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## Psychedelic-Assisted Group Therapy: A Systematic Review

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### Abstract

Contemporary research with classic psychedelic drugs (e.g. lysergic acid diethylamide (LSD) and psilocybin) is indebted to the 20th century researchers and clinicians who generated valuable clinical knowledge of these substances through experimentation. Several recent reviews that highlight the contributions of this early literature have focused on psychedelic-assisted individual psychotherapy modalities. None have attempted to systematically identify and compile experimental studies of psychedelic-assisted group therapy. In therapeutic settings, psychedelics were often used to enhance group therapy for a variety of populations and clinical indications. We report on the results of a systematic review of the published literature in English and Spanish on psychedelic-assisted group therapies. Publications are characterized by their clinical approach, experimental method, and clinical outcomes. Given the renewed interest in the clinical use of psychedelic medicines, this review aims to stimulate hypotheses to be tested in future research on psychedelic-assisted psychotherapy, group process, and interpersonal functioning.

### Keywords

Psychedelic; Hallucinogen; Psychotherapy; Group Therapy; Psilocybin; LSD

### Introduction

The use of psychedelics in group settings for religious purposes dates back centuries (Guerra-Doce 2015). It was through one of these traditional practices— the Mazatec communal ritual of the *velada*— that American researchers first learned of the psychoactive properties of the *Psilocybe mexicana* mushroom (Sabina and Wasson 1974). This discovery led to the isolation of, and early research with, psilocybin (Heim and Hoffmann 1958;

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Wasson and Riedlinger 1990). Famous “first wave” psychedelic research, namely Pahnke’s “Good Friday Experiment” (Pahnke 1963) and Leary’s “Concord Prison Experiment” (Leary et al. 1965), involved the administration of psilocybin in group settings. Despite this precedent, a group therapy approach has yet to be used in any published 21st-century clinical trial. To fill this knowledge gap, and complement other reviews of psychedelic research (Carhart-Harris and Goodwin 2017; Rucker, Iliff, and Nutt 2017; Rucker et al. 2016; Mangini 1998; Passie 1997, 2006), we conducted a systematic review of academic publications from 1900 to 2018 that employed a group element in the preparation, administration, or integration phases of psychedelic-assisted psychotherapy.

Group psychedelic use in nonclinical contexts (e.g., ayahuasca or peyote rituals) is beyond the scope of this review; however, the anthropological study of group psychedelic usage provides strong qualitative and ethnographic evidence of the safety and efficacy of using these substances when contained in a culture-affirming, ritual context (Dobkin de Rios 1972; Harner 1973; Labate and Cavnar 2014, 2016). MDMA, while not a classic psychedelic, is commonly mentioned alongside these substances and has its own extensive history of use in group contexts. Due to MDMA’s differential effects on social bonding, we have only included references to it in our systematic review when used in therapeutic sequences that also included use of a classic psychedelic.

The topic of group administration of psychedelics, and the utility of groups for the preparation or integration of psychedelic experiences, is important to several emerging trends in contemporary psychedelic research. Empirical qualitative findings from a recent clinical trial of psilocybin-assisted individual psychotherapy for treatment-resistant depression suggest that social connectedness may be a fundamental, underlying mechanism of therapeutic change (Watts et al. 2017; Carhart-Harris et al. 2018). Separately, another recent study administered psilocybin to healthy volunteers who received either “standard” psychological support, or a higher level of support that included more total contact hours with study facilitators and a regular “dialogue-group” with other participants who had received the study drug (Griffiths 2017). Participants in the enhanced support arm, compared to standard support, were both self- and observer-rated as demonstrating greater positive behavior changes attributed to their psilocybin experience. Moreover, participants from recent psychedelic-assisted individual psychotherapy trials have repeatedly requested to meet other participants (Bossis 2015; Bradberry et al. 2017) and have attested to the importance of these connections for corroborating often intense, difficult-to-describe, psychedelic experiences and reinforcing their beneficial effects (Bradberry et al. 2017). This echoes the clinical impression of early researchers that group involvement, whether in mutual aid groups like Alcoholics Anonymous or formal group therapy, could help solidify therapeutic gains by extending the intrapsychic experiences of high-dose psychedelic sessions into the interpersonal relationships of the group setting (Osmond et al. 1967). Non-medical psychedelic users in the community also increasingly seek out group support, as evidenced by the growth of peer- and therapist-led psychedelic integration groups.<sup>1</sup> Lastly, as a pharmacological class, psychedelics show unique effects on interpersonal experience

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<sup>1</sup>See (ERIE 2018) and (Center for Optimal Living 2018).

and behavior (Preller et al. 2018). Together, these trends suggest that incorporating groups into psychedelic therapy might enhance both participant satisfaction and outcomes.

Aside from group therapy's cost- and time-saving efficiencies, equivalence between non-psychedelic individual and group therapy has been demonstrated for a range of clinical outcomes and styles of therapy (Burlingame et al. 2016; McRoberts, Burlingame, and Hoag 1998). Whether psychedelic-assisted group therapy is equivalent to individual approaches remains unknown. As psychedelic medicines enter pivotal trials in the United States and Europe, the prospect of post-approval clinical innovation with different administration modalities, including group therapy, arises. It is therefore imperative that data on the safety, feasibility and efficacy of group modalities are available to the rapidly evolving field of psychedelic-assisted psychotherapy.

## Methods

We followed appropriate guidelines from the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) to complete this review (Liberati et al 2009). PsycINFO and MEDLINE databases were searched (November 2018) using the following terms: *lysergic acid diethylamide, LSD, mescaline, psilocybin, hallucinogen, DPT* OR *psychedelic* AND *group therapy, group psychotherapy* OR *group support*. Additionally, the 'Erowid Reference Vaults' (Erowid 2017) and the 'Multidisciplinary Association for Psychedelic Studies' Psychedelic Bibliography' (MAPS 2018), were searched using the terms *group therapy, group psychotherapy, group support* OR *group administration*. Finally, references indexed as *group therapy* in "Psycholytic and Psychedelic Therapy Research 1931-1995: A Complete International Bibliography" (Passie 1997) were reviewed. No restrictions were made on publication dates. 492 papers were identified from these databases, and an additional 14 were found through hand search of reference lists. Of the total 506 records identified, 109 duplicates were removed.

Of the 397 unique papers remaining, 276 were excluded after reading titles or abstracts, and an additional 45 were excluded due to an inability to locate the abstract or full text in English or Spanish (our team only reads English and Spanish fluently). This left 76 full texts to screen in detail for eligibility. Of these, 12 studies met inclusion criteria, which required that the article contain some description of group methods, demographic and diagnostic information, and quantified outcome data. Our methods are summarized in Figure 1. All reported doses are p.o. (oral administration) unless otherwise specified.

## Results

### Group Therapies for Alcoholism

Chwelos, Blewett, Smith, and Hoffer (1959) present a case series of chronic alcoholics treated with a combination of LSD-assisted individual psychotherapy and LSD-assisted group therapy in an inpatient alcohol treatment program (Chwelos et al. 1959). All participants were deemed by the authors to have "an extremely unfavorable prognosis" based on a "lack of response to any previous treatment," and also had comorbid "character disorder" (n=28), "psychopathy" (n=30), and "borderline and actual psychosis" (n=16). Two

sets of cases are discussed: 1) 24 participants treated by an “initial method” which included a simple therapeutic interview by the attending clinician at the height of LSD drug effect but little formal integration, and 2) 16 participants treated after protocols were modified to include music, emotional stimuli (pictures of family), and the use of therapists with personal LSD experience. Typical dosages ranged from 200-400mcg. Groups consisted of 3-5 members: 2-3 participants taking LSD, 1-2 therapists who also took LSD, and occasionally, peers who remained sober but had previous LSD experience. Patients either had a single group LSD experience, or multiple LSD group sessions several months apart. Of the 40 participants treated, as well as 7 additional participants reported in Blewett and Chwelos (1959), 19 were deemed “much improved” (i.e. abstinence), 11 “moderately improved” (substantial reduction in drinking habits), and 17 “unchanged.”

Jensen (1962) conducted a controlled study of an inpatient treatment program for alcoholics using group therapy, Alcoholics Anonymous (AA) meetings, and individual LSD-assisted psychotherapy. 138 patients were split into three conditions: 58 patients received the full program (2 hours of group therapy, 3 times-weekly AA meetings, a single individual 200mcg LSD session), 35 patients received the group therapy and AA components without the LSD session, and 45 “controls” received only treatment-as-usual in the hospital during the same time period. Follow-up data obtained 6-18 months after discharge revealed that in the LSD condition (n=58), 34 remained sober and 7 were considered improved (“drinking definitely less than before”). Of those who received group components without LSD (n=35), 4 were sober and 4 were improved. Of the controls (n=45), 7 were sober and 3 improved. The increased proportion of sobriety or improvement in the LSD condition was reported as statistically significant compared to the two control arms.

