product of our intuition; rather, they are based on experience and on knowledge and data deriving from the field (in the case of drug use, on knowledge about risk and protection factors, on the results of epidemiological, empirical and follow-up studies, and on the all the broad spectrum of knowledge available about drugs, adolescence and early adulthood, prevention, prevention programme design and assessment, and so on).

As discussed elsewhere (Becoña, 1999), different groups of explanatory theories and models can be considered in relation to drug use: 1) partial theories and models, or those based on few components, 2) theories and models based on stages and pathways, and 3) integrative and comprehensive theories and models. Their analysis reveals that the majority of explanatory models are of a psychological nature, either including only psychological processes or combining them with biological and social processes.

In the category of theories and models considered as partial or based on few components are a series characterized by explaining drug use with very few elements or components. These would include the biological theories and models, such as those which consider addiction as a disorder with a biological substrate and hypothesize self-medication, as well as public health, health beliefs and competence models.

A theory of great relevance for the explanation of consumption, for treatment and for prevention is learning theory. Learning theory explains behaviour as a phenomenon of acquisition that follows certain laws, those of classical and operant conditioning and social learning.

Another group of theories that have had considerable relevance since the mid-1970s are those of attitude-behaviour. Notable among them are Fishbein and Ajzen's theory of reasoned action and Ajzen's theory of planned behaviour. The aim of these theories is the prediction of behaviour from the attitude or attitudes of the subject and from subjective norms, both being mediated by behavioural intention in the Fishbein and Ajzen model, and by these together with perceived behavioural control in Ajzen's conception.

Also worthy of consideration among the simpler theories are those classified as psychological theories based on

intrapersonal causes, or those based on affect: the systemic and social models.

The second broad set of theories and models, those based on stages and pathways, are all psychological. These explain drug use in accordance with people's stages of development on the path to maturity. The most well known of them is Kandel's gateway model. Essentially, her model is based on the notion that drug use follows certain sequential steps, whereby subjects begin with some "initiation" substances (legal drugs, alcohol and tobacco) that serve as facilitating elements for the subsequent consumption of others, especially cannabis or marijuana as a second step, followed by the illegal drugs. The basic idea in this conception is that the use of illegal drugs, such as cannabis, cocaine or heroin, occurs in a sequential manner, starting out from the use of legal drugs, alcohol and tobacco. Kandel's studies, both longitudinal and cross-sectional, indicate the existence of four stages through which consumers of illegal drugs pass: 1) beer or wine, 2) cigarettes or spirits (hard liquor), 3) cannabis or marijuana, and 4) other illegal drugs. The use of legal drugs is the intermediate element between the use of no substance at all and the use of marijuana, before moving on to the use of other illegal drugs. It is also important to point out Kandel's model introduced a new element that was absent in the field of prevention before the 1970s: that such a sequence or pathway is not necessarily found in all subjects in the same way. Use of a substance in one phase significantly increases the likelihood of moving on to the following stage of consumption, but there are various basic influences on the involvement or not in illegal drugs. The principal influences are the family and peers, and most research attention has been devoted to these two factors, though factors related to the individual and to other deviant behaviours are also important. Apart from contact with the different substances there would also be two categories of influence: interpersonal and intrapersonal, or personal characteristics (for example, the relationship between depression and substance abuse). The utility of the model has been demonstrated in several follow-up studies. Moreover, the pattern of development proposed has been found in both men and women, in different age groups and in white people and black people, indicating a high level of generalizability.

Another stage-based model is that of Werch and DiClemente, the Multicomponent Motivational Stages model, based on the stages of change identified by Prochaska and DiClemente. Kim's model of the process of reaffirmation in young people includes among its components adequate family support, adequate social support, care and support from adults, high expectations for the young person by relevant social others, ample opportunity to learn work-related life skills, relevant opportunities to assume responsibilities, opportunities for participating in and significantly contributing to social, cultural, economic and public affairs at school and in the community, ample opportunity to demonstrate skills and achievements, and reinforcement from significant others at school and at home and from other adults in one's social context. Further models based on stages or development include Labouvie's model of maturity in relation to substance use, Newcomb's theory of pseudomaturity or premature development, and Glantz's psychopathological model of the development of the aetiology of drug abuse. Also relevant in this category is the theory of primary socialization by Oetting and cols.

Finally, the aim of the integrative and comprehensive models and theories is to explain drug-use behaviour through the integration of components from different theories, or they may postulate a comprehensive theory that explains the problem by itself. Apart from the health promotion model, also sometimes known as the public health model, which includes psychological elements but also others (and was developed from the medical field oriented to planning), the rest are psychological, such as Bandura's social learning theory, now better known as social cognitive theory, or Catalano, Hawkins and cols.' social development model, which is a general theory of human behaviour whose objective is to explain antisocial behaviour through the specification of predictive relations of development, attributing great relevance to risk and protection factors and integrating previous theories with empirical support, such as control theory, social learning theory and differential association theory. Another highly relevant theory is that of problem behaviour by Jessor and Jessor, also and more currently known as the theory of risk behaviour in adolescence, and which considers risk and protection factors, risk behaviours and the results of risk. Furthermore, Botvin has recently proposed a general integrated model of drug-use behaviour, an eminently descriptive model that underpins his preventive programme.

PSYCHOLOGY AND THE PREVENTION OF DRUG USE

Treatment is highly important for those with disorders, but it is even more important to prevent other people

developing the same disorder. This is clearly pertinent in the case of drug use.

The majority of effective preventive programmes have been developed by psychologists, at least those of the latest generation that function adequately (psychosocial programmes, based on evidence, etc.) (see Becoña, 2006). It was in the 1970s and 80s that there began to appear preventive programmes based on the model of social or psychosocial influences and following research in social psychology (Evans, 1976) and social learning (Bandura, 1986), and more specifically on the antecedents of drug use (Jessor & Jessor, 1977). Such programmes consider the learning of specific social skills to be of great relevance. In the 1980s and 90s there emerged the model of general skills, which insists on the need to train young people not only in specific skills for rejecting the offer of different drugs, but also in more general skills, beyond what was previously being focused on in the field of prevention (Botvin, 1995).

If we were to characterize current effective programmes we might say that these are based on the scientific evidence available as a result of progress in research, as is the case of social influence programmes or others that include components of demonstrated efficacy. This has resulted from the recent revolution in applied science in relation to evidence-based medicine and evidence-based psychology (Labrador, Echeburúa & Becoña, 2000), which has extended to all aspects of the biomedical sciences and social sciences and drug-dependence prevention itself. Underlying this approach is that valid programmes must have not only sound theoretical foundations, but also an ample body of empirical evidence to demonstrate that they obtain the expected result – that is, that they are effective.

TABLE 1
MOST IMPORTANT ELEMENTS THAT SHOULD BE PRESENT IN A GOOD PREVENTIVE PROGRAMME FOR SMOKING

1. Information on tobacco and its consequences for health.
2. Knowledge of factors related to the onset and maintenance of smoking.
3. Knowing and detecting risk and protection factors for the whole group and for certain individuals in the group.
4. Training in skills for resistance to and rejection of cigarettes.
5. Training in everyday life skills.
6. Decision-making and commitment to not smoking.
7. Promoting healthy lifestyles.
8. Beyond the school: involving friends, parents and the community.
9. Involving the family as much as possible (parents' associations, parents and guardians).
10. Involving the whole school in the programme (teachers who do not smoke, who do not consume other substances, who promote healthy lifestyles).

Source: Becoña (2006)

As underlined elsewhere (Becoña, 2006), we now know which elements are effective in preventive programmes for application in the school (see Table 1). As we have advocated, prevention in schools should take place in the context of a specific weekly subject, under the title of Education for Health or similar. The current system of prevention employed in schools, with application throughout the curriculum, fails to function in many cases, either because it is not actually applied across the whole curriculum or it does not have the intensity necessary to produce the desired effect.

Today it is relatively easy to obtain a reliable list of all the drug-dependence prevention programmes that work (e.g., Gardner, Brounstein, Stone & Winner, 2001; McGrath, Sumnall, McVeigh & Bellis, 2006; Robertson, David & Rao, 2003).

In Spain there is a Catalogue of drug-dependence prevention programmes (Antón, Martínez & Salvador, 2001; Martínez & Salvador, 2000), sponsored by the Anti-Drugs Agency of the Community of Madrid. In turn, the assessment of programmes and how well they work appears in the meta-analyses (e.g., Thomas, 2002; Tobler et al., 2000) and systematic reviews (e.g., Jones, Sumnall, Burrell, McVeigh & Bellis, 2006) carried out.

In conclusion, it is clear that there is a great deal of work to be done by psychologists in the field of drug-dependence and other addictions, in relation to both prevention and treatment. Psychology is well aware of what an addiction is, and has provided a comprehensive psychological explanation of it, as well as adequate preventive programmes so that people do not start out on the path of drug use. The assessment of such programmes and their appropriate application will facilitate better prevention of drug use among our children, adolescents and young people.

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PREVENTION OF DRUG ABUSE IN SPAIN: THE ROLE OF PSYCHOLOGISTS

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This article sets out to analyze the role of psychology and psychologists in the field of drug prevention. To this end we review the development of this field in Spain, highlighting some of the main contributions made by Spanish psychologists to the improvement of the relevant expertise and practice. Subsequently, we attempt to define the role professionals from our sector should play in drug prevention, as well as the training requirements it involves.
Key words: *Psychology, psychologists, contributions, drug prevention, training, Spain.*

El presente artículo trata de analizar el papel de la psicología y los psicólogos en el campo de la prevención de las drogodependencias. Para ello, proponemos un repaso de la evolución de este campo de trabajo en España, resaltando algunas de las contribuciones hechas por psicólogos que han propiciado la mejora del conocimiento y la práctica. Posteriormente, trataremos de definir el rol que deberían desempeñar los profesionales de nuestro sector en la prevención y las exigencias formativas que ello conlleva.
Palabras clave: *Psicología, psicólogos, aportaciones, prevención de drogodependencias, formación, España.*

INTRODUCTION

In recent years our society has undergone profound changes in numerous important areas: family structure and relationships, predominant values, diverse inter-related cultural variables, the new technologies and the novel forms of learning they have ushered in, new codes of interpersonal communication, and so on. These factors of a sociocultural nature weave unprecedented contexts in which the individual must operate in as adaptive a way as possible.

The use of drugs is one of the new problems our society faces, and a challenge for which, until relatively recently, there was no clear response. The prevention of drug dependence is also a relatively new concept, as is, indeed, prevention in general, and it is only in the last ten years or so that its development has been given the boost it needed, at least in Spain and the rest of Europe.

This intervention strategy has won ground, along with alternative approaches, in efforts to deal with the drug problem and others in which human behaviour plays a central role. Advances in this field have been made progressively, in step with the generation of a body of evidence on which to base preventive activity.

Apart from psychology, many other disciplines have been involved in the construction of this body of knowledge, including anthropology, sociology, epidemiology, statistics, political science and preventive medicine. All have contributed important elements for understanding the phenomenon and for developing intervention strategies, but psychology has undoubtedly played – and continues to play – a central role in these processes.

The body of knowledge developed from psychology, both on the origin and maintenance of the behaviour and on the variables that determine and predict it, confer upon our discipline a protagonism that we should not underestimate, taking advantage of our pivotal position to modify not only behaviours, both of the individual and of the group, but also the contexts and organizations in which they develop.

But what exactly have psychology and psychologists contributed to prevention? What does prevention involve as a new field of work for the psychologist? These are the questions raised in the present work, and in relation to which we shall try to offer some ideas that might help to outline the future role of our profession in this field.

To this end, we shall begin by reviewing the history of prevention in Spain and the role played in it by psychologists. We shall continue by analyzing the activity of psychologists in each area of prevention. Finally, we shall attempt to sketch a professional profile of the

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psychologist involved in prevention that can serve as a guide for determining the training and background necessary for working in this field.

HISTORICAL OVERVIEW OF PREVENTION IN SPAIN AND ITS IMPLICATIONS FOR THE ROLE OF PSYCHOLOGISTS

Here we review the development of prevention in Spain, which can be divided in three stages corresponding roughly to the last three decades. While not pretending to offer an exhaustive review, we shall mention some of the most significant events, stressing the contributions of psychologists.

First stage: the 1980s

The phenomenon of drug dependence and its sudden irruption into Spanish society at the end of the 1970s led first to a significant social response, followed by the introduction of the first government legislation on drugs. This was a time before the sector was professionalized, and when it lacked a body of knowledge on which to base practice.

The year 1985 saw the setting-up of the National Plan on Drugs, followed by regional and municipal initiatives. The National Plan was strongly focused on the treatment of addicts, despite the starting point for its creation being a parliamentary motion aimed at drawing up a "Plan for the prevention of drug use also covering the social reinsertion of drug addicts". This at least indicates the existence of a political will to promote prevention. This government initiative was based on non-specific prevention – that is, aimed at improving living conditions and preventing marginality. It also embraced some elements of prevention that remain in today's conception of it, such as the need for coordination, citizens' participation and the promotion of health as a framework for preventive actions in the area of drug dependence.

At the same time, a series of priorities were established in relation to prevention, such as the implementation of information campaigns in schools, work with parents and teachers, the publication of specialist journals, the promotion of experimental prevention programmes, research on epidemiology and risk factors, and the creation of municipal information and counselling services and social cooperation programmes.

But despite this evident interest, the reality was that in this first period practically all the resources were devoted to the healthcare response to cases of drug dependence. Prevention initiatives were mostly confined to isolated activities in school and community contexts; to campaigns by neighbourhood associations in poor areas, where such problems were close to home, involving mainly the prevention of drug use by minors; to the training of outreach personnel (without a clear idea of whom to recruit); and to a wide range of sporadic and one-off actions. Such initiatives lacked sound bases, were non-specific and fairly unstructured, and depended more on intuition and goodwill than on the expertise and professionalism of those involved.

Somewhat more encouragingly, community prevention committees were set up to serve as models of reference for the work of local organizations.

Little by little the drug-dependence sector became professionalized. At the same time, care and treatment services began to be set up, giving rise to a substantial network which received large quantities of human and material resources.

The creation of healthcare services was key for the development of a whole body of knowledge that grew inductively, that is, from practice to theory. Psychologists played an important role in these services, and apart from their clinical activity they began to be responsible for a series of other tasks, such as management, coordination and planning, thus emerging from their traditional function, focused on direct clinical care and work with individuals.

Their involvement in prevention was at this time much less than in healthcare and treatment, not least because the demand from society was for an immediate response to drug dependence and the social alarm it generated; moreover, it was this area that offered more stable job opportunities.

Second stage: the 1990s

The early 1990s, with the drug-addiction healthcare and treatment network in place and established, saw the gradual introduction from regional and local government of prevention services in which the professional profile was not clearly defined, in contrast to the case of treatment services, where the psychologist had a highly specific role. This meant that professionals from a range of different fields could become involved in this type of resource; psychologists did not consolidate a clear position in these services, and continued to orient their professional interests more towards treatment, where they fitted perfectly and had no problems of adaptation.

Nevertheless, many psychologists formed part of prevention teams, working either in associations – often as volunteers – or within local government, in both prevention and management.

As far as preventive practice was concerned, although the methodology had improved, there were still many one-off or sporadic initiatives, with little or no scientific rigour, deficient planning and almost no systematic assessment, despite the existence of other, more structured and better quality programmes.

But in spite of the technical shortcomings of the early programmes, the fact is that the area of prevention gradually began to take shape, and professionals began to show a concern with improving their expertise and activity. It was around this time that the Spanish Psychological Association began to offer courses on prevention, and there appeared publications in Spanish that facilitated the dissemination of relevant knowledge and information.

This stage also saw the introduction of the so-called IDEA-Prevention system, which systematizes the preventive activity emerging over recent years. This system also has a specialist journal to back it up and help to disseminate knowledge in relation to prevention.

Furthermore, the school context, already recognized as an appropriate one in which to implement preventive actions, became more receptive to such initiatives after the 1990 Education Act (LOGSE), which introduced Health Education throughout the school system. This new legislation made the educational community more sensitive to the need for prevention, and led to the development of school programmes, training courses for teachers and extra-curricular activities related to prevention.

