

# Responding Mindfully to Distressing Voices: Links with Meaning, Affect and Relationship with Voice

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Mindfulness is paying attention in a particular way – on purpose, in the present moment and non-judgementally. A central aim of the present study is to explore links between mindful relating to voices and meaning ascribed them.

Thanks go to all participants and to Cambridge University Press for permission to reproduce Figure 1.

## Introduction

Perhaps the most significant recent development in cognitive therapy has been the integration of mindfulness meditation. Mindfulness may be defined as “paying attention in a particular way: on purpose, in the present moment and non-judgementally” (Kabat-Zinn, 1994, p. 4). Bishop et al. (2004) suggest that mindfulness has two defining features. The first involves the self-regulation of attention, specifically maintaining attention on immediate experience. The second feature is the adoption of a particular orientation towards one’s experience of the present moment, characterised by curiosity, openness and acceptance. The evidence for wide-ranging effectiveness of mindfulness-based interventions is accumulating rapidly (Baer, 2003; Grossman, Nieman, Schmidt & Walach, 2004).

The intention behind mindfulness practice is, like cognitive therapy, to alleviate distress. Crucially, both mindfulness and cognitive therapy share a common premise – namely, that distress and disturbed behaviour reflect cognitive mediation and are not intrinsic properties of unpleasant sensations and experiences (Teasdale, Segal & Williams, 1995). In cognitive therapy this mediation concerns *meaning*. Distress reflects the meaning given to experience, and therapy involves using a variety of cognitive and behavioural methods to support the person to create new, less distressing meaning. In mindfulness distress is conceptualised as reflecting the way a person *relates* to internal experience, and in mindfulness-based interventions the primary mechanism of change is hypothesized to be relational. Teasdale et al. (1995) hypothesized that “decentering” from thoughts, feelings and sensations reduced distress by allowing individuals to relate to internal experience as passing objects of awareness as opposed to necessarily accurate reflections of self or reality. There are hypothesized to be links between the meaning given to a sensation and how a person relates to it – for example, a client experiencing flashbacks from a traumatic experience might hold a metacognitive belief such as “I cannot bear to experience these images” which maintains experiential avoidance of them through self-harm. Changing either the metacognitive belief or reaction is likely to change the other.

Valid measures of mindful responding to difficult internal experience are needed not only to understand how mindfulness-based interventions work, but also to test theoretical predictions about links among relationship to inner experience, meaning and distress. That is, measures are needed in order to test predictions about how mindfulness and cognitive therapy integrate. In relation to psychosis, a common and typically distressing psychotic experience is auditory hallucinations, hereafter called voices. Working with voices has been a cornerstone of cognitive therapy for psychosis

for over a decade (Chadwick & Birchwood, 1994). There are well established connections between meaning ascribed to voices and distress (e.g. Birchwood & Chadwick, 1997; Chadwick & Birchwood, 1995; Chadwick, Lees, & Birchwood, 2000; Morrison, Wells, & Nothard, 2000).

There are several self-report measures of mindfulness yet none that assesses mindful relating to voices. In the present study we present the Southampton Mindfulness of Voices Questionnaire (SMVQ). Item wording for the 12 items of the SMVQ is identical to that for 12 of the 16 items of the Southampton Mindfulness Questionnaire (SMQ: Chadwick et al., 2006), which assesses mindful responding to unpleasant thoughts and images. Chadwick et al. (2006) examined the reliability and validity of the SMQ in a community sample of meditators ( $n = 83$ ) and non-meditators ( $n = 51$ ). Chadwick et al. (2006) reported good internal consistency for the SMQ ( $\alpha = .89$ ), a statistically significant correlation ( $r = .57$ ) with the Mindful Attention Awareness Scale (MAAS: Brown & Ryan, 2003), statistically significant differences in the expected direction between meditators and nonmeditators ( $t = 3.40$ ,  $df = 132$ ,  $p = .001$ ), statistically significant correlations with mood ratings, and sensitivity to increase in mindfulness over an MBSR (Kabat-Zinn, 1990) based mindfulness training programme for 20 health professionals. The psychometric properties of the SMQ have been rigorously further assessed by Baer, Smith, Hopkins, Krietemeyer and Toney (2006). In their sample of 613 undergraduates, the SMQ had good internal reliability ( $\alpha = 0.85$ ) and was statistically significantly positively correlated with all other extant mindfulness measures.