Cheek, Osmond, Sarett, and Albahary (1966) report a controlled, open-label study in which 28 alcoholics underwent a specially constructed 4-week inpatient group therapy program, including 2 LSD-assisted group sessions for each participant. The groups consisted of 10-11 members: only 2 patients were under the influence of LSD each session along with 6 nondrug patients providing support, a “psychiatric technician,” a psychiatrist, and sometimes a sociologist. There was rolling admission to the group with new members filling in for graduating members. The schedule of LSD dosing was designed specifically so that “men to whom the drug had not yet been administered [could] observe others under its influence before they took it themselves.” The purpose of the group therapy was to “work together to understand the LSD experience and profit from it.” The authors used Alcoholics Anonymous (AA) as a model and “employed AA language and concepts and fitted our program into the Twelve Steps with which many of the patients were already familiar.” The outcomes of this cohort were compared with a control group of 34 alcoholics who received the hospital’s regular 6-week treatment program (group and individual therapy, educational programs, AA discussion) but did not receive LSD. Follow-up interviews with all participants were conducted at 3, 6, and 12 months after completion of the program. At 3 months, 17 patients in the LSD group (60.7%) remained abstinent versus 15 of the controls (44.1%). By 12 months, only 8 members of the LSD group (28.6%) remained abstinent versus 7 of the controls (20.6%).

Smart et al. (1966) completed a single-blind, 3-arm controlled clinical trial of high-dose individual LSD administrations coupled with non-drug group psychotherapy sessions in an inpatient alcohol treatment program. 30 participants were enrolled and all received standard morning and afternoon group psychotherapy (or psychoeducation) sessions. Approximately 1 week before discharge, 10 participants received one dose of LSD 800mcg, 10 received one dose of ephedrine 60mg as an active placebo, and 10 received no drug treatment. Individual drug sessions took place in a single room with patients physically restrained to a bed with a Posey belt during the duration of peak drug effect. A doctor and a nurse were in attendance for a 3-hour “psychotherapeutic interview” where participants were asked about a range of topics including “transference feelings toward doctor and nurse,” “child-parent relationship,” and “suicidal propensity.” At the 6-month follow-up, neither abstinence rates nor average number of drinking episodes demonstrated any statistically significant difference between treatment arms. Abstinence was measured as the percent change in total number of weeks abstinent over the 6 months prior to and 6 months after respective treatments (with average gains of 33.7% in the LSD arm, 31.5% in ephedrine arm, and 19.6% in the control arm). The authors contrasted their LSD administration procedures with those of the Blewett and Chwelos (1959), which focused on aesthetic and psychological support techniques, suggesting they might be important without linking this limitation to their null findings.

Bowen, Soskin, and Chotlos (1970) conducted a controlled clinical trial of high-dose individual LSD sessions combined with the Human Relations Training Laboratory (HRTL) treatment versus two comparator arms: HRTL alone and HRTL combined with an active placebo of low-dose LSD (25mcg). HRTL focuses on strengthening alcoholics’ interpersonal skills through group exercises, psychoeducation, and feedback sessions. All participants were men in a voluntary 60-day inpatient VA alcohol treatment program. Although the authors claim that they did not provide group psychotherapy (p113), patients were admitted to the inpatient unit in clusters of 20-23 patients who all received the same treatment, leading to a support group-type atmosphere among those in the LSD treatment arm: “Patients who had their LSD sessions earlier in the program undoubtedly talked about their reactions with the patients waiting to go through their sessions. This probably had the effect of reinforcing a positive set...” (p113). LSD 500mcg was administered orally to 71 participants who were attended to in private rooms by a nursing assistant during their individual session. A clinician-rated scale was created to assess general level of functioning at 1-year follow-up with points assigned for abstinence from alcohol, employment, and other factors. No statistically significant difference was found between any of the three comparator arms at 1-year post treatment (see Table 1 for details).

### **Group Therapies for “Neurotics”**

Bierer and Browne (1960) (also reported in Bierer and Buckman 1961) report an open-label, pilot study of 75 patients receiving LSD or LSD plus methamphetamine in a group setting at a psychiatric night hospital that served as a partial hospitalization program, where patients stayed at night but left to work during the day. On a rolling basis, patients were divided into 5 consecutive cohorts of 13-18 patients each. Frequency of group sessions varied so that over the course of a month, 2 cohorts met 5 evenings/week, 2 cohorts met 3 evenings/week,

and 1 cohort met 2 evenings/week. The authors report neither the dose of LSD and methamphetamine administered nor the frequency with which patients took the drugs. Group therapy sessions were psychodynamic in style and included some patients who were not administered any drug. Patient diagnoses included “schizophrenia” and “advanced schizoid states,” “depression,” “psychopath,” “hysteria,” “anxiety,” and “homosexuality,” but the number of individuals with each diagnosis was not reported. Duration of symptoms for all patients was >1 year, and a majority of the sample had symptoms >10 years. Regarding clinical outcomes, the research team rated 10/75 patients “Much Improved,” 20/75 “Improved,” 7/75 “Slightly Improved,” and 20/75 “Not Improved.” Only these descriptive statistics are reported, and there is no indication as to whether the frequency of group therapy correlated with clinical outcome. The only safety data presented are short descriptions of two completed suicides in their sample—neither of which occurred under the acute effect of LSD. The authors conclude that the data support the feasibility and potential effectiveness of psychedelic group therapy in a partial hospitalization program as long as it was not “considered as a treatment in itself, but as part of a system of treatment.”

Fontana (1961) presents a clinical summary of his work with 168 patients treated with once-monthly LSD-assisted group sessions as an adjuvant to weekly non-drug psychoanalytic group therapy in a private, outpatient setting. Therapy groups comprised 7-10 members with a variety of disorders who were administered LSD 50-150mcg or, less frequently, psilocybin 8-12mg. Clinical improvement scores are available for only 166 patients, who received LSD or psilocybin administration in individual sessions, groups, or both. Of these 166 patients, 93 were rated “Cured” or “Much Improved.” The author states that many patients treated individually also received LSD group sessions in order to help gauge and strengthen their ability to connect interpersonally.

Hausner and Doležal (1963, 1966) conducted an unorthodox multi-arm trial (N=39) of a LSD-assisted group therapy experiment in “neurotic” patients. Participants included male and female patients, most were 30-39 years old and had symptoms of 2-3 years duration. All had shown limited improvement since admission to a mental health rehabilitation center. Study design was as follows: first, all 39 participants attended a non-drug baseline group therapy session together. Later that day, the same participants were randomly assigned to one of four arms during a second group therapy session: 7 patients were assigned to a 50mcg s.c. LSD administration arm (the number of participants reported in the LSD arm differs between publications, with 11 participants reported in the latter 1966 publication); another 5 were assigned to a saline-administration arm; 15 patients were assigned to a non-drug control arm (with another 3 added to this arm due to concerns about their initial assignment to LSD or saline administration). Finally, there were 9 participants, all of whom had previously received individual LSD (100 mcg s.c.) sessions, who constituted a fourth trial arm (LSD “ex-patients”). While the amount of psychotherapy each patient had before and after the 2 experimental group sessions varied, there were reportedly no overall differences in total therapy hours between treatment arms. Using a neurotic symptoms questionnaire, between-group comparisons were made in changes from immediately before the baseline group session to immediately after the experimental group session, and at several follow-up intervals. The reported changes in neurotic symptoms are likely incorrect given that the percentages of improved participants differ between the two publications (Table VII, 1963



and Fig. 1, 1966). See Table 1 for reported percentages of improved participants from the 1963 publication. What was consistent is the authors' reporting that the participants with by far the best clinical outcomes in the short term and at 1-year were those LSD "ex-patients" who were administered LSD 100mcg s.c. in individual sessions and subsequently participated in the therapeutic community of the rehabilitation center, which included regular group therapy.

Spencer (1963) analyzed a case-series of an LSD-assisted group therapy cohort of 10 women (5 inpatient and 5 outpatient) that met twice weekly for 16 months. The author, along with a nurse co-therapist, adapted concepts from Child Guidance Play Therapy (BMJ Editorial Board 1938) to create a room with various arts and crafts activities, toys, props and fully-dressed tailor dummies. This room was incorporated into a day-long, non-directive therapy model called "Permissive Group Therapy." Participants were free to act out and freely experiment with available props, and were allowed "to do precisely as they wanted to unless their actions would result in the possibility of serious damage to themselves or others." Patients were mostly middle-aged with treatment-resistant "psychopathy," "hysteria," "phobia" or "depressive" conditions with "bad, if not hopeless" prognoses; psychotic patients were excluded. Doses beginning at LSD 100mcg were given at 9am on session days, but given the serial and frequent dosing, dosage was escalated to between 200mcg-1500mcg. Sessions lasted until 5pm each day. No unexpected adverse reactions were reported, though patient aggression, including acts of destruction against the dummies and room furnishings, was permissively tolerated by the therapists. Of the 10 group members, after 16 months of therapy, 3 "improved sufficiently to require no further psychiatric help," 4 were "helped to a fairly definite degree" and 3 had no improvement.