Gradually, the psychologist's work begins to become more well- defined, and to include the design of programmes (school, family, community), their application and assessment, the training of prevention workers and the creation of materials.

At the same time, prevention began to form part of expert and masters courses on drug dependency at several Spanish universities, and a substantial portion of those taking these courses were psychologists.

But the phenomenon had ceased to be a problem affecting only marginal populations. Consumption was increasing in all strata of society and its patterns were changing, not only in relation to the type of consumer, but also to forms of use, the drugs used, the contexts of use and the age of first contact. Prevention programmes began to be diversified and to focus on new objectives and with new populations (alternative leisure programmes, risk-reduction programmes, information and sensitization campaigns for young people, etc.).

In the mid-1990s the National Plan on Drugs drew up a set of Technical Guidelines on the standardization criteria of preventive programmes. These included a series of basic requirements for the design and planning of programmes, many of which were actually generic – that is, useful for the planning of any type of programme, including those of prevention (it was stated that preventive programmes must be suited to needs, define their objectives, be subject to assessment, and so on), which highlights the precarious methodological state of the sector at that time.

In 1996, the Ministries of Health and Education signed an agreement for the promotion of Education for Health in schools, and it was in this framework that a number of relevant actions took place. A review of drug-dependence prevention materials in schools revealed that there were more than 600 types of such material. A pilot project was also introduced in the school prevention context with the application and evaluation of Botvin's Life Skills programme, which is characterized by being inspired entirely in intervention models and methodologies of proven effectiveness derived from psychology.

Prevention in schools becomes generalized, and by 1999 there are more than 40 schools programmes validated and applied by regional governments throughout Spain (PND, memoria 2000). Preventive activity is extended to other areas, such as those of the family, the workplace, the media and leisure; strategies are diversified with alternative leisure and risk-reduction programmes; and prevention begins to embrace the new technologies.

Third stage: 2000 and beyond

The year 1999 sees the drawing-up of the National Strategy on Drugs 2000-2008, which updates and reappraises the responses to the phenomenon of drug dependency, first of all because the phenomenon itself has changed considerably, and secondly because the responses have also undergone changes. This document stresses the need to give priority to prevention in policies on drugs. It has become evident by this stage that there is a need for integrated policies to reduce supply and demand, and for the inclusion of prevention within the framework of health promotion. This document reflects how far prevention has evolved, not only in terms of its

generalization, but also of its conceptual and methodological progress.

This strategic plan also emphasizes the need to consolidate and generalize universal prevention programmes and to promote selective and indicated prevention. Furthermore, attention is drawn to the need to improve the quality of the programmes applied. Finally, there is a recommendation to diversify objectives and areas of activity, among which are the recreational, health and communications media contexts.

Although by this time there has accumulated a large quantity of published research on drug-dependence prevention worldwide, much of it fails to make an impact on professionals in Spain due to the lack of publications and translations in Spanish.

Perhaps in response to the shortage of such literature, significant publications in Spanish begin to appear, produced by psychologists who thus help to bring a large portion of the body of theoretical and empirical knowledge on the subject to a Spanish readership. Elisardo Becoña's (1999) book on theoretical models is of crucial importance, and soon becomes a classic work of reference for those involved in prevention in Spain. Moreover, much more quality literature begins to appear: handbooks for intervention with minors or in leisure contexts; planning guides, catalogues of programmes, and so on (Arbex, 2002; Salvador, 2002; González, Fernández Hermida & Secades, 2004) – in the majority of cases produced by psychologists.

This period sees the continued improvement of the quality of interventions, but there are still considerable shortcomings in aspects related to practice. Despite the fact that clear criteria of prevention have been established, methodological deficiencies still emerge in the design of programmes. Only a small part of what is done is actually evaluated, and there is continual application and investment of resources in actions and programmes of doubtful efficacy; at the same time, others that have demonstrated their effectiveness disappear or are not at all widely used. All of this highlights the gap between theory and practice, which has the effect of making it difficult to use the evidence on prevention in the most advantageous way. It could indeed be said, and quite categorically, that there is plenty of will to work in prevention but a lack of belief in it.

In contrast to the somewhat inconsistent trajectory of prevention, the field of healthcare and treatment has developed strongly, boasting stable services and professionals with well-defined functions. Although there are prevention sections in all the different drug-dependence projects and campaigns, preventive practice is almost always in the hands of NGOs totally dependent on grants and subsidies.

In 2005 the National Strategy on Drugs publishes its interim report, highlighting some deficits, which the Plan of Action for 2005-2008 attempts to correct. Among its most important recommendations is the need to promote prevention in the area of healthcare and in the communications media, in order to provide a response to rising consumption trends, related to significant reductions in the perception of the risks people associate with substance use.

THE CONTRIBUTION OF PSYCHOLOGISTS IN THE DIFFERENT CONTEXTS OF PREVENTION

Psychologists have always understood the importance of their role in the field of drug-dependence. The theoretical-scientific resources and flexibility provided by our discipline and all its areas of study (clinical, educational, community, social, etc.) amply equips us for developing intervention techniques valid in diverse community contexts, for passing on our knowledge to other social agents, for setting up studies to provide solutions to the different problems associated with addictive behaviours, and in sum, for detecting, publicizing and effecting the relevant social changes in this area (Bender, 1972, Silverman, 1978, Costa & López, 1986). In this context the psychologist emerges, together with other social agents, as a crucial figure capable of modifying and influencing environments and individuals to facilitate the development of healthy lifestyles.

As early as 1986, the Spanish Psychological Association had published a series of articles in the journal *Papeles del Psicólogo* (vol. 4 nº 24; January 1986) on psychologists' role in the field of addictions. The editorial to this issue warned of the need to avoid making the same mistakes as other sectors, which had failed to pay sufficient attention to the foundations, quality and consistency of interventions, underlining the need for psychology to propose criteria and strategies guaranteeing a concern for these important aspects.

Looking back, it can indeed be said that psychologists have played an important role in the development of prevention, and have made considerable contributions to its growth. We have not only provided relevant theoretical foundations, but have also carried out research, given important advice for

the progress of policies and intervention, designed, applied, and assessed programmes, and introduced psychological instruments and techniques. It should not be overlooked that many of the programmes in use today, especially educational ones, are constructed on the basis of criteria contributed by psychology.

Psychologists have succeeded in situating themselves in positions that span the continuum covering the theory, practice and management of prevention. Thus, today we find psychologists working in prevention in universities; in specialized departments of central, regional and local government; in the employment context, with prevention services; in diverse types of association and NGO, and so on.

In sum, their unique position in the field and their professional qualifications provide psychologists with the capacity to make substantial contributions to the improvement of expertise and practice in the area of prevention, including:

- **Improvement of the quality of interventions**: psychologists have the training and background that equips them to design and plan quality programmes, becoming guarantors of the methodological rigour of the programmes. They are qualified for initiating the tasks involved, as well as for the management and coordination of prevention teams, given their knowledge of the theoretical bases of psychology. Furthermore, this background and these qualifications provide us with the vision necessary for resolving future issues that arise, along with the flexibility for adapting to new challenges.
- **Integration of theoretical and practical expertise**: the psychologist is in the perfect position for combining the information deriving from theory and practice, that is, for occupying the middle ground between research and action. Their work, in collaboration with that of professionals from other disciplines, permits them to consider perspectives and crucial elements that often provide the key to the success of programmes. In sum, it permits them to adapt programmes from an ecological perspective. We should not forget that this is currently one of the great challenges for prevention: to understand why similar programmes do not yield the same results in different intervention contexts. Likewise, it is necessary to be aware of the keys to good practice. Universities should listen to the professionals who apply the programmes and are familiar with the reality, as well as the obstacles to their applicability; otherwise, we run the risk of generating marvellous programmes that are out of touch with the needs of the community.
- **Support for professionals from other sectors**: psychologists' work often consists in making sure that others assimilate their perspectives and the elements these involve in their own approaches to prevention. In the case of school prevention, where psychologists work together with teachers, this is essential, as it is in the communications media, where they must collaborate with and advise professional journalists; but this aspect is also of crucial importance in healthcare contexts; with families, and so on. In all of these cases psychologists contribute their knowledge and techniques so that they can be applied by others.
- **Transfer of knowledge**: despite the substantial efforts of psychologists in recent years to obtain, collate and disseminate empirical data on prevention, the crucial nature of this aspect cannot be emphasized too highly. Moreover, there is still a large quantity of relevant international literature that is not translated or does not reach a sufficient proportion of the Spanish professional community.
- **Role as expert in the field**: currently, clearly conflicting messages are reaching the public on the subject of drugs; at the same time, among professionals themselves there is ambivalence in relation to the most suitable intervention strategies. It is necessary for psychologists to achieve credibility and assume the role of experts in either context.

Bearing in mind all of the above, we shall now propose some of the relevant training content, skills and challenges for psychologists if they are to be able to carry out these and other functions in the field of prevention.

TOWARDS A PROFILE OF THE PSYCHOLOGIST WORKING IN PREVENTION

The development of drug-dependence prevention has led to a change in the psychologist's role, traditionally more focused on the area of treatment. Today it is universally accepted that prevention programmes should be situated within the framework of Health Promotion (Plan Nacional sobre Drogas, 1985, 2000.), whose strategies are aimed at modifying environments and lifestyles, these being understood as more or less organized, complex and stable constellations of behaviour clearly conditioned by the situations in which people live (Costa & López, 1996). This implies that psychologists must abandon their traditional clinical role, adopting a more active one,

without simply waiting for the problems to arrive on their doorstep, and should become actively involved with the target population in order to be able to identify and respond to their needs and demands.

Furthermore, the very complexity of the phenomenon demands from psychologists a much wider perspective of the problems they deal with, less subject-centred, obliging them to intervene at a range of levels including those of theoretical development and research, advice on intervention policies, training, programme design, the direct application of programmes and their assessment, as described above.

This complexity forces psychologists to straddle various disciplines in their work, with all the advantages and disadvantages that this involves. Among the clearest advantages is the possibility to give comprehensive responses tailored to the problems in question, thus increasing the effectiveness and efficiency of the actions designed. However, interdisciplinary work means greater pressure to define the functions of the different professionals involved, and a more global but at the same time more specific training, providing them with a reference from which to guide their work and a common language through which to design their interventions.

We should avoid as far as possible two of the faults most commonly encountered in interdisciplinary work: the mere sum of functions, which hinders a global approach to the intervention; and the overlapping of tasks, which leads to confusion in methodology and, in turn, confusion among the population with which we are working.

In order to fulfil their tasks successfully, psychologists should take into account a series of theoretical and practical elements. From the outset, the National Plan on Drugs stressed the need (PND, 1985) to ensure adequate training in the area of drug dependence, including prevention, for students of those disciplines most directly related to the field (medicine, nursing, social work, sociology, psychology, etc.), as well as supporting efforts to update and recycle the knowledge and skills of professionals already in service. Crucial to the achievement of these objectives are the work of the different professional associations and the study programmes of universities.

Currently, all members of the Spanish Psychological Association are aware of the risks to adequate training and practice in our profession represented by the proposals of the Ministry of Education and Science in relation to courses in psychology. The proposal does not involve a common syllabus for either degree courses or masters courses, and thus fails to guarantee an appropriate and homogeneous training for future psychologists. However, leaving to one side this present controversy, and trusting in the possibility of reaching solutions that will ensure such suitability and homogeneity, we believe the psychologist's training should cover a certain range of content if our profession is to be a competitive one in the field of drug-dependence prevention. Among our suggestions for such content would be the following:

- Theoretical-practical bases of health promotion and drug-dependence prevention: knowledge about explanatory theoretical models of use, about risk and protection factors and about the different preventive strategies of health promotion and education.
- Theoretical concepts related to drugs and drug dependence, in addition to knowledge about substances and their characteristics, effects and risks and about different user profiles and consumption trends.
- Knowledge about the planning and assessment of programmes.
- Knowledge about applied research and scientific methodology.
- Information on the different prevention programmes and resources available.
- Understanding of the elements that determine decision-making in health policies to ensure that they take into account the available evidence.
- The legislative framework in relation to drugs.
- Techniques for transmitting scientific information, basically to relevant populations and other professionals.
- Notions on different treatment options and evidence on their effectiveness.
- Understanding of different developmental stages so as to adapt programmes to different ages.
- Skills and strategies for individual, group and community work appropriate to the different levels of prevention: universal, selective and indicated.
- Coordination and motivation of work teams.

Such content should be deemed essential in undergraduate, post-graduate and masters courses, giving priority to particular aspects depending on the student's professional specialization.

However, in the case of psychologists working on selective and indicated programmes it is necessary to take into account certain aspects:

Traditionally, psychologists have basically carried out their work most effectively in controlled intervention contexts, where individuals come, more or less reluctantly, to try and solve some problem that is preventing them from living a satisfactory everyday life. In such environments the therapeutic relationship is established relatively easily. Our verbal and non-verbal communication, our condition as experts, and even the physical separation of ourselves and the client in the surgery context help to define the boundaries. If members of the client's family, their partner or friends are involved in the sessions, it is always at our request and where feasible, and they also come to us. In sum, we are in our own territory.

In prevention in general, and with risk populations in particular, psychologists face the challenge of working with subgroups of the population who themselves express no need for our services, where our condition as experts is not indicated by a diploma hanging on the wall, where the communication codes and channels are often alien to us, and where the environment demands our greater involvement and commitment, thus making it harder to delimit our professional role. We are in their territory.

Given the elements that make up this context, the psychologist's training will need to be specialized, at both the knowledge and skills levels, based primarily on the principles of prevention but within a wider framework that embraces, among others: educational, developmental, community and clinical psychology. In this area it is naturally of crucial importance to be familiar and up to date with the principles governing the acquisition of addictive behaviours, but it is equally important to know, for example, which knowledge we need to transmit, the strategies that best permit the learning and assimilation of such knowledge, how to modify the environment in order to promote healthy behaviours, which developmental, cultural or gender factors influence certain behaviours, or how to make it possible for individuals to change.

In this context we must abandon our sedentary practices, actively recruiting the target population, analyzing their needs, finding out *in situ* how they relate to their environment and how it, in turn, determines the development or inhibition of healthy behaviours and the true applicability of the programmes we design. In order to carry out these tasks, wholehearted commitment to and involvement in them are essential, since these population subgroups are traditionally situated in contexts offering few incentives, where the relationship between expectations and results is clearly unsatisfactory, leading to behaviours of rejection and mistrust in relation to intervention from outside their natural group, especially if it comes from institutional services.

CONCLUSIONS

Despite the fact that prevention is a relatively young field in the Spanish context, it has in recent years acquired a substantial scientific and empirical base. A range of disciplines have contributed to this development, permitting the generation of a field of scientific and technical knowledge that improves and enriches the work in an area so intimately bound up with personal and social variables that it is almost impossible to break it down into independent constituent parts. Such enrichment has made it easier to abandon reductionist models that proved ineffective in their approach to and understanding of addictions.

Our intention throughout this article has been to describe, in a general way, the special contribution of psychologists to the growth and consolidation of prevention over the different stages of development of the drug-dependence field in Spain. Their contributions, which have made an impact at various levels, most notably include: research and development for the theoretical models on which their actions are based; the welding, thanks to their position in the field, of theory and practice, adapting programmes to the different social realities and assuming the role of expert; the dissemination of knowledge and an active involvement in training; and the incorporation of strategies and methodology for use by other professionals. Nor should we forget their role in the management and coordination of resources. It can be concluded that psychologists currently possess a wealth of expertise and experience that permits them to carry out quality work in the field of drug-dependence prevention.

Given the complexity of the phenomenon in question and, as we have seen, the possibilities for intervention our discipline permits, psychologists are required to take a broader view, not so strongly focused on the individual, assuming their role at different levels covering the theoretical, methodological and practical elements of preventive actions, training, advisory work in relation to intervention policies, and so on. It is therefore necessary to design global and homogeneous programmes for the training of psychologists and the updating of their expertise – at the undergraduate, post-graduate and

masters levels – that guarantee their capacities and consolidate their roles. Such training and education should cover not only the theoretical and practical aspects directly relevant to prevention, but also more general knowledge (legislative, educational, pharmacological, healthcare-related, and so on) deriving from related fields.

