Psychological treatment of slot-machine pathological gambling: a case study

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Clinical Case Studies, 2000, Vol. 1, Issue 3, 240-253.

SUMMARY

In this paper the treatment with stimulus control, exposure and relapse prevention of a patient affected by pathological gambling is described. The patient, a 47-years-old woman, was suffering from this disorder for five years. The treatment consisted of nine individual sessions (five sessions of *stimulus control* and *exposure* and four sessions of *relapse prevention*) in a period of ten weeks. At the end of 1-year follow-up, the patient was much improved, without gambling behavior nor associated symptoms, as well as with a greater overall adaptation. The implications of this case for clinical research and practice are discussed.

Key words: Pathological gambling. Stimulus control. Exposure. Relapse prevention. Treatment.

1. THEORETICAL AND RESEARCH BASIS

Pathological gambling is a behavioral disorder that was first classified as a nosological entity with specific diagnostic criteria in the *DSM-III* (American Psychiatric Association, 1980). Currently, pathological gambling is categorized in the *DSM-IV* (American Psychiatric Association, 1994) as an impulse control disorder. It is a behavioral addiction characterized by emotional dependence on gambling and by a chronic and progressive failure in resisting the impulse to gamble. As a consequence, important alterations occur in the family, social, working and personal environments of pathological gamblers, which negatively interfere with normal functioning in daily life. At the same time, other associated clinical problems are not rare, such as depression, increased risk of suicide, and drug/alcohol abuse (Báez, Echeburúa & Fernández-Montalvo, 1994; McCormick & Ramírez, 1988).

Pathological gambling is a disorder of great social relevance. According to epidemiological studies in Spain (Becoña, 1993; Irurita, 1996; Legarda, Babio & Abreu, 1992), the prevalence rate ranges between 1% and 3% of the population, with an additional 3%-4% of individuals at risk. Those figures are similar to those obtained in other countries (*cf.* Bland, Newman, Orn & Stebelsky, 1993; Volberg & Steadman, 1988, 1989). The main therapeutic demand in our environment comes from the slot machine gamblers (Fernández-Montalvo & Echeburúa, 1997).

From a clinical point of view, the therapeutic objective in the treatment of pathological gambling, as it usually is in other addictive disorders (Echeburúa & Báez, 1994), is abstinence. As far as the effectiveness of therapy is concerned, there have been few controlled studies. Furthermore, most of the studies refer generally to combinations of techniques in which the effective component cannot be always isolated (Blaszczynski, 1985, 1993).

However, three lines of research can be delineated in the treatment of pathological gambling: *imaginal desensitization* -a variant of systematic desensitization-, designed to cope with the psycophysiological hyperactivation (*cf.* McConaghy, Armstrong, Blaszczynski & Allcock, 1983, 1988; Blaszczynski, McConaghy & Frankova, 1991); *cognitive restructuring*, justified by the high number of cognitive distorsions being present in the gamblers (*cf.* Sylvain & Ladouceur, 1997); and, finally, *in vivo exposure with response prevention* and *stimulus control* , designed to face the craving for gambling and to increase expectations of self-effectiveness regarding the capacity to gambling (Echeburúa, Báez & Fernández-Montalvo, 1996; Echeburúa, Fernández-Montalvo & Báez, 2000). The results obtained with these techniques have been satisfactory in assessments carried out just after treatment. In some cases, even a rate of 100% abstinence has been reached (*cf.* Echeburúa *et al.*, 1996). However, as happens in other addictions, a substantial percentage of individuals (around a third of total) relapse in the first months after therapy. Therefore, relapse prevention is the main challenge for the treatment of addictive disorders (Echeburúa, Fernández-Montalvo & Báez, 2001).

2. CASE STUDY

The main goal of this paper is to describe the psychological treatment of a woman affected by slot-machine pathological gambling. The patient was treated in the first phase of the treatment with stimulus control and *in vivo* exposure with response prevention, which, according to some previous studies (Echeburúa *et al.*, 1996, 2000), seems to be the most adequate treatment for the initial cessation of this kind of problem. In the second phase, a strategy to maintain abstinence from gambling in the long term was implemented.

