Treatment of Behavioral Addictions

Utilizing the Feeling-State Addiction Protocol:

A Multiple Baseline Study

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Abstract

Behavioral addictions treatment for these behaviors usually consist of some form of cognitive behavioral therapy. The Feeling-State Addiction Protocol (FSAP), based on The Feeling-State Theory of behavioral and substance addiction, proposes that, just as single-event traumas can become fixated with negative feelings, intensely positive events can become fixated with positive feelings. This fixated linkage between an event and a feeling is called a feeling-state (FS). A multiple baseline study of the FSAP was performed utilizing only the steps of the protocol that involved the processing of the FSs. The results of the study of 4 participants (each with at least two compulsions) indicated for 3 of the 4 participants a clear link between the processing of the FSs and reduced reactivity to the visualized behavior. The reactivity was measured by skin conductance level and a positive feeling scale. All four participants reported that their compulsive behavior was eliminated after the intervention targeted the FSs.

Keywords: Behavioral Addictions, EMDR, Compulsion, Pathological Gambling, Sexual Addiction, Impulse-Control Disorder Protocol, Feeling-State Addiction Protocol

A Multiple Baseline Study of Behavioral Addiction Treatment

Using the Feeling-State Addiction Protocol

Behavioral addictions such as pathological gambling, sexual addiction, and compulsive shopping cause enormous suffering in people's lives. People whose gambling (Petry, 2005), sexual (Carnes, 1991), or shopping (Dittmar, 2004) behaviors have become out of control suffer enormously. Severe financial, emotional, and physical difficulties are a common result of these problems. This study focuses on the treatment of behavioral addictions utilizing the Impulse-Control Disorder Protocol. (ICDP, Miller, 2010). Because the ICDP has been modified and expanded to include substance addictions (Miller, 2012), the name of the protocol has been changed to the Feeling-State Addiction Protocol (FSAP).

Literature Review

Pathological gambling and sexual addiction have been the subject of the most research and clinical attention. Therefore, this literature review will focus on these two disorders.

The largest study of psychosocial treatment for pathological gamblers (N=230) utilized a cognitive-behavioral approach (Petry, Stinson, & Grant, 2004). Reinforcing nongambling was a central component of this treatment. Gamblers would select a reward of each day of nongambling with larger rewards for continuous periods of abstinence. Using a 8-session format, subjects were trained in interpersonal skills, cognitive biases associated with gambling, did daily graphs of their gambling behavior, and identified the pattern and triggers of their gambling behaviors. Subjects were divided into three groups: (1) individual cognitive-behavioral, (2) cognitive-behavioral therapy using a workbook, and (3) referral to Gamblers

Anonymous alone. Median dollars wagers dropped from $1200 to $350 for both GA alone and the workbook condition compared with $80 for the individual therapy. These effects were maintained in a 1-year follow-up.

A purely cognitive treatment approach to pathological gambling (Sylvain, Ladouceur, & Boisvert, 1997) used cognitive restructuring, problem solving, social skills training, and relapse prevention in weekly individual sessions. Forty pathological gamblers were randomly assigned to either immediate cognitive therapy (n=22) or to a wait-list control (n=18). The average number of sessions was 17, but the maximum number of sessions was 30. The study reported that 36% of the subjects had significant benefits from the treatment compared to 6% on the wait-list condition. Success was defined as a 50% or more reduction in the gambling criteria at a 6-month follow-up evaluation.

Rosenthal and Rugle (1994) offer a psychodynamic etiology of pathological gambling that divides gamblers into seven types. One potential reason for gambling is excitement, with a strong desire to impress others. A second reason is what the authors call “omnipotent provocation” or engaging in high-risk activities so that the strong feelings triggered by gambling overcome feelings of depression and emptiness. A third reason for gambling is competitiveness. Winning makes them feel competent. Other reasons for gambling are the desire to rebel or to engage in the breaking of conventional norms, the desire to have financial independence, the desire for social acceptance, and the desire for a form of self-medication or to escape from painful or intolerable affects. Treatment for pathological gambling involves a processing of these issues as well as abstinence from gambling.

A comprehensive treatment program for sexual addiction is a cognitive-behavioral approach described by Schneider (2004). The treatment is divided into three phases. The first phase involves intervening in the cyclic compulsive process, education, and confrontation of denial. The second phase involves attendance at 12-step programs, a relapse prevention plan, an abstinence sex plan, involvement of partner and family, group therapy, and shame reduction. The third phase involves understanding developmental issues and family-of-origin issues. Utilized in this process is a workbook called *Facing the Shadow* (Carnes, 2001) which outlines a step-by-step plan of a task-centered recovery program. However, this program has not been evaluated in a randomized research study; so there is no proof of its effectiveness.

Eye movement desensitization and reprocessing (EMDR) is a psychotherapeutic approach that was developed to resolve disorders related to traumas. EMDR has been found to be effective in the treatment of posttraumatic stress disorder (PTSD) with strong empirical support (Foa, Keane, Friedman, & Cohen, 2009). Other studies (Ironson, Freund, Strauss, & Williams, 2002; Lee, Taylor, & Drummond, 2006) have found EMDR to be equally or more efficacious than traditional exposure-based treatment of trauma.

The usefulness of EMDR therapy for treating behavioral addictions was explored in a case study by Cox and Howard (2007). Viewing trauma as the basis for sexual addiction, EMDR therapy was utilized to address the trauma and relieve the sexual addiction. The authors stated that the traumatizing event created a highly addictive attachment. Processing the trauma released the attachment and the sexual addiction. Marich (2009) studied the use of EMDR in a case of a woman whose addictions included alcohol and sex. The focus of treatment was the traumatic

events of the woman's childhood. Both studies indicated the effectiveness of trauma-focused EMDR therapy in preventing relapse.