The need to abandon excessively traditional postures in the approach to prevention and become involved in the community in which we are working is clearly reflected, furthermore, in the design and application of programmes addressing groups at risk, where other disciplines occupy positions for which we psychologists are not yet prepared. Only by taking up such positions shall we be able to deal with the problems involved from more ecological perspectives, not just modifying individual behaviours but also helping to bring about the social changes necessary for the development of the desired behaviours.

We should not conclude this reflection on psychologists' role in prevention without encouraging all those involved in prevention work itself, in the transmission of knowledge and experience to the rest of the community (both scientific and social), in the publication of journals, in the organization of conferences and even in the creation of Scientific Committees to strive to consolidate our position in this field.

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PSYCHOLOGICAL BASES OF THE TREATMENT OF DRUG-DEPENDENCE

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There is substantial scientific support for the effectiveness of psychological techniques in the treatment of drug addiction, based on empirical evidence demonstrating that drug use and abuse behaviours are operant behaviours, and that contingencies play a determinant role in their explanation. Behaviour therapy offers empirically validated approaches that are considered essential strategies for the effective treatment of drug addiction. Operant (contingency management), classical conditioning (exposure) and cognitive-behavioural (skills training) techniques – as well as their different combinations – have emerged as critical components of such programmes. Nevertheless, despite this relative effectiveness, relapse rates in the long term (more than one year of follow-up) remain high in all types of addictive behaviours. Therefore, future research lines should aim to remedy some of the deficiencies with a view to improving the long-term results of these programmes.
Key words: *Drug Addiction, Reinforcement, Psychological Treatments*

Existe un amplio soporte científico que avala la eficacia de las técnicas psicológicas en el tratamiento de la drogadicción. Dicha eficacia se fundamenta en la evidencia empírica que ha demostrado que las conductas de uso y abuso de drogas son conductas operantes y que las contingencias juegan un papel determinante en la explicación de las mismas. La terapia de conducta cuenta con tratamientos empíricamente validados que se consideran estrategias esenciales para el tratamiento efectivo de la drogadicción. Las técnicas operantes (manejo de contingencias), de condicionamiento clásico (exposición), las técnicas cognitivo-conductuales (entrenamiento en habilidades) y las distintas combinaciones entre ellas se muestran como los componentes críticos de estos programas. No obstante, a pesar de esta relativa eficacia, las tasas de recaídas a largo plazo (más de un año de seguimiento) siguen siendo altas en todos los tipos de conductas adictivas. Por tanto, las futuras líneas de investigación han de ir dirigidas a resolver algunas deficiencias que mejoren los resultados a largo plazo de estos programas.
Palabras clave: *Adicción a drogas, Reforzamiento, Tratamientos Psicológicos*

THE BIOBEHAVIOURAL MODEL OF DRUG USE

The empirical evidence has shown that drug use and abuse behaviours do not depend on a single, isolated factor, but rather develop and are maintained by diverse factors of a multidimensional nature. The so-called bio-psycho-social (or bio-behavioural) model, the contextual framework accepted by the vast majority of authors, permits an analysis of the interactions between the environment and the pharmacological factors involved in drug-use behaviours, regardless of the substance in question. From this perspective, the use or rejection of drugs would be explained by the effects of the substances, by contextual factors and by the vulnerability of subjects themselves.

Thus, no explanatory model valid for all addictive behaviours can be established. Rather, on the basis of these general principles, the specific combinations of their elements that explain the acquisition or not of different types of addictive behaviour and the variables that control it must be examined in each case and at each stage. This involves using behaviour analysis for identifying, in each particular case, the variables involved and the conditions on which they depend. Relevant in this regard is the bio-behavioural (or bio-psycho-social) model described by Pomerleau and Pomerleau (1987) for explaining the onset and maintenance of smoking behaviour. As the authors themselves point out, although substances may differ in their specific pharmacological action, all are subject to the same general line of analysis. This contextual framework provides the capacity for analyzing consumption behaviours in relation to interactions with the context, individual vulnerability and consequences. The variables classed as belonging to the *context* (exteroceptive and interoceptive stimuli) would be given by the classical and operant learning models, and would combine with the reinforcing variables identified as *consequences*. *Behaviour* would naturally include behaviours related to drug use, but also those related to the rejection of consumption and resistance to it.

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Vulnerability includes genetic factors and others associated with sociocultural influences and learning history (Secades-Villa & Fernández-Hermida, 2003).

Thorough knowledge of addictive behaviour will also require a functional analysis explaining the relationships between these elements. Thus, there will be critical associations that denote very close relationships, such as those found between reinforcing behaviours and contingencies and the effects of those consequences on the behaviour that precedes them. On the other hand, between other elements there will be an association of a correlational or modulatory nature. For example, the consequences of a behaviour can change the context, triggering a motor behaviour that modifies the environment and the interoceptive state, whilst susceptibility factors can influence not only how the context is affected, but also the intensity and type of behaviour that would occur in particular circumstances, or the nature of the consequences of that behaviour.

The role of reinforcement in drug-use behaviours

In the bio-behavioural model, the contingencies associated with behaviours of drug use or abstinence play a crucial role in their explanation. There is ample empirical evidence that drugs can function effectively as positive reinforcers of search and self-administration behaviours, and that the principles that govern other behaviours controlled by positive reinforcement are applicable to the self-administration of drugs. That is, drug self-administration behaviour is subjects to the same laws that govern the "normal" behaviour of all animals in similar situations (McKim, 2000). A basic conclusion to be drawn from the results of such studies is that substance-use disorders can be situated within the body of existing psychological principles, which permit the analysis of such behaviour as a dimensional variable on a continuum from a pattern of sporadic use – practically unproblematic – to a pattern of serious use with many adverse consequences.

Such evidence began to emerge in laboratory studies on drug self-administration in animals and clinical and laboratory studies with drug addicts carried out in the 1960s and 70s (see Bigelow & Silverman, 1999). These studies showed how the self-administration of drugs, like other operant behaviours, was highly susceptible to moulding, and could be increased or reduced by manipulating the same types of variables (e.g., reinforcement programme and magnitude, use of punishment, reinforcement of incompatible alternative behaviours) that had been shown to be effective in the manipulation of other operant behaviours (Silverman, 2004).

In the case of opiates, many of the demonstrations designed to show the efficacy of reinforcement have been complicated by the presence of physical dependence in the experimental participants. Nevertheless, a considerable number of studies have provided experimental demonstrations of the positive reinforcing effects of such substances without the need for physical dependence (Schuster & Johanson, 1981; Yanagita, 1973).

In the clinical context there are studies that have demonstrated the efficacy of opiates as reinforcers. For example, when methadone is administered contingent upon attendance at therapy the frequency of sessions attended increases (Brooner, Kidorf, King & Bigelow, 1997). It seems clear, therefore, that the positive reinforcing effect of the self-administration of opiates is fundamental in the maintenance of the behaviour, so that physical dependence is not a necessary antecedent for explaining self-administration behaviour.

Likewise, several works have also shown the occurrence of the behaviour of self-administration of cocaine and other stimulants without the presence of withdrawal symptoms (Pickens & Thompson, 1968).

Thus, physical dependence may be important in explaining drug use, but it is not a necessary factor for self-administration behaviours, and nor is it sufficient by itself for explaining the use and abuse of drugs. That is, it can be assumed that drugs are positive reinforcers, independently of withdrawal syndrome and physical dependence.

Even more conclusive evidence comes from the self-administration of a wide range of psychoactive substances for which no signs of withdrawal syndrome have been observed, or for which the symptoms are very mild. Self-administration of drugs without the presence of withdrawal symptoms has been found in a variety of substances, such as ethanol, nicotine, barbiturates, benzodiazepines, opiates or stimulants. Moreover, studies comparing self-administration behaviours in humans and non-humans have found great similarity among species (Yanagita, 1973).

In the area of treatment, the success of clinical trials in the 1970s with alcoholics and addicts to other substances demonstrated the effectiveness of interventions based explicitly on the principles of reinforcement, and that the use of drugs by subjects with severe dependence could be

modified through the systematic use of contingency management (reinforcement and punishment) (e.g., Hunt & Azrin, 1973; Miller, 1975).

Since these early years, this framework of scientific analysis has held a central role in research on drug dependence, especially in laboratory studies with animals. These studies have spanned fields such as those of neuroscience, genetics or pharmacology. In contrast, the road followed by clinical research was markedly different, and interest in the study of reinforcement principles waned during the 1980s, especially in the area of alcoholism. The causes of this are several, but two in particular stand out: the influence of cognitive psychology, which provided an alternative framework of analysis (notably the relapse prevention model), and the development of effective pharmacological therapies for addiction to certain substances (such as methadone treatment) (Higgins, Heil & Plebani, 2004).

However, the 1990s saw a vigorous resurgence of clinical research on the principles of reinforcement in drug abuse, and this renewed interest has continued to the present day. To some extent, the recalcitrant nature of cocaine dependence and the failure of pharmacological and psychological treatments for this addiction led to the consideration of an alternative point of view in the response to the problem of drug abuse.

Behavioural choice theory and drug use

As we have seen, research on the principles of reinforcement in substance addicts, especially cocaine users, carried out since the 1990s has included both laboratory studies and work carried out in clinical and natural contexts. An important research line has focused on the application of the principles of *Behavioural Economics* to the analysis of drug-use behaviours. Behavioural Choice Theory (Vuchinich & Tucker, 1988) emerges from the application of the empirical (behavioural) laws of choice of reinforcers to the problem of drugs, and contributes a highly pertinent analysis of drug-use behaviours within the social context (that of sociocultural factors).

Behavioural Economics has been employed in all fields related to substance abuse, from laboratory research to the drawing-up of government policies (Bickel, DeGrandpre & Higgins, 1993). In order to understand the principles of Behavioural Economics we should consider three concepts: *Demand, Price* and *Opportunity Cost*. *Demand* refers here to the search for and consumption of drugs. The concept of *price* refers to the quantity of resources employed in using the drugs (not just their financial value, but also the effort required to obtain them), as well as the negative consequences of consumption. *Opportunity cost* refers to the alternative reinforcers lost because of the substance use. Thus, demand (search for and consumption of substances) will vary as a function of price and opportunity cost, so that the manipulation of these two variables will be crucial to the development of strategies for reducing drug use. Specifically, increase in price and opportunity cost will result in a directly proportional drop in consumption.

Various studies with animals and humans have demonstrated how, indeed, drug-taking (demand) varied as a function of price (Nader & Woolverton, 1992) and of opportunity cost (Higgins, Bickel & Hughes, 1994).

A considerable number of laboratory studies have set out to examine the influence of alternative reinforcers (other than drugs) on preference and choice in relation to cocaine use. The results of such studies indicate a certain malleability of the reinforcing effect of cocaine, which could become weakened depending on the alternative reinforcer.

In a similar line, an emerging area of research suggests that substance addicts tend to put a lower value on deferred reinforcers and the importance of lost reinforcers, compared to non-users; thus, addicts display greater preference for: a) more immediate and lower-magnitude reinforcers than for more deferred and higher-magnitude ones, and b) more immediate and higher-magnitude losses (punishments) than for more immediate and lower-magnitude ones (Bickel & Marsch, 2001).

Another crucial factor for understanding drug-use behaviours is the role of time delay. In natural contexts, individuals frequently choose between taking drugs in the present and abstaining from their use in order to experience positive consequences in the future. Laboratory studies have shown how a time delay reduces the power of the alternative reinforcer for competing with the immediate reinforcing consequences of using the drug.

PSYCHOLOGICAL TREATMENTS FOR DRUG ADDICTION

A clear implication of this bio-psycho-social and multi-factor model (in which substance use is triggered and maintained by complex interactions between susceptibility, context, behaviour and its consequences) is that substance-use disorders can affect many areas of the

person's functioning, and that, therefore, they frequently require a multi-modal approach, which includes biological, behavioural and social aspects.

Some treatment components may be aimed directly at the effects of the use of the substance, whilst others should focus on the conditions that have contributed to or have resulted from the drug use. Research on the results of psychological treatments (particularly those of contingency management programmes) shows how the principles of reinforcement can significantly increase rates of abstinence from drugs. Thus, contingency management techniques (including, here, skills training strategies, which are basically aimed at increasing the accessibility of reinforcers alternative to the use of drugs) are proposed as the most effective procedures for the treatment of drug-abuse problems.

Therefore, a description of psychological treatments for drug addiction should include three types of intervention strategy: operant techniques (contingency management), classical conditioning (exposure) techniques and cognitive-behavioural techniques (skills training).

Contingency Management

Contingency Management (CM) involves the systematic application of reinforcers or punishments contingent upon the occurrence of the target behaviour or its absence.

Interventions based on CM can be understood as actions that directly and systematically increase the opportunity cost (alternative reinforcers) of drug use. This type of programme sets certain conditions under which patients lose potential reinforcers if they consume one or various substances. When patients use drugs during the treatment, in addition to the cost associated with their use, they lose certain reinforcers that would be available to them if they had remained abstinent (Higgins, 1996). CM programmes have employed a wide range of reinforcers, such as clinical privileges, access to jobs or housing, cash, or vouchers and discount tickets for buying goods and services in the community (Petry, 2000).

The type of CM intervention that has received most attention from research is that in which patients earn vouchers exchangeable for goods and services, contingent on abstinence from drug use. Apart from reinforcing abstinence, CM programmes based on the use of vouchers have been employed to reinforce other therapeutic goals, such as increased adherence to medication (naltrexone, antiretroviral therapy, etc.) or treatment retention and attendance at sessions.

Throughout the 1990s, scores of studies were published on the use of vouchers as a reinforcement strategy, and the vast majority (around 85%) reported significant improvements in relation to drug use and associated behaviours (Higgins, Heil & Plebani, 2004). A considerable number of these studies were carried out by Professor S. Higgins' group at the University of Vermont, with cocaine addicts, whilst several studies carried out by Silverman and colleagues replicated and extended these procedures to heroin addicts on methadone treatment programmes who were also cocaine users (Silverman, 2004). The results of the meta-analysis by Griffith, Rowan-Szal, Roark and Simpson (2000), which included 30 studies that used different types of reinforcers (increase of methadone dosage, dose of methadone to take home and incentives contingent upon abstinence), confirmed that contingency management was an effective strategy for reducing drug use in outpatient programmes of maintenance with methadone.

Thus, the research results suggest that incentive programmes based on contingency management are effective for the treatment of addiction to different substances and with different populations (Higgins, Heil & Plebani, 2004; Roozen et al., 2004; Secades-Villa & Fernández-Hermida, 2003). In fact, incentive therapy based on vouchers represents just one of the forms in which operant methods can be employed in attempts to reduce cocaine use and dependence (Higgins et al., 2000). In some programmes this strategy has been applied by means of treatment protocols with very well-defined structure and components, such as those described below.

Community Reinforcement Approach

The Community Reinforcement Approach (CRA) (Hunt & Azrin, 1973) is a pioneering programme in the treatment of severe alcoholism by means of operant methods, whose objective is to reduce alcohol consumption and increase functional behaviour.

CRA seeks therapeutic change by manipulating natural contingencies. In the terms of behavioural economics the treatment would be increasing the opportunity cost, as it would improve the quality of those reinforcers that patients lose when they consume drugs.

This programme is applied in groups or individually, and with both in- and outpatients. Its components vary depending on the clinical population and patients' individual needs, but it usually has the following

components: a) strategies for reducing barriers to treatment, b) vocational counselling for unemployed patients, c) identification of antecedents and consequences of drug use and healthy alternative behaviours, d) behavioural therapy for couples, e) training in skills for reducing the risk of relapse (e.g., rejection skills, social skills, mood management), and f) disulfiram therapy for individuals with alcohol problems.

CRA has strong empirical support obtained through well-controlled studies, so that it can be considered a well-established programme. Moreover, a point in its favour compared to other procedures is that, so far, all the studies aimed at confirming its efficacy have reported positive results. The article by Miller, Meyers and Hiller-Sturmhöfel (1999) provides a good review of research on the effectiveness of CRA.

