Changing Attitudes to Psychedelic Drug Assisted Therapy: The Induction of Empathy to Enhance Community Support for Innovative Interventions in Mental Health

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Abstract

Experiment to demonstrate change in attitudes to the use of drug enhanced therapy in the treatment of mental illness, using the induction of empathy in the social influence process. The data showed the enhancement of empathic concern, willingness to aid a client and heighten the client’s responsibility for change.

Psychotherapy augmented by psychoactive drugs for the treatment of mental illness has received recent empirical support. The use of such drugs is still resisted by many in the medical community, however, and the stigma of previous controversies surrounding the drugs, further enhanced by the stigma of mental illness, hinders community acceptance with failure to influence the medical community. We report an experiment to change community attitudes to endorse the benefits of such practice. Participants were given information about a client with post-traumatic stress disorder, with accompanying stigma of mental illness, or a physical condition with comorbid psychological symptoms, but without stigma, namely Parkinson’s disease. Participants received information about the diagnosis and the value of psychoactive drugs in the enhancement of therapy or this information with an empathy manipulation. Analysis revealed higher empathy for the PTSD than for the Parkinson’s patient. This was further enhanced by the empathy manipulation. While there was higher agreement that PTSD clients were responsible for their own condition, there was a greater willingness to help, further increased by empathy. Such conditions may be considered to encourage the general community to accept enhanced therapy for patients with mental illness which may further enhance endorsement of the procedures by medical practitioners.

Changing Attitudes to Psychedelic Drug Assisted Therapy: The Induction of Empathy to Enhance Community Support for Innovative Interventions in Mental Health

“The heresies of one period always become the orthodoxies of the next”. Margaret Thatcher.

The present study is concerned with how social psychological processes can be used to change community attitudes towards medical interventions, namely the evidence based use of psychoactive drugs in psychotherapy that, while presently stigmatized, can facilitate the treatment of conditions that are a burden to mental health. Pollan (2018) has demonstrated that several decades ago the utility of psychoactive drugs in the facilitation of treatments for the treatment of mental illness was a burgeoning area of research. This research,
however, was curtailed by scandals portrayed in the international media concerning the use of such drugs in a range of esoteric practices. However, there has recently been a resurgence of interest in the use of such drugs in psychotherapy (Doblin, Christianson, Jermine & Burgh, 2019; Weir, 2020). This paper contributes to a movement towards the reintroduction of the use of psychoactive drugs in psychotherapy by the use of interventions to alter negative attitudes in the community about the use of psychoactive drugs in controlled conditions, such as psychotherapy for the treatment of mental ill-health.

Mental Health

Mental health is defined as a sense of wellbeing and self-esteem that allows an individual to form positive relationships. Mental disorders make such achievements difficult, but public attitudes towards mental illness and to the means whereby such disabilities may be treated are not always supportive of intervention. However, a recent meta-analysis of attitudes towards treatments of mental illness (Angermeyer, van der Auwers, Carta, & Schomerus, 2017) has shown several trends, among which is the demonstration that the public is increasingly likely to support the use of psychotherapeutic treatment of mental disorders.

A continuing barrier to the implementation of therapy, however, is the existence of Mental Health Stigma (MHS) that both prevent individuals from seeking help and the community from recognising that a person may be suffering from a mental illness. The concept of MHS is the labelling by an individual of their illness as a negative stereotype. This leads the individual unwilling to adopt a mental health intervention over a physical health one, regardless of any proposed benefits. Three types of MHS have been identified. Social stigma is characterised by prejudicial attitudes of others towards the mentally ill, perceived stigma is characterised by the internalizing by the sufferer of their perceptions of discrimination (Jennings et al., 2015; Link, Cullen, Struening & Shrout, 1989) and self-stigma is associated with feelings of low self-worth as a function of seeking treatment (Skopp, Bush, Vogel, Wade, Sirotin, McCann, & Metzger-Ahamkong, 2012). MHS is widespread and has been shown negatively to affect treatment effectiveness (Jennings, Cheung, Jeffris, Peasly & Lee, 2015). It also exists within the medical profession (Crisp, Gelder, Rix, Meltzer, & Rowlands, 2000; Wallace, 2012). An example of the obstacles that MHS places on individuals is that of military personnel returning from warzones, particularly with the rate of Post-Traumatic Stress Disorder (PTSD).