Ucha Udabe et al. (1968) report a single-arm, open-label study of four cohorts (n 9 members in each) that received weekly psychoanalytic group psychotherapy (an average 25 sessions). Each cohort was given a single LSD-assisted group therapy session (LSD 100mcg) and a single, separate Benzedrine (racemic amphetamine)-assisted group therapy session. The study included outpatients diagnosed as "neurotic," "psychosomatic," or "minor psychopathy" with ages 9-42 years old. Oddly, the authors report treating 4 gender-mixed cohorts of a maximum of 9 members each, but the authors claim to have treated a total of 46 patients by diagnostic category— perhaps patients with >1 diagnosis were counted twice. At study completion, patients were deemed to be "Cured" (10/46), "Improved" (25/46), or "No change" (1/46). No safety data were reported. Certain patients received non-drug individual or family therapy sessions concurrently, but no additional information is provided. A simple two-dimensional group process measure was used to sum the total number of discrete interactions each patient had with other group members as well as the "deepest" (most therapeutic) level of communication achieved by the group overall during each session. Though no statistical analyses were reported, the authors state that the average observer-rated group interactions per patient per session showed a "statistically significant" increase during the LSD administration group session compared to non-drug group sessions. This increased frequency of interactions positively correlated with the group as a whole attaining its "deepest" level of communication during the same LSD session. The authors conclude that the administration of psychoactive drugs may help to "mobilize"

psychological material from participants in psychoanalytic group therapy, but that their preliminary data require further validation.

Sokolik and Hausner (1972) report an open-label study in which a heterogenous group of 18 inpatients in a 3-month program that included daily group therapy were given once-weekly LSD treatments in a group setting. Patients were selected on the basis of having failed previous therapy and had diagnoses of “obsessive neuroses, chronic depressions, character neuroses, [and] borderline cases.” The group sessions consisted of all 18 participants and two therapists. Each session lasted 4-5 hours wherein the therapist guided participants in “analyzing the actual emotional attitudes to the group and the transference of emotions to the group.” LSD doses ranged from 100-800mcg. At end of the program, the authors note “substantial improvement in both symptoms and interpersonal relations” in 6/18 participants, “fair improvement” in 4/18, and “no results” in 2/18. 6/18 participants dropped out. The authors note that the group “creates a microsocial field, giving a highly emotional corrective experience and along with this the possibility to analyze the neurotic mechanisms.”

Gasser (1995) reports an overview of the work of three therapists affiliated with the Swiss Medical Society for Psycholytic Therapy (SAEPT) who were granted special permission to use MDMA and LSD in psychotherapy from 1988-1993. These three practitioners provided drug-assisted psychotherapy to 171 patients in an open-label, single-arm fashion. Participants had sought out treatment with these practitioners for diagnoses ranging from “Personality Disorder” to “Addiction,” amongst others. All three practitioners used some variation of drug-assisted group therapy wherein groups of patients (n=8-15) would receive the drug and then listen to music alternating with long periods of silence. One therapist used MDMA 125mg exclusively while the other two used MDMA 125mg for the first 3-4 sessions, after which they used LSD 100-400mcg. The average duration of therapy was 3 years. In a follow-up survey of these participants (n=121 responders), >90% described good or slight improvement. In terms of safety, only 1 patient complained of persistent depression that appeared 3-months after his last psycholytic session.

## Discussion

Among the 12 studies identified, LSD was most commonly used, at dosages typically ranging from 50mcg to 400mcg p.o., though higher doses or combinations with stimulants were occasionally used. Psilocybin was used in 2 of the studies. Studies were methodologically heterogeneous, ranging from a post hoc survey of 171 participants (Gasser 1995) to case studies of psychotherapy groups (sample sizes of 4 to 166 participants) to randomized, active-placebo controlled clinical trials (sample sizes of 30 and 99 participants). The treatment modalities employed ranged from nondirective weekly or monthly group administration of psychedelics to single high-dose individual sessions embedded within the course of an ongoing, structured group treatment program. In addition to these studies, our search also identified many academic presentations, essays, clinical summaries and biographical accounts of psychedelic-assisted group therapy that did not systematically report clinical outcomes data (See Table 2 for an annotated bibliography of these reports).



One limitation of our systematic review is that we were only able to review English- and Spanish-language publications. However, we did review English language translations or publications by Nordic, Dutch and German teams. See (Mascher 1967; Passie 1997, 2006; Gouzoulis-Mayfrank et al. 1998; Rucker et al. 2016; Rucker, Iliff, and Nutt 2017) for English language synopses of some of these studies. In particular, Passie (2006) provides a thorough narrative review of different psilocybin-assisted psychotherapy procedures from many 20<sup>th</sup>-century European teams. All the studies we reviewed were limited in methodological rigor when compared to current standards. Methodological shortcomings common to this era of psychedelic research include lack of proper control groups, lack of blinding procedures, inconsistent diagnoses and treatments applied across groups, outcome measures that were either unvalidated or absent, and poor or absent statistical analysis (O'Brien and Jones 1994; Gouzoulis-Mayfrank et al. 1998; Rucker et al. 2016; Rucker, Iliff, and Nutt 2017). As such, the clinical outcomes reported here do not permit comment on the efficacy of psychedelic-assisted group therapy.

Nonetheless, group support and psychotherapy was a focus of a number of early psychedelic researchers. Approximately 700 participants were administered psychedelics in groups or with the support of groups in the studies included in Table 1. These participants were treated across different settings using a diverse set of group therapy procedures, suggesting the feasibility of combining psychedelics (high and low dose) with group therapy for the treatment of affective and personality (“neurotic”) disorders as well as substance use (alcohol) disorders.

Three points stand out in surveying this work. The first is safety. We cannot reliably determine the safety of these modalities given that the assessment and reporting of adverse events was inconsistent. However, no studies reported any cases of prolonged psychosis, suicide, or other serious adverse events directly attributable to psychedelic administration (Bierer and Browne 1960; Cheek et al. 1966; Gasser 1995). Most studies excluded chronically psychotic and medically ill participants, yet many also focused on treatment-resistant cases, and included patients with comorbid conditions. These findings suggest that with proper safeguards, psychedelics can be given safely to some clinical populations either via individual dosing sessions with adjuvant group therapy or via group dosing sessions supplemented by non-drug psychotherapy sessions. It should be noted, however, that most group dosing protocols used a lower drug dose and/or required that patients have prior experience with individual dosing sessions (see Passie 2012 for an example protocol).

The second point concerns group therapies for alcoholism. Four of five controlled studies in our review were done in inpatient alcohol treatment programs. Two studies had null findings (Smart et al. 1966; Bowen, Soskin, and Chotlos 1970), while two had statistically significant improvements in their treatment arms in terms of sobriety and social functioning (Jensen 1962; Cheek et al. 1966). Comparing these four studies, no compelling trend emerges in terms of dose of drug or dose of group therapy received, nor of individual versus group psychedelic administration. It is notable, however, that the two positive studies— as well as the single uncontrolled study for alcoholism (Chwelos, Blewett, Smith, and Hoffer 1959)— used either a 12-Step model or group therapy specifically adapted for psychedelic administration, while the studies with null findings did not use these elements. Third,

concerning group therapies for “neurotics,” all seven uncontrolled studies were done with heterogeneous populations and all reported clinical improvement in the majority of their participants. The single controlled study (Hausner and Doležal 1966) showed that when a course of non-drug group therapy was held constant, patients in the higher dose (100mcg s.c.) individual LSD session arm had better outcomes than patients who received a lower dose (50mcg s.c.) group LSD session. This difference was maintained at the 1-year follow-up.

Regardless of the clinical population or therapy style, new research into psychedelic-assisted group therapy should take advantage of methodological and statistical advancements in group therapy research since the above-referenced studies were conducted. The American Group Psychotherapy Association has made available evidence-based clinical practice guidelines and validated measures to assess interpersonal functioning and group cohesion (Strauss, Burlingame, and Bormann 2008; Bernard et al. 2008; Krogel et al. 2013). Hierarchical linear modeling can account for multiple levels of analysis (individual versus group effects) and the non-independence of observations inherent in the research of groups (Baldwin, Murray, and Shadish 2005; Tasca et al. 2009; Kenny et al. 2002).

The range of clinical approaches used in these reviewed studies illustrates the complexity involved in designing future trials of psychedelic-assisted group therapy. The optimal number of group members, drug dose, sequencing and number of group sessions, and type of group therapy are among the variables to consider. As opposed to the group administration of psychedelics that was common in early research, researchers today will likely, at least at first, use groups solely for the preparation and integration of individual psychedelic administration sessions. Modern psychedelic-assisted individual psychotherapy protocols are resource-, staff- and time-intensive (Mithoefer 2017; Johnson, Richards, and Griffiths 2008). Because preparatory and integration sessions entail the majority of total therapy hours a patient receives in modern protocols, delivering these sessions in a group format may improve the cost-benefit and time efficiency of research and clinical operations (Villapiano 1998).

