

Clinical **MDMA** Research Update

Matthew Baggott

SEVERAL PAPERS on MDMA were published in Fall 1998. Most significant is Vollenweider et al.'s "Psychological and cardiovascular effects and short-term sequelae of MDMA ("Ecstasy") in MDMA-naive healthy volunteers" (*Neuropsychopharmacology*, 1998, 19(4): 241-251).

In this placebo-controlled double-blind study 13 volunteers were given oral doses of 1.7 mg/kg MDMA. Physiological and psychological measurements were made during the drug experience and the next day. MDMA was found to produce "enhanced mood and well being associated with moderate derealization and depersonalization, thought disorder, anxiety, and without marked increases in psychomotor drive." Although some of these psychological effects sound dysphoric, they seem less so when the way in which they were measured is examined.

Most of these psychological measures were obtained by self-report using the APZ-OAV questionnaire and the EWL rating scale. The APZ-OAV is a modified form of the APZ and was designed to measure altered states of consciousness. It is comprised of three main subscales: "oceanic boundlessness," "dread of ego dissolution," and "visionary restructualization." Dittrich's article in the 1994 *50 Years of LSD* book provides a good introduction to the questionnaire. I am not familiar with the EWL.

The researchers point out that the measured increase in anxiety was not due to subjectively reported anxiety but an increase in the EWL anxiety scale. This scale is made of three subscales ("thoughtfulness-contemplativeness," "apprehension-anxiety," and "dejection"). Of these three subscales, only "thoughtfulness-contemplativeness" was increased. Therefore, it might be slightly misleading to call this an increase in "anxiety." Subjects did not feel particularly anxious; they felt thoughtful!

Some subjects did report concern over loss of control and the "dread of ego dissolution" subscale of the APZ-OAV was significantly increased. The researchers speculate that with higher doses or in less controlled settings, this concern over loss of control might lead to panic attacks. It seems to me that this concern might have been also increased by the volunteer's lack of experience with psychoactive substances. More experienced volunteers might have less concern with loss of control.

The depersonalization reported was measured using the APZ-OAV. In contrast to psilocybin data from a previous study, MDMA's effects "were not experienced as problematic or psychotic fusion, but as pleasurable state of loosened ego boundaries." In fact, the researchers feel that MDMA's profile on the APZ-OAV (high "oceanic boundlessness," low "visionary restructualization," and low "dread of ego dissolution") discriminates it from psychedelics and stimulants. This finding, along with MDMA's failure to affect performance on a psilocybin-

sensitive neuropsychological task (the Stroop interference task), supports the notion that MDMA represents a new class of psychoactive substances, which David Nichols has termed "entactogens."

This study is particularly interesting because the volunteers were MDMA-naive. At this point in time, MDMA research with naive, healthy volunteers would probably not be approved in the U.S. due to concerns about potential adverse reactions and toxicity. Despite the lack of experience of the volunteers, no serious psychological adverse reactions were noted. The researchers conclude that "present data suggest that the risk for MDMA-induced psychiatric complications can be minimized under clinical conditions by careful evaluation and preparation of volunteers."

One 49-year old volunteer did experience hypertension (240/145 mmHg), which resolved after 20 minutes without intervention. Other adverse effects were considered mild by the volunteers and were consistent with previous reports (jaw clenching, difficulty concentrating, etc.).

The abstract for the report:

Vollenweider FX; Gamma A; Liechti M; Huber T. Psychological and cardiovascular effects and short-term sequelae of MDMA ("Ecstasy") in MDMA-naive healthy volunteers. *Neuropsychopharmacology*, 1998 Oct, v19 (n4):241-251.

3,4-Methylenedioxymethamphetamine (MDMA, "Ecstasy") is a recreational drug reported to produce a different psychological profile than that of classic hallucinogens and stimulants. It has, therefore, been tentatively classified into a novel pharmacological class termed entactogens. This double-blind placebo-controlled study examined the effects of a typical recreational dose of MDMA (1.7 mg/kg) in 13 MDMA-naive healthy volunteers (aged 23-47 yrs). MDMA produced an affective state of enhanced mood, well-being, and increased emotional sensitiveness, little anxiety, but no hallucinations or panic reactions. Mild depersonalization and derealization phenomena occurred together with moderate thought disorder, first signs of loss of body control, and alterations in the meaning of percepts. Subjects also displayed changes in the sense of space and time, heightened sensory awareness, and increased psychomotor drive. Adverse sequelae during the following 24 hrs. included lack of energy and appetite, feelings of restlessness, insomnia, jaw clenching, occasional difficulty concentrating, and brooding. The present findings are consistent with the hypothesis that MDMA produces a different psychological profile than classic hallucinogens or psychostimulants.

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