

MAPS-Sponsored Swiss MDMA/PTSD Study: Discussion and Analysis



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SINCE the last *MAPS Bulletin* (Winter 2006-7), the first subject has completed the treatment phase of the protocol in my ongoing MAPS-sponsored study evaluating MDMA-assisted psychotherapy for subjects with treatment-resistant post-traumatic stress disorder (PTSD). The first subject also had two post-treatment outcome measurements with the independent assessor three weeks and two months after the third MDMA session. In terms of outcome measurements – the patient's subjective reports and our psychotherapeutic evaluation – she has made substantial progress on her way to healing from PTSD.

The journey is not over, though. The process of integrating the experiences from the MDMA sessions and adjusting to the changes induced by the MDMA-assisted psychotherapy - such as experiencing feelings more intensely, gaining a new life perspective after many years of suffering from PTSD or being able to forgive the perpetrator - takes a long time and continuing conventional psychotherapy. We will be conducting one-year follow-up research with each subject who completes the experimental treatment to evaluate the subject's long-term reduction in PTSD symptoms in relation to the short-term data.

We have now enrolled the second and third subjects, and both are currently undergoing treatment. Two more patients have passed the initial screening and will qualify for the study but will have to wait for their treatment to begin until the current two patients have terminated the treatment phase of the protocol. In total, we have screened 11 patients by telephone and have had several inquiries from psychiatrists and psychotherapists after sending a letter to all Swiss German psychiatrists asking for referrals.

In January 2007, the MAPS clinical research team visited the investigation site and monitored the study documents and procedures. MAPS has also submitted the Swiss protocol to the US Food and Drug Administration (FDA) under MAPS' Investigational New Drug (IND) application for MDMA in the treatment of PTSD.

In late January, it was also exciting to learn that Vanja Palmers, a Swiss Zen priest, would donate \$50,000 to MAPS exclusively for the Swiss MDMA/PTSD study. Vanja is motivated to donate to

psychedelic research by his interest in the relationship between psychedelic drugs and spirituality. Thank you, Vanja! Since Vanja is a Swiss citizen, MAPS even arranged for the donation to be made directly to the Swiss Medical Association for Psycholytic Therapy (SAePT), a group to which I belong. SAePT is co-sponsoring the Swiss MDMA/PTSD study along with MAPS and has obtained nonprofit status with the Swiss government, allowing for future donations from other Swiss supporters.

My wife and co-therapist, Verena Widmer, and I are often asked questions about how and why MDMA-assisted psychotherapy works, why it is different from conventional psychotherapy, what kind of experiences and changes a prospective patient with a certain condition (such as PTSD) can expect from MDMA-assisted psychotherapy, and so on. I will attempt to reflect on these questions, knowing that the theory of MDMA-assisted psychotherapy is yet evolving, and illustrate my points with a short case report from the first patient treated in our study.

The Interdependence of Subjectivity and Objectivity

First of all, we have to differentiate between the chemical agent MDMA (its effect on the brain, the changes it induces in terms of neurobiology and observable behaviour) and the subjective psychological-psychotherapeutic process going on “inside” the person who is experiencing the effects of the MDMA. Both dimensions are crucial when it comes to developing a comprehensive theory of MDMA-assisted psychotherapy. These two dimensions or perspectives - the “inside” view or conscious-subjective experience and the “outside” view or neurobiological-behavioural perspective - are interdependent but cannot be reduced to each other.

There are several characteristics of the MDMA-induced neurobiological effects that are responsible for the consistent changes in observable behaviour of humans under the influence of MDMA and which at the same time constitute the basis for successful psychotherapeutic interventions. MDMA leads to a transient and distinctive stimulation of the serotonergic, dopaminergic, noradrenergic, and other neurotransmitter systems of the brain with a massive release of the respective neurotransmitters, primarily serotonin. It also increases levels of hormones like oxytocin and prolactin. On the functional level, MDMA reduces fear by reducing the activity of the amygdala, which are responsible for the regulation of the stress-fear reaction. Other consistent findings are the elevation of mood, enhancement of predominately

positive feelings and emotions, empathy, closeness and bonding, and a better recollection of memories. All of these effects wear off after a certain amount of time when the brain has returned to the baseline functioning level. There are many anecdotal reports, however, that even a single dose of MDMA can lead to long-lasting psychological changes that cannot be explained just by the aforementioned acute effects of MDMA.

One possible explanation is that if brain cells called neurons or whole assemblies of such cells are stimulated for a longer period - more than roughly 10 minutes - they begin to show internal cell changes that eventually lead to a complicated cascade of molecular reactions. This reinforces the involved neuronal circuits and stimulates neurons to reconnect with other neurons with the possibility of building new neuronal circuits. This is reflected in the rule of thumb: “neurons that fire together, wire together.” MDMA can intensify this stimulation on an intensely positive scale for much longer than just 10 minutes, possibly explaining the long-lasting neuronal changes.