At a fundamental level, a group component in psychedelic research protocols serves as a significant manipulation of both attitudinal set and environmental setting. Regardless of whether formalized group therapy, less formal group support, or simply a group task is used, inclusion of a group setting in a psychedelic intervention may reveal new pathways toward understanding the extent to which the human response to psychedelics is shaped by “drug, set, and setting” (Zinberg 1984). Today’s respect for this tripartite adage stems from the 20<sup>th</sup> century’s vast and variable clinical experience with psychedelics. We feel the fullest and most therapeutic expression of these three factors in psychedelic research still lies ahead, and that psychedelic-assisted group therapy may yet play a key role in this clinical and scientific endeavor.

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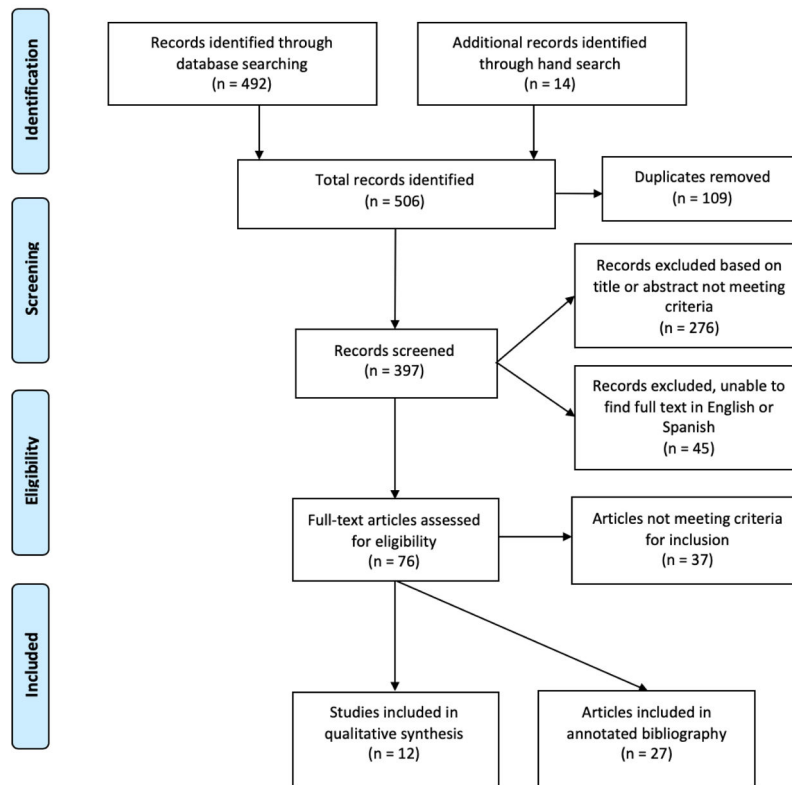
## References

- Baldwin SA, Murray DM, and Shadish WR. 2005 Empirically supported treatments or type I errors? Problems with the analysis of data from group-administered treatments. *Journal of Consulting and Clinical Psychology* 73 (5): 924–935. doi:10.1037/0022-006X.73.5.924. [PubMed: 16287392]
- Bernard H, Burlingame G, Flores P, Greene L, Joyce A, Kobos JC, Leszcz M, MacNair-Semands RR, Piper WE, McEaney AMS, and Feirman D. 2008 Clinical Practice Guidelines for Group Psychotherapy. *International Journal of Group Psychotherapy* 58 (4): 455–542. doi:10.1521/ijgp.2008.58.4.455. <Go to ISI>://WOS:000259655200002. [PubMed: 18837662]
- Bierer J, and Browne IW. 1960 An Experiment with a Psychiatric Night Hospital. *Proceedings of the Royal Society of Medicine* 53: 930–932. [PubMed: 19994080]
- Bierer J, and Buckman J. 1961 Marlborough Night Hospital: Treatment with LSD and Group Therapy. *Nursing Times* 57: 637–639.
- Blewett DB, and Chwelos N. 1959 (2002 Digital Version). Handbook for the Therapeutic Use of Lysergic Acid Diethylamide-25: Individual and Group Procedures. Edited by MAPS and Erowid [https://erowid.org/psychoactives/guides/handbook\\_lsd25.shtml](https://erowid.org/psychoactives/guides/handbook_lsd25.shtml).
- BMJ Editorial Board. 1938 Play Therapy and Child Guidance. *British Medical Journal* 2 (4065): 1150–1151. <https://www.ncbi.nlm.nih.gov/pubmed/20781936> [PubMed: 20781936]
- Bossis AP 2015 Psilocybin-Generated Mystical Experience Research: Implications for Alleviating Existential Distress Associated with a Cancer Diagnosis Public lecture, UCSF Osher Center for Integrative Medicine, San Francisco, CA, 10 26, 2015.
- Bowen WT, Soskin RA, and Chotlos JW. 1970 Lysergic Acid Diethylamide as a Variable in the Hospital Treatment of Alcoholism. A Follow-Up Study. *Journal of Nervous and Mental Disease* 150 (2): 111–118. [PubMed: 4906920]
- Bradberry M, Byler D, Gilpin G, Host-Jablonski D, and Brown C. 2017 PANEL: UW Psilocybin Pharmacokinetics Study: Study Volunteers Discussion Psychedelic Science 2017, Oakland, California, 4 22, 2017.
- Burlingame GM, Seebeck JD, Janis RA, Whitcomb KE, Barkowski S, Rosendahl J, and Strauss B. 2016 Outcome Differences Between Individual and Group Formats When Identical and Nonidentical Treatments, Patients, and Doses Are Compared: A 25-Year Meta-Analytic Perspective. *Psychotherapy* 53 (4): 446–461. doi:10.1037/pst0000090. [PubMed: 27918191]
- Carhart-Harris RL, Erritzoe D, Haijen E, Kaelen M, and Watts R. 2018 Psychedelics and connectedness. *Psychopharmacology* 235 (2): 547–550. doi:10.1007/s00213-017-4701-y. [PubMed: 28795211]
- Carhart-Harris RL, and Goodwin GM. 2017 The Therapeutic Potential of Psychedelic Drugs: Past, Present, and Future. *Neuropsychopharmacology* 42 (11): 2105–2113. doi:10.1038/npp.2017.84. [PubMed: 28443617]
- Center for Optimal Living. 2018 Psychedelic Harm Reduction and Exploration Group. Accessed November 18, 2018 <https://www.psychedellicprogram.com/psychedelic-harm-reduction-and-exploration-group>.
- Cheek FE, Osmond H, Sarett M, and Albahary R. 1966 Observations Regarding the Use of LSD-25 in the Treatment of Alcoholism. *Journal of Psychopharmacology* 1 (2): 56–74.
- Chwelos N, Blewett DB, Smith CM, and Hoffer A. 1959 Use of d-lysergic acid diethylamide in the treatment of alcoholism. *Quarterly Journal of Studies on Alcohol* 20: 577–590. [PubMed: 13810249]
- Dobkin de Rios Marlene. 1972 *Visionary Vine: Psychedelic Healing in the Peruvian Amazon*. San Francisco: Chandler Publications Co.
- ERIE, Entheogenic Research Integration & Education. 2018 ERIE Events Page. Accessed November 18, 2018 <https://erievision.org/events/>.