The specific interest of this case, which has been treated in a controlled clinical trial (Echeburúa *et al*., 2000), is related to the gender of the patient -there are few studies of women in the field of therapy of pathological gambling- and to the focus of treatment: behavioral techniques for immediate abstinence and cognitive techniques for relapse prevention.

The patient is a 47-years-old woman, housewife, married for 25 years with a plumber and having two daughters (23 and 20 years-old) and one son (11 years-old). The patient was suffering from pathological gambling for five years and she sought treatment at the Pathological Gambling Center of Rentería (Spain) in March 1999.

3. PRESENTING COMPLAINTS

Nowadays, the patient plays the lottery (with an approximate weekly expenditure of 22$) and plays on slot machines (approximately 165$ every week). More concretely, she goes three times a week to the slot machine gallery at the hotel -never anywhere else- and spends around 54$ each day, although she does recognize that on one occasion she even managed to lose 270$. When she wins money, she does not leave the gambling area, but, instead, stays gambling longer until she loses everything. She only allows for 1$, which she keeps in a separate pocket, for the bus trip back home.

She feels depressed and ashamed because she is forced to lie. When she gets back home, she usually finds people from her town on the bus and she no longer can think up an excuse for making the trips. Moreover, when she arrives back in her town, her old friends are usually at a coffee shop near the bus stop and when she is with them, she has to think up new excuses. She is totally despaired and can no longer take it and thinks nobody believes her any more. When she is very down, she often drinks a few too many "*to forget it all*".

At home the situation isn't any better. She is very nervous and cannot even sleep. When she gets home, she does not like talking nor does she feel like doing any housework. Nobody in her family knows anything about her gambling, though she does think they suspect something. One time she commented to them that she had a problem but did not dare tell them the truth. She has let the house run down and even her personal appearance. Moreover, her daughters confront her since it is not possible to talk to her. Her husband, who up to now has not worried about money at home, has begun to ask her to account for her spending. She is very

desperate because she has spent all of her savings. Moreover, the gambling has added up to become a 1,650$ debt from a small personal loan that she can no longer meet. She has never stolen, but on some occasion has gone through the drawers in her daughters' rooms in search of money to gamble with. Every night when she goes to bed, she thinks that she is not going to gamble the next day, however, she cannot help it. Her thoughts about gambling go on non-stop. The relationship with her husband is getting worse and worse. They have not have sexual relations for 2 months since she feels incapable and he has lost interest.

The patient insists that she does not want anyone in her family to find out. She is afraid that, if her husband finds out, he will file for divorce. She has come to the therapist's office ready to do anything she can to quit gambling since she can no longer cope with the situation she finds herself in and feels she is incapable of controlling it by herself. Due to the high level of motivation which the patient shows to receive treatment -something which is not very usual in this type of patients- the assessment is being directly undertaken prior to therapy.

4. HISTORY

Her relationship with gambling began approximately 10 years ago. At that time, she began to go out with her friends to horse races and to bet small amounts. She never won very much but she does remember that she had a good time. At home, her husband did not know that she would go to the races and she dreamed of hitting it big and give him a nice surprise. Nevertheless, she never lost control of herself in this kind of betting.

Soon afterwards, she began to play football pools. She had never understood very much about football but she read the papers carefully and, based on the standings of the team, she decided on the results. However, this kind of gambling was to last for a short time (around a year) since, according to her own words, she was never very taken by it.

Later on she took up buying lottery tickets. The weekly expenditure was around 22$ which she continues to spend to date. However, although it is a relatively heavy amount (approximately 88$ a month), she never got over it but she did keep it under control.

What did make her lose control were the so-called slot machines. It all began 6 years ago. She was at a coffee shop waiting for a friend. While waiting, she saw how a man who was playing on a slot machine won a special prize. Ever since then, she got into the habit of spending the change from the price of the coffee on slot machines. However, she gradually became more and more hooked and spent more and more time playing on the slot machines.