The Desensitization of Triggers and Urge Reprocessing (DeTUR) model (Popky, 2005) uses the bilateral stimulation (BLS) component of EMDR to process the triggers, urges, and cravings associated with the addiction as measured on the Level of Urge scale (LOU). A case study of internet addiction of a 13-year-old male utilized the DeTUR protocol (Bae & Kim, 2012). Seven triggers were processed in four sessions reducing the LOU of the triggers to 2, which the participant defined as "not being able to think about or crave for the game." The participant reported that he was able to restrict his time on the internet to an hour per day. Abel and O'Brien (2010) combined the DeTUR protocol with other approaches in the treatment of a woman with co-morbid PTSD and alcohol dependence.

The Feeling-State Theory of Behavioral Addiction

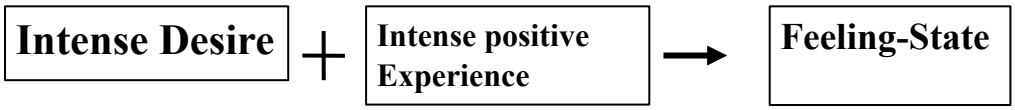
The Feeling-State Theory of behavioral addiction postulates that addictions are created when positive feelings become rigidly linked with specific objects or behavior. The unit formed from the linkage between feeling and behavior is called a feeling-state. When the feeling-state is triggered, the entire psycho-physiological pattern is activated. The activation of the pattern then triggers the out-of-control behavior.

In Feeling-State Theory, the term "feeling-state" refers to the entire psycho-physiological arousal of the body and its connection with a specific behavior. This arousal includes emotions and feelings such as excitement, satisfaction, and power, along with any accompanying sensations. The Feeling-State Theory proposes that the combination of the feelings, sensations, and the behavior compose the feeling-state that causes the impulse-control problems. There is a

large variety of feeling-states because any desired emotion or feeling can become fixated with any behavior. Once created, the feeling-state continues to exist, with the same feelings and behavior associated with it as when the feeling-state was originally formed. A more complete description of Feeling-State Theory can be found in Miller (2010).

To illustrate the Feeling-State Theory of Behavioral Addiction in diagram form:

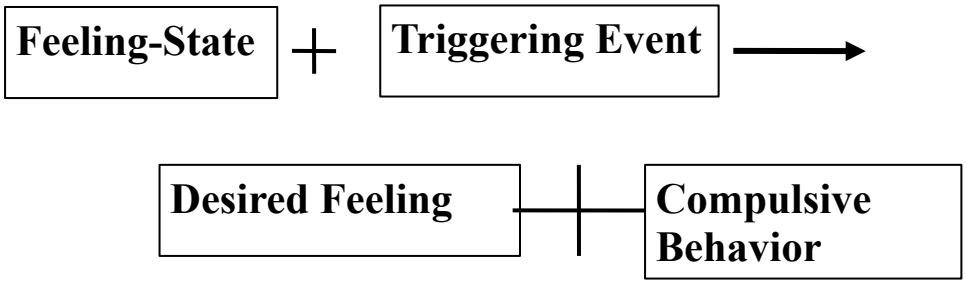
Creation of a Feeling-State



Once a feeling-state is created, the feeling-state can be activated by either internal or external factors. The sight of a poker table or a need to belong, for example, can both trigger the urge to gamble.

In diagram form:

Activation of the Compulsive Behavior



The Feeling-State Addiction Protocol

The Feeling-State Addiction Protocol utilizes a modified form of the eye movement desensitization and reprocessing therapy protocol (EMDR). The theoretical basis underlying EMDR therapy is the adaptive information processing model (AIP; Shapiro, 1995/2001), which states that the basis for pathology is that the innate information processing system of the brain can become imbalanced as a result of high arousal. The result is that the memory is encoded in isolated neural networks containing the emotions, physical sensations, and perspectives experienced at the time of the event. The inability of this encoded information to link with more adaptive information is the basis of pathology, as the memory can be triggered by a variety of current stimuli causing the dysfunctional affects and perspectives to emerge. When successful processing occurs, "what is useful is stored with the appropriate affect and is available for future use," (Shapiro, 2001, p.30). While Shapiro has elaborated on the utility of the model in regard to understanding the basis of pathology and described it in detail as relates to the processing of

trauma with EMDR therapy, the AIP model has also been useful in explaining the effectiveness of the FSAP (Miller, 2010).

A feeling-state is also conceived as a memory that has been isolated from the overall memory network memory as a consequence of the high level of arousal caused by the high intensity of the positive affect. Using a modified form of EMDR therapy, the FSAP helps connect the isolated memory with the larger memory network, leading to an adaptive resolution of the FS and subsequent changes in the person's behavior.

In the FSAP, the feeling-state is the target for therapy. Composed of the desired feeling and a behavior fixated with that feeling, the feeling-state is processed through the use of eye movements. The most important modification of the EMDR protocol involves the approach used in the processing of the negative beliefs and the installation of positive beliefs.

The Feeling-State Addiction Protocol

The following is an outline of the steps of the Feeling-State Addiction Protocol.

1. Obtain history, frequency, and context of addictive behavior.
2. Evaluate the person for having the coping skills to manage feelings if he/she is no longer using the addictive behaviors to cope. If not, do resource development before continuing. Install a future template if necessary.
3. Identify the specific aspect of the addictive behavior that has the most intensity associated with it. If the addiction is to a stimulant drug, then the rush/euphoria sensations are usually the first to be processed. However, if some other feeling is more intense, process that first. The starting memory may be the first time or the most recent – whatever is most potent.
4. Identify the specific positive feeling [sensation + emotion + cognition] linked with the addictive behavior and its PFS level (0 – 10).
5. Locate and identify any physical sensations created by the positive feelings.
6. The client visualizes performing the addictive behavior, feeling the positive feeling, combined with the physical sensations.
7. Eye movement sets are performed until the PFS level drops to 0 or 1.
8. Install future templates of how the person will live without having that feeling.
9. Between sessions, homework is given to evaluate the progress of therapy and to elicit any other feelings related to the addictive behavior.