Post-Traumatic Stress Disorder

Post-traumatic stress disorder is a debilitating anxiety disorder characterized by hyperarousal, intrusive re-experiencing of traumatic experiences and avoidance symptoms (emotional numbing and withdrawal). It can develop following exposure to a potentially traumatic event such as warfare, terrorism or other threats on a person’s life and has been posited to be an outcome of exposure to the threat of COVID-19 (DSM-V). It is, typically, a chronic illness that is co-morbid with depression, anxiety, substance abuse and suicide (Cohen et al., 2009; Kessler et al., 2005). Across a lifetime, it has been estimated that between 50-70% of people will experience a potentially traumatic event, and of this group, 15 to 25% will develop PTSD (Creamer, Burgess, & McFarlane, 2001).

Current pharmacological treatment options include administration of antidepressants. Meta-analyses, however, show an insignificant response rate to the medications greater than placebo and complete remission of symptoms in only 30% of patients. This emphasizes the need for more effective agents for PTSD, including psychological therapies (Foa, Keane, Friedman & Cohen, 2009; Pratchet, Daly, Bierer & Yehuda, 2011). However, existing psychological therapies are ineffective for between 35% and 50% of patients who enrol in clinical trials. With current treatments lacking effectiveness there is a need for the development of new treatments (Cloitre, Stolbach, Herman, van der Kolk, Pynoose, Wang & Petkova, 2009). Pharmacologically assisted psychotherapy has been shown to be beneficial.

MDMA-Assisted Psychotherapy

The use of psychoactive drugs, in particular clinical grade 3,4-Methylenedioxymethamphetamine (MDMA), has been shown to be beneficial in comparison with therapy alone (Metzner, & Adamson, 2001; Mithoefer, Wagner, Mithoefer, Jerome, & Doblin, 2011; Mithoefer, Mithoefer, Feduccia, Jerome, Wagner, Wymer et al.,...
MDMA may catalyse therapeutic processing by allowing participants to stay emotionally engaged while revisiting traumatic experiences (Metzner & Adamson, 2001; Stolaroff, 2004). Participants can experience and express fear, anger and grief as part of the therapeutic process, with less likelihood of feeling overwhelmed by these emotions. Mithoefer and colleagues (2011, 2018) found a significant lasting beneficial effect of the MDMA-assisted therapy for PTSD symptoms. Two months following final treatment, this reduction in PTSD symptoms remained significantly lower for the treatment group than the placebo group.

However, this drug remains illegal across the world, with a Schedule 9: Prohibited substance scheduling in Australia, under the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) legislation. The substance may only be used for research purposes, with no current accepted medical value. There is, therefore, a double stigmatization. First, the stigma of a patient presenting with a mental illness and second, the stigma of a treatment that can be facilitated by the application of a negatively stereotyped drug.

Some studies do indicate adverse effects, with neuroimaging showing that regular use may alter the brain’s serotonergic system in a dose-dependent manner, showing up to 70% lower cortical serotonin densities compared with matched controls (Reneman, de Win, van der Brink, et al., 2006; Roberts, Jones, & Montgomery, 2016). Szigeti and colleagues (2018), however, found that these studies focused on unusually heavy MDMA use, and therefore are likely to overestimate the extent of serotonergic alterations experienced by the majority of people who partake in regular (illegal & recreational) use.

Such contraindications, however, do not apply in the case of controlled therapeutic intervention with a trained therapist. Physiological effects of MDMA administration during therapy, including elevations of blood pressure, pulse, and body temperature all return to baseline at the end of session. Side effects are typically resolved over a period of hours or days, and there are no serious drug-related adverse effects (Mithoefer et al., 2011). In addition, success depends on the sensitivity and talent of the therapist who employs it (Grinspoon & Doblin, 2001) and for an enduring change the psychotherapeutic element is essential (Parrott, 2013). But there is still significant resistance within the medical profession. A recent official submission to the Therapeutic Goods Administration (TGA) in Australia by the Royal Australian and New Zealand College of Psychiatrists (RANZCP) has been criticised by members of the College for misrepresenting the quality of research into the use of psychoactive drugs and perpetuating the stigma surrounding the use of such drugs (The Australian, 2021).