These are some of the “ingredients” or the prerequisites on the brain level for MDMA-assisted psychotherapy. It is the psychotherapist’s duty to utilize these MDMA-induced neurobiological changes in a manner to serve the goals of psychotherapy.

With cases of PTSD, the goal is to help patients integrate troublesome and painful traumatic memories that are “stuck” in the implicit memory structures – to be pictured as sort of temporary memory storage structure – which are not able to move on to the

explicit memory structures that can be pictured as a “photo album” kind of memory structure. This means that a person suffering from PTSD relives the traumatic memories as soon as he is reminded of the trauma. Usually, specific cues related to the trauma such as noises, smells, seeing similar events on TV, or being asked about the trauma trigger the immediate and uncontrollable recollection of the traumatic memories. Subjectively this feels as if the past traumatic events are happening right now and is accompanied by intense fear and other negative, unpleasant emotions. The person inevitably tries to avoid such cues and feelings. This will ultimately lead to a very restricted lifestyle, affecting all major areas of everyday life. Memories that have been transferred to the explicit memory structures cease to acutely and constantly disturb the subject. At the same time he or she experiences a greater amount of control over the recollection of such memories and their associated emotions.

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From the “inside” perspective, some of the most important factors for successful treatments are the motivation, the intentions, and treatment goals of the patient. Not only do these factors generally influence the psychotherapeutic process, they also determine the content of the MDMA experience. The therapist should take great care to clarify these points in the preparatory phase of MDMA-assisted psychotherapy.

We assume that the key elements of MDMA’s psycho-

facilitates the experience as it unfolds while being encouraging and supporting in a nondirective manner. He or she also must be attentive to possible pitfalls, such as when the experience becomes so overwhelming that the patient becomes anxious, suppressing and avoiding dealing with the trauma. The therapist has to be comfortable with going through such very intense and distressing moments together with the patient, re-establishing again and again the basic positive cognitive-emotional state of

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therapeutic effect are the reduction of fear and release of tension in combination with the induction of a positive mental-emotional state. This shift includes positive self-awareness, increased self-worth and self-acceptance, approachable behavior, and enhanced social bonding. This altered state of mind and behavior facilitates emotional processing in the therapeutic setting. Usually the traumatic memories spontaneously emerge in a very different and more positively constructive manner, thus helping the patients gain new perspectives on their symptoms and previous problems with a greater sense of safety and control.

Recent findings in psychotherapeutic research show that psychotherapists should do everything to let patients experience themselves from a positive perspective. This includes helping patients to satisfy basic psychological needs such as the sense of control, the increase in self-worth, the experiencing of positive feelings, and the need for emotional bonding and relationships. This positive cognitive-emotional state is the basis out of which patients gather the courage and the energy to initiate change. This is also called the resource-oriented approach. The MDMA-induced behavioural effects and subjective experiences are very much in line with this understanding of the psychotherapeutic process.

The previous description of the effect of MDMA could lead to the notion that MDMA does the job on its own and the patient can lean back and wait for the miracle cure. This is usually not so. Sometimes breakthroughs happen but mostly patients are required to do their share of very hard work. The more a person is psychologically injured, the more psychotherapeutic work has to be done. Although MDMA enhances predominately positive mood and emotions, patients with a complex or severe psychological disorder risk terrifying, painful, and unpleasant experiences. They must learn to endure difficult and distressing emotions, to understand what happened to them, to trust again, to relate to other people again, and to rebuild their lives. MDMA helps them face this challenge.

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mind. This does not mean not having negative feelings but rather implies allowing them to come and go in what we call the cascade of feelings.

There is an intrinsic movement and direction in the structure of feelings. Aggressive feelings like hatred, anger, envy, jealousy, and the like are usually based on fear and associated with feelings like helplessness, loneliness, powerlessness, pain, and so on. Once these feelings are no longer suppressed and can be endured and accepted, they lead over into sadness. When somebody first surrenders into sadness they associate it with a reason or cause. The second phase of sadness is “depersonalized” or “detached” from its cause. At this point someone experiencing the sadness does not know any more why he or she is sad and crying, there is just sadness. Sadness without a personal cause is an expression or symptom of love.