- Erowid. 2017 Erowid Reference Vaults. Accessed November 7, 2018 <https://www.erowid.org/references/>.
- Fontana AE 1961 El uso clinico de las drogas alucinógenas. *Acta Neuropsiquiátrica Argentina* 7 (94): 1–8.
- Gasser Peter. 1995 Psycholytic Therapy with MDMA and LSD in Switzerland. *MAPS Bulletin* 5 (3): 3–7.
- Gouzoulis-Mayfrank E, Schneider F, Friedrich J, Spitzer M, Thelen B, and Sass H. 1998 Methodological issues of human experimental research with hallucinogens. *Pharmacopsychiatry* 31 (S 2): 114–118.
- Guerra-Doce E 2015 Psychoactive Substances in Prehistoric Times: Examining the Archaeological Evidence. *Time and Mind* 8 (1): 91–112. doi:10.1080/1751696X.2014.993244.
- Harnier Michael J. 1973 *Hallucinogens and shamanism*. New York: Oxford University Press.
- Hausner M, and Doležal V. 1963 Group and Individual Psychotherapy under LSD. *Acta Psychotherapeutica et Psychosomatica* 11: 39–59. [PubMed: 14044681]
- . 1966 Follow-Up Studies in Group and Individual LSD Psychotherapy. *Activitas Nervosa Superior* 8: 87–95. [PubMed: 5913553]
- Heim R, and Hoffmann A. 1958 Isolement de la Psilocybine à partir du *Stropharia cubensis* Earle et d'autres espèces de champignons hallucinogènes mexicains appartenant au genre *Psilocybe*. *Comptes rendus de l'Académie des Sciences* 247: 557–561.
- Jensen SE 1962 A Treatment Program for Alcoholics in a Mental Hospital. *Quarterly Journal of the Study on Alcohol* 23 (2): 315–320.
- Johnson MW, Richards WA, and Griffiths RR. 2008 Human hallucinogen research: guidelines for safety. *Journal of Psychopharmacology* 22: 603–620. doi:10.1177/0269881108093587. [PubMed: 18593734]
- Kenny DA, Mannetti L, Pierro A, Livi S, and Kashy DA. 2002 The statistical analysis of data from small groups. *Journal of Personality and Social Psychology* 83 (1): 126–137. doi:10.1037//0022-3514.83.1.126. [PubMed: 12088122]
- Kroegel JulieAnn, Burlingame Gary, Chapman Chris, Renshaw Tyler, Gleave Robert, Beecher Mark, and Macnair-Semands Rebecca. 2013 The Group Questionnaire: a clinical and empirically derived measure of group relationship. *Psychotherapy Research: Journal of the Society for Psychotherapy Research* 23: 344–354. doi:10.1080/10503307.2012.729868. [PubMed: 23432457]
- Labate BC, and Cavnar C. 2014 *Ayahuasca Shamanism in the Amazon and Beyond*. New York: Oxford University Press.
- . 2016 *Peyote: History, Tradition, Politics, and Conservation*. Santa Barbara: ABC-CLIO.
- Leary T, Metzner R, Presnell M, Weil G, Schwitzgebel R, and Kinne S. 1965 A New Behavior Change Program Using Psilocybin. *Psychotherapy* 2 (2): 61–72.
- Liberati A, Altman DG, Tetzlaff J, Mulrow C, Gotzsche PC, Ioannidis JP, Clarke M, Devereaux PJ, Kleijnen J, and Moher D. 2009 The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate healthcare interventions: explanation and elaboration. *BMJ* 339: b2700. doi:10.1136/bmj.b2700. [PubMed: 19622552]
- Mangini M 1998 Treatment of alcoholism using psychedelic drugs: A review of the program of research. *Journal of Psychoactive Drugs* 30 (4): 381–418. doi:10.1080/02791072.1998.10399714. [PubMed: 9924844]
- MAPS, Multidisciplinary Association of Psychedelic Studies. 2018 *Psychedelic Bibliography*. Accessed November 7, 2018 <https://maps.org/resources/psychedelic-bibliography>.
- Mascher E 1967 Psycholytic Therapy: Statistics and Indications In *Neuro-Psychopharmacology*, ed. Brill H, Cole JO, Denker P, Hippings H and Bradley PB, 441–444. Amsterdam: Excerpta Medica Foundation.
- McRoberts C, Burlingame G, and Hoag M. 1998 Comparative Efficacy of Individual and Group Psychotherapy: A Meta-Analytic Perspective. *Group Dynamics: Theory, Research, and Practice* 2 (2): 101–117. doi:10.1037/1089-2699.2.2.101.
- Mithoefer MC 2017 *A Manual for MDMA-Assisted Psychotherapy in the Treatment of Posttraumatic Stress Disorder (Version 8.1; 22 May 2017)*. A Manual for MDMA-Assisted Psychotherapy in the Treatment of Posttraumatic Stress Disorder. Accessed November 29th, 2018 <https://s3-us->

[west-1.amazonaws.com/mapscontent/research-archive/mdma/TreatmentManual\\_MDMAAssistedPsychotherapyVersion+8.1\\_22+Aug2017.pdf](https://west-1.amazonaws.com/mapscontent/research-archive/mdma/TreatmentManual_MDMAAssistedPsychotherapyVersion+8.1_22+Aug2017.pdf).

- O'Brien CP, and Jones RT. 1994 Methodological issues in the evaluation of a medication for its potential benefits in enhancing psychotherapy In *Fifty Years of LSD: Current Status and Perspectives of Hallucinogens*, 213–222. New York: Parthenon.
- Osmond H, Albahary R, Cheek FE, and Sarett M. 1967 Some Problems in the Use of LSD 25 in the Treatment of Alcoholism In *The Use of LSD in Psychotherapy and Alcoholism*, ed. Abramson HA, 434–457. Indianapolis: Bobbs-Merrill Company, Inc.
- Pahnke W 1963 *Drugs and Mysticism: An Analysis of the Relationship between Psychedelic Drugs and the Mystical Consciousness* Thesis submitted as part of Ph.D. in Religion and Society: Harvard University.
- Passie T 1997 *Psychoalytic and Psychedelic Therapy Research 1931-1995: A Complete International Bibliography*. Hannover: Laurentius Publishers.
- . 2006 *A History of the Use of Psilocybin in Psychotherapy In Sacred Mushroom of Visions: Teonanácatl: A Sourcebook on the Psilocybin Mushroom*, ed. Metzner R, 113–138. Rochester, Vt: Park Street Press.
- . 2012 *Healing with Entactogens*. Santa Cruz: Multidisciplinary Association for Psychedelic Studies.
- Preller KH, Schilbach L, Pokorny T, Flemming J, Seifritz E, and Vollenweider FX. 2018 Role of the 5-HT<sub>2A</sub> receptor in self-and other-initiated social interaction in LSD-induced states—a pharmacological fMRI study. *Journal of Neuroscience: 1939–2017*. doi:10.1523/JNEUROSCI.1939-17.2018.
- Rucker JJH, Iliff J, and Nutt DJ. 2017 Psychiatry & the psychedelic drugs. Past, present & future. *Neuropharmacology*. doi:10.1016/j.neuropharm.2017.12.040.
- Rucker JJH, Jelen LA, Flynn S, Frowde KD, and Young AH. 2016 Psychedelics in the treatment of unipolar mood disorders: a systematic review. *Journal of Psychopharmacology* 30 (12): 1220–1229. doi:10.1177/0269881116679368. [PubMed: 27856684]
- Sabina M, and Wasson RG. 1974 *María Sabina and her Mazatec mushroom velada*. New York: Harcourt Brace Jovanovich.
- Smart RG, Storm T, Baker EF, and Solursh L. 1966 A Controlled Study of Lysergide in the Treatment of Alcoholism 1. The Effects on Drinking Behavior. *Quarterly Journal of Studies on Alcohol* 27 (3): 469–482. [PubMed: 5970697]
- Sokolik Z, and Hausner M. 1972 Difficulties in Psychotherapy with Psychodysleptics. *World Journal of Psychosynthesis* 4 (2): 41–43.
- Spencer AM 1963 Permissive Group Therapy with Lysergic Acid Diethylamide. *British Journal of Psychiatry Bulletin* 109 (458): 37–45.
- Strauss Bernhard, Burlingame Gary M., and Bormann Bianca. 2008 Using the CORE-R battery in group psychotherapy. *Journal of Clinical Psychology* 64 (11): 1225–1237. doi:10.1002/jclp.20535. <https://onlinelibrary.wiley.com/doi/abs/10.1002/jclp.20535>. [PubMed: 18785650]
- Tasca GA, Illing V, Joyce AS, and Ogradniczuk JS. 2009 Three-level multilevel growth models for nested change data: A guide for group treatment researchers. *Psychotherapy Research* 19 (4-5): 453–461. doi:10.1080/10503300902933188. [PubMed: 20183400]
- Uche Udabe R, Kertesz R, Savorgnan JA, and Mannino D. 1968 LSD y Amfetaminas en psicoterapia grupal. *La Semana médica, Buenos Aires* 132: 1131–1134.
- Villapiano AJ 1998 Time-Managed Group Psychotherapy: Effective Clinical Applications. *Psychiatric Services* 49 (6): 838–838. doi:10.1176/ps.49.6.838. <https://ps.psychiatryonline.org/doi/abs/10.1176/ps.49.6.838>.
- Wasson RG, and Riedlinger TJ. 1990 *The Sacred Mushroom Seeker: Essays for R. Gordon Wasson* Vol. 4 Historical, Ethno- & Economic Botany Series. Portland, Oregon: Dioscorides Press.
- Watts Rosalind, Day Camilla, Krzanowski Jacob, Nutt David, and Carhart-Harris Robin. 2017 Patients' accounts of increased “connectedness” and “acceptance” after psilocybin for treatment-resistant depression. *Journal of Humanistic Psychology* 57 (5): 520–564.
- Zinberg Norman E. 1984 *Drug, Set, and Setting: The Basis for Controlled Intoxicant Use*. New Haven: Yale University Press.



**Figure 1.**  
PRISMA Study Selection Flow Diagram



Table 1.