The present project is concerned with the promulgation of an educational psycho-social intervention to induce empathy with the patient to highlight the benefits of MDMA assisted psychotherapy. Attitudinal change towards the benefit of MDMA-assisted therapy will be compared between groups with a physical disease (Parkinson’s disease, which affects the functioning of the central nervous system and which can, in one third of sufferers, result in symptoms of depression and anxiety, but without the stigma of a mental illness) and groups given a mental health diagnosis of PTSD. Due to the widespread negative stereotyping and prejudice towards mental health sufferers, it is predicted that there will be greater positive attitudinal support for the use of MDMA in therapy for the PTSD patient following the empathy induction intervention, compared with the a physical-health target group (namely sufferers from Parkinson’s disease).

Attitudes and Empathy Induction

Empathy is broadly defined as “the reactions of one individual to the observed experiences of another” (Davis, 1983). Research has shown the benefit of building empathy in changing an already established attitude (Samra, Griffiths, Cox, Conroy & Knight, 2013). An increase in empathy can reduce stereotypes of stigmatized groups by reducing blame attributed to individuals (Batson & Ahmad, 2009), or by reducing the perceived differences between the self and other (Galinsky & Moskowitz, 2000; Galinsky, Wang & Ku, 2008). Empathy has been shown to be positively associated with more favourable attitudes towards stigmatized individuals and groups (e.g. mental illness, and members of the LGBT community; Batson, Chang, Orr, & Rowland, 2002; Hodson, Choma & Costello, 2009). While recent research has questioned the benefits of empathy (Bloom, 2016), this study will test the value of an empathy induction to engage a rational process
to understand the perspective of another person, not an automatic emotional response. Recipients of the information are then encouraged to approve the use of a stigmatised drug to enhance therapy for a patient group also stigmatised by the label of having a mental illness.

Method

Design

The study’s design was a 2 (health condition) X 2 (informative intervention) between subjects factorial design. The health condition had two levels, with the target condition being either PTSD or Parkinson’s Disease (PD). The information intervention had two levels comprising Information alone (I) or a combination of Information with an Empathy manipulation (I+E). A control condition comprised a group who completed the dependent variable questionnaire with respect to a client identified as having a broad stress related condition with no prior exposure to the independent information or empathy manipulations.

The dependent measures were attitudes and behavioural intention towards supporting the use of MDMA in an assisted psychotherapeutic intervention, as well as beliefs about Empathy, Social Distance, Personal Responsibility Beliefs, and Affective reactions (Fear, Pity, Anger, Helping Willingness, & Coercion Segregation) towards the target conditions.

Participants

People over the age of 18 were recruited online (Facebook and SONA) and randomly allocated to one of five conditions, four experimental conditions and a control group. Of the 82 participants who completed the questionnaire, 76 finished with complete data (93%). Four cases identified as influential outliers were removed, resulting in a final participant group of 72. Group compositions consisted of Control (n = 16), PTSD/I (n = 15), PTSD/I+E (n = 15), Parkinson’s/I (n = 14), and Parkinson’s/ I+E (n = 12).

Experimental conditions

Information. Participants were given a one-page essay defining and summarizing the health condition to which they had been randomly assigned, as well as the potential benefits of MDMA-assisted therapy. The citation of peer reviewed articles was used to support each fact. The Information sheets for PTSD and Parkinson’s were designed with Flesch-Kincaide readability grade levels of 9.5 and 9.6 respectively.

Empathy. The Empathy induction condition was adapted from a study testing the effects of narrative and evidence on individual attitudes towards target groups (Niederdeppe, Shapiro, & Porticella, 2011) designed to elicit cognitive empathy (i.e. knowing how someone else is thinking or feeling; Batson & Ahmed, 2009). Participants assigned to the empathy condition read a half page first-hand account of a sufferer recounting their condition, highlighting the struggles of everyday living and emphasizing the symptoms of the condition. These Empathy narrative accounts for PTSD and Parkinson’s had readability grade levels of 4.5 and 5.8 respectively. Participants in this condition also read the one-page account of the potential benefits of MDA-assisted therapy.