10. In the next session, the addictive behavior is reevaluated for both the feeling identified in the last session as well as identifying other positive feelings associated with the behavior.
11. Steps 3 - 9 are performed again as necessary.
12. Once the feeling-states associated with the addictive behavior have been processed, the negative beliefs underlying the feeling-states are determined, and the desired positive beliefs are chosen.
13. The negative beliefs are processed and the positive beliefs are installed with the standard EMDR protocol steps.
14. The negative belief that was created as a result of the addictive behavior is determined and a positive belief is chosen.
15. The negative beliefs are processed and the positive beliefs are installed.
16. Install future templates.

A Multiple Baseline Study of Treatment of Behavioral Addictions Using Only the FS Processing Steps of the FSAP

The hypothesis is that treating behavioral addiction with steps 1-11 of the FSAP will reduce the reaction of the participants when they visualize doing the addictive behavior. This study seeks to clarify the role that the postulated FSs play in behavioral addictions and the effectiveness of the FS processing steps of the FSAP in reducing the participants' reactions.

Method

Participants. The participants were four males between the ages of 24 and 41. Participants 1, 2, and 4 had previously been in therapy for their addictive behavior. Participants were recruited for the study by word-of-mouth and advertising.

Design. The study focused on four participants with at least two behavioral addictions each. The requirement of at least two addictions is necessary because the study uses a single-case multiple baseline research design. The design of this study is such that a reduction in each participants' reactivity to his addictive behaviors is anticipated to occur only after the FSAP treatment is applied to that specific behavior. Only if a change in reactivity toward the target behavior occurs after the intervention on that behavior, and not before the intervention, can such change be thought to be a result of the intervention. This design makes each participant his own study by treating each addiction separately.

Measurements. Measurements were taken of skin conductance levels (SCL) of the participant both at rest and while the participant visualized doing the compulsive behavior. SCL measures the electrical conductivity of the skin and has been shown to reflect psycho-physiological arousal (Boucsein, 2012). The electrodes were placed on the fingers of the participants. PFS values were reported by the participant while they were visualizing doing the compulsive behavior.

Procedure: The procedure of measurements and interventions was as follows:

1. Before any intervention was applied, five ΔSCL and PFS baseline measurements were obtained for the behaviors.
2. An intervention was performed on one of the compulsive behaviors until the participant reported that the PFS was 0. No intervention was performed on the other

behavior. The number of sessions varied for each intervention.

3. Five more measurements were obtained on both behaviors.
4. An intervention was performed on the next compulsive behavior until the participant reported a PFS of 0.
5. Then five measurements were obtained on both behaviors.

Participants Behavioral Report. At the end of the study, the participants reported any changes in their addictive behavior.

Results

Participant 1. Participant 1 is a 24-year-old Caucasian male with two behavioral addictions: impersonating a policeman and a sex compulsion. Figures 1 and 2 show a decrease in both the PFS and ΔSCL values for the impersonating compulsion after that compulsion was targeted. The nontargeted sex compulsion values did not change when the impersonating compulsion was the target. Only when the sex compulsion was targeted did both the PFS and ΔSCL values for the sex compulsion decrease. See figures 1 and 2.

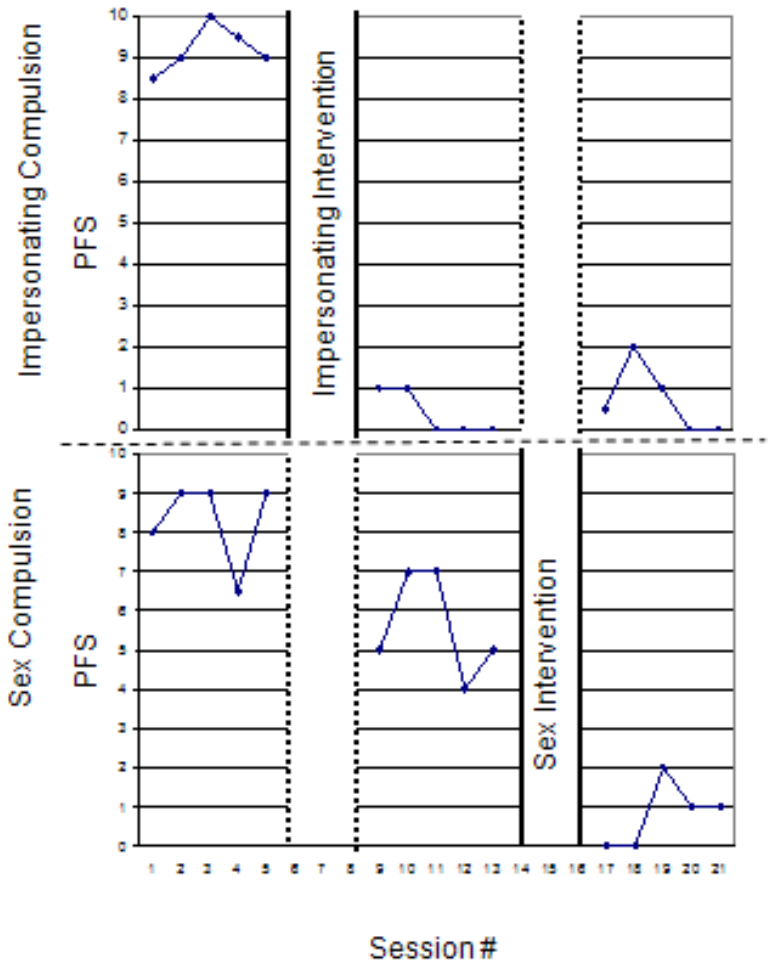


Figure 1. Graphs of Participant 1 showing the ΔSCL values for the impersonating and sex compulsions.