Community Reinforcement Approach plus incentive therapy

This protocol was initially developed for the treatment of cocaine addicts in outpatient contexts (Buchey & Higgins, 1998; Higgins et al., 1991). CRA + Incentive combines the Community Reinforcement Approach, originally developed as an effective treatment for alcoholism (Hunt & Azrin, 1973), with a contingency management programme, in which patients can earn points exchangeable for certain reinforcers that contribute to the attainment of the programme goals, as long as they stay on the programme without consuming cocaine.

The therapy has six components: incentive therapy, drug-use coping skills, lifestyle changes, relationships counselling, use of other drugs, and treatment of other disorders. The order of these components and the number of sessions devoted to each one vary depending on patient needs.

The incentive therapy sub-component is a contingency management procedure through which retention and abstinence are systematically reinforced. The points or vouchers are earned in exchange for negative urine tests, and the number of points increases with each consecutive negative analysis. The procedure not includes only a reward for each negative urine sample: greater incentives are offered for longer periods of continuous abstinence. Vouchers can be exchanged for certain incentives (goods and services) that help patients to achieve the therapeutic goals and to improve their lifestyle. In no case is money used as a means of reinforcing abstinence.

This multi-component treatment has shown itself to be effective in several well-controlled studies with adult cocaine addicts in outpatient programmes. For this reason it is currently among the programmes approved by the NIDA (National Institute on Drug Abuse) in the United States. Prof. Higgins' group at the University of Vermont has carried out many clinical trials examining the effectiveness of this programme. In two of these works (Higgins et al., 1991, 1993) CRA + incentive therapy was found to be superior, several months after the treatment, to a traditional psychological counselling programme. In subsequent trials (Higgins et al., 2003; Higgins et al., 1994) it was found that participants who received the complete programme attained significantly higher abstinence rates than those who received just one of the two modules (CRA or incentives). The results also indicate that the efficacy of the programme is maintained over long follow-up periods (Higgins et al., 1995).

Finally, the efficacy of this programme for the treatment of cocaine addiction has also been demonstrated in studies carried out in community contexts in Spain (Secades-Villa, García-Rodríguez, Alvarez Rodríguez, Río Rodríguez, Fernández-Hermida & Carballo, in press; García-Rodríguez et al., 2006).

In sum, the Community Reinforcement Approach plus incentive therapy can be considered a first-choice treatment, at least for the treatment of cocaine dependence. Its authors suggest that the programme's long-term effectiveness resides, at least partly, in its capacity for achieving initial periods of abstinence in the majority of patients (Higgins, Badger & Budney, 2000). Furthermore, this strategy has the virtue of combining the manipulation of "artificial" and "natural" contingencies (Higgins, 1996). Natural contingencies would be involved in the therapeutic modules making up the CRA: drug-rejection skills, lifestyle changes, social relations counselling, abuse of other substances and management of associated disorders; Incentive Therapy, on the other hand, would be situated at the pole of artificial contingencies, as a CM programme in which patients earn vouchers they can exchange for different goods and services, as long as they remain abstinent from cocaine.

Treatments located closer to the "natural" pole should have more advantages than those situated at the opposite pole, at least as far as long-term abstinence is concerned, since the "natural" contingencies are those which, in the end, must maintain any therapeutic change that occurs. On the other hand, operant behaviour is highly sensitive to the precision of the contingencies that control it, and

one advantage of treatments closer to the "artificial" pole is that the contingencies can be manipulated more precisely than the "natural" ones.

The above observations suggest that perhaps the best approach would be a combination of natural and artificial contingencies during the first stages of treatment, followed by an attempt to maintain the therapeutic changes through natural contingencies, once an initial period of abstinence has been achieved.

Therapeutic Workplace

A particular version of the use of contingency management with addicts to more than one substance on methadone programmes is the *Therapeutic Workplace* programme, in which salary is used as a reinforcer contingent upon abstinence (from cocaine and heroin) and upon other behaviours linked to participation in an employment module (punctuality, learning, productivity and other "professional behaviours"). Kenneth Silverman's team at Johns Hopkins University School of Medicine in Baltimore carried out an initial study in which they applied this strategy to a group of unemployed women (recent and expectant mothers) on a methadone programme. After six months, abstinence rates for both substances in the experimental group were double those attained by the control group (Silverman, Svikis, Robles, Stitzer & Bigelow, 2001), and these good results were maintained at the three-year follow-up (Silverman, Svikis, Wong, Hampton, Stitzer & Bigelow, 2002). Its authors conclude that the *Therapeutic Workplace* can be effective in the long term for the treatment of addiction to cocaine and heroin with this type of patient. However, some authors express doubts about the applicability of this procedure in real contexts (due to the complexity of the reinforcement programme) and its true efficacy (since it is difficult to discern the extent to which the decrease in drug use is due to the programme of contingencies or to the mere fact that participants are involved in an activity that can compete with the drug-use behaviour) (Marlatt, 2001; McLellan, 2001; Petry, 2001). That is, the direct reinforcement of abstinence is supported with the reinforcement of behaviours that can compete with the use of drugs, thus, facilitating non-consumption.

Other treatments based on Contingency Management

In addition to these programmes based explicitly on CM, other highly popular treatments also use strategies aimed at manipulating the opportunity cost of drug use (Higgins, 1996). These would include, for example, brief interventions such as the Motivational Interview (Miller & Rollnick, 1991). The Motivational Interview is a type of approach that has shown itself to be highly effective above all for reducing alcohol consumption and the associated harm in heavy drinkers (with low or moderate levels of dependence) (Saunders, Wilkinson & Phillips, 1995; Stotts, Schmitz, Rhoades & Grabowski, 2001), but also for reducing the use of other drugs (Bien, Miller & Boroughs, 1993; Handmaker, Miller & Manicke, 1999) or increasing treatment retention (Secades-Villa, Fernández-Hermida & Arnáez Montaraz, 2004). The Motivational Interview is a particularly useful technique with those who are resistant to change. Its objective is to break through the denial and ambivalence and activate the user in the direction of change. The strategies of the Motivational Interview are more persuasive than coercive. According to its authors, classical cognitive-behavioural strategies, based on Skills Training, assume that the participant is already at the "action" stage (and therefore motivated for change), so that the emphasis is placed on training people how to change; in contrast, the Motivational Interview sets out to build the commitment to change (the "why" component). Thus, this procedure is based on five general principles: the expression of empathy, the development of discrepancy, the avoidance of arguing, overcoming resistance to change, and increasing self-efficacy. In particular, the development of discrepancy involves the therapist helping patients to identify discrepancies between their current behaviour and their personal aspirations and goals. This exercise implies exploring the potential consequences of patients' current (drug-use) behaviour – that is, making them aware of the costs of such behaviour.

The Alcoholics Anonymous (AA) programme is also based largely on the principles of reinforcement (Secades-Villa & Pérez Álvarez, 1998). There are at least three practices common in AA and similar 12-step programmes that can be reconceptualized from Behavioural Economics. The companionship and camaraderie characteristic of such self-help groups could be understood as efforts to improve the social life of group members, as in CRA. Also, the fact that members cannot participate in activities if they are under the influence of any substance increases the opportunity cost after consumption, depriving them of the companionship and help they would enjoy if they were sober or "clean".

Finally, the medals and other means of rewarding continuous abstinence would be related to the increase in price if the patient starts to consume again, since recognition from one's colleagues does not return until the patient demonstrates prolonged abstinence.

Cognitive-behavioural treatments

Programmes based on Cognitive-Behavioural Therapy (CBT) are focused on training in certain skills for responding appropriately to the environmental and individual antecedents and consequences (cognitions and emotions) that maintain the drug-use behaviour. Coping skills deficits and certain maladaptive cognitions are considered the greatest risk factors for drug use. Within this paradigm we can distinguish three intervention models: Coping/Social Skills Training, Relapse Prevention (RP) and family/relationships behavioural therapy.

Coping/Social Skills Training

Coping/Social Skills Training is a wide-ranging and well-established cognitive-behavioural procedure particularly widely used in the treatment of alcoholism. The rationale underlying this therapeutic strategy is that the patient lacks adequate skills for dealing with everyday social and interpersonal situations. Such deficiencies can lead to the appearance of conditions of stress that impede appropriate and effective coping with the social pressure to drink alcohol or use other types of drugs. The main goal of this type of intervention is to equip the patient with sufficient coping and self-control skills to be able to manage risk situations produced by the stimuli that trigger the intense desire to drink.

The central aspects of this procedure include: interpersonal skills, assertiveness and expression of emotions; training in problem-solving; coping with cognitive-emotional states; coping with stressful life events; and coping with drug-use risk situations (Monti, Rohsenow, Colby & Abrams, 1995).

The scientific evidence on the effectiveness of the essential therapeutic components of CSST is extensive, particularly in the case of alcohol. Various reviews and meta-analyses show that Skills Training is preferable to other treatments and to non-treatment, and that it increases the effectiveness of interventions when it forms part of broader programmes (Miller et al., 1995).

Recent years have also seen a proliferation of work employing some variant of cognitive-behavioural therapy in combination with pharmacological therapy (naltrexone or acamprosate). In the majority of cases the combined therapy was found to be superior to the isolated use of one of the components.

Relapse Prevention (RP)

Marlatt and Gordon's (1985) Relapse Prevention (RP) model can be considered as a kind of particular branch of cognitive-behavioural programmes that has established its effectiveness, so that it can be classed as a first-choice treatment.

RP has three basic elements: (1) Skills training strategies, which include both cognitive and behavioural strategies for coping with risk situations: identification of high-risk situations; training in skills of drug-use coping, self-recording and functional analysis; strategies for coping with craving and thoughts associated with substance use; coping with lapses; assertiveness; stress control; communication skills; general social skills; and problem-solving training; (2) cognitive restructuring procedures designed to provide patients with alternative thoughts to those that lead them to consume, imagination strategies for detecting risk situations and strategies for coping with the effect of breaking abstinence; and (3) lifestyle readjustment strategies (such as relaxation or physical exercise) for increasing activities alternative to drug use.

However, although RP is an originally well-structured intervention procedure, with well-differentiated phases and components, in the majority of studies it has not been applied systematically, but rather used as a general method for coping with relapses. Moreover, in many cases it is difficult to appreciate the differences between the components of a skills training programme and those of an RP programme.

Despite these drawbacks there is currently a solid body of empirical evidence in support of the efficacy of RP in the treatment of alcoholism, compared to no treatment, to placebo control, to traditional medical counselling and to self-control strategies. Likewise, several meta-analytical studies consider RP as the first-choice treatment for alcoholism, and some indicate that RP is more effective in the treatment of addiction to alcohol, compared to other substances (Secades-Villa & Fernández-Hermida, 2006).

In the case of heroin there is clearly a scarcity of well-controlled studies and a dispersion and heterogeneity of components employed. However, as regards cocaine, Cognitive-Behavioural Therapy for Coping Skills, based on RP, has strong empirical support, notably from the work carried out at the Substance Abuse Treatment Unit

of Yale University. The program used there is of short duration and has two basic components: functional analysis and skills training.

The parameters of CBT are perfectly delimited, and according to the authors, the active ingredients characteristic of CBT are as follows (Carroll, 1998): functional analysis of drug abuse, training in recognition of and coping with craving, problem-solving, coping with emergencies, coping skills, examination of cognitive processes related to consumption, identification of and coping with risk situations, and use of extra sessions for skills training.

Family/relationships behavioural therapy

Family/relationships behavioural therapy focuses on training in communication skills and on increasing the rate of positive reinforcement in family relationships. It is actually a multi-component programmes that includes techniques such as functional analysis, identification of conflictive relationships that lead to drinking, assignment of tasks, stimulus control, behavioural contract, contingency management, and training in communication and problem-solving skills.

This procedure has been employed above all in the treatment of alcoholism, and the majority of studies have obtained positive results, indicating that techniques aimed at improving patients' family relationships may be a critical component of treatment programmes for alcoholism. Studies by McCrady's and O'Farrell's groups have set the standard. In three of such studies (McCrady, Longabaugh et al., 1986; McCrady, Noel, et al., 1986; McCrady et al., 1991), participants in the family therapy group obtained better results at the 6, 12 and 18-month follow-ups than the other two treatment groups. Similar results were found in the study by Bowers and Al-Redha (1990), in which the alcoholics in the treatment group that included their wives consumed less alcohol at the 12-month follow-up than those who had received a standard individual treatment.

In various studies by O'Farrell's group, Behavioural Marital Therapy (BMT) was found to be effective in reducing alcohol use, maintaining abstinence in the long term and reducing legal, family and social problems (O'Farrell, Cutter & Floyd, 1985; O'Farrell et al., 1996; Fals-Stewart, O'Farrell & Birchler, 1997; O'Farrell, Van Hutton & Murphy, 1999).

In a recent development of relationships therapy that the authors call Community Reinforcement and Family Training (CRAFT), Miller, Meyers and Tonigan (1999) included the following components: motivational interview, training in contingency management for reinforcing abstinence, training in communication skills, identification of activities that could compete with drinking, identification of risk situations and identification of activities for reinforcing the couple. CRAFT obtained better results than two other family intervention models (Al-Anon and the Johnson Institute's confrontation-based intervention).

Likewise, Meyers, Miller, Hill and Tonigan (1999) found that this type of relationships therapy increased abstinence and treatment adherence and reduced depression behaviours, anxiety, anger and adverse physical symptoms in people close to the patients.

In sum, it can be deduced from the results of the majority of these studies that techniques oriented to improving patients' family relationships can constitute a critical component of treatment programmes. Indeed, family management techniques are an important part of CRA, one of the alcoholism treatment programmes with the most empirical support at the present time (Secades-Villa & Fernández-Hermida, 2003).

Exposure techniques

Cue Exposure Therapy (CET) uses response conditioning for explaining drug use. Thus, originally neutral stimuli that precede this behaviour can, after repeated pairing, become capable of provoking conditioned responses of drug use. These techniques are aimed at reducing cue reactivity through procedures of stimulus control and exposure. The intervention consists in repeated exposure to cues of pre-ingestion of the drug in the absence of its consumption (response prevention), with the consequent extinction of the conditioned responses.

Studies on treatments that incorporate the cue exposure methodology in alcoholism present promising results, but there are still very few of them. The works by Childress, McLellan and O'Brien (1986), Kasvikis, Bradley, Powell, Marks and Gray (1991) or Powell, Gray and Bradley (1993) are good examples of the application of exposure. Even so, in several works exposure has not shown itself to be so effective (e.g., Dawe et al., 1993).

However, this strategy has been more widely used in work on problems of opiate addiction, and although these studies present encouraging results, there are still considerable doubts about the parameters of exposure, which should be addressed in future research. For example: time of exposure in relation to drug abstinence

and use, duration and frequency of exposure sessions for ensuring habituation and extinction, selection of stimulus cues, or method of cue presentation.

Furthermore, many of these studies refer to the difficulty represented by a significant obstacle: generalization of the stimuli outside the treatment framework. In this regard, some authors propose that the fundamental utility of passive extinction is to improve the use of coping skills, often undermined by intense reactivity (anxiety) when faced with stimuli related to the drug. Thus, passive exposure would constitute the initial phase of the intervention, which should be complemented by active intervention strategies (active exposure), such as social skills or coping skills training (Secades-Villa & Fernández-Hermida, 2003).

CONCLUSION: THE EFFICACY OF PSYCHOLOGICAL TREATMENTS

Despite the dominance in recent years of pharmacological treatments, it is appropriate and fair to underline the importance of psychological treatments for drug addiction. This importance is indeed borne out by the reports and treatment handbooks promoted in the last few years by such prestigious bodies as the American Psychological and Psychiatric Associations or the National Institute on Drug Abuse (NIDA). Thus, for example, among its so-called 'principles of effective treatment', the NIDA stresses that psychological therapies are critical components of the effective treatment of addiction, whilst pharmacological treatment is an important element for many patients, especially when combined with behavioural therapies (NIDA, 1999). It should be noted that while pharmacological treatments are beneficial for certain patients, psychological therapies are essential in any combination treatment programme, and that this is in acknowledgement of the central role of such treatments in therapeutic intervention.