Measures

Participants were assessed on their attitudes towards drugs and drug usage using the questionnaire adapted from the Australian National Drug and Alcohol research centre’s Review of Australian public opinion surveys on illicit drugs (2008).

Two scales were used to assess empathy. The Interpersonal Reactivity Index (Davis, 1983) was used to assess participants’ natural responsivity toward others as an individual difference measure of empathy and perspective-taking. Participants rated 14 adjective items describing their current emotional state, including five empathy items (i.e., sympathetic, soft-hearted, warm, compassionate, and tender) and eight distracters. These measures were used in previous studies (e.g. Gapinski, Schwartz, & Brownell, 2006).
To assess *attitudinal social distance* towards persons labelled with PTSD (mental disorder), or Parkinson’s disease (physical disorder), eight questions were used, adapted from Link, Phelan, Bresnahan, Stueve, & Pescosolido (1999). Questions included asking participants how willing they were to engage in various interactions with a person with PTSD or Parkinson’s.

*Affective reactions* were measured through a questionnaire assessing participants’ emotional reactions to an “ill person” (PTSD or Parkinson’s), including both negative affect and sympathy/concern reactions, adapted from Corrigan, Markowitz, Watson, Rowan, and Kubiak (2003).

A self-constructed questionnaire was used to measure *attitudes* towards the use of MDMA-assisted psychotherapy. Reliability analysis of the questionnaire revealed strong internal consistency with Cronbach’s Alpha equal to .86.

**Procedure**

Participants were randomly assigned to a health condition, either PTSD (mental) or Parkinson’s (physical). Each group was further randomly assigned to an intervention condition, *Information* or *Information + Empathy*. Participants in the control condition were only assigned to a generic ‘stress’ based health condition, with no intervention. Participants in each condition were asked for demographic information, familiarity with mental & chronic physical illness, and were measured for their attitudes towards drug use.

Control group members were then measured for their empathy, attitudinal social distance, affective reactions, and their attitudes toward the use of MDMA-assisted therapy for a general ‘stress’ condition. Following this stage, participants in the experimental conditions received their intervention, either ‘information’ or ‘information + empathy’. Participants’ empathy, attitudinal social distance, affective reactions, and their attitudes toward the use of MDMA-assisted therapy were then assessed for their randomly assigned health condition.

All participants were then provided with an outline of the aims of the study, with information regarding the legality and dangers of use surrounding MDMA outside a controlled clinical setting without a trained therapist.

**Results**

Eight cases were discarded due to incomplete data and a further four outlying cases were discarded due to their influence on the model. Thirty-one per cent of the sample (N=72), identified as male, 68% identified as female, while the remaining 1% identified as other (intersex). The mean age was 30.69 years ($SD = 8.32$).

**Normality**

Normality tests resulted in 6 cases being removed due to suspicious patterns of answering and due to outlier significance. Eight outliers remained for the dependant variable (MDMA Therapy Support), according to case wise diagnostics, but were deemed non-influential and kept in the data set.

Only one variable significantly correlated with MDMA therapy support; Approval of regular substance use positively correlated with MDMA therapy support ($r = .59, p < .001$).

**Analysis of Variance**

Although normality assumptions were violated between variables, we proceeded with analysis of variance analyses due to their robust nature. Interpretative caution was accounted for by setting a non-directional hypothesis level of significance at the $p = .05$ level. A series of 2x2 Factorial ANOVAs tested for group differences between the four experimental conditions on the nine outcome variables (see Table 1).

Insert Table 1 Here.
MDMA Therapy Support. The main effect of Health condition on MDMA Therapy Support was non-significant, $F(1, 52) = .80, p = .375$. The main effect of Intervention was also non-significant, $F(1, 52) = 2.49, p = .121$ and the interaction was non-significant, $F(1, 52) = .03, p = .872$. There were no significant differences between any of the experimental group means and the mean for the control condition. Overall, therefore, the interventions had no positive or negative impact on attitude to the use of psychoactive drugs in therapy. Analysis of the personal reactions to the interventions, however, does show significant variation in such reactions.