The movement from sadness with a personal cause to love is the ultimate letting go. It is in a way the same process as in dying, meaning no more avoidance, no more fighting anything or reasoning with fate, just an acceptance of what is. When all the inner commotion has subsided there is awareness, stillness, and love. The inherent movement in feelings is always toward love, and can often be easily observed during therapeutic MDMA-sessions. MDMA may take you directly to the state of love but eventually does not save anybody from going through the previously mentioned steps. It often goes back and forth in the cascade until a problem causing these difficult feelings has been completely understood, accepted, and resolved by going to its deepest root. As many traumas are inflicted on humans by other humans, the core issues of openness, trust, closeness, and love are goals in the psychotherapy of PTSD. Here again it is a challenge for the therapist to be compassionate and respectful of boundaries, allowing trust to grow again. The therapist has to ensure that the patient stays in contact with difficult feelings as he or she and moves toward the state of love.

One of the advantages of MDMA-assisted psychotherapy over conventional treatments is that MDMA

induces changes on the neurobiological level. This helps patients overcome deep-rooted neuronal fixations not otherwise accessible to psychotherapeutic and psychopharmacologic interventions, reinitiating the normal healing process. Both the MDMA as the catalyzing drug and the psychotherapy are needed to ensure the effectiveness of this method.

The following case vignette of the first patient treated in our study exemplifies the aforementioned elements of MDMA-assisted psychotherapy:

Anna (sic), a 40-year-old woman, had been sexually abused by her alcoholic step-father from the age of 8 to 16. She developed PTSD symptoms already during adolescence but increasingly after her husband unexpectedly left her at the age of 29. She has also suffered from recurrent depression since then. She went through several psychotherapeutic treatments, none of which helped her overcome the symptoms of PTSD.

The first MDMA session began with a half-hour state of bliss, release of tension and the feeling of being completely safe and at peace with everything. Then for another half hour she was absorbed with thinking about her beloved, younger half-sister and her son who still lived with Anna's parents. As expected, this state was just the steppingstone to the confrontation with the traumatic events in her childhood. This happened as she began to worry about her young nephew, thinking that he could possibly be in danger of being abused by her step-father. She then vividly relived several abusive scenes from her childhood. At this point she needed reassurance and support from the therapists to bear the difficult memories and feelings and we encouraged her to just stay with what

The second MDMA session started again in an emotionally positive state with a feeling of being happy and secure. She proceeded to remember the good times she had had with her husband and then the shock and pain felt when he unexpectedly left her. She realized that she had since forced herself to be overly autonomous, suppressing her needs for close and intimate relationships. She relived the pain of the separation and intense feelings of abandonment. As the session went on, further details of the sexual abuse emerged, but were less disturbing than the first time.

The third MDMA session again began with a positive and soothing memory of Anna's foster parents, whom she had grown up with, happy and protected until the age of six. At this time her mother took her back and married shortly afterward. For a long time, Anna was completely preoccupied with the role of her mother in the sexual abuse. She felt the lack of love, bonding and care in the relationship to her mother. She then remembered several previously unconscious scenes when her mother witnessed the abuse and failed to intervene and stop it. She now understood why her mother also began to abuse alcohol, frequently being completely drunk while the step-father abused Anna. Again, several abusive situations with her step-father came up. This time she relived the scenes in the form of very realistic bodily sensations. Although distressing, they did not have approximately the same emotional impact compared to her expression of the feeling of having been betrayed by her mother. Until the supplemental dose of MDMA at 2.5 hours after the beginning of the session, Anna could keep some emotional distance to these insights and memories. Then,

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she was experiencing. After some time she began to relax again and the disturbing memories faded away. During the rest of the session she talked a lot about her family, trying to put the pieces of the puzzle together. The following night and days she repeatedly felt sad and had to cry when remembering and feeling the horror of her childhood: the injuries, the pain and the loneliness. Since this first session she completely gave up her avoidance of the issue of the abuse. She was able to talk about it in the subsequent non-drug integrative psychotherapy sessions, and also for the first time to her boyfriend and to her half-sister. The therapeutic relationship had also changed: she was very much more committed and motivated to face all these difficult issues. From time to time, new, previously suppressed insights and memories related to the abuse surfaced to consciousness.

after the supplemental dose she surrendered to the full intensity of the pain and the negative feelings, going into the sadness and weeping like a small child. This process of dealing with the core injuries preoccupied her for the rest of the session and most of the following day. During the following weeks Anna had a very hard time integrating this third MDMA session, with many more details surfacing into consciousness. Anna required intense support during this time. In spite of this psychologically demanding and ongoing process, Anna's PTSD symptoms showed a significant reduction.

We are now also looking forward to the initiation of the Israeli MDMA/PTSD study, the Harvard MDMA/cancer anxiety study. These studies will extend our knowledge and deepen the understanding of the potential of this fascinating chemical compound. •