

LSD Use and Flashbacks in Alcoholic Patients

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ABSTRACT. Lysergic Acid Diethylamide (LSD) is a hallucinogenic drug that received considerable attention in the 1960's and early 1970's. It produced a wide variety of psychological phenomena, including a variety of perceptual disturbances which would manifest among some users long after the drug had left the system. These phenomena were commonly referred to as "flashbacks" and may have been largely responsible for the drug falling out of favor among recreational drug users. This report describes histories of LSD use among alcoholism treatment facility inpatients and reports specific characteristics of flashbacks and the degree of subjective distress experienced during flashbacks. Findings indicate a statistically significant relationship between number of doses and incidence of flashbacks. *[Article copies available for a fee from The Haworth Document Delivery Service: 1-800-342-9678. E-mail address: getinfo@haworthpressinc.com]*

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Lysergic Acid Diethylamide (LSD) is a hallucinogenic drug that received considerable attention in the 1960's and early 1970's. It is known to produce a wide variety of psychological phenomena with acute use, especially hallucinations and illusions. It is also known for producing a variety of chronic, slowly reversible perceptual disturbances which manifest among a varying percentage of users¹⁻⁵ after the drug is no longer in the system. Such chronic disturbances, commonly referred to as "flashbacks," have been reported in all sensory modalities. They may persist for weeks or months after the last drug experience and frequently mimic the perceptual and cognitive distortions of the acute drug state. The DSM-IV refers to such phenomena when causing clinically significant distress as Hallucinogen Persisting Perception Disorder.⁶

Strassman⁷ has reviewed in detail the literature concerned with adverse reactions to psychedelic drugs. He noted that flashbacks and other adverse reactions may be conceptualized as occurring along a temporal continuum in which flashbacks may be seen as transient recurrences of some aspects of the original hallucinogen experience.

Literature concerned with prevalence rates of flashbacks among LSD users is variable. In a review of findings, Stanton and Bardoni⁸ noted ranges from 20% to 58% among "normals." Among psychotherapy patients, prevalence rates varied from 15% to 32%. Problems in research methodology have been reviewed in detail^{1,9,10} as much of the difficulty lies in the problem of reliably quantifying subjective states.¹¹

There are also inconsistent findings concerned with the number of LSD exposures required to generate flashbacks. Concerning the relationship between number of doses and prevalence of flashbacks, Holsten¹² has noted "... flashbacks are not related to frequency of LSD use. Nor do the patients with the most serious flashbacks seem to have used LSD more than the rest of population. Some got flashbacks after only one ingestion of LSD, while others reported at least 500-1000 LSD trips before they experience flashbacks."

While there were a number of reports of LSD related flashbacks in the 1960's and 1970's, recent information describing LSD flashback phenomena is limited, particularly studies using DSM-IV⁶ criteria.

Anecdotal reports from individuals undergoing inpatient alcoholism treatment at our facility have suggested an increased use of LSD with a high prevalence of flashback phenomena. This is consistent with findings in the literature that disinhibiting drugs or states of heightened arousal may precipitate the flashback experience.¹

This study had three aims: (1) to quantify reports of LSD use among alcoholic patients, (2) to subtype the specific characteristics of flashback

phenomena, and (3) to assess the degree of subjective psychic distress experienced during flashback experiences.

PROCEDURE

All participants in the study were inpatients at the Triservice Alcoholism Recovery Facility (TRISARF) at Tripler Army Medical Center, Honolulu (N = 110). Exclusion criteria for admission included significant medical or psychiatric comorbidity which might interfere with alcoholism treatment. The sex distribution of the study population matched that of the treatment facility, with a preponderance of males (N = 106; 96.4%). The age range was 18 to 65 years (M = 27.3 yrs., SD = 6.4 yrs.). All patients were medically evaluated using DSM-III R¹³ or DSM-IV⁶ criteria and were determined to have a diagnosis of Alcohol Dependence.

Following a six-week inpatient treatment regimen for alcohol dependence, each participant met with a member of the investigation team to explain the purpose of the study and complete a volunteer agreement affidavit. Data were collected from a questionnaire completed by the participant (Inclusion 1). The questionnaire requested information on sex, ethnicity, LSD use, flashback symptoms and subjective degree of distress from symptoms. Statistical analysis was performed using Fisher's Exact Test for comparisons of the percentage of incidence between groups.