The principle aims of the present study are to assess the internal reliability and concurrent validity of the SMVQ in a sample of people with psychosis and current auditory hallucinations, and to examine the conceptual links between mindfulness, affect and meaning given to voices. Specific theoretical hypotheses were that mindfulness score would be negatively correlated with (i) subjective rating of distress associated with voices, measured with a Likert scale, and general negative mood measured with the Positive And Negative Affect Scale (PANAS: Watson, Clark, & Tellegen, 1988), and (ii) malevolence, omnipotence and resistance, as measured by the Beliefs About Voices Questionnaire-Revised (BAVQ-R: Chadwick, Lees, & Birchwood, 2000). No predictions are made about voices perceived to be benevolent and engaged with, because the SMVQ concerns response to distressing psychotic experience.

## Method

### Participants

Fifty-nine people (35 men, 59 %) participated who met DSM IV diagnostic criteria for schizophrenia and currently experienced auditory hallucinations. Participants' ages ranged from 19 to 61 years (mean 38.9 years,  $sd = 11.9$ ). The mean number of years since onset of psychotic experience was 14.54 years ( $sd = 11.71$ ) with a range of six months to 49 years. Nine (15.3 %) were inpatients and 50 (84.7 %) outpatients. Fifty-three (88.1 %) of the sample were currently taking antipsychotic medication. Ratings for voice frequency were: once this week (5 participants), several times this week but not every day (13), once a day (1), several times a day but not every hour (22) and every hour (17). Ratings for loudness were: quiet whisper (5), quieter than own voice (19), about as loud as own voice (21), louder than own voice (6) and extremely loud (7). One person did not complete either the frequency or the loudness scale. The mode rating of frequency was "several times a day but not every hour" and loudness was "about as loud as own voice". Nine (15.3 %) of participants reported having practised meditation. Six had meditated in the last seven days, one within the last month, one within

the last six months and one had not meditated for more than a year. Mean number of meditations per week was 2.9 ( $sd = 2.31$ , range 0–7) and mean duration was 13.1 minutes ( $sd = 9.7$ , range 5–35).

## Measures

*Southampton Mindfulness of Voices Questionnaire (SMVQ)*, a 12 item scale, measures the degree to which people respond mindfully to voices. Items are scored on a seven- point Likert scale, worded “strongly disagree” to “strongly agree”, yielding a range of possible scores from 0 to 72. Items are intended to reflect four linked facets of mindfulness. These facets can be understood as bipolar constructs that differentiate mindful responding to difficult internal experience from distressing reactions to difficult internal experience. These are: clear awareness of what is present versus being lost in reacting to it; allowing attention to remain with unpleasant or difficult sensations versus experiential avoidance of it; accepting difficult sensations and oneself for having them versus judging sensations and self; and letting go versus rumination/struggle (Chadwick, Newman-Taylor, & Abba, 2005). To guard against any tendency to agree with all statements, six items are framed positively, six negatively.

The SMVQ has only 12 items because 4 items from the SMQ did not perform well when applied to voices rather than to thoughts and images. Three items had an item-total correlation of less than 0.2 ( $r = .17$ ,  $r = .12$ ;  $r = .02$ ) – well below 0.3, the minimum recommended level for inclusion in a scale (Landon, 2005). One more item was dropped because of participant feedback. Of the 30 participants who chose to complete measures with the researcher present, 24 (80 %) asked for clarification of an item worded “I notice how brief each comment really is” (all other items were completed straightforwardly). Whilst conceptually transience applies to all sensations, including voices, in practice many voice hearers experience their voices as being continuous and this item made little sense to them.

*The Mindful Attention Awareness Scale (MAAS; Brown & Ryan, 2003)* is a 15 item self report instrument that asks individuals to rate how frequently they have certain experiences on a six-point scale. The items describe experiences that indirectly assess how present and aware someone is in the current moment. The scale has good test–retest reliability ( $r = .81$ ,  $p = .000$ ) and internal consistency Cronbach’s alpha = .82). Convergent and divergent validity assessments show that the scale measures a quality of consciousness that is related to a variety of measures of well-being, discriminates between meditators and non-meditators, and detects changes in mindfulness over time.