Thus, there is substantial scientific support for the efficacy of certain psychological techniques in the treatment of addictive behaviours. Behavioural therapy employs empirically validated treatments that are considered essential strategies for the effective treatment of drug addiction (NIDA, 1999). Operant techniques (contingency management), classical conditioning (exposure) and cognitive-behavioural techniques (skills training), and the different combinations between them, emerge as critical components of such programmes (Secades-Villa & Fernández-Hermida, 2006).

As we have seen, the factors related to the development and maintenance of addictive behaviours are multiple and diverse in nature. Following from this is the clear utility of employing behavioural strategies as part of multi-component programmes; this would include, within such programmes, the possible use of pharmacological therapies (by means of agonist or interdictor substances). It is assumed that the two approaches function by means of different mechanisms and that they affect different (though closely related) aspects of the problem (Secades-Villa & Fernández-Hermida, 2003), so that pharmacological and psychological therapies should be understood not as competitive, but rather as complementary strategies. Programmes such as CRA perfectly encapsulate this point of view.

Nevertheless, despite this relative efficacy, relapse rates in the long term (more than one year of follow-up) continue to be high in all types of addictive behaviours. Therefore, future research lines should aim to remedy some of the deficiencies that affect the long-term results of these programmes.

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PSYCHOLOGY AND DRUG-ADDICTION CARE IN SPAIN: A HISTORICAL VIEW

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The history of drug addiction care in Spain is brief but highly intense. The present work reviews the main events and advances that have marked its development, in parallel with the process of incorporation of psychology into this area of intervention. The article also analyzes and assesses the role of psychologists in the different historical stages, highlighting both the achievements and shortcomings in the construction of a body of professional and scientific knowledge and experience.
Key Words: *Psychology, Drug Addiction, Historical review, Spain.*

La historia de la atención a la drogodependencia en España es breve pero muy intensa. Este artículo revisa los principales acontecimientos y avances que jalonan su desarrollo estableciendo un paralelismo entre éstos y el proceso de implantación de la psicología en este ámbito de intervención. También se analiza y valora el papel desempeñado por los psicólogos en las diferentes etapas históricas resaltando tanto los logros como las deficiencias en la construcción de un cuerpo de conocimientos y experiencias profesionales y científicos.
Palabras clave: *Psicología, Drogodependencia, Historia de la drogodependencia en España*

This monograph once again offers us the occasion to reflect upon the complex relationship between psychology and drug addiction; a relationship marked by a curious parallelism in their respective developments that does not have a long journey but is very intense in both cases. Thus, the two previous monographs in this same issue pertain to significant but quite different historical stages in the evolution of the attention to the phenomenon of drug addiction in our country. The first was carried out in 1986, when the National Plan on Drugs was recently approved and when the *Colegio Oficial de Psicologos* (COP) started to create a framework for its study and a strategy in order to bring our profession closer to the Public Institutions in charge of this matter. The second, fourteen years later, in the year 2000, after a long process of consolidation characterized by the wide-spread presence of psychologists in every technical area and in many institutional fields (Martín, 2000).

From that time until now barely seven years have gone by; in this brief period there have not been novel changes in the configuration of the phenomenon, however certain tendencies that had been pointed out in previous stages have been established and directly affect the public policies regarding drugs that have been applied in our country. The most relevant is, without any doubt, the growing appropriation of the discourse regarding drugs by certain health sectors. In a field that was traditionally characterized by interdisciplinarity, a biomedical reductionist orientation prevails with more and more clarity, which is progressively biasing intervention styles and capitalizing on institutional, political and consequently media spaces. As a consequence, the presence of psychologists seems to have been held back and the specific weight that our discipline had acquired in certain areas runs the risk of moving backwards.

Regarding this reality that few argue about and its consequences for the immediate future, we can propose numerous questions about the role played by psychologists for more than twenty years, both concerning the correct decisions and mistakes by psychology professionals who have been working in this field as well as about the degree of use that, as a profession, we have achieved with the indisputable opportunities that the drug addiction field has offered us. What is the level of development of psychology on the different planes of intervention with respect to drugs? What unmistakable contributions have psychologists provided in this field? What place do psychologists hold with respect to the diverse fields that intervene? What learning can we extract from the balance of the experience accumulated during this phase? With what expectations can we face the upcoming years?...

The following lines will try to answer these and many other questions that this topic brings. For this, we will

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resort to a historical revision (Historia magister vitae) that coincides in its methodology with other reflections that have been made from very different sectors during the last two years due to the twentieth anniversary of the National Plan on Drugs.

HISTORICAL EVOLUTION

We will try to establish a parallelism between the evolution that the drug phenomenon has undergone in our country and the incidence that psychology has had in its development. We will divide this evolution into four great stages that go from the configuration of the problem as such and as it has been perceived and is still perceived by most of the Spanish population, to the current situation which is conditioning the immediate evolution of drug addiction care in our country.

Before continuing, and since along these lines we will constantly be referring to different intervention models and professionals from one discipline or another, it is convenient to clarify that this reflection has been undertaken trying to avoid, at all times, exclusive positions, the justification (or denigration) of models or the global consideration-always unjust-of professional collectives and of corporative positions. Nobody owns the truth, and an absolute truth probably does not exist with respect to the varied aspects we are dealing with here. On the other hand, we can find different people and behaviours in every profession. If we think about psychologists themselves, in spite of having made an indisputable effort in defending interdisciplinarity, we have also found traditionalist, arrogant and intolerant positions. Similarly, not all psychologists who intervene in this field have boasted of all the knowledge and technical, professional competencies proper of psychology and have made those mistakes and simplifications that with such ease we attribute to other professionals.

A NEW PROBLEM, A YOUNG PROFESSION

Coming back to the historical division, we can chronologically set the first stage between 1975 and 1985. The first date coincides with the massive expansion of illegal drugs in our country and the second with the approval of the National Plan on Drugs. Both elements deserve to be highlighted: in one case for the alarmism that characterizes the decade of the eighties and in the other for being the first initiative promoted by the National Government in this field that has an administrative structure- the Government Delegation for the NDP- and a budget endowment with an aim.

Although we should not forget that in the late sixties an important increase in alcohol consumption took place which was the beginning of the alcoholization process of Spanish society, what is most outstanding in this stage is the appearance and rapid expansion of heroin, its impact and the important demand for health care that its consumption generated in the first half of the eighties. It can be said that this phenomenon surprised Spanish society which, for years, had been defenceless against a problem that was expanding in a breeding ground such as the socio-political context that our democratic transition offered. In fact, in the motivations of many opiate consumers lay counter cultural attitudes and ideologies related to a very characteristic phenomenon of the time known as “pasotismo” (couldn’t-care- less attitude) an expression that very graphically represented the positions of disillusionment, dissatisfaction and nihilism that impregnated the vital attitude of certain juvenile sectors.

The institutional response in this period was minimal. In the beginning, the only existing nation-wide services were the *Dispensarios Antialcohólicos*, centres devoted specifically to the treatment of alcoholism, created in the sixties. Despite their scarce incidence - they were very few and dispersed around the country - they had some value as references for the subsequent out-patient centres for drugs. Curiously, with these centres psychologists appear in this field for the first time as secondary components of teams led by and composed mainly of psychiatrists.

It is also fair to point out two territorial realities which had a pioneering character: Cataluña and País Vasco. In the same way as the rest of the Autonomous Communities did later, these two communities took advantage of the emergent drug-related phenomena to provide themselves with competencies while awaiting the bulk of transferences. Despite having different organizations and development, both have very similar characteristics: they configure the first public autonomous and municipal programs on drugs (DAK, DROSS...), they propose the first health service networks and the incorporation of multidisciplinary teams with a definitely more relevant presence of psychologists than in the previous case.

But, the truth is that the available care for the affected individuals who began to demand help in the early eighties, sometimes in an anxious manner, continued to be very scarce in the country as a whole for several years. In practice, the first substantial offers for places came from social initiatives occasionally linked to family associations that had already begun to be organized.. The pioneer

associations originated beyond our borders; although having a distinctive nature and quality of care, we are obliged to mention the associations "El Patriarca" and "Proyecto Hombre". The latter offered a more structured therapeutic program which included going through a therapeutic community, whereas in the case of "El Patriarca" as in the majority of the remaining associations, the most usual measures were the so-called "granjas" (farms).

Farms of very different characteristics emerged depending on the composition of their teams, the incorporation or not of religious elements and the functioning of the centre. But, on the whole, they were conceived as single therapeutic elements, self-sufficient and situated in a rural environment, that is, isolated from the everyday reality of drug addicts. Heirs of self-help models such as that of SYNANON, they had full confidence in the curative power of the community and its therapeutic atmosphere and they did not conceive the consumption of drugs as a medical problem but as based on social or personal causes.

These aspects which may appear as anecdotic are without any doubt of great relevance in the subsequent evolution of the topic at hand. The framework of analysis that has conditioned the social imagery of drugs in our country is a product of processes generated by historic circumstances as precise as those that occurred at the beginning of the eighties and by the connotations of a substance such as heroin, linked in a symbolic way to all the strange, unknown, threatening, violent, marginal, morbid and lethal aspects of drugs.

A very illustrative example is the establishment during this stage of an attitude which for years has overridden the technical intervention on drug addiction which considers it as "a specific form of wisdom", a matter for the initiated rather than a specialty in the conceptual and methodological framework of the different professionals who work in this field. This problem is not exclusive of psychologists but it has affected us very directly and has cost many years to fight against it; regardless, today there are still remains of that discourse.

I would not like to end this stage without making a brief reference to prevention. The pressure of the demand for attention in the presence of an objective shortage of adequate resources caused prevention to play a very small role. The few existing prevention activities consisted of concrete initiatives that did not continue over time. They had a pronounced informative character and they placed their emphasis on illegal substances which, in those days, constituted the centre of interest regarding drug problems.

As for the presence of psychologists during this stage, it could be considered disperse and secondary; in any case, not very relevant collectively speaking. For this reason, a landmark was the first training program for psychologists financed by a state organ, specifically the *Dirección General de Acción Social*, which in the year 1984 financed the first general and specific training courses on drug addiction for psychologists. This training process has been maintained without interruption since then by COP with the support of the National Plan on Drugs.

AN OPORTUNITY FOR PSYCHOLOGY

The second stage, although very short, deserves specific treatment because of its transcendence and intensity. For the five years that followed the approval of the National Plan on Drugs in 1985 until the end of the decade, the majority of the Autonomous Plans on Drugs and some of the most important Municipal Plans are approved in our country. The creation of a global plan, based on institutional, social and political consensus, generated great expectations which, spurred on by social pressure and the recoil of the emerging autonomies, resulted in an authentic convulsion for the policies on drugs in our country.

The consequences did not take long to appear: important specific budget endowments were assigned for the attention of drug addiction; the Government Delegation for the National Plan on Drugs was created as a driving and coordinating organ for the Plan, and the implementation of some effective structures for the planning, management and autonomous coordination that were generically denominated Autonomous Plans on Drugs.

The creation of plans implies the implementation of an institutional response model based on the coordination of overall policies which, despite being in an embryonic state, will influence the policies regarding drugs in our country and will later be exported to different European and Latin-American countries. But it will especially make possible the creation of numerous care networks. This fact contributes to the empowerment of the associative movement related to drugs and generates a noticeable increase in the human resources dedicated to this matter.

It can be said that the great incorporation to of professionals to this field, specifically of psychologists, took place during those years. It was an exceptional occasion for job promotion by psychologists and a historical opportunity to apply their professional skills in

numerous fields –clinical, preventive, management, planning….. There is an illustrative fact: already in 1990, the Governing State Body of the *Colegio de Psicólogos* feels the need to reflect on the nature of this intervention and to know the dimensions of professional practice of psychologists in this field. The study (COP, 2003) is based on a sample of 357 psychologists who completed the questionnaires although the authors had sent a total of 1000 questionnaires to other professionals identified through official records and a centre by centre search.. This means that this figure could in some way be approximate to the real one. Currently there are not any similar studies that would allow us to make a comparison; the most recent data corresponds to a study from the National Plan on Drugs (2003) that permits us to estimate a minimum of 825 as the number of psychologists who work in Autonomous Plans, to which we would have to add those corresponding to the ones who do not offer these data (Cataluña, Baleares, Canarias & País Vasco) and those professionals working in NGOs with their own attention networks (Proyecto Hombre, Cruz Roja, etc.) which, therefore, would not have been included in this account. Consequently, we can say that although the actual volume of psychologists who intervene in this field greatly surpasses those registered in 1990, it is reasonable to think that the major part of placements comes from that quinquennium.

There are other facts to highlight in this study such as the age of the professionals, the organisms that generate these jobs and the place that psychologists occupy in them. With respect to age, we can point out the distinct youthfulness of this population who in 85% of the cases are under 35 and half of them are under 30. On the other hand, two thirds of the generators of these jobs are Public Administrations, of which almost half (46.7%) belong to the filed of social services; finally, we have to point out that in 53% of the teams studied, psychologists occupied a coordinating position, followed by doctors who reached 30.7%.

In short, it would not be exaggerated to say that the massive incorporation of psychologists and the occupation of positions of responsibility in such a short period of time is an exceptional fact in the history of psychology in Spain. As we will see next, this intense and accelerated implantation has had more than a few consequences with respect to the consolidation of psychology in this field.

An aspect worth highlighting in this stage is the conceptualization of care networks. Having overcome the previous stage of single elements, it was considered that a network for the attention of drug addictions should be composed of a group of programs, services and resources with a functional order and organization capable of responding to all the assumptions and needs of people with problems related to the consumption and abuse of drugs (Becoña & Martín, 2004). The result was the creation of wide networks with regard to its objectives, diversified by its variety of resources and professionalized, that is, integrated by interdisciplinary teams with a great variety of academic degrees (psychologists, doctors, social workers, occupational therapists, nursing graduates, etc.).

The theoretical exposition that underlay this decision, shared by social and institutional entities, was based on the certainty that the therapeutic approach for drug addicts requires a coordinated combination of different resources which should establish individualized care objectives in which a biological, psychological and social approach will be carried out..

Another relevant aspect of this stage is that networks had two much generalized identity signs: they were directed almost exclusively towards problems generated by heroin and their objectives were basically based on abstinence and, in the last instance, social insertion of the drug addict.

In order not to ignore the state of prevention, it is enough to mention that there were no advances during those years worth mentioning, with the exception of a few programs with a purely emblematic value. One of the most graphic testimonies of this stage is without doubt the "Report for the planning of drug prevention in the school community" (Aguado, Comas & Martín, 1986), carried out due to a petition from the Ministry of Science and Education, that had no practical consequences on school prevention policies.

THE CHANGES AND THE DIVERSIFICATION OF THE NINETIES

We usually refer generically to this third stage as "the decade of great changes" because during these years the drug phenomenon suffered its greatest transformations. It was so much this way that the nineties ended with a configuring scenario much more diverse and complex than that existing in previous stages. If we had to summarize these multiple changes we could reduce them to two: with relation to consumption habits, the stabilization and subsequent decrease in heroin consumption that coincides with the so-called recreational

use of drugs and, if we focus on the policies adopted by Public Administrations, the extremely important development of programs and services for damage reduction linked fundamentally to the problem of AIDS among intravenous drug users (IDUs).

The first of these phenomena has to do with the appearance of new drugs and new consumption patterns. It is what several authors have valued as an authentic change of cycle in the drug crisis in our country (Gamella & Álvarez, 97). These are weekend consumptions, outside the family environment, in public spaces or premises and with the main motivation of diversion. But there is also an underlying aspect which it is convenient to state clearly, which is that these consumptions do not generally entail counter-cultural positions or marginal behaviours as happened in the previous model. What started to be conceived in the past decade were not simply new ways of relating to drugs but rather new ways of being in society which affects very important sectors of youth who are relatively well-integrated in other spheres of life. It is what Parker (1998) exposed as a process of normalization where the extension of an activity considered deviant goes from the margins to the centre of juvenile culture where it can be added to other risky conducts.

