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Induced Anxiety in the Treatment for LSD Effects

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This paper describes the psychological treatment of a college student who manifested intense anxiety and hallucinatory-like experiences following the repeated use of LSD. The primary technique of induced anxiety which has been described by SIPPRELLE [1967], involves operant conditioning of anxiety, eliciting of the stimuli which the patient then associates with that anxiety, and the substitution of non-anxious for anxious responses to those stimuli.

Presenting complaints

The subject was a college sophomore who had consulted the University Health Service for a physical examination. He refused to say why he wanted the examination and showed overt signs of anxiety. The University physician referred him to the Psychological Services Center where he revealed in the initial interview that he had been using marihuana and had used LSD on 11 occasions. The last LSD experience had been a "bad trip" and since that time he had numerous symptoms including anxiety, panic, fears that he would lose control and become insane, rigidity and tension, frightening visual and somatic sensations, unusual afterimages, an oppressive feeling induced by bright colors, general restlessness, and an almost constant obsession that he had damaged his brain or chromosomes.

Appointments were made for a case history and psychological testing. The patient did not meet the appointments or return to the Psychological

Services Center for the next five months. During that period he married, his wife became pregnant, and the obsession with chromosome and brain damage intensified sufficiently to return him to the Psychological Services Center.

History of the disorder

This man had been reared in a large Catholic family by a very authoritarian father whom he feared and a kind mother who tried to maintain a good Catholic home. The patient identified with his mother and her religious beliefs, went to parochial school, and then to seminary with the goal of becoming a priest. He rebelled against the authoritarian nature of the seminary and the priesthood and returned home to enter public high school in his junior year and subsequently developed an interest in art.

While living at home his first year of college, the conflict between his authoritarian father and the patient's newly developing interest in art, long hair, and liberal viewpoints on war, freedom, self expression, and the like intensified. He finally rebelled again, "had it out" with his father, and moved out of the home to live in an apartment with artist friends. He joined a hippie-like subculture which was in marked contrast to his previous conservative authoritarian Catholic background and started taking marihuana, amphetamines, and LSD, all of which at first he felt were opening a new world for him.

This man appeared to be a rather typical hippie who was expressing his hostility and rejection of his authoritarian background by participation in the activities of a very liberal subculture. While consciously expressing great confidence that he had found an acceptable identity, he had strong unconscious feelings of guilt about rejecting the values by which he had been reared. The obsession with damage from LSD and drugs represented the punishment he expected for adopting a style of life other than the one for which he had been reared.

Psychological testing indicated that he was of superior intelligence, in good contact with reality despite the complaints of hallucinatory-like experiences, and that he suffered little, if any, intellectual deficit as a result of his emotional disturbance.

Functional analysis of the behavior

The patient appeared to have been happy and contented in the support afforded by the authoritarian family in early life and responded to it with compliance, an instrumental response which was reinforced by the family when he was young and dependent. However, with increasing age his needs for self direction and to be like his peers came increasingly into conflict with compliance and led to a rejection of religion and family

values in favor of rebellion and the hippie system, culminating in the move to a different subculture and the use of drugs. While the rebellion reduced the frustration of compliance, at the same time it mobilized the classically conditioned fear response to non-compliance which had been instilled in this man in the authoritarian family. Thus our patient is in an approach-avoidance conflict in which rebellion and autonomy decrease the humiliation and frustration of compliance while simultaneously increasing the fear of punishment for noncompliance. Having been exposed to a barrage of information as to the harm of drugs, and LSD in particular, he acquired a classically conditioned fear of their consequences which in turn motivated an avoidance response to LSD. By being preoccupied with bodily and psychological damage from LSD, and by avoiding LSD and other drugs, he could thus reduce the fear of punishment from his rejection of the conservative Catholic values by which he had been reared. The initial visit to the Psychological Services Center constituted a flight from rebellion to authority. However, the authority, in typical approach-avoidance fashion, in turn mobilized the humiliation of compliance, and drove him away for five months. During these five months he acquired a wife who became pregnant, thus increasing the need for autonomy and also the fear of chromosome damage. The return to therapy, again typical approach-avoidance vacillation, was a compromise attempt to lead an autonomous life with the help and endorsement of a therapist (authority figure). It was designed to bolster his preoccupation with LSD damage and consequently to reduce his guilt and anxiety over abandoning the compliant and anxiety reducing role he had played in early life.

According to the previous formulation, the patient was engaging in behavior which might be termed "preoccupation with LSD damage". That behavior, or instrumental response, was designed to reduce the classically conditioned anxiety over abandonment of family values which had been displaced to the free swinging hippie culture and LSD. Fear of loss of control, anxiety, and strange somatic sensations were then really manifestations of responses to his change in style of life, and not to LSD, although their form was determined by culturally induced stereotypes as to the nature of the effects of LSD. Reasoning that these fears were really only signals as to the existence of the classically conditioned fear of noncompliance, it then becomes clear that this man's problem is, in essence, composed of a stimulus (the family's response to noncompliance) and a classical response (anxiety), and an instrumental or operant response (LSD avoidance) designed to reduce that anxiety.