Summary of studies included in the systematic review

Author	Study Design	Sample Size (N) Number of groups (G) Patients per group (P)	Patient Population and Setting	Group Therapy: Style; Regimen Drug Treatment: Drug; Dose; Regimen (all p.o., unless otherwise specified)	Outcomes
Chwelos, Blewett, Smith, and Hoffer, 1959	Open-label, single arm	N=40 G=? P=2-4	Treatment refractory chronic alcoholics (with comorbid "character disorder", "psychopathy", and "borderline and actual psychosis")	Group and individual therapy focused on self-acceptance, trust, and developing empathic bonds; therapy frequency unknown LSD (group dosing); 100-1000mcg (usually 200-400mcg); a single session or multiple sessions "usually several months apart"	"Much improved" (e.g., abstinence) or "Moderately improved": 27/40
Jensen, 1962	Open-label, controlled trial comparing 3 arms: 1) Group therapy + individual LSD session 2) Group therapy 3) Individual non-drug treatment	N=138 total 1) N=58, G = not specified P = 8-10 2) N=35 G = not specified P = not specified 3) N=45 G = N/A P = N/A	Male alcoholics, Voluntary inpatient unit	Group therapy (supportive / psychoeducation) 2 hours; AA meetings, 3 times/week; 2-months total stay LSD (individual dosing); 200mcg; once at end of the 2-month hospitalization	Follow-up 6-18 months after discharge: 1) Group therapy + LSD (N=58): Abstinent 34 Improved 7 2) Group therapy alone (N=35): Abstinent 4 Improved 4 3) Control (N=45): Abstinent 7 Improved 3
Cheek, Osmond, Sarett, and Albahary, 1966	Open label trial of LSD vs treatment-as-usual control	N = 62 total G = 1 Open group (rolling admission) P = 8 Active treatment (LSD)=28	Chronic alcoholics Age: 29-65 years Inpatient treatment program	Structured, 12 Step-inspired 4-week treatment program with daily therapeutic activities LSD (group dosing); 100-300mcg; twice 2 patients took LSD per group, the other 6 provided support	12-month follow-up: "Abstinent": LSD 8/28 Control 7/34 "Generally abstinent": LSD 10/28 Control 11/34
Smart et al., 1966	Double-blind RCT of LSD vs active control vs treatment-as-usual	N=30 G=? P=? Active treatment (LSD)=10	Inpatient alcohol treatment program Ages: 26-50 years	Didactic meetings or group psychotherapy sessions focused on alcohol and other drugs; twice daily LSD (individual dosing); 800mcg; one session Active control: Ephedrine 60mg Post-drug therapy sessions included "no special effort	6-month follow-up: No between-group differences in abstinence rates or average number of drinking occasions per month.

Author	Study Design	Sample Size (N) Number of groups (G) Patients per group (P)	Patient Population and Setting	Group Therapy: Style; Regimen Drug Treatment: Drug; Dose; Regimen (all p.o., unless otherwise specified)	Outcomes
				to examine the results of the drug session unless the patient requested it."	
Bowen, Soskin and Chotlos, 1970	<i>Experiment I</i> Open-label trial of LSD +HRTL vs HRTL <i>Experiment II</i> Double-blind RCT of LSD +HRTL vs active placebo + HRTL vs HRTL	<i>Experiment I</i> N=99 G=4 P=20-23 Active treatment =49 <i>Experiment II</i> N=59 G=3 P=15-22 Active treatment =22	Male veterans in an inpatient alcohol treatment program at Topeka Veterans Administration Hospital	Human Relationships Training Laboratory (HRTL) treatment program; 60-day program LSD (individual dosing); 500mcg; once Active control: LSD 25mcg	Clinician-rated 1-year follow-up: "Good or fair adjustment": Active treatment: 53/71 (75%) All controls: 59/87 (68%) (No statistically significant difference)
Bierer and Browne, 1960; Bierer and Buckman, 1961	Open-label, single arm	N=75 G=5 P=13-18	Heterogeneous (Schizophrenia and "schizoid states," Depression, Anxiety, "Hysteria," and "Psychopath") Psychiatric night hospital	"Active and interpretative dynamic" group therapy; 1-5 times/week LSD or LSD plus methamphetamine (group dosing); unknown dose; unknown frequency	"Improved": 49% (37/75)
Fontana, 1961	Open-label, single arm	N=166 G=? P=7-10	Heterogeneous (including "Psychopath," "hypochondriacs," and "adolescent") Outpatient	Psychoanalytic group therapy; weekly LSD; 50-150mcg (or Psilocybin 8-12mg) (group dosing); monthly	Aggregated data of patients treated with individual and/or group LSD sessions: "Cured" or "Much improved" or "Improved": 93/166
Hausner and Doležal, 1963; 1966	Semi-blinded, multi-arm trial comparing LSD (group dosing) vs LSD (individual dosing) vs Placebo (group dosing) vs Non-drug control All patients participate in the same therapy group	N=39 G=1 P=39 LSD (group dosing) = 7 or 11 LSD (individual dosing) = 7 or 11	"Neurotics" ("Anxiety neuroses," "Phobias," "Slighter obsessions," "Characteropathies," "Homosexuality," "Psychosomatic problems" ["Migraines, Dyspareunia, Ejaculatio praecox, Hysteria"]) Inpatient therapeutic community	Psychodynamic group therapy with "here and now" emphasis; one session combined with drug. Each LSD patient was assigned a "sponsor" (a peer who had previously been treated with LSD) in the therapeutic community to help them work through their LSD experience in the days after the treatment. LSD (group dosing); 50mcg s.c.; once or LSD (individual dosing); 100mcg s.c.; once or	Clinician-rated as "Much improved" or "Improved": LSD group 37.5% LSD individual 85.7% Placebo 80% Non-drug Control 69% Self-rated as "Much improved" or "Improved": LSD group 37.5% LSD individual 87.5% Placebo 80% Non-drug Control 100%

Author	Study Design	Sample Size (N) Number of groups (G) Patients per group (P)	Patient Population and Setting	Group Therapy: Style; Regimen Drug Treatment: Drug; Dose; Regimen (all p.o., unless otherwise specified)	Outcomes
				Saline (group dosing); s.c.; once	
Spencer, 1963	Open-label, single arm	N=10 G=1 P=10	Heterogeneous (Chronic "psychopathy, hysteria, phobic anxiety or recurrent neurotic depression") Female: 100% Inpatient: 5 Outpatient: 5	"Permissive Group Therapy"; 2 days/week over 16 months LSD (group dosing); 100mcg-1500mcg; every group Setting: Child Guidance Play Therapy Room	"Improved sufficiently to require no further psychiatric help": 3/10 "Helped to a fairly definite degree": 4/10
Ucha Udabe et al., 1968	Open-label, single arm	N=36 or 46 G=4 P 9	Heterogenous ("Neurotic," "psychosomatic," and "psychopathic" conditions) Outpatient	Intensive psychoanalytic group psychotherapy; weekly 90-minute sessions, average of 25 sessions per therapy group cohort LSD (group dosing); 100 mcg; once Racemic amphetamine (group dosing); 30mg; once (administered at a different group session than LSD)	"Cured": 10/46 (20.8%) "Improved": 25/46 (55.3%)
Sokolik and Hausner, 1972	Open label, single arm	N = 18 G = 1 P = 18	Heterogeneous (Treatment-refractory patients with "obsessive neuroses, chronic depressions, character neuroses, borderline cases") Inpatient	Group therapy focused on "analyzing... emotional attitudes" and "transference of emotions to the group"; 4-5hr non-drug sessions 5-times/week, for 3 months LSD (group dosing); 100-800mcg; weekly	"Substantial improvement in both symptoms and interpersonal relations" or "Fair improvement": 10/18
Gasser, 1995	Patient survey (conducted through mail)	N=171 (121 responded) G=? P=?	Heterogeneous (Personality Disorders, Adjustment Disorders, Affective Disorders, Eating Disorders, Addiction, Psychosis, Sexual Deviation) Outpatient 53% female Mean age 41 yr (SD = 8.7 yr)	Individual psychotherapy, combining elements of psycholytic and psychedelic approaches, occurring every two weeks Group drug sessions every 5 months (after 10 non-drug psychotherapy sessions)	Self-rated "Good" or "Slight improvement": 90.9%

Author	Study Design	Sample Size (N) Number of groups (G) Patients per group (P)	Patient Population and Setting	Group Therapy: Style; Regimen Drug Treatment: Drug; Dose; Regimen (all p.o., unless otherwise specified)	Outcomes
				MDMA (group dosing); 125mg; all drug sessions or MDMA (group dosing); 125mg; 3-4 sessions, then LSD (group dosing); 100-400mcg; all subsequent sessions	

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Table 2.