FINDINGS

Table 1 lists the results of our study. One hundred ten participants completed the questionnaire; seventy-five (68%) reported no past use of LSD, and thirty-five (32%) indicated at least one time use. The 35 participants who confirmed past LSD use were divided into groups based on use rates. The user group was divided into sub-groups based on total number of times LSD was used (Figure 1). Thirteen participants had used LSD from 1 to 5 times. In this group, 6 denied flashbacks, 5 had flashbacks but denied any distress, 1 indicated slight distress, and 1 indicated flashback distress as moderate.

Ten participants reported having used LSD on 6-20 occasions; in this group, 2 denied Flashbacks, 4 reported flashbacks without distress, 3 reported distress as slight, and 1 reported distress as moderate. Eight persons reported using LSD on 20-100 occasions. The 7 who reported flashbacks indicated that these phenomena were accompanied by distress; five reported distress level as slight, one as moderate, and one as severe. Of the four participants who had used LSD more than 100 times, all reported flashbacks; one reported no distress, two reported distress levels as slight and one as severe.

Of the thirty-five participants who used LSD, 26 (74%) experienced flash-

INCLUSION 1. Questionnaire.

L.S.D. Information

SEX: M ☐ F ☐

AGE: _____

ETHNICITY: Black ☐ Hispanic ☐ Caucasian ☐
 Asian ☐ Native American ☐ Other ☐

Estimated number of times you used LSD:

Never ☐ 1-5 ☐ 6-20 ☐ 20-100 ☐ 100+ ☐

Over what period of time?

Not Applicable ☐ 1-6 months ☐ 6-12 months ☐ 1-5 years ☐ 5+ years ☐Have you ever had the following symptoms (For LSD users, have you ever had these symptoms when you were **not** using the drug?)

(Check all that apply.)

Hallucinations or imaginary images of geometric forms (shapes) . . ☐
 False image at the edge of your visual field (area of vision) ☐
 Flashes or images of color ☐
 Intensification of colors ☐
 "Trails" of images from moving objects ☐
 Positive after images ☐
 "Halos" around objects ☐
 Things seem smaller than they actually are ☐
 Things seem larger than they actually are ☐

When these symptoms occurred the amount of distress I felt was:
 (Circle the most appropriate number.)

1 2 3 4
 None Slight Moderate Severe

backs, but only 16 (46%) indicated that such perceptions were distressing. A rank order of use rates by ethnicity indicates the greatest incidence to be among Caucasians (39.1%), followed by patients of Hispanic (30.0%), and African-American descent (6.1%) (Figure 2).

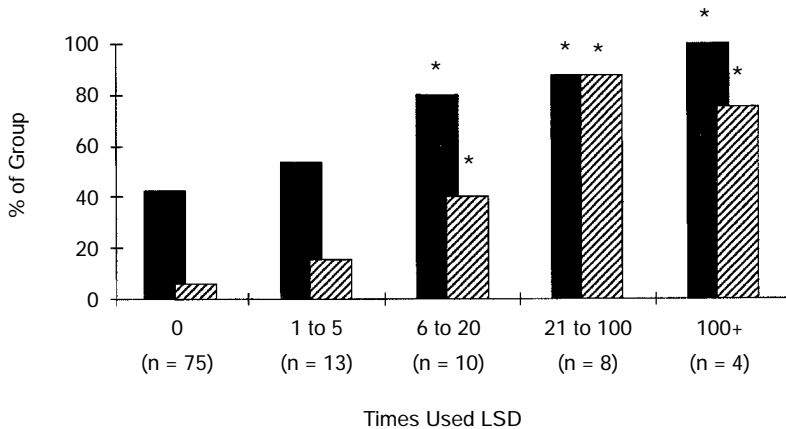
Our findings indicate the number of uses tends to be positively correlated with both presence of flashbacks, and degree of subjective distress. The most

TABLE 1. LSD Use and Flashbacks

Total n = 110

	No LSD Use	LSD Use
No Flashbacks	79% (n = 59)	23% (n = 8)
Flashbacks	21% (n = 16)	77% (n = 27)
Total	75	35