All this explains how in the second half of the decade a prevention strategy that would cope with the phenomenon of recreational consumption was demanded, one that would not only focus on school centres but that would involve the family and that would introduce the generation of alternative leisure activities; in short, a new way of conceiving and promoting prevention strategies.

The advances favoured during these years, although insufficient, have contributed to the establishment of solid bases capable of making possible a process in the generalization of prevention. Specifically, advances in the area of school prevention carried out by both public administrations and social organizations, have been repeatedly weighted by international organisms such as the European Monitoring Centre for Drugs and Drug Addictions (EMCDDA).. In fact, the effort made by researchers, technicians and educators in the field of school prevention led the EMCDDA to place Spain amongst the most advanced countries in prevention matters: "In Spain, Ireland and the United Kingdom, a clear quality control system has been developed, prevention policies are based on evidence and there is an intention to reinforce this line" (EMCDDA, 2003). An international expert such as Burkhart (2002) declares that "…in this country (he is referring to Spain), the level of methodology in its programs is quite high: clear descriptions, utilization of the better known models, interest for evaluation, application of the most recent models…". This is reflected in the program EDDRA regarding good practice in the European Union which included Spanish programs superior to the mean of the remaining member countries. Although it is also true that this assessment of school prevention has not been extended to other areas of prevention (family, community, labour…) and that these achievements have not been rounded off by the necessary expansion.

The leading role played by psychologists in this drive for prevention is unquestionable. It would be enough to review the list of written works and programs designed, applied and assessed regarding prevention to confirm that the presence of psychologists is overwhelming. In all areas (universities, educational centres, municipalities, families…) where prevention programs have been applied there have been psychologists present and to them we owe the main contributions made in our country in this field during this decade; having said this we do not want to lessen the invaluable role that other professionals have played especially those belonging to the social and educational fields.

On the other hand, the diversity of consumption that characterizes the decade of the nineties also ended up having repercussions on the demand for assistance. This way, cocaine was already responsible for 31% of first admissions at the end of the decade (Report from the Spanish Observatory on Drugs nº4). For this reason, the existing current assistance networks are forced to deal with the new treatment demands that have progressively been proposed to them by a relatively young population where the problems of the abuse of certain drugs (cocaine, alcohol, cannabis or synthetic drugs) are made compatible with acceptable levels of social integration. This way, in the mid-nineties a process of the reorientation of the resources offered by assistance networks was initiated, characterized by the need to simultaneously attend the emerging new demands and the old problems associated to drug abuse. It is a challenge facing the diversification and versatility of the assistance offer which yet today many institutions and professionals are involved in and that is characterized by providing networks of greater flexibility.

In order to understand the second phenomenon referring to the extension of programs for damage reduction, it is necessary to review some facts and events that happened

during that stage. Even though the nineties began under the impact of heroin, in the following years there was a decreasing tendency with respect to this drug that has continued until the present. After 1992 the admissions for treatment due to this substance stabilized and they have decreased since 1996. Parallel to this, the cases of AIDS in IDUs, which had increased rapidly since 1982, placed us for a long period of time at the head of the European Union countries.

Consequently, the antiquity in drug consumption of many IDUs with the subsequent personal deterioration and the severe diseases associated (AIDS, hepatitis, tuberculosis…), combined with the inability of attention networks to attract an important number of heroin addicts, more than justifies the great boom in these programs whose main exponent are the treatment programs with methadone that multiplied by 23.9 times in ten years, going from 3043 cases in 1990 to 78806 in 2000 (PND, 2001).

The main consequence of these policies was that Spain reduced the percentage of AIDS among drug injectors. Of the 1465 diagnosed cases in the year 2001, 52% of the total was attributable to the injection of drugs when in 1990 we had reached the highest level with a percentage of 69.6%. Another fact that correlates directly with this result is that obtained with the change of method in the administration of drugs: the use of injection as the main method used went from 60-70% in the eighties to 17% in the year 2000.

All these facts brought difficulties of integration in the attention network with them throughout most of the decade which forced great efforts of adaptation to be made.. These difficulties did not only appear due to the integration of the different types of programs –free of drugs and damage reduction- but, essentially, due to the different ways of perceiving and valuing the priorities in therapeutic intervention.

Here we have one of the most controversial debates about the role played by psychologists in relation to that of other professionals. It is true that not all psychologists showed the same receptivity regarding the urgency made evident by the data and that compelled them to resort to these emerging programs without delay. It could even be said that certain sectors of institutional officials, among whom some psychologists were found, slowed their response down excessively. But it is no less certain that most psychology professionals shared the necessity of promoting these programs from the beginning and actively participated in their implementation. That is why some accusations that have been generically dumped on psychologists as a whole are so unjust. The attention networks in our country, in general terms, have been capable of coping successfully with this challenge and on most of those teams there was and there is a wide presence of psychologists.

Another very different matter are the doubts that were exposed then and that are still being exposed today about the way of conceiving and applying these programs, even after having demonstrated their efficacy and enjoying almost unanimous acceptance. In the same manner, we should not hide the fact that the great thrust of programs for damage reduction has brought with it an incomprehensible withdrawal of the debate and research regarding the efficacy of drug free programs.

SOME SIGNS OF THE CURRENT STAGE

It is more difficult to relate the history of the fourth stage which takes us from the year 2000 up to the present and that is marked by the implementation of the National Strategy on Drugs 2000 – 2008. This entails a reality which is still being configured. However, as we said at the beginning, some recent events deserve a brief commentary.

The Government of the Nation, following the guidelines set out by the United Nations, in 1999 carried out a thorough, revision of its policies on drugs and after an in depth debate with institutional and social agents, approved the Strategy which begins by stating "The National Plan on Drugs" (….) after almost fifteen years of being in force and of permanent updating, needs to adapt to the current reality of the drug phenomenon, as well as to anticipate predictable changes in the phenomenon of drug addiction" (1999). In other words, in practice, this document represented the birth of a new plan. Some years later, at the half-way point in its development and after a partial evaluation in 2004 of its degree of compliance, the National Plan introduces a Plan of Action that does not offer practically any novelty with respect to the spirit and proposals of the previous text.

In short, what do these new institutional policies propose? Basically, to reaffirm the necessity of continuing in the direction that was taken at the end of the previous decade; that is, the guarantee of full assistance coverage adapted to the diversity of demand, the proposal to prioritize and generalize prevention and a greater insistence in the quality of the programs, evaluation and training .It could not be any other way given the

tendencies in the consumption of drugs that are becoming evident in our country.

In relation to the attention networks, the fundamental proposal revolves around the wager for the "coordinated integration of attention networks for drug addictions in the Public Health Systems and Social Services", with the double objective of making the existing resources cost effective within these systems and of normalizing intervention.

With respect to diversification, there is a clear consensus to consider as consolidated the existence of a mixed structure of drug free/damage reduction programs in almost all the networks in our country regardless of their being public or private. However, some professionals are worried about the mechanistic instrumentalization that is being made of the damage reduction programs. We believe in the insistence that they should be impregnated with a psychological, social and support perspective which permits the better development of these people's lives whenever possible without renouncing the elimination of the dependency. The restrictive outlook by some medical sectors towards these programs seems to have silenced other ways of understanding them and making them efficient. However, there are valid models by psychologists (Insúa, 1999) which open new lines of intervention in the damage and risk reduction programs.

The time also seems to have come to close the circle with respect to this juxtaposition in programs because if it is true that drug free programs need the complement of damage reduction programs, today we know that these cannot be seen in themselves as a definite solution to the problems of drug dependencies, more so when the new demand for treatment becomes a reality. All this makes urgent the application of a renovated impulse towards investigation and the application of treatments, fundamentally psychological, which have been confirmed as the most efficient in light of the scientific evidence available. (Fernández Hermida & Secades, 2003; Álvarez & Becoña, 2006).

Otherwise, we run the risk of moving towards a normalization that is very different from the one proposed in the National Strategy which would mean confusing normalization with assimilation. It is true that the consideration of drug dependencies to all effects as "common disorders", as set out in diverse autonomous laws, has permitted the image of the drug addict to be dignified and to consider the addict as an ill person, as all others, worthy of receiving the rights and services offered by the National Health System. .However, we might ask ourselves if an inadequate management of these theoretical advances is not occasioning renewed problems such as the inhibition of other networks (social services, educational…..) and generating new errors in the social perception of the drug phenomenon that leads to an increased demobilization (according to the barometer of CIS in November, 2006, drugs were perceived as a problem which personally affected only 1.6% of citizens).

More can be said about prevention policies. From the Health Ministry itself, a message about the supposed failure of prevention is being sent, which is contributing to the discouragement of the few groups who work in this field. As well as being an unfair appreciation as only four years have gone by since the approval of the Strategy, prevention programs in Spain continue to count with little support (according to PND, they received 15.9% of the budgets of the Autonomous Plans in 2000 and 21.4% in 2004) and they face consumer tendencies that have been in constant growth for decades. It seems obvious that something is not clear in the usual concept of prevention and of the demands that this poses for our public powers.

FINAL CONSIDERATIONS

Without wanting to fall into defeatist arguments, it seems obvious that there are sufficient indications that point to the increasing pre-eminence of a lineal vision of the problem, that affects the substances more than the people, based on a model of disease and very far from the assumptions that psychology proposes–coinciding, on the other hand, with those of the WHO- that propose a global vision of the phenomenon and a bio-psycho-social model which, without avoiding the predisposing factors of a biological character, consider the use of drugs as a kind of human behaviour, understood in its cognitive, affective and behavioural dimensions and greatly influenced by its interpersonal, social and cultural environment. It seems that it is not difficult to find a relationship between this and other contentions that psychology has proposed in its recognition as a health profession. Here as well we are confronted with an underlying health model that seriously limits our presence and our full professional practice in the drug addiction policies.

This will inevitable affect the role that psychologists will be able to play in the future. However, as has been demonstrated on previous pages, psychologists have demonstrated their capacity and audacity to offer an adequate response to the social demands during the eighties, a response that proved appropriate and effective

facing a difficult challenge that few disciplines took on. In the same manner, we have generated a body of theory and we have made noticeable contributions in every area of intervention promoting a global, integrated and interdisciplinary model. On the whole, we can affirm that a clear recognition of psychologists in this framework of activity has been achieved.

However, now is the moment to reflect sincerely on our deficiencies. There is no doubt that we have wasted good occasions in key moments and that we have not made sufficiently profitable the conceptual, technical and methodological baggage that psychological research has offered us. To all this we can add our traditional limitations as a profession (scarce investigation, few publications, shortages in the systematization of knowledge, difficulties of organization as a group…). In addition, at the present time, we find barriers proper of the health administrations due to our minimal presence in them, which places us in a vulnerable position with respect to other health professionals.

What are our opportunities? Above all, to extract all the possibilities that psychological research offers us in areas such as prevention and treatment of the new attention demands, applying and evaluating programs, systematizing knowledge and methods that will allow us to offer rigorous models based on scientific evidence. All this is joined together in a solid and identifiable collective project. The *Colegios de Psicólogos* and the Council could once again become idoneous platforms to renovate this project.

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PET-FACILITATED THERAPY AS AN ADJUNCT REHABILITATION PROGRAM FOR PEOPLE WITH A DIAGNOSIS OF CHRONIC SCHIZOPHRENIA

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Coincidiendo con el surgimiento de la psiquiatría comunitaria, ha habido un progresivo proceso de desinstitucionalización de los pacientes psiquiátricos; seleccionando a los menos discapacitados para los recursos comunitarios y dejando los pacientes con más discapacidad al cuidado de las instituciones. La rehabilitación pretende afrontar la discapacidad para realizar actividades, con la finalidad de mejorar la desventaja social consecuencia del deterioro e incapacidad producidos por la enfermedad.

La Terapia Facilitada por Animales, se describe como una intervención diseñada para mejorar el funcionamiento cognitivo, físico o social de un paciente, con unos objetivos específicos delimitados en el tiempo. Los estudios realizados hasta el momento apuntan a resultados positivos de este tipo de intervención. En el presente trabajo se pretende describir cómo la Terapia Facilitada por Animales puede ser un programa de rehabilitación terapéutico efectivo adjunto al tratamiento normal que cubra con las necesidades de los pacientes crónicos con diagnóstico de esquizofrenia institucionalizados.

Palabras Clave: *terapia por animales, esquizofrenia, rehabilitación.*

Schizophrenia runs a course that usually leads to high degrees of disability. During the past few years and coinciding with the advent of community psychiatry there has been a progressive deinstitutionalization process. Less disabled patients have been selected for the new community mental health services while severe patients have remained under institutionalized care. Rehabilitation aims to cope with the reduction in the ability to undertake different activities in order to improve social disadvantage due to the disability caused by the disorder.

Animal-Facilitated Therapy (AFT) is described as an intervention designed to improve cognitive, physical and social functioning of a patient, with some determined, time-delimited objectives. Studies done until now with different populations suggest that this kind of intervention could have positive results. The present paper aims to describe how AFT could be an effective therapeutic rehabilitation program adjunct to regular treatment for institutionalized patients with schizophrenia.

Key Words: *animal-facilitated therapy, schizophrenia, rehabilitation.*

Rehabilitation attempts to confront the decrease in the capacity to undertake activities with the aim of improving social disadvantage due to the deterioration and the incapacity produced by the disorder (Collins & Munroe-Blum, 1995). Rehabilitation is based on the fact that the socio-environmental dimension of the mental disorder is as important as the biological dimension and that the supervision of chronic disabilities is as important as the treatment of symptoms and therefore, it is proposed as an long-term intervention focused on the factors of everyday life that affect social adaptation without ignoring the symptoms they are experimenting (Sheperd, 1996).

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The problems that a person with a severe mental disorder has pertain to "social access" and this depends on the provision of social supports that can facilitate this access and help maintain the person in his social position. The long-term maintenance of their social access depends on the stability of these social supports and on the rehabilitation services that have to consistently supervise and readjust their interventions in an appropriate manner (Sheperd, 1996). This is more difficult in an institutionalized context in which social access is low.

In the institutionalized setting, rehabilitation has been structured as another hospital service with the objective of decreasing the incapacity generated by institutionalized life although with no reference to a social context and therefore to the participation of the patient in a social network. The facilitation of "social access" on the part of the rehabilitation team allows us to appreciate how part

of the rehabilitation process also requires active participation in the community (Aparicio, 1996).

In the last few years and coinciding with the emergence of Community Psychiatry there has been a progressive process of deinstitutionalization of psychiatric patients. This way, the least disabled have been selected for the new community resources leaving behind the most severe cases in more institutionalized hospital resources. In some cases this process of deinstitutionalization has generated a group of patients with a poor social network and great incapacity who often relapse and are hospitalized on repeated occasions and who are at a great social disadvantage, a phenomenon known as "the revolving door patient" (Folsom et al., 2005; Trieman & Leff, 1996). It has been said that institutionalized patients consider their quality of life to be worse than that of community patients, do not improve their everyday life skills and their social network becomes minimal (Leff, Trieman & Gooch, 1996). In addition, if the patient's stay is long, then what has been denominated "deculturization" can happen, that is, a lack of training that temporally incapacitates him for coping with certain aspects of life in the exterior, and also there is a loss of the previously learnt social roles (Goffman, 1970).

The severely mentally ill who are more present in psychiatric institutions are those diagnosed with schizophrenia. This disorder has very heterogeneous clinical manifestations and an evolution that will lead to high degrees of disability in diverse areas (Meise & Fleischhacker, 1996). The fact that this is a group of institutionalized patients makes training in social skills and social functioning difficult since, as we have previously explained, their "social access" is limited.

In the present work we intend to describe how Animal-Facilitated Therapy can be an effective therapeutic rehabilitation program adjunct to regular treatment that covers the needs of institutionalized chronic patients with a schizophrenia diagnosis.