As a result, she began to drift away from her friends. She preferred to be by herself so as not to be seen and to feel more at ease. At first, she would play on the slot machines in her home town. However, she began to go to San Sebastian (the

capital city). In this way, neighbours and people who knew her wouldn't see her. In San Sebastian, she went to a gallery of slot machines at a well-known hotel. Since then, her behaviour has grown progressively worse and she has been spending more and more money. For example, on the same day that she came to the therapist's office for the first time, she had been gambling immediately before and she wound up only with the money for a bus ticket back home.

The medical and psychological record of the patient is characteristic of a person with normal health who has not suffered any grave illness nor has been operated on. She has never received any psychiatric treatment before suffering from said disorder. There are also no previous psychopathological episodes nor medical and/or psychological visits for this reason in the immediate family.

5. ASSESSMENT

The pretreatment assessment measures were administered to the patient before beginning the initial treatment programme. Three assessment sessions, with a duration of one hour, were carried out with the patient and the content of the therapy was explained to her. When initial therapy was finished, an intratreatment assessment session was carried out in order to establish therapeutic results -the main goal of this treatment was total abstinence of gambling-. Moreover, this assessment session was the initial one of the relapse prevention programme. The following evaluations -always in the format of a personal interview- took place when the relapse prevention programme was finished and in the 1-, 3-, 6- and 12-month follow-ups. All the assessments were conducted by an experienced clinical psychologist.

The diagnosis of pathological gambling was made according to *DSM-IV* diagnostic criteria. In addition, a structured interview on gambling history was carried out (45 minutes) in the first assessment, the objective of which was to gather data related to the beginning and subsequent development of the gambling problem.

The assessment tool, related directly to pathological gambling, was the *South Oaks Gambling Screen (SOGS)* (Lesieur & Blume, 1987). The *SOGS* is a screening questionnaire composed of 20 items which are related to gambling behavior, loss of control, the sources for obtaining money and the emotions involved. The range is from 0 to 19 and the cut-off point, which serves to identify probable pathological gamblers, is 4 in the spanish version of Echeburúa, Báez, Fernández-Monalvo & Páez (1994). This tool is used only in the first assessment because it is not a test sensitive to therapeutic change (Echeburúa *et al.*, 1996).

Some relevant information about gambling dependent variables was also gathered: the amount of money, the frequency, and the time dedicated weekly to gambling on average. The patient's perception of the seriousness of the *frequency*, *time* and *money* invested in gambling was also evaluated, along with the *frequency of thoughts* about gambling and the *subjective need to gamble*: this is called the *patient's subjective indicator*. The scores for each variable vary from 0 (nothing) to 4 (very much) on a Likert-type scale, and the summed total ranged from 0 to 20. These same

questions were asked of one patient's family (in this case, the older daughter) to compare to patient self-report. This is called the *family member assessment.*

In addition to gambling-related measures, other psychopathological indicators usually associated with gambling were evaluated: depression (*Beck Depression Inventory*), anxiety (*State Trait Anxiety Inventory*) and lack of adaptation to daily life *(Inadaptation Scale)*. Tools were used that have been shown to be sensitive to therapeutic change.

The *Inadaptation Scale (IS)* (Echeburúa & Corral, 1987) reflects the extent to which gambling affects different areas of daily life: work, social life, free time, marital adjustment, and family adjustment. This tool, with 6 items that range from 0 to 5 on a Likert-type scale, is also composed of a global scale which reflects the degree of global inadaptation to daily life. The range of the total scale is from 0 to 30 (the higher the score, the greater the inadaptation). The version used in this study is described in Fernández-Montalvo & Echeburúa (1997).

The results of pretreatment assessment are shown in *table 1*.

PLACE TABLE 1 HERE

The socioeconomic level of the patient was low-middle class. Gambling behavior was characterized as being frequent, entailing a considerable amount of money spent, and involving a substantial amount of time. Moreover patient were heavily in debt (1,650 $).

From a psychopathological point of view, the patient was characterized as being anxious, with relevant depressive simptoms and wiht important negative consequences in dayly life.

6. CASE CONCEPTUALIZATION

a) Explanatory hypothesis and motivation for treatment

Once the assessment is finished, it was explained to the patient and her eldest daughter, who was going to act as a co-therapist, what characteristics there are in pathological gambling behaviour, what the mechanism for acquiring it were, and how it was maintained in this case, and what the treatment was going to consist of, as well as the proposed therapeutic goal: total abstinence from gambling. This is the most suitable goal when the patient is, as in this case, a pathological gambler in the strictest sense (Fernández-Montalvo & Echeburúa, 1997).