## Annotated Bibliographic Table of Psychedelic-Assisted Group Therapy

Citation	Synopsis
Abramson, H. A., M. P. Hewitt, H. Lennard, W. J. Turner, F. J. O'Neill, and S. Merlis. 1958. The Stablemate Concept of Therapy as Affected by LSD in Schizophrenia. <i>The Journal of Psychology</i> 45 (1): 75-84. doi.org/10.1080/00223980.1958.9916241.	The authors describe the group process in a study involving schizophrenic patients with non-psychotic individuals matched by age and gender. Under LSD, the schizophrenic patients' participation in the group process is increased, affective references related to self decrease, and other-oriented references increase.
Abramson, H. A. 1956. Lysergic Acid Diethylamide (LSD-25): XIX. As an Adjunct to Brief Psychotherapy, with Special Reference to Ego Enhancement. <i>The Journal of Psychology</i> 41 (1): 199-229. doi.org/10.1080/00223980.1956.9916216.	The author examines the effects of differing doses of LSD-25 on ego dissolution in the context of therapy. He mentions a group therapy model with 2-5 participants per group taking LSD-25 100mcg, which acts as a "directing force" and modifies the ego to allow a therapeutic group process to unfold.
Álvarez de Toledo, L. G., A. E. Fontana, and F. P. Morales. 1958. Psicoterapia de grupo y dietilamida del ácido lisérgico. <i>Acta Neuropsiquiátrica Argentina</i> 4: 258-261.	The authors describe a small case report of 3 LSD-assisted group therapy sessions (50mcg dose), composed of 4 outpatients with respective diagnoses of "Neurosis," "Schizoid with depersonalization," "Epilepsy," and "Phobia". These patients were involved in ongoing weekly, one-hour non-drug group sessions. This schedule was punctuated every 6 weeks by a 4-5hr group LSD session. All four patients are describe as having "slight improvements" due to the group sessions; increases in affective range during the sessions are described as "modest," but no specific quantitative outcomes are reported. A lengthy psychoanalytic interpretation of the group sessions and course of treatment overall is offered.
Blewett, D. B., and N. Chwelos. 1959 (2002 Digital Version). <i>Handbook for the Therapeutic Use of Lysergic Acid Diethylamide-25: Individual and Group Procedures</i> . Edited by MAPS and Erowid. <a href="https://maps.org/research-archive/ritesofpassage/lshdhandbook.pdf">https://maps.org/research-archive/ritesofpassage/lshdhandbook.pdf</a>	The authors present an early manual for LSD psychotherapy based on four years of experience treating patients and discussion with colleagues. They advise on practical aspects of therapy such as setting, dose, preparation, and indications, and offer in-depth analysis of six categories of reactions to LSD that are most commonly observed. A framework is presented for how to understand the stages of the experience, along with suggestions for therapeutic interventions at each stage. Avenues for future psychedelic research are also discussed.
Blewett, D. 1970. The Psychedelics and Group Therapy. In <i>Psychedelics: The Uses and Implications of Hallucinogenic Drugs</i> , ed. B. Aaronson and H. Osmond, 342-357. Garden City, NY: Anchor.	The author analyzes the intrapersonal and interpersonal dynamics involved in psychedelic group therapy, catalogues types of reactions to LSD, discusses the topic of therapists using LSD during sessions, and offers advice for group process techniques.
Cheek, F. E., and C. M. Holstein. 1971. Lysergic acid diethylamide tartrate (LSD-25) dosage levels, group differences and social interaction. <i>The Journal of Nervous and Mental Disease</i> 153 (2): 133-147.	The authors describe a series of administrations of varying doses of LSD to several groups of 4 participants each: prison inmates, alcoholics and schizophrenics. Examining changes in social behavior within these groups, they concluded that the behaviorally aggressive inmates showed increased negative social-emotional behaviors, the two alcoholic groups rose in positive social-emotional behavior, while the schizophrenics tended to rise in both positive and negative behaviors with escalating LSD dosages.
Corach, J. E., I. Devincenzi, M. Kornblit, A. L. Lawrence, E. H. Pinto, and J. M. Taratuto. 1968. Psicoterapia con alucinógenos en un grupo de aprendizaje de la psiquiatría [Psychotherapy with Hallucinogens in a Psychiatry Training Group]. <i>Proceedings of the Fourth World Congress of Psychiatry, Madrid, 5-11 September 1966</i> , ed. L. Ibor, vol. 4, 2864-2866. Amsterdam/Buenos Aires: Excerpta Medica.	The authors describe a psychoanalytic process group that they were involved in as trainees under the direction of Dr. Alberto Fontana in Buenos Aires. Members used both individual and group psychedelic administrations (substance, dose and procedures are not described). They describe the importance of psychedelic-assisted group therapy to their training as therapists, especially in terms of exposing and integrating aspects of group conflict, roles and cohesion. They conclude that, in terms of interpersonal functioning, it is "impossible to reach a level of integration for a patient greater than that which [their] therapist has attained" in the therapist's own psychedelic-assisted psychoanalysis.
Eisner, B. G. 1964. Notes on the Use of Drugs to Facilitate Group Psychotherapy. <i>The Psychiatric Quarterly</i> 38: 310-328.	The author comments on several psychedelic-assisted group therapy sessions. The authors find that in those participants who participated in the drug-assisted group sessions, LSD and mescaline, in conjunction with amphetamines, lowered defensive barriers, enhanced empathy, facilitated verbal and nonverbal communication among group members, and made available deeper levels of feeling. Eisner describes the benefits of a group setting as a psychological re-creation of early life allowing recapitulation of an early family emotional setting; this then enhances the capacity to discharge repressed material or affect at a non-verbal level. The author offers a longer discussion of this style of group process and other non-research impressions of group administrations in her unpublished memoir: Eisner, B. G. 2002. "Remembrances of LSD therapy past." <a href="https://www.erowid.org/culture/characters/eisner_betty/remembrances_lsd_therapy.pdf">https://www.erowid.org/culture/characters/eisner_betty/remembrances_lsd_therapy.pdf</a> .
Eisner, B. G. 1967. The Importance of the Non-Verbal. In <i>The Use of LSD in Psychotherapy and Alcoholism</i> , ed. H. A. Abramson, 542-560. Indianapolis/New York/Kansas City: Bobbs-Merrill.	The author describes the various forms of nonverbal expression and communication observed in patients undergoing LSD psychotherapy. She offers commentary on the dominance of verbal, rational thought in societal and psychotherapeutic interactions, and describes the therapeutic value of encouraging and attending to unconscious,

Citation	Synopsis
	spontaneous, and non-verbal aspects of patients' experiences. As it pertains to groups, the author describes the importance of intentional group member selection, the power of supportive interventions, and specific physical and emotional techniques whereby group members can help affect therapeutic change in other members.
Fontana, A. E., and L.G. de Álvarez de Toledo. 1960. Psicoterapia de grupo y dietilamida del ácido lisérgico: Nuevas aportaciones. <i>Acta Neuropsiquiátrica Argentina</i> 6: 68-71.	The authors state that psychoanalytic psychedelic-assisted group therapy can help to dramatically demonstrate to group members their defense mechanisms, underlying motivations, and unresolved conflicts, leading to increased frequency of insight and symptom resolution. Contrasting the temporal development of various defenses during a session of psychedelic-assisted individual therapy, the authors state that defenses and roles are distributed and exchanged amongst members during psychedelic group sessions in a spatial fashion instead. They provide a schematic of how aspects of ego dissolution and interpersonal connection during group sessions can lead to experiences of the collective unconscious.
Freedman, D. X. 1968. On the Use and Abuse of LSD. <i>Archives of General Psychiatry</i> 18 (3): 330. doi.org/10.1001/archpsyc.1968.01740030074008.	The author comments on studies involving psychedelics in individual and group contexts, as well as on their use in the larger, non-medical psychedelic subculture. He observes that psychedelics can be "cultogenic" in that, as these drugs dissolve the self-other boundary, people resort to "leaning on others for structure and control." This then translates into a power of "the directive mystique and support of the group" over individual group members (p. 334).
Leary, T, R Metzner, M Presnell, G Weil, R Schwitzgebel, and S Kinne. 1965. "A New Behavior Change Program Using Psilocybin." <i>Psychotherapy</i> 2 (2): 61-72.	Leary et al. use a 6-week psilocybin-assisted group therapy program in a forensic sample of 32 men nearing parole at a maximum security prison. The main outcome measure of recidivism rate at 1.5 years post-treatment was compared to recidivism base rates for Concord prison parolees calculated in a separate study by Metzner and Weil (1963). The intervention included psychoeducation provided during twice-weekly preparatory group sessions (3-4 in total), 2 all-day psilocybin-assisted group therapy sessions that were non-directive and "permissive," and subsequent biweekly integration groups. No overall reduction in recidivism rates was found. In his 34-year follow-up study of this work, Doblin (1998) describes several methodological inconsistencies and finds that of the 21 of 32 participants for whom follow-up data was available, 71% had returned to prison by 2.5 years post-release. (Doblin, Rick. 1998. Dr. Leary's Concord Prison Experiment: A 34-Year Follow-up Study. <i>Journal of Psychoactive Drugs</i> 30 (4): 419-426. doi:10.1080/02791072.1998.10399715.)
Lennard, H., I. Jarvik, E. Murray, and H. A. Abramson. 1956. Lysergic Acid Diethylamide (LSD-25): XII. A Preliminary Statement of its Effects Upon Interpersonal Communication. <i>Journal of Psychology</i> 41: 185-198.	The authors describe a small study in which four healthy college graduates were given a low dose of LSD and asked to discuss an article. To measure the changes in interpersonal communication as compared with a non-LSD placebo condition, all acts of speech and behavior were recorded and classified on various axes (i.e. quantity of speech, direction of communication, frequency of interruptions). Findings included a marked reduction of negative interpersonal responses, less speech, fewer interruptions, more questions, and more expressions of solidarity under the influence of LSD.
MacLean, J. R., D. C. MacDonald, U. P. Byrne, and A. M. Hubbard. 1961. The Use of LSD-25 in the Treatment of Alcoholism and Other Psychiatric Problems. <i>Quarterly Journal of Studies on Alcohol</i> 22: 34-45.	The authors, working in a hospital setting, report on a novel therapy model which includes four staff members interacting with a single participant under the influence of LSD. Of the 100 participants studied, a majority of whom came to this therapy for alcoholism, over 80 reported being "much improved" or "improved" following treatment. Though not group therapy expressly because of focus on a single individual's experience, this reference suggests group dynamics that might influence an individual LSD therapy session.
McCabe, O. L., C. Savage, A. Kurland, and S. Unger. 1972. Psychedelic (LSD) Therapy of Neurotic Disorders: Short-Term Effects. <i>Journal of Psychedelic Drugs</i> 5 (1): 18-28. doi.org/10.1080/02791072.1972.10471465.	The authors compare the short-term effects of LSD-assisted individual psychotherapy at low and high doses in a "psychoneurotic" population. Unique to this study is the inclusion of a non-drug conventional group therapy control arm against which the individual drug-assisted arm is contrasted.
Pahnke, W. 1963. Drugs and Mysticism: An Analysis of the Relationship between Psychedelic Drugs and the Mystical Consciousness. PhD diss., Harvard University.	The author reports on a study in which 20 student volunteers from a local Christian seminary were given either 30mg of psilocybin or 200mg of nicotinic acid as an active placebo. All participants were partitioned into groups of four persons for preparation and then participated in a remote, live broadcast of Good Friday services in the basement of Marsh Chapel, Boston University.
Passie, T. 2018. The early use of MDMA ('Ecstasy') in psychotherapy (1977-1985). <i>Drug Science, Policy and Law</i> 4: 1-19. doi.org/10.1177/2050324518767442.	The author reviews major players (chemists, therapists, regional groups) involved in using MDMA in psychotherapy during the stated period. Group psychotherapy facilitated by Claudio Naranjo, Joseph Downing, and George Greer and Requa Tolbert is described in detail. There is also a short but valuable treatment of entheogens in groups in: Passie, T. 2012. <i>Healing with Entactogens</i> . Santa Cruz: Multidisciplinary Association for Psychedelic Studies.
Rojo Sierra, M. 1960. El L.S.D. 25 y la Psicoterapia en Grupo [L.S.D. 25 and Group Psychotherapy]. <i>Revista</i>	A brief clinical summary of the author's observations of several pairs of outpatient clients who were given LSD 40-70mcg while in the author's waiting room for the