*Positive and Negative Affect Scales (PANAS; Watson, Clark & Tellegen, 1988)* comprises two ten item mood scales, measuring positive (PA) and negative (NA) affect. Factor analysis indicates that positive and negative affect are relatively independent constructs. The items are scored on a five-point scale ranging from “not at all” to “extremely”. The PANAS can be used to ask participants to report on several time frames ranging from ‘this moment’ to ‘this year’. The internal consistency for the PA and NA scales for each of these time frames is high (Cronbach’s alpha ranging from .86 to .90 for PA, .84 to .87 for NA).

*Beliefs About Voices Questionnaire Revised (BAVQ-R; Chadwick, Lees & Birchwood, 2000)* is a 35-item measure of people’s beliefs about auditory hallucinations, and their emotional and behavioural reactions to them. There are three subscales relating to beliefs: malevolence, benevolence and omnipotence. Two further subscales, resistance and engagement, each measure a combination of emotional and behavioural responses to depict two different interpersonal’ relationships with voices. All items are measured on a four-point scale ranging from ‘disagree’ to ‘agree strongly’. The mean internal reliability for the five subscales is high, Cronbach’s alpha = .86. Examination of construct

validity found a strong relationship between malevolence and resistance ( $r = .0.76, p = .001, N = 60$ ) and benevolence and engagement ( $r = .82, p = .001, N = 60$ ).

*Subjective Rating of Distress.* Distress at the time of hearing the voice was measured using five point Likert scales. The five points of the scales were: not at all distressed (0), slightly distressed (1), moderately distressed (2), very distressed but could be worse (3) and extremely distressed (4).

## Procedure

Necessary ethical approval was first obtained. Participants were recruited through community mental health teams, in-patient wards and hearing voices groups across five centres in the south of England. Mental health staff were asked to approach potential participants on their caseloads who had a diagnosis of a schizophrenia according to DSM IV. Staff members asked potential participants for permission for the researcher to approach them. All participants were fully informed about the purpose of the study and gave written consent. Participants were offered the choice of completing the measures independently, with their key-worker or with the researcher. The order of the scales was constant as the sampling method precluded counterbalancing. All participants were debriefed, thanked and offered a summary of the results of the research once the study was complete.

**Figure 1. Distressing reactions versus mindful responding to unpleasant voices and other psychotic sensations**

## Results

### Descriptive Statistics

There was a low incidence of missing data. Two responses were missing from the SMVQ data. Eight responses were missing from the MAAS data, six for item 12, which asks participants how often they drive places on automatic pilot (very few participants owned cars). Missing items on the SMVQ and MAAS were replaced with the participant's mean response for the total scale. Three people missed one item from the BAVQ-R. Missing data on the BAVQ-R were replaced with the participant's mean for that sub-scale. One participant's BAVQ-R data were dropped because one page had been inadvertently left blank.

The data for the SMVQ, BAVQ-R Malevolence, Resistance, Omnipotence, PANAS and MAAS were normally distributed: one sample Kolmogorov-Smirnov tests were non-significant. These data were therefore analysed using parametric tests. The one sample Kolmogorov-Smirnov test was significant for the Benevolence and Engagement subscale of the BAVQ-R, indicating that these scales were not normally distributed. Visual examination of these data showed them to be skewed towards very low scores. Over 77.6 % of the participants scored five or less on the Benevolence subscale, 23 people (39 %) scored zero (range 0–18). On the Engagement subscale, 69.5 % scored five or less, 16 participants (27 %) scored zero (range 0–21). As is usual in health care settings, the participants in this study predominantly perceive their voices to be malevolent and resist them. No analyses of benevolence or engagement were conducted. Mean SMVQ, MAAS, PANAS, distress ratings, Malevolence, Omnipotence and Resistance for the total sample and demographic subgroups are reported in Table 1. Due to the number of correlations that were calculated, a Bonferoni correction was considered but was not implemented due to the significance level of the results.