These prior explanations are of great interest to motivate the patient for treatment and to get the adherence to the therapeutic prescriptions. The initial motivation in this case came from family pressure and her immediate social

surroundings -it was getting more and more difficult to hide her gambling problem-, as well as the patient's perception that she was unable to control it by herself.

As a way to get her actively involved in the treatment and to motivate her to change, it has been suggested to her that she should tell her husband and her elder daughters about the existing problem and her firm commitment to change. The therapist offered to talk to them later on to clear up any doubts and to give them any necessary support.

The patient is an impulsive person and emotionally unstable. Her slide into gambling was gradual, going from one kind of game to another until she was faced with her uncontrollable gambling urge with slot machines. At first, gambling was of a merely social and recreative nature -she gambled with her friends to pass the time away-. However, the casual observation of how a slot machine player won a jackpot led her to have expectations that in this way she could win a jackpot too. In this way she began to bet more often -her previous gambling habit was already considerable- and she preferred to do it alone, although she did meet sporadically with another three gamblers who she had recently met. In fact, she gradually withdrew from her circle of friends and dedicated more and more time to gambling. Within a short period of time, the only thing that was exciting to her was being in front of a slot machine. The discriminative stimuli which triggered off gambling behavior become larger and larger until she totally lost control.

The treatment plan, as well as its overall guidelines, were explained to the patient and her daughter. It was emphasized that the only way to overcome the addiction was by controlling the stimuli and with the help of regular exposure to slot machines without actually winding up playing on them. The tasks were initially to be troublesome, but the therapist, in order to motivate the patient, intended to propose to her that the programme should be gradual, to show her some skills to confront this initial discomfort and to be at her disposition should anything negative happen. Likewise, he was going to draw up a subsequent plan in order to prevent any relapses.

b) Treatment selection

The therapist who carried out the assessment and treatment of the patients is a clinical psychologist with six years of experience in cognitive-behavioral treatment of pathological gambling. The treatment, included assessment, lasted for 3 months (3 assessment sessions and 9 weekly therapeutic sessions). The therapeutic techniques used were the following ones:

Stimulus control and gradual "in vivo" exposure with response prevention. Stimulus control refers basically to maintaining control of money (not taking money or credir cars with her, except what is strictly necessary; reporting all expenses to a relative; managing income, etc.) and to avoiding *situations or routes of risk* as well as gambling friends. As treatment advances, the control of stimuli is gradually faded, except avoiding gambling friends.

The gradual "in vivo" exposure with response prevention forces the subject to experience *the desire to gamble* and to learn how to *resist* this desire in a gradually more self-controlled way. The aim of systematic exposure to cues and situations of risk is to make the cues lose their power to induce urges and gambling behavior. Exposure task took place 6 days a week for a minimal time of 15-20 minutes. Patient could not drink alcohol or other drugs during the exposure tasks. The characteristics of the application of this technique are shown in *table 2*.

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These two techniques were used sequentially in an individual therapy format. Stimulus control can stop gambling behavior, but if planned exposure is not carried out, the probability of relapse in the relatively near future is greater. A detailed diary of the sessions, along with the corresponding homework, is included in Fernández-Montalvo & Echeburúa (1997).

Relapse prevention. The first goal of this program is to train the patient to identify high-risk situations for relapse; the second goal is to provide her adequate strategies for coping with problematic situations. In this way, the patient learns to identify and to discriminate the risk situations which can lead to an initial lapse in gambling. The usual high-risk situations which are contemplated at this programme are social pressure, negative emotional states (e.g., anxiety, depression and anger) and interpersonal conflicts. These three situations are the main risk factors for relapse (*cf.* Marlatt & Gordon, 1985).