ANIMAL-FACILITATED THERAPY (AFT): FACILITATOR OF COGNITIVE AND SOCIAL REHABILITATION

The presence of animals in therapeutic fields goes back centuries, although in the first decades of the XX century, with the arrival of scientific medicine, animals were eliminated from hospital environments (Serpell, 2003). The active participation and the consideration of animals in the therapeutic process is relatively novel; it was Levinson, a child psychologist, who by serendipity observed how the presence of his dog Jingles in the session facilitated interaction with a child who had difficulties of interaction with the therapist himself (Levinson, 1962); subsequently he used this finding to introduce Jingles in therapeutic sessions facilitating the interaction and expression of children (Brodie & Biley, 1999). Levinson is considered the father of the current AFT. However, previously Bossard (1950) had already manifested that "ets are an essential part of family life; they should be considered a basic factor of mental hygiene".

AFT, or Animal-Facilitated Therapy, is described as an intervention designed to improve the cognitive, physical or social functioning of a patient, with specific time-delimited objectives. The interaction between the animal and the patient is generally one to one. The animals used in AFT are usually specially trained animals and are not the animals of the actual patient (Connor & Miller, 2000).

Mallon et al. (2003), describe some principles they have identified after a long experience with AFT at Green Chimneys; a temporal residence for children and adolescents where they have been using the curative component of the animal-person interaction for more than 50 years. Mallon starts from the premise that AFT programs must be protocolled, designed according to the individual characteristics of each patient and attached to the normal treatment of these. The therapeutic objective must be directed at improving the social skills, the autonomy and the emotional responses of individuals. In addition, he holds that the participation of patients in a program of these characteristics must be voluntary and consented, as well as maintaining that the therapist must watch out for the security of the patient and that of the other professionals who are linked to the application of the program. These principles, despite being formulated by a working team in a residence for children and adolescents, are transferable to any institutionalized population.

AFT is supported by the "animal-person" bond developed along the evolutionary process of human beings and domestic animals. The relationship between human beings and domestic animals (in the case of the dog) goes back, at least, 12000 years; in the north of Israel they found a tomb with some fossil remains of a human with his hand resting on the fossil remains of a dog. Experts indicated that a burial of these characteristics emphasizes the link that person had with his pet. Anyhow, molecular genetics studies on domestic

dogs suggest that this link goes back much farther (Vila, Seddon & Ellegren, 2005). This is not an altruistic bond: while in the beginning animals provided food, protection, transport, etc…their usefulness has been transformed into a sort of mutual dependency; in recent years there has been an increasing interest to know the origin of this dependency, that is, what are the physical and emotional benefits that domestic animals provide us with in the present (Manchon & Tomé, 1997a) and it has been observed that the benefits are quite considerable. For example, Kidd & Kidd (1994) studied the benefits of having pets for homeless people, coming to the conclusion that those animals were the only relationship that they had with another living being; however, they did not use any measures which allowed them to conclude that this fact gave them any advantage over homeless people without pets. In a study by Allen et al. (2002; 1991) they observed that pet owners' response threshold to stressful situations was higher than that of those who did not own pets; furthermore they observed that in the presence of familiar people that threshold decreased. These results indicate that the presence of other people makes the perception of the situation more stressful than when they are in the presence of pets since the presence of the latter reduced the levels of cardiovascular reactivity when confronted with tasks. Other studies have also found that arterial pressure was significantly reduced after being in contact with domestic animals (Stasi et al., 2004). Not only were there changes in the arterial pressure but also the levels of neurotransmitters in plasma varied significantly ($p<0.01$) after the interaction with a companion animal (Odendaal & Meintjes, 2003). Poresky & Hendrix (1990) concluded that having domestic animals on the part of children was highly associated to a good social development that affects the social competence, empathy and cooperation of children. Another study (Siegel, 1990) concluded that older people who had companion animals made fewer visits to family doctors than those who were not animal owners.

In conclusion, there seems to be evidence that indeed suggests that there are some benefits secondary to the bond established throughout our evolution between people and animals. These benefits have been the base for the utilization of domestic animals as therapeutic allies.

Since Levinson's discovery there have been studies done that try to quantify the benefits of using the animal-person bond in a therapeutic environment. Even though there are not many of great methodological rigor, those done up to now seem to suggest that AFT is beneficial for different symptoms and different illnesses, in different populations. The AFT programs have been applied mainly with:

a) People (especially children) with physical and/or psychiatric disability: Nathanson and de Faria (1993) implemented an AFT program with Dolphins in children with mental retardation; although the sample was small they found a tendency to the improvement of cognitive functioning (communicative capacity and attention). There have also been AFT programs with horses with very good results for physical rehabilitation (Potter, Evans & Nolt, Jr., 1994; Cusack, 1991). Companion animals, especially assistance dogs, have been used with the main objective of facilitating the mobility of physically disabled children; but a study by the Mader group (1989) concluded that the company of an assistance dog facilitated the proximity of non-disabled people to disabled children ($p<0.01$); furthermore, children accompanied by assistance dogs received more positive contacts ($p<0.01$) than children who went alone. These results helped them to conclude that the presence of an assistance dog is a social facilitator and increases social acceptance. There is the experience of the Rosella Residence in Cataluña, where they introduced companion animals as a therapeutic complement in the treatment of mental deficiency. This experience was very positively valued by the team and, especially, by the users (Sanmartí, 1992).

b) In old age: There have been AFT programs implemented in residences for the elderly. Some professionals have evaluated the benefits of the implementation of a program of these characteristics in these institutions. Among these we find the Banks & Banks group (2002) that studied if the residents' feeling of loneliness was improved after the application of an AFT program. Even though it was found that the residents who had participated in a program of these characteristics significantly improved ($p<0.001$) their feeling of loneliness compared to a control group who had not participated, we have to emphasize that they do not indicate if this group received any other type of intervention different from AFT that can make us affirm that AFT, more than other interventions, is more effective in reducing the feeling of loneliness in older residents. Another study points out that the implementation of an AFT program in the elderly has resulted in the tendency to

improve depressive symptoms and in a decrease in arterial pressure (Stasi et al., 2004).

c) People with chronic mental disorders: In the same manner as some professionals have been interested in evaluating the positive effects of the implementation of AFT programs with older people, some professionals in the mental health field have also applied and evaluated such programs, especially in people with the diagnosis of schizophrenia residing in a psychiatric institution. Of all these studies we can emphasize the one done by Barak's team (2001). They carried out a study that evaluated the effects of an AFT program in geriatric patients diagnosed with schizophrenia who resided in a long-term care unit for a year. They randomly chose a sample which was evaluated using a scale which measures social-interpersonal functioning, instrumental and self-care skills and self-control. The greatest change was that related to social-interpersonal functioning with a very significant improvement ($p<0.01$), there was a noticeable tendency to improve instrumental skills and there was no change in self-control. This study is especially interesting because they compared the AFT intervention group with a control group that received an intervention that was different from AFT, therefore, the results are controlled for the effect of activity and the passage of time. Later, Nathans-Barel et al. (2005) found a significant improvement in the hedonic tone ($p=0.02$) of 20 long-term patients who had chronic schizophrenia after the application of an AFT program; they also perceived that their quality of life related to leisure was significantly better ($p=0.01$). This study did not have a control group so they could not control for possible changes in the evaluation scales due to the passage of time. Kovács et al. (2004), introduced an AFT program in a long-term care unit for middle-aged patients diagnosed with schizophrenia with the objective of facilitating social functioning adapted to community needs. They evaluated everyday skills before and after the implementation of the AFT program and they found a significant improvement in domestic activities ($p=0.01$) and of self-care ($p=0.02$); they also observed a tendency to improve the rest of everyday life activities. Mayol-Pou (2002), proposed that an AFT program would decrease the psychotic symptomatology of a group of chronic institutionalized patients. After the implementation of the program they found that the negative symptomatology of the patients evaluated by the Positive and Negative Syndrome Scale (PANSS) (Kay, Fiszbein & Opler, 1987; Peralta, 1994) improved ($p=0.005$) after the application of an AFT program. Another study found that the levels of anxiety in patients with a diagnosis of psychotic disorder who had received an AFT program decreased significantly ($p<0.01$) compared to a group of patients who received emotional support (Barker & Dawson, 1998). We have to point out that all these studies done with persons diagnosed with schizophrenia have not used very large samples but a fact that stands out is the high compliance and bonding with AFT on the part of the patients.

d) Other mental disorders: AFT has been positively valued when introduced in the treatment of post-traumatic stress disorder, especially with people who do not respond to other types of treatments and who have a tendency to actively isolate themselves (Altschuler, 1999).

e) Prisoners: AFT programs have been introduced in reformatories with the objective of teaching inmates new skills with relation to animal care as well as to link them to new responsibilities and controlled activities (Cooper, 1992).

RISKS OF AFT

The effectiveness of the application of any intervention has to be assessed with an end to being able to measure the real benefits of such an application. At the same time, we cannot fail to assess the possible adverse effects of any therapeutic intervention. A number of possible risks related to the application of an AFT program have been identified, among these we find:

1) The risk of contraction of diseases (zootic diseases)
2) Risk that the patients could be bitten or scratched
3) Sanitary problems related to animal hygiene
4) Patient adverse reactions when exposed to the animals
5) Feelings of loss in the case of death of the animal or separation from it
6) Maintenance costs or of animal utilization

Aside from the risks previously established already explored in the bibliography (Manchon et al., 1997a; Brodie, Biley & Shewring, 2002), in a work carried out for the licenciatura (degree credential) with 46 health professionals (Manchon & Tomé, 1997b), these were suggested as negative effects:

7) Risk of not adopting the appropriate animal
8) Risk that the patient may not know what to expect from the animal

9) Risk of forcing animal-patient situations since this is a "trial" therapy
10) Inadequacy of the character or type of animal to the needs which could imply a negative experience.

These negative effects have been resolved in the following ways:

a) Regarding points 1, 2 and 3: Hygiene protocols for dogs have been established. In addition, all dogs used in therapy follow the current policy regarding companion animals. Anyhow, the probability of contracting a disease transmitted by a companion animal correctly controlled by a veterinarian is very small (Brodie et al., 2002; Guay, 2001).
b) Regarding points 2, 7 and 10: Animals for therapy are carefully trained and follow behaviour standards established by organizations that regulate AFT (Brodie et al., 2002).
c) Regarding point 4: Questionnaires are administered to detect subjects' adverse attitudes towards the therapist-animals, which are an exclusion criterion for studies; aside from attitudes it is also evaluated if the patient has any allergies provoked by contact with animals (Banks et al., 2002).
d) Regarding point 8: This is not an effect that is found in the literature but professionals consider it important. We believe that with the information that is given before enrolling in a study or a treatment, the patient can adjust his expectations to the possible benefits he will have after the implementation of the program.
e) Regarding point 9: With the legislation that regulates the voluntary participation in studies and/or treatments, there will be no need to force situations in which the patients or tutors do not want to participate.
f) Regarding point 6: There are no studies on cost-effectiveness done to date with respect to AFT.
g) Regarding point 5: This point has to be considered seriously since the process following the death of a pet is a mourning process that can have serious repercussions for the owner. AFT is based on the human-animal bond and it is this bond precisely which makes the process following the loss of an animal that of mourning (Podberscek & Blackshaw, 1994). Despite not being the aim of AFT, the fact of participating in a mourning process due to the death of or separation from an animal, allows for training in real situations in a protected environment with therapists who will guide the process.

IMPLEMETATION OF AN AFT PROGRAM IN PEOPLE RESIDING IN A LONG-TERM CARE UNIT WITH THE DIAGNOSIS OF CHRONIC SCHIZOPHRENIA

As we have said before, patients with chronic schizophrenia have low levels of activity and social functioning and also show reduced strategies for the resolution of social problems. When we compare institutionalized patients with schizophrenia with community patients we find that the former show a greater and more progressive disability (Kovacs et al., 2004).

To date, the negative symptomatology, characterized by the slowing-down of thought, flat affect and social withdrawal (Crow, 1985), has not been successfully reduced by neuroleptic medication. This set of negative symptoms is the one more associated to the long evolution of the disorder, with cognitive dysfunction and the disability of the individual (Penades, Gasto, Boget, Catalan & Salamero, 2001; Grawe & Levander, 2001; Liddle, 2000; Hammer, Katsanis & Iacono, 1995).

Since the challenge of rehabilitation is to creatively develop long-term supports that will promote social functioning which help accept the possible existence of incurable difficulties and how to maintain them effectively (Sheperd, 1996), we believe that the implementation of an AFT program, as a complement to traditional therapy and not as a self-sufficient and exclusive therapy, could be beneficial for people with a chronic mental illness residing in a long-term care unit, since:

a) It acts on negative symptomatology reducing its severity (Mayol-Pou, 2002; Nathans-Barel et al., 2005). As we have commented previously the negative symptomatology is associated to a long evolution of the disorder and to greater disability. AFT also appears to be especially effective as a social catalyser (Brodie et al., 1999; Mader et al., 1989); people with chronic schizophrenia who live in the community already seem to have social withdrawal that becomes accentuated in institutionalized patients due to the lack of social access.
b) The results obtained to date indicate that cognitive rehabilitation exercises that are performed in the presence of an animal have better results than those that do not have the presence of the animal added (Nathanson et al., 1993). Many individuals with chronic schizophrenia show cognitive dysfunction (Penades et al., 2001). In addition, bad cognitive functioning has been related to bad social function-

ing (Green, 1996; Addington & Addington, 1999).

c) AFT generates normalized, organized, supervised and regulated activities, compatible with everyday life activities; it could be training and a model for everyday activities for residents. The measure of skills and supports, more than the psychiatric diagnosis and the symptomatic patterns that are particular of each individual with a severe mental illness, determines the proper functioning of a person in the community. The interventions for the improvement of skills and supports can help people with chronic mental illness to function more successfully in the community (Farkas, 1996).

d) It reduces feelings of loneliness and the discomfort of residents (Banks et al., 2002).

e) The literature shows that the bond of people with a diagnosis of schizophrenia who participated in an AFT program is very high (Kovacs et al., 2004; Barker et al., 1998; Barak et al., 2001), which allows us to treat different aspects with the patients due to their high motivation for treatment.

f) The presence of animals reduces anxiety levels (Barker et al., 1998; Allen et al., 2002; Allen et al., 1991; Odendaal et al., 2003). Due to the fact that the vulnerability of these patients is very high, the presence of animals in the therapeutic process would reduce the anxiety levels for any given task.

Although the experiences where AFT has been applied have been carried out in very different populations and small samples and the efficacy studies are very scarce, the possible benefits of this type of intervention seem to cover the therapeutic needs of patients with a diagnosis of chronic schizophrenia mainly with negative symptomatology and institutionalization, and seems to be a good support therapy for regular treatment protocols.

CONCLUSIONS

Even though AFT has not been widely demonstrated to be effective, it seems that there are indications that lead us to consider that it could be an adjunct treatment to the rehabilitation programs that are carried out in institutions where people with a diagnosis of schizophrenia reside with a long evolution of the disorder. The benefits of these types of rehabilitation programs are still not determined with methodologically correct studies but the studies that have been carried out up to this moment seem to indicate that it could be beneficial for social-interpersonal functioning (Barak et al., 2001), hedonic tone (Nathans-Barel et al., 2005), certain everyday life skills (Kovacs et al., 2004) and even psychotic symptomatology (Mayol-Pou, 2002). What is really interesting for us is the high compliance and link with AFT on the part of the patients. This leads us to think that the novelty of introducing companion animals in regular treatment makes this type of intervention suitable to fixate patients' attention and work on the aspects they may present difficulties with. AFT does not pretend by any means to be independent or self-sufficient from other interventions but is proposed as a complement to traditional interventions. The main limitation of AFT is the absence of studies that evaluate its efficacy and benefits as well as study the possible harm that it could do.