**Table 1. Descriptive statistics for SMVQ, MAAS, PANAS (negative and positive affect scores) and BAVQ-R (malevolence, omnipotence and resistance scores) for total sample (n = 59), men (n = 35), women (n = 24), in-patients (n = 9), out-patients (n = 50), meditators (n = 9) and non meditators (n = 50)**

	SMVQ	MAAS	PANAS Neg	PANAS Pos	BAVQ-R MAL	BAVQ-R OMN	BAVQ-R RES
Sample mean	28.0	47.1	31.9	23.5	10.7	11.3	19.6
Std. Dev.	(14.6)	(14.0)	(10.7)	(9.3)	(6.9)	(4.7)	(6.0)
Range	0–65	15–90	10–50	10–50	0–18	0–18	0–27
Men: Mean	30.6	46.2	31.2	24.5	9.3	10.3	19.2
Std. Dev.	(14.4)	(13.3)	(11.7)	(9.9)	(5.6)	(4.4)	(6.8)
Range	0–60	15–90	10–50	10–50	0–18	0–18	0–27
Women: Mean	24.1	48.3	32.9	22.2	12.6	12.8	20.1
Std. Dev.	(14.2)	(15.3)	(9.4)	(8.4)	(8.2)	(4.8)	(4.6)
Range	2–65	15–90	10–50	10–50	0–18	0–18	0–27
Inpts: Mean	25.4	48.6	30.1	24.4	8.8	11.7	18.2
Std. Dev.	(6.2)	(13.4)	(10.4)	(6.7)	(4.2)	(3.8)	(8.3)
Range	17–37	15–90	10–50	10–50	0–18	0–18	0–27
Outpts: Mean	28.4	46.8	32.2	23.4	11.0	11.2	19.8
Std. Dev.	(15.6)	(14.3)	(10.9)	(9.8)	(7.3)	(4.9)	(5.5)
Range	0–65	15–90	10–50	10–50	0–18	0–18	0–27
Meditator: Mean	32.3	56.7	26.7	26.0	8.9	10.8	19.2
Std. Dev.	(19.7)	(14.3)	(10.1)	(10.3)	(6.2)	(5.9)	(5.3)
Range	8–65	15–90	10–50	10–50	0–18	0–18	0–27
Non med: Mean	27.2	45.3	32.8	23.1	11.0	11.4	19.6
Std. Dev.	(13.6)	(13.4)	(10.7)	(9.2)	(7.0)	(4.5)	(6.1)
Range	0–60	15–90	10–50	10–50	0–18	0–18	0–27

## Internal Reliability and Concurrent Validity

Item mean scores and item-total correlations are reported in Table 2. Cronbach's alpha for the SMVQ is .84 indicating a good level of internal reliability (Howitt, & Cramer, 2003). Item-total correlations range from  $r = .42$  to  $.69$ , with a mean of  $r = .52$ . Internal structure remains stable when individual items are deleted. The overall alpha remains at least .82 whichever of the 12 items is deleted. Total score

on the SMVQ was statistically significantly positively correlated with Total MAAS score ( $r = .51$ ,  $p = .001$ ,  $N = 59$ ), indicating moderate concurrent validity.

Usually when I hear my voice...	Mean	Std. Dev.	Range	Item-total correlation	alpha if item deleted
1. I am able just to notice it without reacting	3.12	2.14	0–6	.53	.83
2. It takes over my mind for quite a while afterwards	1.59	1.59	0–6	.69	.82
3. I judge the voice as good or bad	1.00	1.52	0–6	.42	.84
4. I feel calm soon after it has stopped	2.64	2.00	0–6	.53	.83
5. I am able to accept the experience	3.66	2.14	0–6	.50	.83
6. I judge myself as good or bad depending on what the voice says	1.90	2.24	0–6	.52	.83
7. I “step back” and am aware of the voice without getting taken over by it	2.86	2.15	0–6	.55	.83
8. I just listen and let it pass	2.80	2.20	0–6	.45	.84
9. I accept myself the same whatever the voice says	2.58	2.27	0–6	.55	.83
10. I keep thinking about what it said after it's stopped	1.54	1.80	0–6	.45	.84
11. I find it so unpleasant I have to distract myself and not notice them	2.32	1.91	0–6	.46	.84

12. I lose myself in the voice	1.95	1.85	0–6	.54	.83
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## Mindfulness, Mood and Distress Associated with Voices