However, the programme also includes the confrontation of the patient with specific high-risk situations, as well as an educational intervention about some factors which may specifically contribute to relapse in pathological gamblers (Fernández-Montalvo, Echeburúa & Báez, 1999): alcohol abuse, irrational expectations about gambling, lack of money planning, lack of pleasure activities, and so on. Finally, an individualized exposure programme for high-risk situations is elaborated. The goal of exposure is to practice the confrontation strategies in a systematic way and so to increase self-efficacy expectations.

7. COURSE OF TREATMENT AND ASSESSMENT OF PROGRESS

a) Course of treatment

Stimulus control

The *first treatment session* was dedicated to organizing the stimulus control. Her eldest daughter was chosen as a co-therapist, who at the outset was surprised at the seriousness of her mother's problem although she could clearly perceive that something was happening to her. In this way, her daughter gained control of the money (credit cards, pocket money, etc.) and the patient only received just the

money for daily shopping. Nevertheless, she later had to account for all of the money she had spent from shopping receipts. On the other hand, she was told not to loiter in bars with slot machines and to avoid contact with friends that gambled.

Likewise, a list of pending debts was drawn up and a realistic plan to pay them back was set up, strengthening the patient's responsibility to pay them. In this way the patient shoud reach an agreement with her creditors, with the express request that they should never lend her any money on any other occasion.

Stimulus control and gradual "in vivo" exposure with response prevention

In the *second session*, the patient came to the office very happy. She had managed to fulfil all of the therapeutic prescriptions and, for the first time in a long time, had spent one whole week without gambling. This headway was later confirmed by the co-therapist. To that end, with the goal of reinforcing the period of abstinence achieved, it was decided to continue with the stimulus control along the same lines as in the previous session. Likewise, in this session, an exposure technique was begun and it was explained both to the patient and the co-therapist what type of corresponding tasks there were to be in the first week of exposure (*table 2*). The patient had to write down the exposure tasks in a record sheet specifically chosen for that task.

In the *third session*, the patient continued to go without gambling and did not present any problem with exposure tasks. Nevertheless, during this week there was a slight worsening in her mood. After going into more detail about this aspect, it was observed that the patient, after giving up her gambling, had many free hours on her hands which she previously had dedicated to gambling and now did not know what to do with that time. Concretely, she spent the whole afternoon watching television and, as a result, her bad mood, as well as her thoughts on gambling, increased. Thus, with the patient's consent, a list of possible reinforcing and alternative activities to replace gambling was drawn up (to go for walks with friends, get exercise, sewing, attending a computer science class, etc.), with the goal that the patient should do them, thereby limiting the risk of relapse.

On the other hand, the stimulus control began to be faded. Concretely, the patient now received a fixed sum of money as a weekly shopping allowance with the goal of strengthening her responsibility in administering the allotted money. Nevertheless, it was still necessary for all of the expenditure to be accounted for by the co-therapist and she was not allowed to be in contact with her gambling friends. Likewise, the exposure programme corresponding to the second week was continued (*table 2*).

In the *fourth and fifth sessions*, the gradual fading of the stimulus control was continued due to the fact that the patient was feeling better and stayed off gambling. Likewise she had begun swimming at the municipal swimming pool during her free hours and felt more relaxed. She also continued with the exposure tasks (corresponding to weeks 3 and 4 respectively) with an ever increasing amount of money. When the patient completed the entire exposure programme without any considerable discomfort, it was deemed to have ended.

Relapse prevention

In the subsequent sessions (from 6th. to 9th.), after undergoing an intratreatment evaluation, treatment directed to relapse prevention was initiated, this time without the co-therapist. In these sessions, coping skills to deal with the main risk situations were provided: bad mood, interpersonal difficulties, social pressure, alcohol drinks, money management, etc.

Concretely, in the *sixth session*, the main situations in which a relapse could occur were identified, as well as the patient's skills to cope with them adequately. Likewise, there was a training session in relaxing techniques with the goal of preventing the high level of anxiety from turning into a situation that could lead to a relapse.

In the *seventh session*, dedicated to interpersonal problems, patient was taught how to cope with usual difficulties in everyday life with the most adequate techniques of solving problems. Likewise, patient was informed about the risk of excessive drinking for relapse in pathological gambling, but counselling was enough and was not necessary a training program of controlled drinking.

