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Applying Mindfulness Therapy in a Group of Psychotic Individuals: A Controlled Study

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Background: There are already several existing studies that show the effectiveness of mindfulness-based approaches in varying types of disorders. Only a few studies, however, have analyzed the effectiveness of this intervention in psychosis, and without finding, up to now, significant differences from the control group. **Aims:** The aim of this study is two-fold: to replicate previous studies, and to focus on analyzing the feasibility and effectiveness of applying mindfulness in a group of people with psychosis. **Method:** Eighteen patients with psychosis were randomly assigned to experimental and control groups. The experimental group received eight 1-hour sessions of Mindfulness-Based Cognitive Therapy (MBCT), while the control group was relegated to a waiting list to receive MBCT therapy. **Results:** The experimental group scored significantly higher than the control group in their ability to respond mindfully to stressful internal events. **Conclusions:** Both the usefulness and effectiveness of implementing a mindfulness-based program have been replicated in a controlled manner in patients with psychosis.

Keywords: Mindfulness approach, psychosis, acceptance, controlled study.

Introduction

A mindfulness-based approach has been used to treat a wide array of disorders with promising results that lend support to its use in intervention (e.g. Allen, Chamber and Knight, 2006). Very few studies, however, have been conducted on mindfulness and psychosis. The first study to evaluate the application of mindfulness as a standardized, protocolized program

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for people suffering from psychosis was by Chadwick, Newman-Tylor and Abba (2005). It was conducted on a group of 10 patients and yielded positive results in Clinical Outcomes in Routine Evaluation (CORE), as well as an increase in mindfulness skills. It did not, however, include a control group. At a later date, Abba, Chadwick and Stevenson (2008) applied the mindfulness approach to 16 patients with psychosis with the objective of determining and describing the major psychological mechanisms involved in the mindfulness response. A recent, controlled study by Chadwick, Hughes, Russell, Russell and Dagnan (2009) examined the effectiveness of mindfulness skills versus remaining on a waiting list. They found that all the measures used to assess the intervention indicated change in the expected direction, but not to the extent that statistically significant differences registered between the experimental and control groups.

It is important to take into consideration the procedure these studies used to help patients acquire mindfulness skills. The 10 minutes of meditation incorporated: i) brief body scan; ii) mindfulness of breath; and iii) choiceless awareness (Chadwick, 2006). From the MBCT perspective, the recommended procedure is a series of techniques and exercises that train one to progressively incorporate mindfulness practice into one's life. These techniques include body scan, mindfulness of hearing, mindfulness of breathing, and mindful walking. Informal meditation practice is also encouraged (this refers to any daily activity practised in a mindful way). Using metaphors, poems and exercises to illustrate the difference between responding on "automatic pilot" versus mindfully, is also common (Segal, Williams and Teasdale, 2002). The present research aims to replicate a controlled study by Chadwick et al. (2009), employing the structure proposed by Segal et al. (2002), and following the recommendations of Chadwick et al. (2005). Specifically, we seek to analyze the feasibility and effectiveness of applying MBCT in a group of psychotic individuals in a controlled-design study.

Method

Participants

Participants were referred by the Association of Patients with Severe Mental Disorders, El Timón, in El Ejido, Almeria, Spain, and met the following inclusion criteria: (a) a diagnosis of schizophrenia, schizophreniform disorder, schizoaffective disorder or delusional disorder according to the DSM-IV-TR; (b) clinical stability, according to the research team therapist; and (c) had provided informed consent to participate in the study.

Twenty-three patients meeting the above criteria were selected to participate; 12 were randomly assigned to the control group and the other 11 to the experimental group. Two participants in the experimental group withdrew from the study. The first withdrew after the second session, saying he saw no benefit in the meditation. The second withdrew after the sixth session and, when contacted by telephone about his departure, remarked that he wanted a rest from El Timón (and therefore the group therapy they provided). Two other patients attended the sessions irregularly, less than 50% of the time, and were therefore excluded from the post-treatment analysis. One participant in the control group did not wish to complete the questionnaires post-treatment. Thus, the final sample consisted of 7 participants in the experimental group (mean age 34.7 years-old, *SD* 8.2 years; male 51.1%; average years of schooling 10.1, *SD* 4.1 years) and 11 in the control group (mean age 33.9 years-old, *SD* 10.7 years; male 63.6%; average years of schooling 9.3, *SD* 2.8 years). No significant

differences between groups were observed in age $T = 1.99 > .05$, sex $X^2 = .076 > .05$, or years of schooling $T = 5.38 > .05$. Also, all participants were taking antipsychotic medication (consistently throughout the experimental phase). Finally, all participants were unemployed and born in Spain.