FIGURE 1. Percent of individuals in each group who experienced flashbacks (solid bars), and the percent of individuals experiencing distress with flashbacks (crosshatched bars) as a function of times use of LSD; * = $p < 0.05$ compared to the 0 times used group.



common types of flashbacks in declining order were: flashes of color, $N = 24$ (68.5%); false images at the edge of visual fields, $N = 23$ (65.7%); trails of images from moving objects, $N = 22$ (62.8%); halos around objects, $N = 20$ (57.1%); positive afterimages, $N = 17$ (48.6%); micropsia $N = 13$ (37.1%); macropsia $N = 13$ (37.1%); and intensification of colors $N = 12$ (34.3%) (Figure 3). Findings indicate a clinically significant rise in subjective distress associated with flashbacks as a function of the times used.

DISCUSSION

The results of this study indicate that a high percentage of LSD users who experience flashbacks do not report high levels of distress attendant to such distortions. Although flashbacks are understood to be drug-related, the user

FIGURE 2. Incidence of LSD use as a function of ethnicity; * = $p < 0.05$ compared to the 0 times used group.

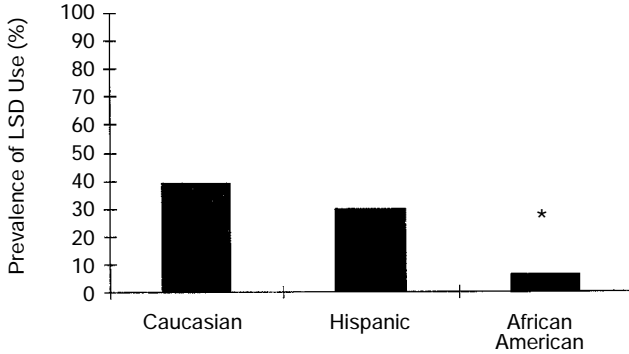
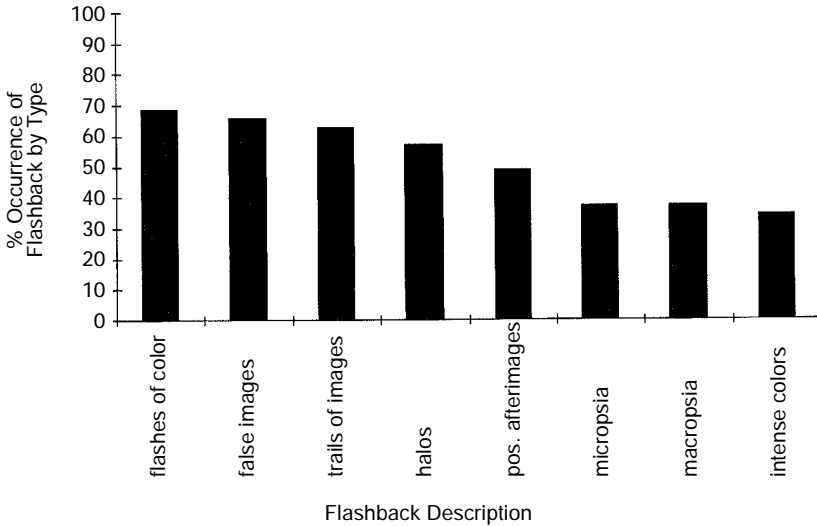


FIGURE 3. Rates of occurrence of flashback by type of distortion.



may learn to accept them in much the same way others might accept minor or transient physical discomfort. This finding is reminiscent of many alcoholic patients who report a broad range of physical sequela of their alcohol consumption which they come to perceive as an inconvenient but acceptable aspect of their use of alcohol.

Substance use disorders are a significant public health problem. Recent information about LSD use and LSD flashbacks, especially in patients who also have alcohol dependence, is lacking. It has been noted by many researchers in the addictions field that patterns of drug abuse in large populations often vary over time in relation to the relative popularity of a drug or group of drugs. It is noteworthy that nearly one third of all alcohol dependent patients in this study have a positive LSD history; this may indicate that LSD, and possibly hallucinogens in general, are making a comeback. A replication study in a civilian facility would help in determining the generalizability of these findings. A better understanding of these problems will aid in comprehensive treatment of identified patients, provide empirically derived information to guide drug and alcohol policy in the future, and give direction to public information and education programs about drug and alcohol abuse.

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