Session eight was dedicated to confronting social pressure. Patient was trained in an assertive way to refuse invitations for gambling as well as to deal with this situation by using adequate social skills. Likewise, in this session the patient paid up all of her debts. In that way, she was prevented, in this aspect, from the possible danger of relapsing into gambling. The relief from paying off a debt and money now being available have been shown to be a precipitating factor in the relapse of many gamblers (Fernández-Montalvo *et al.*, 1999).

Finally, in *session nine*, the patient was prepared to cope with negative emotional states. Concretely, there was a cognitive intervention to restructure irrational thoughts related to negative mood. Likewise, special emphasis was placed on putting into practice fun and social activities in order to restart a satisfactory everyday lifestyle.

b) Assessment of progress

In this study *therapeutic success* was defined as total abstinence of gambling. Likewise, it was seen that there has been improvement in the psychopathological variables associated and her everyday life. The results obtained from the different moments in the assessment are shown in *table 3*.

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As can be seen in the intratreatment evaluation, the stimulus control and *in vivo* exposure with response prevention may be enough to achieve a total abstinence from gambling. Likewise, in this moment there is a considerable improvement in the psychopathological variables associated.

8. COMPLICATING FACTORS

In this case the therapist could not have the patient's husband as cotherapist because he was not informed anything at all about her wife's illness and she did not dare to let him know it in order not to be abandoned. Therefore, patient's daughter, in spite of not being so adequate as husband, was choosen as alternative cotherapist.

A complicating factor for the long-term improvement was the poor repertory of reinforcing behaviors alternative to gambling. It costed a lot to involve patient in other hobbies different from gambling in order to motivate her for everyday life and prevent from relapse.

9. FOLLOW-UP

Afterwards, once the treatment is completed with an intervention in relapse prevention, abstinence from gambling remains on course and progressive improvement in the psychopathological variables associated can be observed up to the point of one year's follow-up, when the improvement seen is already stabilized. Likewise, the patient looks better, is concerned about her personal appearance, and is more diligent about household matters. The couple's relationship has improved and she has gone back to her old, non-gambling friends.

10. TREATMENT IMPLICATIONS OF THE CASE

In this text, the cognitive-behavioural treatment of a woman diagnosed with pathological gambling disorder has been presented. As this addiction affects more men and as women are more reluctant to recognize the problem and to search for therapeutic help, it is rare to find a scientific bibliography on descriptions of clinical cases of women. The nature of the symptoms presented in this case include the basic characteristics of pathological gambling behaviour: loss of control, alteration of decisive areas (family, social life, etc.), incessant lying, personal negligence, etc.

The treatment of pathological gambling has, in the first instance, the goal of helping the patient achieve abstinence and to get back in control of her life and, secondly, to teach suitable strategies to cope with difficult situations where there is a risk of relapse. In this sense, exposure treatment, initially used in the field of anxiety disorders, has begun to be used recently in different clinical trials. As for addictive behaviour in particular, the results gained from this technique to cope with craving, used together with the stimulus control, have been shown to be clearly encouraging in achieving the goal of abstinence. In the case presented, the patient achieved abstinence by applying these two techniques. These results match those obtained in two previous studies from our group (Echeburúa *et al.*, 1996; 2000). Therefore, the combination of these two techniques can be considered, at this time, a treatment of choice in achieving cessation of gambling behavior as well as improvement in the associated psychopathological variables.

From another perspective, applying specific relapse prevention programmes

is most useful to maintain the positive results over the long run. It is a question of helping the patient identify the main situations where there could be a risk of relapse, of giving them more suitable strategies to confront their addiction and, in the very end, to put to the test the strategies learnt in the therapist's office by using controlled exposure in real life situations where there might be a risk (Marlatt & Gordon, 1985). Relapse prevention programmes have been shown to be useful in the concrete case of pathological gambling (Echeburúa *et al.*, 2000).

In any case, from the point of view of cost and benefit, the programme proposed is brief (only 12 hours of therapist-patient contact over a total period of 3 months), it is well-structured, and has been shown to be effective in the long run.