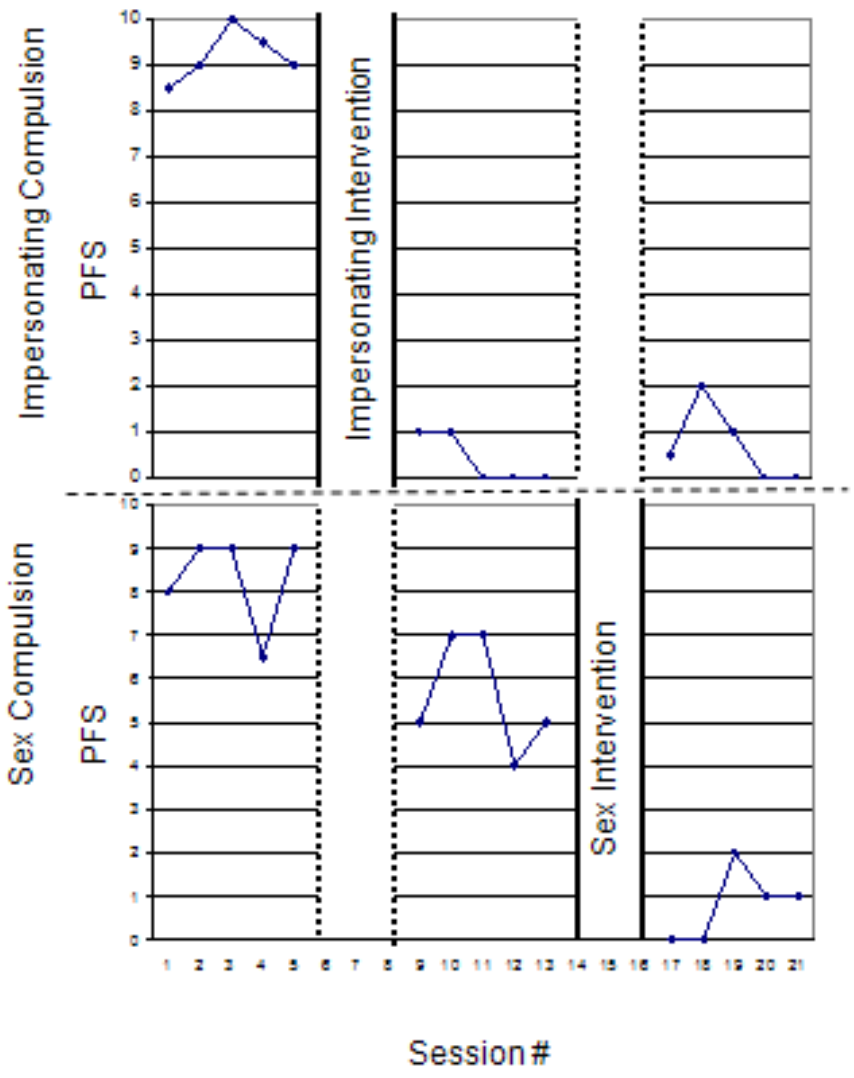


Figure 2. Graphs of Participant 1 showing the PFS values for the impersonating and sex compulsions.

Participant 1's report: Participant 1 had gotten into legal problems because of his

behavior of impersonating a police officer. Even with the legal problems, whenever he talked with someone--man or woman--he would do or say something that would suggest that he was or had been in law enforcement. Just days before the compulsion was targeted, he had attempted to obtain "professional courtesies" from a police officer. After the compulsion was targeted, he reported that he had stopped doing this kind of behavior.

Participant 1's sexual compulsion consisted of trying to "get over" on a woman. Even when he was in a relationship, he would still feel compelled to act out this way with other women. After the sexual compulsion was targeted, he reported that he could enjoy talking with a woman and not attempt to seduce her.

Participant 2. Participant 2 is a 25-year-old white male with a history of sexual compulsion and degrading conduct toward women. The motivation for his sexual compulsion was driven by his desire for the feeling of winning over women and his desire for the feeling of approval from men. When he would go to nightclubs, Participant 2 would dance with as many women as he could. If he was able to obtain the telephone number of the woman he was dancing with, he would feel victorious and then move on to dance with others. Focusing on one woman in order to have sex with her was not necessary for this part of the compulsion. The other part of Participant 2's sexual compulsion manifested itself in the need to feel other men's approval of his ability to attract many different sexual partners. He would have sex with a woman and then invite a friend over in order to have his victory recognized, often to the dismay of the woman. After having his victory acknowledged, he would no longer be interested in the woman. Then the hunt for another victory would begin anew.

Participant 2's other compulsion was a need to degrade women. The degrading behavior

consisted of certain kinds of "sexual talk" and particular sexual acts. He reported that his compulsion to degrade women pushed him to have sex outside his primary relationships, where he felt he could have more degrading sex.

Participant 2's ΔSCL graph's zero value is near the top of the graph because he became more relaxed when he focused on the compulsions. Thus a decrease in relaxation would indicate that the intervention was successful. Participant 2's graphs indicate that the SCL and PFS values of the compulsions changed only when the behaviors were targeted. See figures 3 and 4.

