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Mersh, L., Jones, F. W. and Oliver, J. (2015) Mindfulness, self-stigma and social functioning in first episode psychosis: a brief report. *Psychosis*. ISSN 1752-2439.

Link to official URL (if available):

<http://dx.doi.org/10.1080/17522439.2015.1024714>

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Citation: Mersh, L., Jones, F., & Oliver, J. (2015). Mindfulness, self-stigma and social functioning in first episode psychosis: A brief report. *Psychosis: Psychological, Social and Integrative Approaches*. DOI: 10.1080/17522439.2015.1024714

Mindfulness, self-stigma and social functioning in first episode psychosis: A brief report

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This study aimed to test the hypothesis that people with first-episode psychosis who are more mindful will have lower self-stigma, and hence better social functioning. Thirty-four participants experiencing first-episode psychosis completed self-report questionnaires, in a cross-sectional design. Consistent with the hypothesis, higher levels of mindfulness predicted lower self-stigma and better social functioning, and self-stigma statistically mediated the mindfulness → social functioning relationship. However, contrary to expectations, when symptom severity was included as a covariate, evidence of mediation was lost. Limitations and implications of these findings are discussed.

Keywords: self-stigma; mindfulness; social functioning; mediation

People with psychosis can experience high levels of stigma and this can be internalised as self-stigma, which has been defined as 'shame, evaluative thoughts, and fear of enacted stigma that results from individuals' identification with a stigmatised group' (Luoma, Kohlenberg, Hayes, Bunting & Rye, 2008, p. 150). Self-stigma may be particularly influential for people with first episode psychosis (FEP), given the potential for it to develop following the first diagnosis of a mental health problem combined with the possibility that it may discourage people from engaging with services (Sirey et al., 2001), potentially resulting in a longer duration of untreated psychosis. However, to date, there is not strong empirical support for interventions to reduce self-stigma in FEP.

Therefore, the current study sought to further our understanding of self-stigma, with a particular focus on the role that mindfulness might play, in the hope that this could subsequently inform intervention development. Mindfulness can be described as "paying attention in a particular way: on purpose, in the present moment and non-judgementally" (Kabat-Zinn, 1994, p.4). Through mindfulness, thoughts can be experienced as passing events in the mind rather than literal truths, and ascribed less meaning and significance (e.g. Segal, Williams & Teasdale, 2013). Given this, we hypothesised that people with FEP who were more mindful would have lower self-stigma, since they would be more likely to experience self-stigmatising thoughts as passing events in the mind. Furthermore, given that lower self-stigma predicts better social functioning (Lysaker, Roe & Yanos, 2007), we hypothesised that, as a consequence of its effect on self-stigma, greater mindfulness would predict better social functioning. Therefore, we predicted the causal chain: mindfulness -> self-stigma -> social function, and so expected that self-stigma would statistically mediate a relationship between mindfulness and social functioning. Furthermore, given that all of these

variables might plausibly be associated with symptom severity, we planned to test whether the predicted relationships endured once this potential confounder was controlled for.

Method

Thirty-four consenting participants with FEP were recruited from an Early Intervention Service, including nine inpatients. The male to female ratio was 16:18, ages ranged between 18 and 39, 18-20 years (n=12; 35%), 21-29 years (n=18; 56%) and 30-39 years (n=4; 9%) and the majority were from black and minority ethnic backgrounds (79%). A cross-sectional questionnaire design was employed, including self-report measures, with satisfactory psychometric properties, of mindfulness (*Five Facets of Mindfulness Scale, FFMQ*; Baer et al., 2006; 29 items), self-stigma (*Internalised Stigma of Mental Illness Scale, ISMI*; Ritsher, Ollingham, & Grajales, 2003; 29 items), social functioning (*Social Functioning Scale, SFS*; Birchwood, Smith, Cochrane, Wetton, & Copstake, 1990; 90 items), and symptom severity (*SCL-90-R Symptom Checklist*; Derogatis, 1994; 90 items). The first author administered the measures on a one-to-one basis with participants. All measures had satisfactory internal consistency in this sample (all $\alpha > .76$). Drawing on Table 3 in Fritz and MacKinnon (2007), the study was powered to detect large effects, with a power of 0.8 at a 0.05 significance level. In the absence of previous research, the choice of a large effect size was somewhat arbitrary and was in part influenced by the limited resources available to the project. We hoped that if this initial, exploratory study yielded promising findings, it could support applications for funding for a longitudinal study with a larger sample, capable of detecting more subtle effects.

Results

The means (and SDs) for the measures were as follows: FFMQ: 117.9 (18.5); ISMI: 0.398 (0.071); SF: 767.5 (58.3); SCL-90-R: 104.4 (77.2). As hypothesised, in a linear

regression, higher levels of mindfulness predicted better social functioning (coefficient=1.158, SE=0.517, $p=0.03$); i.e. the 'c-pathway' (cf. Hayes, 2013) was significant. Furthermore, as expected, bootstrapping (Hayes, 2013) revealed that self-stigma statistically mediated this mindfulness->social-functioning relationship, with a 95% confidence interval for the indirect effect that did not cross zero (0.259, 1.827) (point estimate=0.733, SE=0.365). The coefficients and standard errors in this model were: mindfulness->self-stigma (the a-pathway) coefficient=-0.002, SE=0.001, $p<0.01$; self-stigma->social-functioning (the b-pathway) coefficient=-401.799, SE=137.333, $p<0.01$; mindfulness->social-functioning (the c'-pathway) coefficient=0.425, SE=0.528, n.s.. However, contrary to expectations, when symptom severity was included as a covariate, evidence of an indirect effect was lost, since the 95% confidence interval (-0.195, 0.712) crossed zero; point estimate=0.141, SE=0.211. The statistics for the pathways were: a-pathway coefficient=-0.001, SE=0.001, n.s.; b-pathway coefficient=-256.456, SE=144.314, $p=0.09$; c-pathway coefficient=-0.098, SE=0.592, n.s.; c'-pathway coefficient=-0.238, SE=0.577, n.s..

Discussion

These findings are consistent with the possibility that people with FEP who are more mindful believe self-stigmatising thoughts less, and so experience lower levels of self-stigma, and consequently have better social functioning. However, the cross-sectional nature of the design means that causation cannot be shown, and the fact that the mediation effect disappears when symptom severity is included as a covariate leaves open the possibility that mutual associations with this variable may instead drive the relationships found; so it maybe symptom severity and not mindfulness that plays a causal role.

Alternatively, it may be that mindfulness and symptom severity are highly overlapping constructs, with a decrease in mindfulness forming part of a pattern of worsening symptoms. This is supported by the large correlation between symptom severity and mindfulness (-0.64, $p<0.001$). It is also possible that the failure to detect an indirect effect when symptom

severity was controlled for may be a Type II error, as the study was powered to detect large, but not medium or small effects, and it is plausible that the size of the indirect effect reduced when a confounding variable was included.

Arguably, helpful next steps will be to repeat the study using a larger sample and longitudinal design where the proposed causal variables in the mediation model are collected at different points in time. If this confirms the relationships observed here then an RCT to examine whether interventions aimed at increasing mindfulness in people with FEP can improve their social functioning, and whether self-stigma mediates this outcome, would be valuable.

Clinical Implications

If such research supports the meditational hypothesis outlined here then interventions that increase mindfulness may represent a useful means of alleviating self-stigma.

Conflict of Interest

All authors declare they have no conflicts of interest.

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