Behavior modification plan

One approach to the modification of an approach-avoidance response is by forcing the response with the goal achieving extinction. In this particular case, with the involvement of LSD and other drugs, that approach would utilize the administration of LSD and drugs to demonstrate that no ill effects will occur. While that approach might theoretically make psychological sense, it does not make physiological sense as paradoxically there is reason to believe that inappropriate use of drugs may very well have bad effects.

It was, therefore, decided that therapy would consist in substituting responses of relaxation and calm for the conditioned anxiety presently motivating the LSD avoidance response, with the goal of removing that response, and the associated symptoms. It should be noted that the goal was to substitute calmness and tranquility, and not the taking of LSD, for the LSD avoidance response. The approach to be followed featured the use of induced anxiety as developed by SIPPRELLE [1967], and described elsewhere in detail.

Briefly summarized, the induced anxiety technique is a variant on the reciprocal inhibition therapy of WOLPE [1958] and involves the following assumptions and steps:

It is assumed that neurotic behavior is essentially instrumental behavior designed to reduce anxiety classically conditioned to various stimuli. Thus, the focus of the approach is on the assumed, underlying conditioned anxiety rather than on the instrumental anxiety reducing responses. To countercondition calmness and relaxation to those stimuli, it is necessary to present the patient with the stimuli and countercondition the new responses by shaping and reinforcement. WOLPE [1958] has achieved this end by arranging such stimuli in a hierarchy, according to their potential for eliciting anxiety, and systematically reciprocally inhibiting the anxiety response by substitution of the incompatible response of relaxation.

In the induced anxiety approach, the patient is operantly conditioned into an anxious state by means of shaping and reinforcement of behaviors usually associated with anxiety such as physical tension, rapid breathing, swallowing, increased heart rate, crying, and other signs of underlying anxiety. It has been demonstrated by ASCOUGH and SIPPRELLE [1968] that autonomic responses may be brought under operant control. Once the patient has been made sufficiently anxious, it has been found that he will either spontaneously, or by request, become aware of the stimuli which

characteristically evoke such anxiety in him and be able to verbalize them. At this juncture the reciprocal inhibition technique of WOLPE [1958] is utilized to achieve inhibition of the anxiety response.

Under induced anxiety this patient showed many signs of intense anxiety and verbalized bizarre feelings of pressure and splitting in his brain, panic, fears of loss of control, or nothingness and many other strange feelings which were characteristic of his "bad trip" on LSD. The following quotations are typical: "I am being closed in; my brain is being pushed through the wall. Oh, it hurts so much." "My nerves are tingling; they feel like wires, it feels like they will snap." "I am experiencing absolute nothingness; it is scaring." "My sense of awareness is pulling me apart now. It is as if I am looking at myself from the outside." "Oh, I can't move my fingers anymore; I can't open my mouth; it hurts so much; please make it go away."

The course of treatment involved 16 sessions, 4 in which the therapist and patient talked over his situation and built the rapport and reinforcement value necessary, 8 in which induced anxiety and reciprocal inhibition were utilized, and 4 terminal sessions to consolidate the gains and insure a good outcome.

Outcome

Treatment was terminated after the 16th session. At this time the patient reported that he felt comfortable and that he was no longer plagued by visual disturbances or unusual sensations.

According to the patient's report at termination, he had not experienced any of the sensations and autonomic reactions outside the therapy room since treatment began. He no longer noticed visual afterimages and displays of bright colors were no longer oppressive to him. "Tingling nerves" and muscular rigidity had not occurred since the 6th session.

The patient's problems had always been rather specific and circumscribed. They had never disrupted his school work or his part-time work in a local business. There was no evidence of "symptom substitution", despite a deliberate effort to look for it during the last interview. The patient reported that he could concentrate much better since his freedom from the pre-treatment preoccupation with brain and chromosome damage. He indicated still being concerned about these issues but he no longer worried about them for hours at a time and no longer showed the pre-treatment restlessness.

It is not the intent of this paper to infer that drug effects are purely psychological, or to attempt to unscramble the physiological and psychological effects. It is apparent that to some extent he had utilized the stereotypes of LSD experience in his own psychopathology, as a means of coping with a more prosaic problem of escape from childhood dependence to adult independence. This man's rebellion from authority to the "hippie subculture" and drugs is fairly typical of other cases we have observed and indicates that the escape from parental authority, whether it be benign or despotic, is an anxiety creating experience and may lead to the formation of deviant or minimally adaptive symptoms.

Summary

Following ingestion of LSD, this patient displayed a variety of symptoms usually considered to be effects of that drug. Functional analysis of the case indicated those effects were really displaced manifestations of anxiety triggered by anxiety over separation from the family which was being bound by an avoidance response to LSD. Behavior therapy designed to reduce the displaced anxiety motivating the avoidance response was effective in removing the symptoms.

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