Pearson's correlation coefficients were calculated to examine the relationship between mindfulness as measured by the SMVQ and negative affect as measured by both the PANAS and subjective distress ratings. PANAS negative affect score was significantly negatively correlated with Total SMVQ score ( $r = -.69, p = .001, n = 59$ ). Negative Affect was significantly negatively correlated with Total MAAS score ( $r = -.67, p = .001, n = 59$ ). Items 4 and 14 of the SMVQ include descriptions of negative affect, in order to control for any possible confound between these items and affect as measured by the PANAS, the data were also analysed excluding these items. The relationship between Negative Affect and SMVQ score remained significant ( $r = -.68, p = .001, n = 59$ ). No prediction was made regarding Positive Affect and mindful responding to voices because there is no theoretical reason to propose that the voice hearing experience would become emotionally positive through mindfulness – only that distress would be diminished. 53 participants gave subjective ratings of distress felt when they heard the voice. Scores were: Not at all distressed ( $n = 3$ ), Slightly distressed ( $n = 8$ ), Moderately distressed ( $n = 12$ ), Very distressed but could be worse ( $n = 13$ ), Extremely distressed ( $n = 17$ ). SMVQ score was significantly negatively related to distress when the participant heard the voice ( $r = -.63, p = .001, n = 53$ ).

## Mindfulness, Beliefs about Voices, and Resistance

One of the central aims of the study was to begin to explore links between mindful relating to voices and meaning ascribed them. As predicted, there were significant negative correlations between SMVQ and Malevolence ( $r = -.50, p = .001, n = 58$ ), Omnipotence ( $r = -.65, p = .001, n = 58$ ) and Resistance ( $r = -.45, p = .001, n = 59$ ).

## Discussion

Within the limits of the present study, the SMVQ is both a reliable and valid measure of the degree to which people respond mindfully to voices. Internal reliability is good ( $r = .84$ ) as is the mean ( $r = .52$ ) and range of item-total correlations (.42 to .69). These data suggest that the 12 items assess a common construct and that each item contributes meaningfully to this. Factor analysis with a larger sample of people with psychosis would further elucidate this. There was a moderate correlation with the MAAS, a well-validated measure of mindfulness (Brown & Ryan, 2003). We would argue that in the present context this degree of concurrent validity has ecological as well as statistical significance, given the substantial difference in item wording and state-trait focus. The MAAS assesses mindful awareness in everyday situations, such as whilst snacking and driving; the SMVQ assesses mindful responding only in relation to one specific psychotic sensation.

Predicted links with negative affect were supported. There were significant negative correlations between SMVQ score and subjective distress at the time of hearing voices, and with general mood as measured by the negative affect subscale of the PANAS (Watson et al., 1988). Brown and Ryan (2003) found that mindfulness as measured by the MAAS was positively associated with positive affect ( $r = .30-.39, p = .000$ ) and negatively associated with negative affect ( $r = -.39$  to  $-.43, p = .000$ ). The

present study replicates Brown and Ryan's findings in a sample with current psychosis: there were significant relationships between MAAS and PANAS positive affect scores ( $r = .33, p = .006, n = 59$ ), and MAAS and negative affect scores ( $r = -.67, p = .000, n = 59$ ). The present study made no prediction regarding positive affect because of the focus on difficult voices. Mindful responding to unpleasant voices is likely to reduce distress, but is unlikely to yield positive affect.

Mindfulness is a multi-faceted construct. Baer et al. (2006) conducted a series of studies assessing the properties of five mindfulness scales, including the Southampton Mindfulness Questionnaire (SMQ). The item wording for the 12 item SMVQ is drawn from the SMQ. Factor analysis of the SMQ identified two factors, non reactivity to distressing inner experience and non-judging of inner experience. These authors conceptualise these two facets as "ways of operationalising acceptance" (p. 42). Baer also conducted a stepwise regression analysis in order to examine which of the factors identified in the factor analysis predicted other psychological variables. Non-judging of inner experience was found to be the best predictor of psychological symptoms and thought suppression. Non-reactivity to inner experience was found to be the best predictor of experiential avoidance and self-compassion. This reflects the explicit clinical focus behind the development of the SMQ.

Romme and Escher (1993) found that not all people who experience voices are distressed by them, many cope well without contact with mental health services. Out of a sample of 173 voice hearers, 58 (34 %) reported that they coped well with the experience. Romme and Escher (1993) report that of these 58, 30 % experienced benevolent voices, compared to only 10 % of the group who did not cope well. Yet 70 % of those coping well did not hear benevolent voices, leading the authors to suggest that the difference might reflect these people having more accepting relationships with their voices. The SMVQ might be completed by a nonclinical sample hearing voices that they experience as difficult and unpleasant, but with which they cope adequately. We would predict that mindfulness would be higher in those who cope well.