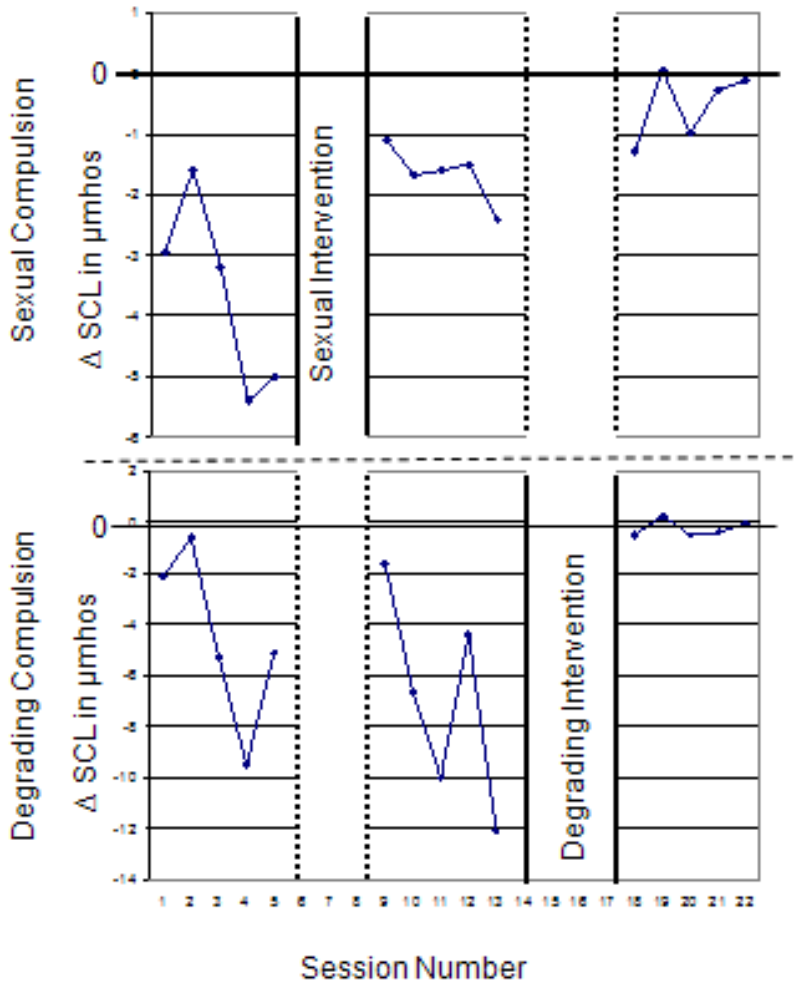


Figure 3. Graphs of Participant 2 showing the ΔSCL values for the sex and degrading compulsions. In this graph the 0 value is near the top of the graph.

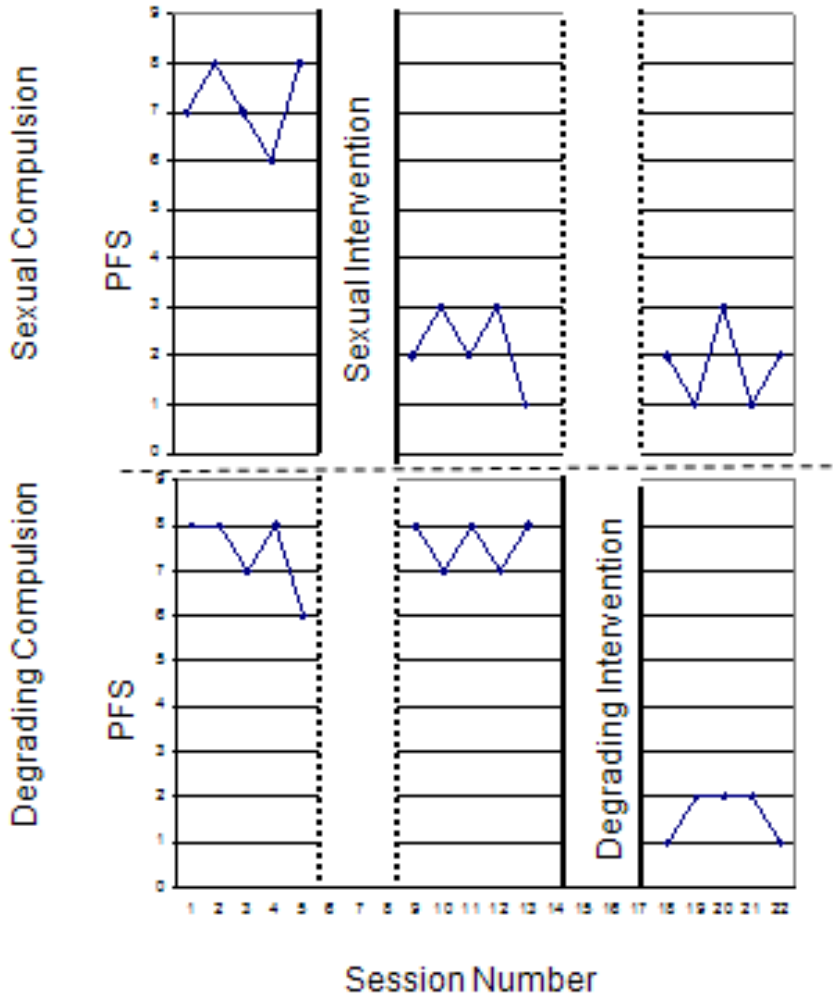


Figure 4. Graphs of Participant 2 showing the PFS values for the sex and degrading compulsions.

Participant 2's report: Participant 2 reported that, after the sexual compulsion was targeted, he stopped hunting women to get their telephone numbers and for sexual conquest. The degrading compulsive behavior also ceased after that behavior was targeted. He no longer needed to engage in degrading talk and acts and was satisfied with the relationship he had with his girlfriend.

Participant 3. Participant 3 is a 41-year-old Caucasian male with a history of gambling (buying lotto tickets and organizing the office lotto pool) and socializing (spending many hours socializing at different restaurants) compulsions. ΔSCL and PFS values for the gambling compulsion indicated a decrease in responsiveness to the compulsive gambling imagery after that compulsion was targeted. However, the PFS values for the socializing compulsion also showed a decrease after the gambling compulsion was targeted. An assumption made in the multiple baseline design was that the behaviors would be independent of each other. However, Participant 3 was discovered to have an FS that was similar in both compulsions (belonging). Resolving that FS for the gambling compulsion may have affected the socializing compulsion as well. The PFS values for the socializing compulsion decreased further after that compulsion was targeted. The ΔSCL values for the socializing compulsion declined after being targeted. See figures 5 and 6.