Measures

Clinical Global Impression-Schizophrenia Scale (CGI-SCH). This instrument assesses the major symptomatic dimensions of schizophrenic disorders. It consists of two subscales with five items each. The first subscale assesses the severity of patients' clinical profiles during the previous week using five symptomatic dimensions (positive, negative, depressive, cognitive, and total symptoms). The second subscale assesses how much change has occurred since the last evaluation in the clinical profile's severity. These dimensions are evaluated by the clinician using a 7-point Likert scale.

Acceptance and Action Scale (AAQ II). This scale measures experiential avoidance, or the unwillingness to come into or stay in contact with internal experience. It consists of 10 items, evaluated on a scale from 1 to 7; 1 = never true, and 7 = always true. The Spanish adaptation of the AAQ II has a one-factor solution and good psychometric properties (Cronbach's alpha of 0.85) similar to the original version in English.

Southampton Mindfulness Questionnaire (SMQ). The 16-item SMQ assesses the extent to which respondents respond mindfully to distressing thoughts and images. It measures four aspects of mindfulness: full observation, letting something be, not having aversion, and the absence of judgement. The authors indicate it has a one-factor structure. The questionnaire exhibits adequate internal and external validity.

Procedure

The present study began by selecting potential participants, who were then asked to participate in an interview where they received information about the study (informed consent) and completed the questionnaires referred to in the Measures section above. There was no mindfulness practice at this assessment session. The clinician who conducted the assessment was blind to which group participants belonged, and independent of the MBCT therapist (who had 2 years' practice with mindfulness applied to various groups, with and without psychosis). Participants were randomly assigned to one of the two groups, where the following procedures were carried out.

Control group. Participants were put on a waiting list for mindfulness therapy.

Experimental group. Participants attended eight weekly sessions of group therapy, each lasting approximately 60 minutes. The mindfulness intervention followed the procedure set out by Segal et al. (2002). First, participants were trained in body scan, mindfulness of breathing, breathing, and sitting meditation. Poetry, metaphors and other exercises were often used to help illustrate the concept of mindfulness. At the end of each session, participants received handouts summarizing the session. They also received a CD on body scan and sitting meditation, and homework forms to complete. We incorporated the adaptations proposed by Chadwick et al. (2005) for applying mindfulness in patients with psychosis. The

Table 1. Mean (*SD*) scores pre and post intervention and effect size

	Pre				Post				*d*	
	E	C	*T*	Sig.	E	C	*T*	Sig.	E	C
GSI	14.00 (4.83)	14.36 (5.80)	−.138	.892	9.29 (3.04)	12.45 (5.61)	−1.363	.192	1.167	0.335
AAQII	36.71 (16.25)	44.30 (13.76)	−1.040	.315	36.57 (12.50)	42.09 (13.30)	−.958	.353	0.010	0.156
SMQ	61.33 (14.68)	59.10 (12.21)	.329	.747	79.83 (13.64)	61.91 (15.58)	2.445	.028*	1.306	0.201

E = experimental group; C = control group; * = significant at the .05 level.

psychotic symptoms themselves were not the intervention's focus; instead the general ability to mindfully respond to stressful internal events was emphasized.

Results

Pre- and post-intervention average scores were calculated for each group using Student's *t* statistic for independent samples. The effect size (Cohen's *d*) was also computed. Table 1 displays the two groups' mean scores before treatment (pre-intervention); no significant differences between the groups were observed. Post-intervention scores on all measures used to evaluate the intervention indicated change in the expected direction. That being said, the experimental group only exhibited statistically significant higher scores than the control group, and exhibited a large effect size, in mindfulness response to stressful thoughts and images.

Discussion

Regarding the feasibility of applying mindfulness techniques to psychotic patients, this study has confirmed that this procedure is not harmful, at least when executed in a controlled manner, and within this specific clinical framework. Two participants withdrew from the study, but not because treatment brought on a significant increase in their discomfort, or triggered a crisis.

As for the intervention's effectiveness, the experimental group scored significantly higher than the control group in the ability to respond mindfully to stressful internal events, as evaluated by the SMQ. This result supports the findings of Chadwick et al. (2005, 2009), who conducted a within-groups comparison. It also suggests that it is advisable to use the procedure described by Segal et al. (2002) to obtain more beneficial results in mindfulness skills training in cases of psychosis. It is also advisable to examine the effectiveness of the intervention's various components individually, so as to concretely identify what it is about mindfulness that provokes a change in one's relationship with their internal events. Another important aspect to consider is that neither in this study, nor in previous studies as far as we know, have yoga exercises been applied to mindfulness training. Therefore, it has become necessary to determine whether the absence of this variable has had any impact on the effectiveness of intervention.

In summary, this study has replicated the results of other research that attests to the feasibility and effectiveness of implementing a mindfulness-based program in patients with psychosis. However, this study's small sample size is an important limitation and hinders the generalizability of these results. In order to continue advancing research on applying mindfulness training to cases of psychosis, studies of a larger scale must be conducted.

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