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DOMESTIC VIOLENCE: WHAT BASIC INVESTIGATION WITH COUPLES REVEALS

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La violencia doméstica, especialmente en poblaciones concretas como usuarios de Servicios de Urgencias, Centros de Salud Mental…, es muy alta. En este artículo se revisan algunos conceptos básicos derivados de los primeros estudios destinados a clarificar el inicio y mantenimiento de los problemas de pareja y se aplican al estudio de la interacción de las personas que denuncian violencia física, psicológica o sexual. Se concluye que el grado de armonía relacional es inversamente proporcional al nivel de violencia, las secuencias seguidas por parejas que denuncian violencia, a la hora de resolver problemas, así como las tasas base y grado de reciprocidad de refuerzos y castigos, se parecen a las que caracterizan a las parejas en conflicto, y el grado de acoplamiento fisiológico es alto. Se concluye que estos datos han de ser tenidos en cuenta a la hora de entender, que no justificar, predecir y modificar los comportamientos violentos en el contexto de relaciones íntimas.
Palabras Clave: *violencia doméstica, relación de pareja, solución de problemas, ensamblaje fisiológico.*

Domestic violence incidence, particularly in certain populations such as those attending Emergency Units or Mental Health Services, is very high. This paper reviews some basic concepts derived from original research aimed at clarifying the origin and maintenance of relationship dysfunction and applies them to the study of the interaction of those who report experiencing physical, psychological or sexual violence. It is concluded that the degree of relational harmony is inversely associated to the level of violence; the actions undertaken by couples who denounce violence when resolving problems, the base rates and the reciprocity of reinforcements and punishments, are similar to that of couples in conflict and the degree of physiological linkage is high. These mechanisms should be kept in mind when trying to understand, not only justify, predict and modify violent behaviours in the context of intimate relationships .
Key Words: *domestic violence, couple interactions, problem solving, physiological linkage.*

It is difficult to estimate the level of violence in the context of intimate relationships. Such estimation depends on how we define violence, what populations are studied, the methodology used for gathering data, whether they refer to a period of a year or to a lifetime, and on a series of variables referring to the subject that at times are tremendously difficult to evaluate (e.g. evolution, motivation…).

According to the Women's Institute (2002), within the general Spanish population this phenomenon has affected at least 4% of all women during the previous year and up to 15% report having been affected at some moment of their lives.

In other latitudes (USA), when we define violence as an assault, threat or intimidation on the part of a partner, between 8% and 14% of the users of a Primary Assistance Centre report having suffered from this in the last year and between 21% and 34% of these when we refer to their entire lives (Grynbaum, Biderman, Levy & Petasne-Weinstock, 2001)

The violence detected in Emergency Departments, a place where it could come to light with greater ease, referring to the previous year, was 11.7% and the lifelong accumulated prevalence for a person is 54.2% in the United States (Abbott, Johnson, Koziol-Mclain & Lowenstein, 1995); in the United Kingdom (Boyle & Todd, 2003) annual general incidence is 1.2% and, lifelong is 22.4% in the case of men and 22.1% in the case of women; in Canada the corresponding rates were 26% in the last year and 51% throughout life (Cox, Bota, Carter, Bretzlaff-Michaud, Sahai & Rowe, 2004).

Within the population who makes consultations regarding problems derived from the consumption of toxic substances, 22% admitted having been the target of violence (Easton, Swan & Sinha, 2000), while among women who ask for an abortion 21.6% report having suffered from violence in the last year and 31.4% at some time during their lifetime (Evins & Chescheir, 1996).

Cann, Withnell, Shakespeare, Doll & Thomas, (2001) recommend being extremely cautious when interpreting

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these data since its study reflects that the proportion of violence that family doctors, Mental Health and Emergency Services workers or gynaecologists are capable of detecting is infinitely lower than that detected in general surveys and that the degree of knowledge about the problem and the attitudes of the aforementioned professionals towards it, is still quite deficient and erratic.

It is possible that the increase in the number of domestic violence police reports, the media repercussion the increase in the number of research studies centred on this topic (the number of references between the years 2000-2006 when we introduce "domestic violence" on Medline goes up to 4746!) can be indicative of the degree of preoccupation and awareness in both the general population and the experts and social policy planners regarding this topic.

However, we understand that this greater preoccupation has not yet been translated into proper knowledge about the mechanisms involved or that this knowledge has not generated comprehensive actions or programs that make it possible to control.

Schumacher, Feldbau, Smith Slep & Heyman, (2001) have reviewed in detail the results of diverse studies, including only those published in the period between 1989-1998 that were methodologically well-controlled, regarding the risk factors for violence of men to women within the couple, coming up with a long list of individual (demographical, child development, attitudes, psychopathology, personality, jealousy, substance abuse...) and relational factors.

The objective of this review is:

a) To investigate the proportion among the people who use a Mental Health Centre derived from Primary Attention, who admit to being the target of different types of violence in the context of couple relationships.
b) To study the existent relationship between this type of violence and some of the mechanisms taken into account when explaining couple relationships, their maintenance or deterioration.
c) To outline the model that, in our understanding, better integrates the data known up to the present moment.

TYPES OF VIOLENCE AND FREQUENCY

In the Psychology Department of a Mental Health Centre we were able to interview a large number of couples, individually as well as in groups, and thoroughly analyse their way of communicating, of expressing feelings, wishes, desires and specially, the steps they follow in order to try to resolve disagreements. We were also able to analyse their answers to multiple questionnaires destined to measure their subjective perception of the degree of satisfaction in their relationship and their capacity of coming to an agreement, Dyadic Adjustment Scale (Spanier, 1976), their sexual desires, the Sexual Interaction Inventory, (Lopiccolo & Steger, 1974), desired changes in the behaviour of the other, Areas of Change Questionnaire (Weiss & Birchler, 1975), and, finally, the model of couple relationship that each of the members aspires to as well as the degree of harmony between such implicit models (Cáceres, 1996).

We have been able to complete all this information by also analysing some basic physiological reactions on the part of each member of the couple when they are in the presence of the other, in very special situations such as dissolving conflicts or coming to an agreement regarding topics that confront them (Cáceres, 1999).

When quantifying violence within the couple, aside from investigating through individual interviews with him and her, we have adapted questionnaires, the Violence Index (Hudson & Mcintosh, 1981), that allows us to revise the domestic violence police reports placed by the women and also by the men, through clear questions in relation to their behaviour and concrete actions that, in a wide sense, several authors (Corsi, 1994) consider violent, such as devaluation, hostility, cold treatment, and that finally facilitate the evaluation of both the frequency and the intensity of violence on three very different scales: Physical violence, Psychological violence and Sexual violence (Cáceres, 2002).

In this first study (Cáceres, 2002) 20 men and 33 women participated (N = 53), among who most were couples, having completed the questionnaires previously mentioned. They had been derived by their family doctor to a Mental Health Centre, essentially due to difficulties relating, which ended up affecting their health. The results show the existence of physical violence throughout the lifetime of the couple in 50.9% of the sample, and psychological violence in 48.5%. This type of violence does not seem to be exclusive to women since, regarding **physical violence** the global mean violence reported by men also surpassed the cut point of 10 on the scale of the questionnaire and the difference in the mean scores between the men and the women is nearly statistically significant ($p<0.058$). With respect to **psychological vio-**

lence the degree of violence reported by the women is also superior to that reported by the men, but in this case the difference does not even get close to statistical significance. These results were confirmed in a second study (Cáceres, 2004) with a much wider sample, in which 76 men and 90 women participated (N = 166), also being patients derived from Primary Attention to a Mental Health Centre essentially due to relationship problems. In this study 62 % of the subjects surpassed the score indicative of severe psychological violence. In the case of physical violence this percentage reached 46%. With respect to the **frequency** of certain violent behaviours, 4.8 % of the sample reports having been threatened with a weapon (6.7 % of the women and 2.6 % of the men); 7.8 % reported having been hit in the face and the head (11.1 % of the women and 3.9 % of the men), and 4.2 % have needed medical assistance due to punches (6.7 % of the women and 1.3% of the men). In none of these behaviours were the differences statistically significant. We should highlight that 41.9 % of the women declare being afraid of their husbands while 26% of the husbands say they are afraid of their wives. The percentage domestic violence police reports is greater among those who are in the process of separation than among those that, despite the conflict still remain together. Sometimes this fact is interpreted by the media as an act of machism "I killed her because she was mine". They rarely mention the number of problems that the process of separation entails in our country, where adversarial rather than mediational models have been followed (Cáceres, 2003).

COMMUNICATION STYLE, RELATIONAL HARMONY AND DOMESTIC VIOLENCE

The existing correlation between the level of relational harmony and the degree of violence is high and negative ($r = -560$; $p < .01$).

If we subcategorize the scores obtained on the Dyadic Adjustment Scale, in three subgroups, ("Very low", scores below 70; "Low", scores between 71 and 85; "Medium", scores above 90 –if we strictly follow this scale this score should be 110, but people with this level of harmony do not come to our consultations, the physical, psychological and sexual violence experimented is **inversely proportional to the level of harmony**. The differences between the subgroups classified as very low and low are statistically significant compared to the medium group ($F = 22.37$; $p < .001$). The opposite of abuse is not the absence of violence but good treatment.

With respect to the changes that each couple member expects and demands of the other, the couples that report a greater degree of violence demand more changes in the relationship and in the behaviour of their mate, especially the women (which supports the idea that they are less satisfied with the relationship or else that they are more demanding), petitions that are not always correctly perceived or interpreted by the other, for what we can see according to the scores regarding agreement and disagreement obtained from the Areas of Change Questionnaire (Cáceres, 2004)

Long ago several studies showed that couples in high conflict communicate in a different manner than couples who are harmonious (Birchler, 1973; Cáceres, 1992; Gottman, 1979). These differences have to do with what they say, but specially, with how they say it, the sequences they follow and the degree of physiological connection that is produced between them as long as the discussion continues.

What they say, the contents, are usually less useful in discriminating harmonious couples from conflictive couples, but when we do a micro-analytical analysis of faces, gestures, tones and postures we discover that harmonious couples are much more positive and less negative than couples in conflict (they smile more and get closer, make things easier, are less critical and less reproachful…). Couples in conflict adopt gestures, tones and postures that many would not doubt in labelling as "violence", at least psychological violence.

There also is what has been called **"reciprocity"**, that refers not only to the base rates of positive and negative aspects that characterize harmonious and conflictive couples but also to the promptness with which such elements are answered in the course of the interaction; harmonious couples are characterized by a **high reciprocity of positive elements** while couples in conflict return the negative ones more promptly and in an almost automatic manner. O'leary & Slep (2006) have shown that a high proportion of the men in their sample justify that their violence is triggered by the previous violence of their partners, while a high portion of the women say that their physical violence is provoked by the psychological violence initiated by the men…

Another phenomenon that some authors (Gottman & Levenson, 1986) have called physiological linkage: the contagion of the physiological acceleration from one to the other. This physiological linkage when the underlying emotions are analysed is not symmetric, rather there are subtle differences in the return and the contagion of neg-

ative elements of women and men. The negative emotions that predominate among men are rage and scorn, while the corresponding ones for women are sadness and fear. This asymmetry continues in the established sequences in the contagion of emotions: the rage in her generates rage in him, rage in him generates fear in her and her fear generates more rage in him! In addition, people seem to react differently cardiovascularily in the context of an argument: some become accelerated and others slow down, which does not imply a sympathetic deactivation but more a different physiological "directional fractioning" that possibly reflects different personality typologies (Cáceres, 1999; Gottman, Jacobson, Rushe, Short & Babcock, 1995). These different types of person, which in non-expert contexts for improving their comprehension we have denominated "pit-bulls" and "cobras" respectively because although they can be equally lethal they react in a different way (Jacobson & Gottman, 1998) both in the course of the violent episode and in the moments and ways of inflicting violence throughout the separation process, if there was one.

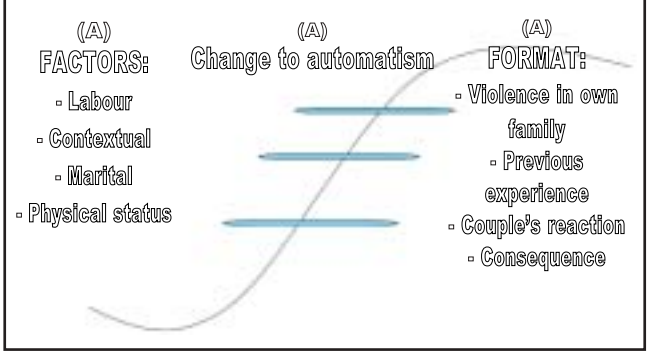
These results obtained in our surroundings are no different from those obtained by researchers from other countries (Birchler, 1973; Gottman, 1979; Jacobson & Waldron, 1978; Jacobson, Gottman, Waltz, Rushe, Babcock & Holtzworth-Munroe, 1994) who also show that:

a) When communicating with people different from our partners we all know how to be more positive and more flattering ("Where there is confidence there is disgust" as the Spanish saying goes).

b) With strangers, with whom we know how to be more positive, we never have to discuss such complicated problems and with such emotional burden as the ones we ought to discuss with our intimate partners and we are definitely never expected to come to exact agreements.

FIGURE 1

DOMESTIC VIOLENCE: BIOPSYCHOSOCIAL MODEL



c) When we talk about neutral topics we sometimes know how to be generous even with the partner we live with…The existing correlation between negative manners (non-verbal communication) and conflict is especially high.

d) Couples in conflict react specially to short-term contingencies; they are overtaken by immediacy, while harmonious couples know how to wait for long-term reinforcements without letting themselves get carried away by the momentary overexcitement.

But these characteristics do not seem to be present from the beginning of the relationship. When the degree of satisfaction and of violence in young recently formed couples, who still do not live together on a permanent basis, is compared with that of couples of many years who are in conflict, our results suggest that the degree of satisfaction in the relationship vanishes with the passage of time and this deterioration in the relationship, at the same time as it increases the mistrust in resolving the problems in an mutually assumable manner, also increases violence (Cáceres & Cáceres, 2006).

BIOPSYCHOSOCIAL MODEL OF DOMESTIC VIOLENCE

Many of these data could be summarized and integrated into what we have called the bio-psycho-social model of violence adapted from Rosembaum, Geffner & Sheldon, (1997). (Figure 1)

This models would imply the following assumptions:

1. People get physiologically activated according to diverse sources of stress (labour, marital…)
2. Having surpassed certain levels of activation, most people would enter a period of automatic reaction. We can distinguish:
   2.1. On the thresholds that determine the change to "automatic pilot" in a constant manner (e. g. personality factors) or responding to the demands of the moment (e. g. alcohol).
   2.2. In the way of acting and of controlling cognitive processes when they are in such a state (possibly depending on their past experience, their school of social learning, their personality typology…).

CONCLUSIONS

Based on our data we can formulate the following conclusions:

a) There are high percentages of physical, psychological and sexual violence in couples, especially in certain subpopulations such as those that come to a

Mental Health Centre due to relationship problems. The conflict seems to work as the breeding ground for the development of violence although it is probably not the only determinant element. Holtzworth-Munroe, Waltz, Jacobson, Monaco, Fehrenbach & Gottman, (1992) have shown that if there is violence in half of the couples in conflict , this violence is also present in a third of couples that do not show any conflict. Schumacher & Leonard, (2005) discovered how even though there are detonating sequences in the course of discussions that are risk factors for violence, conflict does not seem to be the only variable determinant for physical violence.

b) This situation does not seem to be this way from the beginning of the relationship. Many couples appear to know how to live in a non-violent manner at the beginning of the relationship. Later, especially when discrepancies and conflict in the process of resolution begin, changes in the partner are demanded, and the way of negotiating such changes already implies a certain degree of violence.

c) Some of the mechanisms offered for explaining the deterioration of romantic relationships (negative reciprocity, base rates of negative non-verbal elements, physiological activation…) can already be considered, in themselves, concrete examples within the violence continuum.

d) There seems to be an assembly, both physiological and communicational between her and him, with established sequences that are repeated with certain automatism. (Gottman & Levenson, 1999), as in the links of a chain. With one, we can expect the other. Once a violence sequence has emerged in the context of a discussion, there is nothing that a woman can do to deactivate such a sequence (Jacobson, Gottman, Waltz, Rushe, Babcock & Holtzworth-Munroe, 1994)

We believe these processes to be specially relevant and should be taken into account when developing sanitary policies, in the prevention of violence, the decrease in the number of police reports or of their early retirement, in the context of intimate relationships and, of course, when planning treatment and rehabilitation programs for both the victims of violence and the aggressors.

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