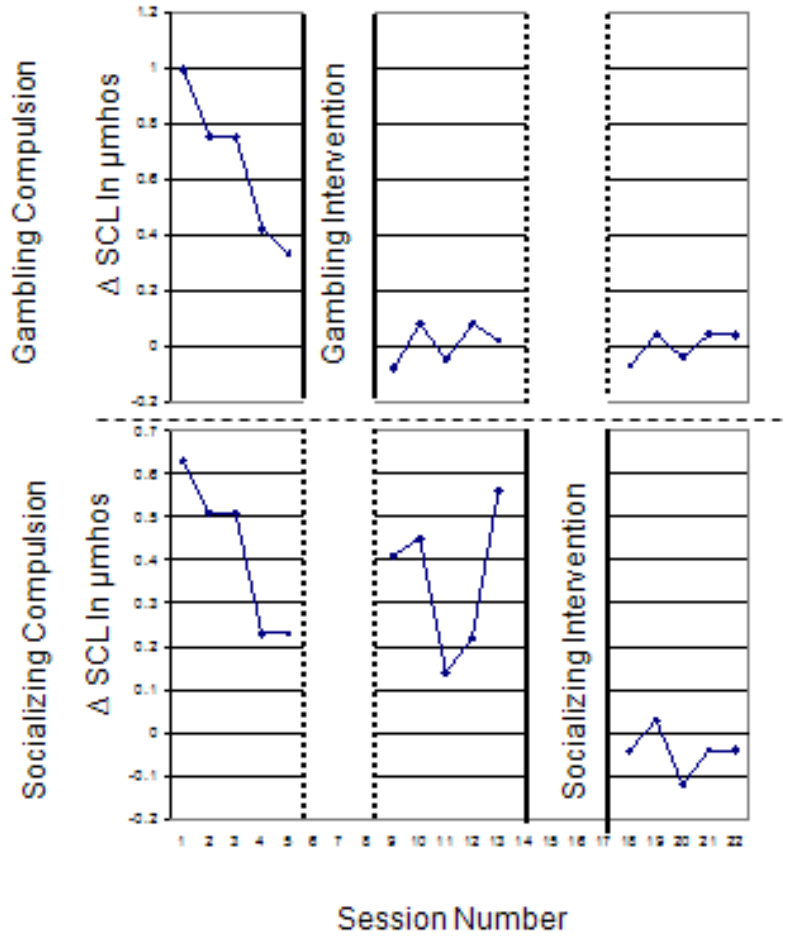


Figure 5. Graphs of Participant 3 showing SCL values for the gambling and socializing compulsions

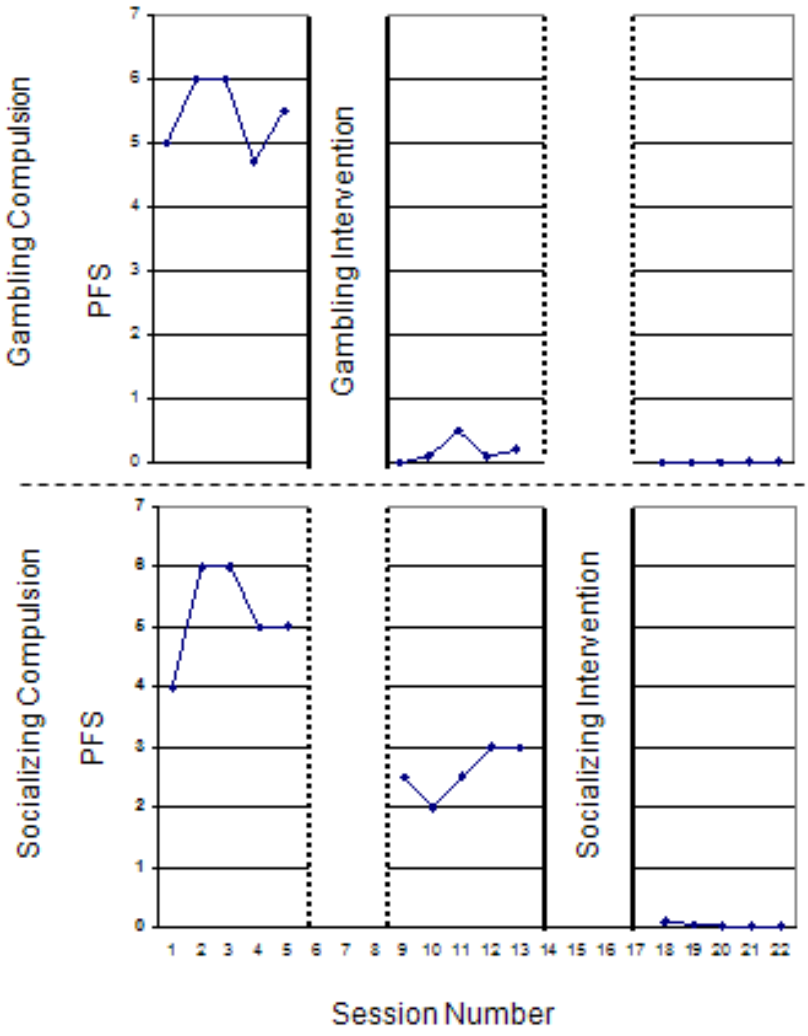


Figure 6. Graphs of Participant 3 showing PFS values for the gambling and socializing compulsions.

Participant 3's report: Participant 3 reported that, by the end of the gambling intervention, he had stopped buying lotto tickets and was only participating in the office lotto pool as a member rather than as the major organizer, buyer, and checker of the lotto tickets. Participant 3

also reported that his socializing behavior had changed after having been targeted by FSAP. He was staying at home longer and doing other things such as exercising instead of being the first one to arrive at the restaurant. Rather than visiting three places in an evening, he was able to stay at one place longer and then go home. Participant 3 stated that the change in both his lotto ticket buying and socializing behavior was remarked on with surprise by his friends and by the owner of the store where he usually bought lotto tickets.

Participant 4. Participant 4 is a 35-year-old Caucasian male with a history of gambling and sex addiction. Participant 4 actually had four compulsions: a high-stakes poker compulsion, a low-stakes poker compulsion, a strip-clubs compulsion, and a massage-parlor compulsion. The high-stakes and low-stakes poker compulsions were targeted during the same set of sessions because the participant changed his focus from one behavior to the other during the same session. The strip-club compulsion and the massage parlor compulsion were treated separately. ΔSCL values for high-stakes poker, the low-stakes poker, and the strip-club compulsions show a decrease in responsiveness only when the behaviors were targeted.