11. RECOMMENDATIONS TO CLINICIANS AND STUDENTS

Clinicians and students interested in the treatment of pathological gambling should consider the main following points:

a) to develop strategies of motivation for therapeutic change because this point may be more important than treatment in itself.
b) to use strict stimulus control in the first phase of therapy. In this way patient can feel far away from gambling and to learn how to cope with high risk situations.
c) to involve exposure, in the second phase of therapy, as the choice treatment to cope with craving and to resist the desire to gamble.
d) to provide, after initial treatment, adequate strategies for coping with problematic situations in order to prevent from relapse and to maintain therapeutic success in the long term.

Future research should concentrate on determining the specific weight of the components of this programme.

REFERENCES

American Psychiatric Association (1980). *Diagnostic and Stadistical Manual of Mental Disorders (3rd. ed.)*, Washington, DC: APA.

American Psychiatric Association (1994). *Diagnostic and Statistical Manual of Mental Disorders (4th. ed.).* Washington, DC: Author.

Báez, C., Echeburúa, E. & Fernández-Montalvo, J. (1994). Características demográficas, de personalidad y psicopatológicas de los jugadores patológicos de máquinas tragaperras en tratamiento: un estudio descriptivo. *Clínica y Salud, 5*, 289-305. (Demographic, personality and psychopathological characteristics of slot-machine pathological gamblers in treatment: a descriptive study)

Becoña, E. (1993). *El juego compulsivo en la comunidad autónoma gallega*. Santiago de Compostela. Xunta de Galicia. (Pathological gambling in Galicia)

Bland, R.C., Newman, S.C., Orn, H. & Stebelsky, G. (1993). Epidemiology of pathological gambling in Edmonton. *Canadian Journal of Psychiatry, 38*, 108-112.

Blaszczynski, A.P. (1985). A winning bet: Treatment for compulsive gambling. *Psychology Today, December*, 38-46.

Blaszczynski, A.P. (1993). Juego patológico: una revisión de los tratamientos. *Psicología Conductual, 1*, 409-440. (Pathological gambling: A review of treatments)

Blaszczynski, A., McConaghy, N. & Frankova, A. (1991). Control versus abstinence in the treatment of pathological gambling: A two to nine year follow-up. *British Journal of Addictions, 86*, 299-306.

Echeburúa, E. & Báez, C. (1994). Tratamiento psicológico del juego patológico. En J.L. Graña (Ed.). *Conductas adictivas: teoría, evaluación y tratamiento*. Madrid. Pirámide. (Psychological treatment of pathological gambling. In J. L. Graña (Ed.). *Addictive behaviors: theory, assessment and treatment*.)

Echeburúa, E., Báez, C. & Fernández-Montalvo, J. (1996). Comparative effectiveness of three therapeutic modalities in the psychological treatment of pathological gambling: long-term outcome. *Behavioural and Cognitive Psychotherapy, 24*, 51-72.

Echeburúa, E., Báez, C., Fernández-Montalvo, J. & Páez, D. (1994). Cuestionario de Juego Patológico de South Oaks (SOGS): validación española. *Análisis y Modificación de Conducta, 20*, 769-791. (South Oaks Gambling Screen: Spanish validation)

Echeburúa, E. & Corral, P. (1987). *Escala de Inadaptación*. Manuscrito no publicado. (Inadaptation Scale) Unpublished manuscript.

Echeburúa, E., Fernández-Montalvo, J. & Báez, C. (2000). Relapse prevention in the treatment of slot-machine pathological gambling: long-term outcome. *Behavior Therapy, 31*, 351-364.

Echeburúa, E., Fernández-Montalvo, J. & Báez, C. (2001). Predictors of therapeutic failure in pathological gamblers following behavioural treatment. *Behavioural and Cognitive Psychotherapy, 29*, 369-373.