Empathy. The empathy manipulation was effective in the case of the PTSD group, with main effect of $F(1, 52) = 22.75, p < .001, \eta^2_p = .30$ with empathy significantly higher for the PTSD group ($M = 18.17, SD = 4.20$) than for the Parkinson’s group ($M = 12.88, SD = 4.75$). The interaction effect was significant, $F(1, 52) = 7.04, p = .011, \eta^2_p = .12$. The PTSD Information + Empathy condition was significantly higher than control, which in turn was significantly greater than the mean for Parkinson’s Information + Empathy.

Fear. There was a main effect of Health condition on Fear towards sufferers, $F(1, 52) = 7.27, p = .009, \eta^2_p = .12$; fear of PTSD sufferers was significantly higher ($M = 6.83, SD = 2.17$) than for Parkinson’s sufferers ($M = 5.08, SD = 2.73$). Neither the main effect of Intervention, $F(1, 52) = .05, p = .824$ nor the interaction effect $F(1, 52) = .86, p = .358$ were significant.

Personal Responsibility Beliefs. All four experimental conditions significantly reduced the attribution of personal responsibility compared with the control condition. Within the experimental conditions there was a main effect of health condition on Personal Responsibility Beliefs, $F(1, 52) = 8.49, p = .005, \eta^2_p = .14$; attribution of personal blame for their condition to the sufferer was significantly higher for the PTSD group ($M = 5.47, SD = 2.22$) than for the Parkinson’s group ($M = 4.08, SD = 1.32$). The main effect of Intervention was significant, $F(1, 52) = 7.10, p = .010, \eta^2_p = .12$. Attribution of personal responsibility for a sufferer’s condition was significantly higher with the Empathy intervention ($M = 5.52, SD = 2.28$) than for Information alone ($M = 4.17, SD = 1.39$). The interaction effect was non-significant, $F(1, 52) = 1.74, p = .193$.

Helping. There was a main effect of Health condition on general helping intentions, $F(1, 52) = 11.99, p = .001, \eta^2_p = .187$; willingness to help was higher for a PTSD sufferer ($M = 18.50, SD = 5.26$) than for a Parkinson’s sufferer ($M = 14.92, SD = 3.85$). The main effect of Intervention was significant ($F(1, 52) = 8.807, p = .005, \eta^2_p = .145$) with willingness to help a sufferer significantly higher with the empathy manipulation ($M = 18.67, SD = 5.88$) than information alone ($M = 15.14, SD = 3.15$). His effect was, however, modified by the significant interaction effect, $F(1, 52) = 14.97, p < .001, \eta^2_p = .224$. For PTSD, Info + Empathy led to higher willingness to helping compared with all other experimental conditions.

Discussion

Health condition or intervention type did not influence support for MDMA assisted therapy; there was a non-significant difference in MDMA assisted therapy support between the control condition and the four experimental conditions. However, ‘regular substance use approval’ was strongly associated with support for MDMA assisted therapy. This suggests the generalised acceptance of use of an already approved substance to another, especially if the use is beneficial.

The manipulation of inducing empathy for the client, however, did significantly affect reactions to the client in several ways. Respondents exposed to the PTSD condition, with the additional induction of empathy, displayed greater fear of and higher blame for the client’s condition compared with the Parkinson’s condition. These results are predicted from MHS studies, which have shown that personal responsibility and fear are both highly attributed to sufferers of mental health (Crisp et al., 2000; Jennings et al., 2015; Link et al., 1989; Link et al., 1999; Wallace, 2012). Evoking empathy may emphasize the negative aspects and increase bias towards targets or groups (Batson & Ahmad, 2009; Danielsdottir, O’Brien & Ciao, 2010). Alternatively, Galinsky, Ku, & Wang (2005) have suggested that empathic perspective-taking can increase stereotypes by association.
The finding that the empathy manipulation increased significantly the willingness of participants to help PTSD sufferers compared with Parkinson’s sufferers was particularly interesting. Previous studies would suggest that MHS would have negative impact upon any attitudes towards suffers of mental health (Crisp et al., 2000; Jennings et al., 201; Link et al., 1989; Link et al., 1999 Wallace, 2012), and predict a greater empathy effect for Parkinson’s over PTSD. This willingness occurred regardless of the heightened negativity towards PTSD sufferers, measured in reactions of fear and blame. This finding is contrary to any previous findings on the effects of MHS (Crisp et al., 2000; Jennings et al., 2015; Link et al., 1989; Link et al., 1999; Wallace, 2012).