The massage parlor compulsion values do not follow the pattern of the other behaviors. The ΔSCL absolute values for the massage parlor compulsion decreased before being targeted. So within the design of the study the SCL values did not satisfy the expected result that would have supported the FSAP hypothesis. The PFS values also showed the same pattern as the ΔSCL values. Thus the data regarding this behavior does not show a clear shift in ΔSCL and PFS values between pre- and post-intervention. However, the participant told the author later that he was not able to focus on visualizing going to a massage parlor during the session because he had been going there every day and felt satisfied. Because he felt satisfied, he stated that

visualizing the behavior was not arousing for him, a variable affecting the ΔSCL and PFS measurements for which the study's design had not accounted. See figures 7 and 8.

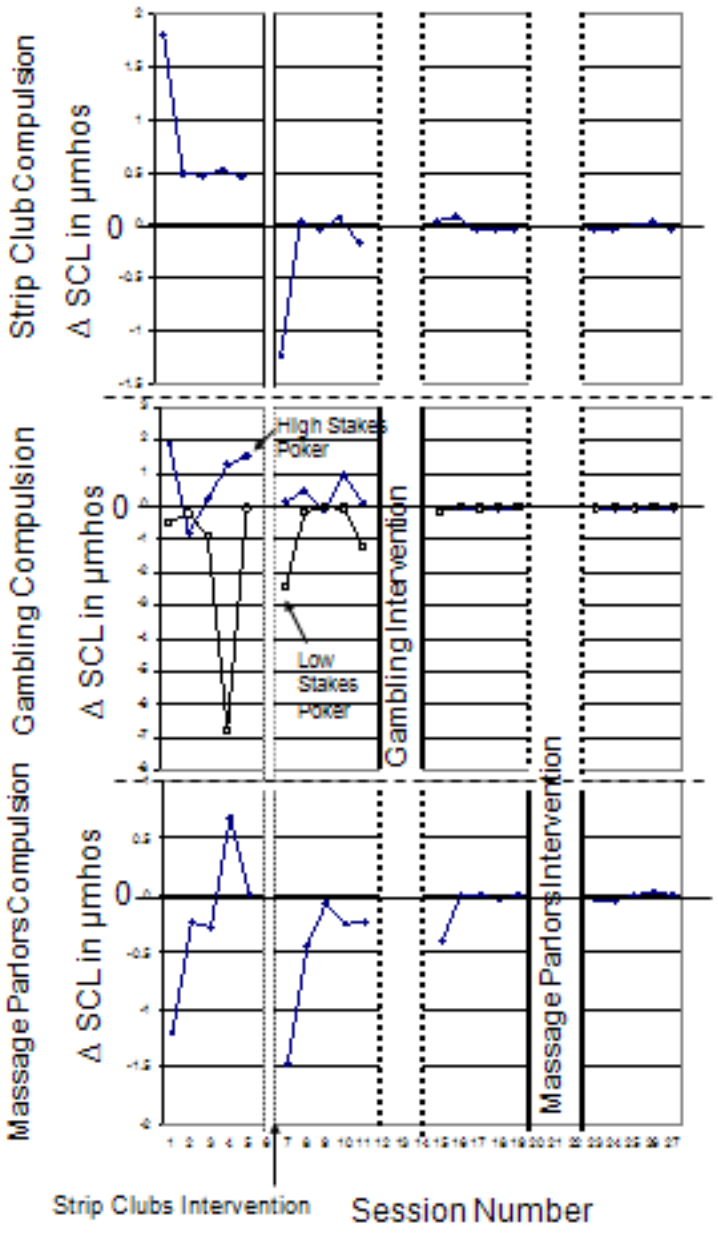


Figure 7. Graphs of Participant 4 showing SCL values for the strip clubs, gambling, and massage parlor compulsions.

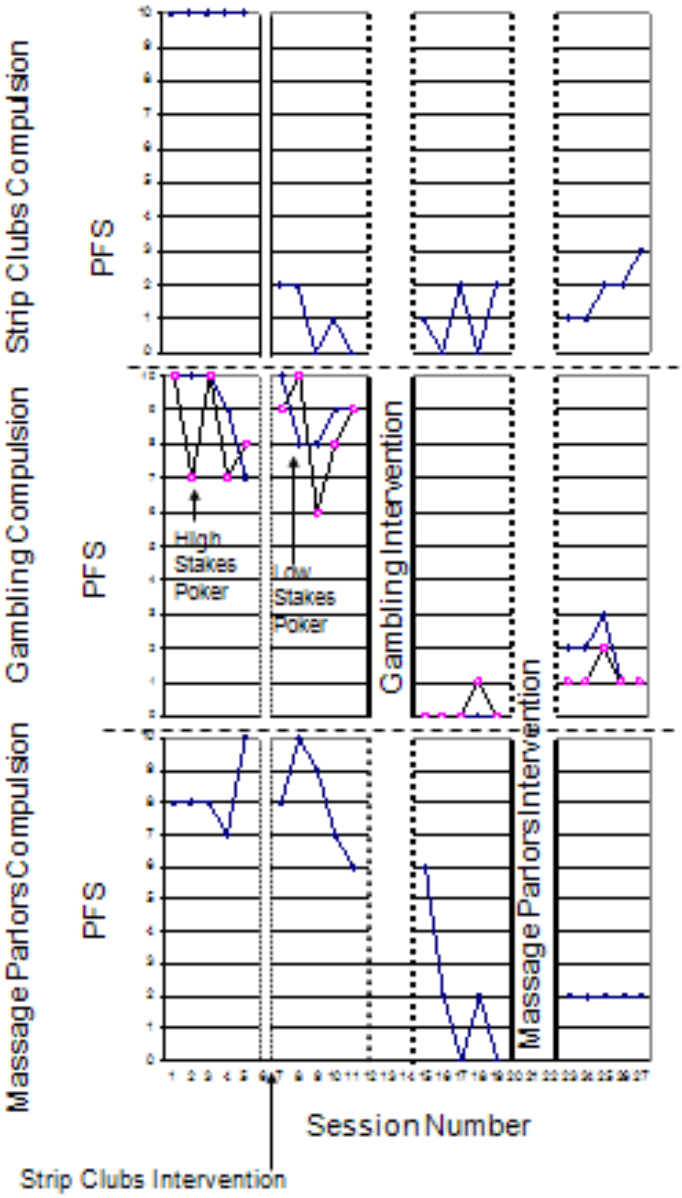


Figure 8. Graphs of Participant 4 showing PFS values for the strip clubs, gambling, and massage parlor compulsions.