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<i>de Psiquiatría y Psicología Médica de Europa y América Latinas</i> 4: 419-422.	purposes of individual psychedelic-assisted sessions that took place an hour or two later. These socially isolated clientele appeared to surmount usual avoidance strategies to form deep "lysergic friendships" spontaneously. The author provides a psychoanalytic framework for understanding this form of bonding while under the influence of LSD.
Roquet, S., P. L. Favreau, R. Ocana, and M. R. Velasco. 1975. <i>Lo existencial a través de psicodyslépticos: una nueva psicoterapia</i> . Mexico City: Instituto de Psicosisntesis. Available at <a href="https://www.samorini.it/doc1/alt_aut/lr/roquet.pdf">https://www.samorini.it/doc1/alt_aut/lr/roquet.pdf</a> [Accessed November 13th, 2018]	A complete description of the historical development, theoretical framework, patient characteristics, and session-by-session procedures for Dr. Roquet's well-known psychedelic-assisted group therapy treatment course known as psychosynthesis. Draws on experiences of 720 group sessions with roughly 1700 unique patients (who often attended these groups on a repeating monthly basis) performed during the 1960s and early 1970s. Elaborates the biography and therapeutic technique of Roquet to a much greater extent than the helpful introduction to Roquet's work provided by Villoldo (1970; see below).
Sandison, R. A. 1959. The Role of Psychotropic Drugs in Group Therapy. <i>Bulletin of Organisation Mondiale de la Santé</i> 21: 505-515.	The influence of group administration on various psychiatric treatments of the late 1950s, including LSD psychotherapy, insulin shock treatment, and "ataractic" (sedative-hypnotic) therapy, are examined. The author describes the ways in which group interpersonal dynamics and larger cultural expectations of the group affect the individual experience with each mode of therapy.
Sessa, B., and F. M. Fischer. 2015. Underground MDMA-, LSD- and 2-CB-assisted individual and group psychotherapy in Zurich: Outcomes, implications and commentary. <i>Drug Science, Policy and Law</i> 2: 1-8. <a href="https://doi.org/10.1177/2050324515578080">doi.org/10.1177/2050324515578080</a> .	Several investigators, working underground in Switzerland, have used substances such as MDMA and LSD to enhance psychotherapy in a group context. One such practitioner is Friederike Meckel Fischer, who treated patients for over a decade before being arrested for her activities in 2009. Over her time as an underground therapist, Fischer treated 60 patients in psycholytic group sessions which used low-to-medium doses of MDMA, LSD and 2CB alongside alternating music, silence, and individual and group psychotherapy components. Although Fischer did not frequently collect quantitative psychological measures of her clients' progress, the qualitative results are described as overwhelmingly positive with no serious adverse events. A much larger treatment of this history is provided by: Fischer, F. M. 2015. <i>Therapy with Substance: Psycholytic Psychotherapy in the Twenty-first Century</i> . London: Muswell Hill Press.
Slater, P. E., K. Morimoto, and R. W. Hyde. 1957. The Effects of Group Administration Upon Symptom Formation under LSD. <i>Journal of Nervous and Mental Disease</i> 125: 312-315.	The intent of the authors was to determine how the effects of LSD differ when administered in group settings versus individually. 72 healthy participants were assigned to receive LSD alone (24) or in groups of 2 or more (48) on an inpatient unit; they were interviewed by multiple clinicians who rated the frequency, intensity, and type of symptoms observed. Group participants tended to show more elation, less anxiety, less depression, fewer somatic symptoms, and were more likely to have "manic or schizo-affective reactions."
Slater, P. E., K. Morimoto, and R. W. Hyde. 1963. The Effects of LSD upon Group Interaction. <i>Archives of General Psychiatry</i> 8: 564-571.	The authors present an experiment in which six 4-person discussion groups were studied under normal conditions versus under the effects of LSD, as they engaged in group tasks as well as free-form social interactions. All interactions and responses were recorded and catalogued.
Stolaroff, M. J. 2004. <i>The Secret Chief Revealed</i> . Revised edition. Sarasota, FL: Multidisciplinary Association for Psychedelic Studies (MAPS).	The author presents the transcription of an extended conversation with Leo "Jacob" Zeff, a psychotherapist who dedicated his career to teaching and refining the art of psychedelic psychotherapy. In a conversational tone, Zeff describes his introduction to LSD and MDMA, addresses practical challenges of psychedelic psychotherapy, and shares his experience as a teacher and psychotherapist. Chapter 4 is devoted to group therapy, wherein he describes group administration sessions conducted with small groups of 10 people in a weekend retreat-type format.
Tenenbaum, B. 1961. Group Therapy with LSD-25 (A Preliminary Report). <i>Diseases of the Nervous System</i> 22: 459-462.	The author describes a small study of 10 male sex offenders refractory to previous treatment who were selected for group psychotherapy with LSD (dose: 50-300mcg). Therapeutic goals were symptom reduction and behavior change related to various paraphilias. Though no quantitative outcome data is reported, the authors note that only one of ten patients "failed to respond altogether favorably to LSD-25 group therapy." The authors also report EKG changes of T wave regression and ST segment depression noted in some patients during LSD experiences.
Villoldo, A. 1977. An Introduction to the Psychedelic Psychotherapy of Salvador Roquet. <i>Journal of Humanistic Psychology</i> 17 (4): 45-58.	The author presents an introductory description of the psychedelic group psychotherapy methods of Salvador Roquet at the Institute of Psychosynthesis in Mexico City. Elements of Roquet's elaborate group ritual are described, including botanical and synthetic psychedelic substances used, timing of visual/auditory stimuli during sessions, selection of participants, and stages of the experience.
Ward, J. L. 1961. The Psychodrama of the LSD Experience- Some Comments on the Biological Man. <i>Group Psychotherapy</i> 14: 121-128.	The author discusses how reports of transformational therapeutic change catalyzed by LSD psychotherapy challenge the assumptions of reductionist neurochemical understanding of mental illness and treatment. He compares LSD therapy with psychodrama and finds many similarities: in each the patient is called to "live" their experience rather than act it, and suggests that such "living through" is necessary for

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	healing. Per the author, in both LSD therapy and psychodrama, group members or the “audience” are instrumental in facilitating the individual healing process.
<b><i>Identified English and Spanish Language References of Psychedelic-Assisted Group Therapy not Obtained for this Review</i></b>	
Fontana, A. E. 1963. Clinical Use of Hallucinogenic Drugs. In <i>Proceedings of the Third World Congress of Psychiatry</i> , ed. Canadian Psychiatric Association, vol. 11, 942-944. Toronto: University of Toronto Press.	
Roquet, S., P. L. Favreau, and L. Pierre. 1981. <i>Los alucinógenos de la concepción indígena a una nueva psicoterapia</i> . Mexico City: Ediciones Prisma.	
Trueheart, T. 1992. <i>Triplepoint: LSD in Group Therapy</i> . Petrolia, CA: Green Fir Pub.	