The SMVQ has clinical and research utility. As in the present study, it can be used to test theoretical understanding of links between mindful relating, meaning and distress. Also, it might be used in outcome research. Chadwick (2006) in Person-Based Cognitive Therapy has integrated mindfulness practice within cognitive therapy for psychosis. Acceptance and Commitment Therapy (Hayes, Strosahl, & Wilson, 2003), which has similarities with mindfulness-based interventions, has been shown to reduce relapse in psychosis (Bach & Hayes, 2002). Measures such as the SMVQ might elucidate the mechanism of change in outcome research for psychosis, and the degree to which mindfulness mediates change. The SMVQ has utility not only in assessing outcome in mindfulness based interventions. It has been argued that cognitive therapy might alleviate distress in part by altering people's relationship with difficult internal experience, through a process of decentring. It would be worthwhile to assess this by exploring whether outcome in cognitive therapy for psychosis that lacks a mindfulness component links to a reduction in SMVQ score.

The BAVQ-R was used in this study to test predictions about the relationship between mindfulness and response to voices. The sample in this study was a typical clinical sample, the majority experiencing voices which were believed to be malevolent and omnipotent, and which they resisted. Scores on the Benevolence and Engagement subscales were low. Results supported predicted negative correlations between mindfulness and both malevolence and omnipotence. This supports a proposal that meaning and mindful relating to psychotic experience are linked (Chadwick, 2006, pp. 13–14). The results also supported the predicted negative correlation between mindfulness and a resistance based "interpersonal" relationship with voices – though these two concepts overlap to some degree.



The present research has several limitations and replication is needed. It is important to note several characteristics of this study which limit the generalisation. The sample here consisted of individuals with a diagnosis of schizophrenia (though formal diagnostic assessment was not undertaken), 88 % of whom were currently taking anti-psychotic medication. Also, the sample volunteered (of the 60 participants who gave permission to be approached, only one did not subsequently take part). Again, the study did not assess test-retest reliability nor conduct factor analysis. Finally, the order of the scales was constant because the sampling method precluded counterbalancing.

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## Key publications

Chadwick, P. D. J., & Birchwood, M. J. (1994). The omnipotence of voices: A cognitive approach to auditory hallucinations. *British Journal of Psychiatry*, 164, 190 - 201..

Chadwick, P. D. J. (2006). Person-based cognitive therapy for distressing psychosis. West Sussex: John Wiley.

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### Key publications

Chadwick, P.D.J., Newman-Taylor, K & Abba, N. (2005) Mindfulness groups for people with distressing psychosis. *Behavioural and Cognitive Psychotherapy*, 33, 351 - 359.

Newman-Taylor, K., Stopa, L & Garner, M. (in preparation) The fear of others; Comparing social phobia and paranoia within the cognitive model.

Newman-Taylor, K., Graves, A. & Stopa, L. (in preparation). Strategic cognition in paranoia; The use of thought control strategies in a non-clinical population.

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Research on mindfulness-based interventions has been limited by lack of measures of mindfulness. Several measures of mindfulness have been developed, but none which applies to the experience of hearing voices, or auditory hallucination. This research examines the reliability and validity of the Southampton Mindfulness of Voices Questionnaire (SMQV), a measure of mindful relating to auditory hallucinations, and tests predicted links with affect, meaning and relationship to voice. Fifty-nine participants with a diagnosis of schizophrenia who were currently experiencing auditory hallucinations participated. Participants completed the 16 item SMQV, and measures of general mindfulness, affect and beliefs about voices. The SMVQ had a Cronbach's alpha of .84, correlated significantly with a mindfulness measure, was significantly negatively correlated with negative affect and distress associated with voices. SMVQ scores correlated negatively with beliefs about voices' malevolence and omnipotence and resistance to voice. These data suggest that the scale is internally reliable and valid within the limits of the present study, and support predicted links between meaning and mindful relating. Research and clinical utility are discussed.

Keywords: mindfulness, psychosis, voices, measurement, cognitive therapy