Fernández-Montalvo, J. & Echeburúa, E. (1997). *Manual práctico del juego patológico. Ayuda para el paciente y guía para el terapeuta*. Madrid. Pirámide. (Practical handbook of pathological gambling)

Fernández-Montalvo, J., Echeburúa, E. & Báez, C (1999). Las recaídas en el juego patológico: un estudio de las situaciones precipitantes. *Revista de Psicopatología y Psicología Clínica, 4*, 115-121. (Relapses in pathological gambling: a study of ¿¿precipitantes?? situations)

Irurita, I.M. (1996). *Estudio sobre la prevalencia de los jugadores de azar en Andalucía*. Sevilla. Comisionado para la Droga. Consejería de Asuntos Sociales. Junta de Andalucía. (Prevalence of pathological gambling in Andalucia. Seville)

Legarda, J.J., Babio, R. & Abreu, J.M. (1992). Prevalence estimates of pathological gambling in Seville (Spain). *British Journal of Addictions, 87*, 767-770.

Lesieur, H.R. & Blume, S.B. (1987). The South Oaks Gambling Screen (SOGS). A new instrument for the identification of pathological gamblers*. American Journal of Psychiatry, 144,* 1184-1189.

Marlatt, G.A. & Gordon, J.R. (Eds.) (1985). *Relapse prevention: Maintenance strategies in addictive behavior change.* New York. Guilford Press.

McConaghy, N., Armstrong, M.S., Blaszczynski, A. & Allcock, C. (1983). Controlled comparison of aversive therapy and imaginal desensitization in compulsive gambling. *British Journal of Psychiatry, 142*, 366-372.

McConaghy, N., Armstrong, M.S., Blaszczynski, A. & Allcock, C. (1988). Behavior completion versus stimulus control in compulsive gambling. Implications for behavioral assessment. *Behavior Modification, 12*, 371-384.

McCormick, R.A. & Ramírez, L.F. (1988). Pathological gambling. En J.G. Howells (Ed.). *Modern perspectives in psychosocial pathology*, New York. Brunner/Mazel Inc.

Sylvain, C. & Ladouceur, R. (1997). Cognitive and behavioral treatment of pathological gambling: a controlled study. *Journal of Consulting and Clinical Psychology, 65*, 727-732.

Volberg, R.A. & Steadman, H.J. (1988). Refining prevalence estimates of pathological gambling. *American Journal of Psychiatry, 145*, 502-505.

Volberg, R.A. & Steadman, H.J. (1989). Prevalence estimates of pathological gambling in New Jersey and Maryland. *American Journal of Psychiatry, 146*, 1618-1619.

TABLE 1: RESULTS OF PRETREATMENT ASSESSMENT

Gambling variables	
South Oaks Gambling Screen (SOGS) *(Range: 0-19)*	11
Subjective indicator *(Range: 0-20)*	16
Family assessment *(Range: 0-20)*	16
Gambling frequency	3 days/week
Money invested in gambling	165 $/week
Time invested in gambing	6 hours/week
Psychopathological variables	
Anxiety (STAI-S) *(Range: 0-60)*	35
Depression (BDI) *(Range: 0-63)*	29
Inadaptation (IS) *(Range: 0-30)*	21

TABLE 2: CHARACTERISTICS OF EXPOSURE IN PATHOLOGICAL GAMBLING

EXPOSURE	CHARACTERISTICS
1st. week of exposure	The cotherapist (a relative or a close friend) is together with the patient when he is doing exposure to slot-machine. Patient does not take any money.
2nd. week of exposure	The cotherapist goes with the patient to the local of gambling, but stays out waiting for him when the patient is doing exposure. The patient takes only some coins to pay a soft drink.
3rd. week of exposure	The cotherapist stays at home when the patient goes to he local of gambling for doing exposure. If the patient is in a jam, he can phone the cotherapist. The patient takes restricted money, but not only a few coins.
4th. week of exposure	The cotherapist does not take part any longer in the exposure task. Patient can take money without any restriction.

TABLE 3: RESULTS OF TREATMENT

Variables	Pretreatment	Intratreatment	Posttreatment	1 month	3 months	6 months	12 months
Subjective indicator	16	2	1	0	1	0	0
Family assessment	16	5	3	3	2	0	0
Gambling frequency	3	0	0	0	0	0	0
Money spent	165$	0	0	0	0	0	0
Time invested	6	0	0	0	0	0	0
Anxiety (STAI-S)	35	25	14	12	9	8	8
Depression (BDI)	29	15	8	6	4	4	4
Inadaptation (IS)	21	20	13	8	2	1	1