Summary

Attitudes towards MDMA assisted therapy are positive in the present study, regardless of the health condition being treated. Negative affective reactions towards patients previously associated with stigma (mental health patients) were reversed by the induction of cognitive empathy with an associated increase in willingness to help such patients. The use of empathy to influence community attitudes to the use of psychoactive drugs in the treatment of mental illness may therefore seem indicated and reinforce the case for inducing a rational form of compassionate concern in health related matters (Bloom, 2016).

The findings suggest that attitudes concerning use of MDMA in assisted therapy sessions is not in line with current law and health policy and are related to more positive community attitudes demonstrated in research across the world (Angermeyer et al., 2017). The law and medical policy could be reconsidered in light of these findings. This research may also be viewed as conducive to introducing changes in community, to inform the consideration of change in policy through community action (Pollan, 2018) to influence attitudes to the and utility of psychoactive drugs under controlled conditions. The debate within medical circles may also be affected by an emphasis upon an understanding of the perspectives of the patients through the manipulation of empathy in the training of medical practitioners.

References


### Table 1. Mean Scores and Standard Deviations for Each Group

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>MDMA Therapy Support</th>
<th>Empathy</th>
<th>Fear</th>
<th>PRB</th>
<th>Helping</th>
<th>Social Distance</th>
<th>Pity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>44.86 (11.74)</td>
<td>16.00 (3.72)</td>
<td>5.50 (2.76)</td>
<td>8.13 (2.90)</td>
<td>14.06 (2.41)</td>
<td>17.81 (4.13)</td>
<td>10.00</td>
</tr>
<tr>
<td>PTSD I</td>
<td>47.27 (7.87)</td>
<td>17.20 (4.68)</td>
<td>6.60 (1.92)</td>
<td>4.53 (1.41)</td>
<td>14.93 (3.31)</td>
<td>17.13 (4.85)</td>
<td>10.60</td>
</tr>
<tr>
<td>PTSD I+E</td>
<td>44.47 (9.50)</td>
<td>19.13 (3.56)</td>
<td>7.07 (2.43)</td>
<td>6.40 (2.53)</td>
<td>22.07 (4.38)</td>
<td>14.47 (5.38)</td>
<td>11.07</td>
</tr>
<tr>
<td>Park I</td>
<td>49.36 (3.95)</td>
<td>14.79 (3.87)</td>
<td>5.43 (3.65)</td>
<td>3.79 (1.31)</td>
<td>15.36 (3.08)</td>
<td>15.57 (4.91)</td>
<td>10.00</td>
</tr>
<tr>
<td>Park I+E</td>
<td>45.92 (6.68)</td>
<td>10.67 (4.87)</td>
<td>4.67 (.89)</td>
<td>4.42 (1.31)</td>
<td>14.42 (4.68)</td>
<td>14.25 (4.35)</td>
<td>11.59</td>
</tr>
<tr>
<td>Total Mean</td>
<td>46.33 (8.49)</td>
<td>15.78 (4.86)</td>
<td>5.90 (2.61)</td>
<td>5.56 (2.59)</td>
<td>16.22 (4.65)</td>
<td>15.94 (4.83)</td>
<td>10.61</td>
</tr>
</tbody>
</table>

\( R^2 \)
\( N = 72 \)

Note: Measures are scored such that higher numbers indicate more of each construct. Reported \( R^2 \) represents the univariate ANOVA of each condition for each outcome measure. PRB = Personal Responsibility Beliefs; CoSeg = Coercion Segregation. PTSD = Post-Traumatic Stress Disorder. Park = Parkinson’s disease.