Participant 4's report: Participant 4 reported that he had stopped the gambling, strip club, and massage parlor behaviors only after each behavior was targeted. This was true for the massage parlor behavior even though the ΔSCL data on the massage parlor compulsion indicated that he was no longer responsive to that imagery prior to the intervention. He had continued to visit massage parlors until the behavior was targeted. He said that, after the intervention, he visited his usual establishment twice but had been so "turned off" that he left before doing anything. For participant 4, the PFS values seem to reflect the change in his behavior better than the ΔSCL values.

Discussion

Participants 1, 2, and 3 graphs indicate a definite change in the participants' responses after each intervention. Participants 1 and 2 show a decrease in responses for both SCL and PFS values with no change in the nontargeted behavior. Participant 3's graphs show a decrease in both the SCL and PFS values for the targeted behavior but also a modest decrease in those values for the nontargeted behavior. This may have been the result of both behaviors having an FS in common. Thus, when the FS for one behavior was reduced, it may have affected the participant's response when visualizing the other behavior.

Participant 4's PFS graph indicates a change in his subjective response; the PFS values decreased for the targeted behavior but not the nontargeted behavior. However, the SCL graph showed a decreased response to nontargeted behaviors as well. While the SCL values decreased, the data do not indicate that the intervention was the likely cause of the change in values.

In regards to a possible placebo effect in this study, three of the four participants had previously been in treatment that had not worked. All four participants stated, near the end of the

treatment, that they had not expected the treatment to be successful but were participating in the study because whatever they had tried previously had failed. Thus it is unlikely that the results from this study were biased by expectations of improvement.

The results of this multiple baseline study of the FSAP indicate that the part of the FSAP protocol targeting the FSs was effective in reducing the participants' reactivities to the visualized stimuli. Further, the participants' self-reports also suggest that the targeting of the FSs may have affected the targeted behavioral addictions.

The behavioral additions that were treated in this study included two types of sex addictions, gambling compulsions, a socializing compulsion, an impersonating-a-policeman compulsion, and a degrading-conduct-toward-women compulsion. The only similarity between these various behaviors was their compulsive nature, which had been causing significant financial, legal, and/ or social problems for the participants. The FST postulates that these different kinds of compulsions are really the result of a linkage between a feeling and a behavior. Because the partial FSAP used in this study focused solely on processing the linkages between the feeling and behavior, the study directly explored the link between the postulated FSs and the participant's reactions to visualized stimuli. The self-reports of behavioral change by the participants help explore the connection between the FSs and behavior.

The participants reported that, after the intervention, they were either not interested in doing the previously compulsive behavior (participant 1:impersonating-a-policeman, for example) or that the behavior had drastically altered toward a more normal behavior (participant 2:socializing). The participants reported that they noticed these changes occurring within days of the FS being processed. The participants did not have to work at changing their behavior.

Rather, it appears that their behavior changed because the cause of their behavior no longer existed. The variety of behaviors and the way in which the behaviors changed without any behavioral intervention but with only the processing of the FSs support the FST model for the etiology of behavioral addictions.

The clinical implication of this model, is that behavioral addictions, no matter what the behavior may be, are the result of an FS. Therefore, the target for treatment should be the FSs. In this study no attempt was made to have the participant control his behavior; no attempt was made to change any of the irrational or distorted thinking that had accompanied the behavior; no attempt was made to avoid or process triggers to the behavior. The study suggests that, if the FS is eliminated, the behavior will not need to be controlled or managed. The implications for treatment are that behavioral addictions may not require the elaborate system for managing behavior such as 12-step groups. In addition, this study suggests that the homework, that is often part of the therapy process but is often not performed, is not necessary. The simpler and easier procedure of the FSAP may make treatment for behavioral addictions more available to those people who are less motivated and would more likely quit treatment. Therapy will then be shorter and less difficult so that more people can be helped.

Limitations of the Study

One of the limitations of this study is that readings were not obtained during the sessions when the interventions were performed except at the first session. This means that the effect of the intervention over the number of the sessions required for the treatment cannot be understood. Instead, only the pre- and post-treatment values were obtained. How long after the treatment did changes begin to occur and whether the treatment effect was sudden or gradual over a period of

time or had spikes in values could not be ascertained. The complete intervention for one compulsion was usually performed within a two-week period. Another limitation is that the length of time between sessions could not be controlled. The number of sessions needed for the study, including both readings and interventions, varied between 23 and 30. The participants scheduled sessions as their ongoing lives permitted. Still another limitation is the lack of a good instrument for measuring compulsions. The participants reported how the compulsions had affected their lives and what changes occurred as a result of the treatment. However, there was no independent measure of these reports. The small number of participants (four) that were studied is also another limitation. Many more participants will need to be studied in order to obtain more definitive results.

Conclusion

The Feeling-State Addiction Protocol offers a new approach for the treatment of behavioral addictions. The multiple baseline study, which targeted the FSs linked with the behavioral addictions, supports the etiology of addictions as described in Feeling-State Theory. Further, the study supports the use of the processing of the FSs as described in the FSAP. Even with its limitations, the study suggests that the FSAP might be a useful approach for the treatment of behavioral addictions. Because the treatment is usually performed in less than 10 sessions, this approach will be easy to evaluate. Clinical experience also suggests that the FSAP may be useful for treating substance addictions.

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