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Exploration of illness perception among patients with mental illness in a multi-ethnic Asian sample

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ABSTRACT

Illness perceptions are beliefs that patients have about their illness. These beliefs play an important role in influencing their behaviour and outcomes. This study examined the factor structure and correlates of the Illness Perception Questionnaire Mental Health (IPQ-MH) among patients with mental illness in a multi-ethnic Asian sample. 400 participants with schizophrenia and other psychotic disorders, mood or anxiety disorder were recruited from a tertiary psychiatric institution and administered the IPQ-MH. Data on sociodemographic variables were also collected. A multi-factor structure was identified for the Identity, Structure and Cause subscale of the IPQ-MH. Age was consistently associated with a positive perception of illness across all three disorders; women had a more positive perception of schizophrenia and other psychotic disorders as compared to men while those of Indian ethnicity had a more negative perception of their mood disorder as compared to those of Chinese ethnicity. Those with lower education had a poorer understanding of their illness among those with mood disorder, and a poorer understanding of their illness and the effectiveness of treatment among those with anxiety disorder. The study identified specific groups which can be targeted through tailored and culturally relevant psychoeducational interventions to enhance their understanding and perception of mental illness.

1. Introduction

Illness perceptions are defined as cognitive representations or beliefs that patients have about their illness (Leventhal et al., 1984). These perceptions develop through information that a patient receives from both formal and informal sources including healthcare workers, media, family, friends and fellow patients (Petrie and Weinman, 2006). These perceptions may not only differ from that of the treating clinician but also from other patients suffering from the same illness and more importantly, these perceptions have been found to play an important role both in patients with physical and mental illnesses wherein they determine patient outcomes such as treatment adherence and quality of life (Hagger and Orbell, 2003; Lobban et al., 20032004; Petrie et al., 2007; Broadbent et al., 2008).

While many models have been put forth to explain patients' health related behaviors, one of the most widely studied models of illness perception is the Self-Regulation Model (SRM) developed by Leventhal et al. (1980). The model proposes that patients actively try to understand their illness and this dynamic process influences their coping, help-seeking and emotional response to their ailment. Research has further suggested that patients' ideas about their illness comprise five main components: (i) causal—thoughts about the cause of their illness, (ii) identity—beliefs about the label and nature of the illness and the associated symptoms, (iii) timeline—perceptions pertaining to the time course of the illness whether it is acute, cyclical or chronic, (iv) cure-control—extent to which they believe their condition to be amenable to cure or control and (v) consequences—beliefs about the perceived impact of the illness on their functioning, personal life, family, social relationships and finances (Leventhal and Deifenbach, 1991).

The illness perception questionnaire (IPQ) (Weinman et al., 1996) and the illness perception questionnaire revised (IPQ-R) (Moss-Morris et al., 2002) were developed based on the SRM to assess the perceptions of the patients towards their illness. Both these questionnaires have been used extensively in the field of physical health conditions such as rheumatoid arthritis (Groarke et al., 2005), coronary heart disease (Aalto et al., 2005) and hypertension (Chen et al., 2008) as well as mental health conditions including schizophrenia

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(Lobban et al., 2004), depression (Fortune et al., 2004) and anxiety (Bhui et al., 2006).

Witteman et al. (2011) adapted the IPQ-R to develop the Illness Perception Questionnaire Mental Health (IPQ-MH) and established its psychometric properties among patients with mental illness irrespective of their diagnosis. The instrument differs from the IPQ-R in the use of the term 'problem perception' instead of 'illness perception'. The IPQ-MH has the same three parts as the IPQ-R i.e. identity, structure and causes. The authors established the psychometric properties of the scale and found that the overall fit of the model with 34 items (structure subscale) was acceptable to good with CFI >0.90 and RMSEA <0.05. The internal consistencies in terms of Cronbach's alpha were good (>0.80) for four scales and (almost) acceptable for the remaining three (>0.70).

However, few studies have examined illness perceptions among Asian patients with mental illness. The aims of the current study were therefore to examine the factor structure and socio-demographic correlates of the IPQ-MH among patients with mental illness in a multi-ethnic Asian sample.

2. Methods

2.1. Sampling and study design

Data for the study were collected between October 2015 and December 2016. A total of 400 participants were recruited through convenience sampling from the Institute of Mental Health (IMH) which is the sole tertiary care psychiatric hospital in Singapore. Patients seeking treatment at the IMH outpatient clinics and affiliated satellite clinics were invited to participate in the study. Patients who were Singapore residents (Singapore Citizens and Permanent Residents) aged 21–65 years, belonging to Chinese, Malay or Indian ethnic groups, capable of providing consent, able to understand or read in any of the four languages - English, Chinese, Malay or Tamil, having a clinical diagnosis of schizophrenia and other psychotic disorders (henceforth referred to as schizophrenia), any mood disorder (depression or bipolar disorder) or any anxiety disorder (generalized anxiety disorder, obsessive compulsive disorder, post-traumatic stress disorder or panic disorder), as determined by a psychiatrist (using DSM-IV criteria) with a duration of illness not more than two years were included in the study. The study was initiated after receiving ethical approval from the relevant institutional ethics review board (National Healthcare Group Domain Specific Review Board) and all the participants provided written informed consent. The research was carried out in accordance with the Declaration of Helsinki and the ethical principles in the Belmont Report.

2.2. Measures

All participants were administered the following questionnaires:

1. Socio-demographic questionnaire: The questionnaire obtained data on age, gender, ethnicity, marital status, education level attained, employment status, income, living circumstances, medical history and any family history of mental illness.
2. The Illness Perception Questionnaire Mental Health (IPQ-MH) (Witteman et al., 2011) consists of three parts. Part 1: the Identity scale consists of 12 items, and is scored on a five-point Likert scale with 1 = 'not at all important' to 5 = 'very much important'. This scale asks participants to indicate what are currently their most important psychological complaints or problems and the last four items ask them to indicate what their complaints or symptoms are attributed/ related to. While three of the four items are derived from the biopsychosocial model, the fourth item assesses whether clients might label their problems existentially (Table 1). Part 2: the Structure scale is measured with 34 items and scored on a five-point Likert scale ranging from, 1 = 'strongly disagree' to 5 = 'strongly agree'. It has seven subscales—timeline chronic, timeline cyclical, consequences, personal control, treatment control, coherence and emotional representation subscales. This section of the scale is similar to that of the IPQ-R (Moss-Morris et al., 2002) (Table 2). Part 3: the Cause scale consists of 20 items in four subscales: psychological, biological, structural and stress-related and scored on a five-point Likert scale of 1 = 'strongly disagree' to 5 = 'strongly agree' and is derived from the Causal Belief Questionnaire (CBQ) (Whittle, 1996) (Table 3).

Clinical history was collected through a medical records review which included information on psychiatric diagnosis, total duration of illness and date first seen in IMH.

2.2.1. Translation

The forward-backward translation procedure was applied to translate the instruments from English into the local languages—Chinese, Malay and Tamil. A team comprising psychologists and one social worker translated the questionnaire while back translation was done by members of the team who were not involved in the first translation. Any inconsistencies were resolved by retaining only the translated items that conceptually matched the original questionnaires after back-translating the items into English. A pilot study was performed with five respondents per language to ensure that the questions were understood.

2.2.2. Statistical analysis

Statistical analyses were carried out using the SAS software version 9.2 (SAS Institute Inc., Cary, NC, USA) and MPLUS version 8 (Muthén and Muthén, 1998–2017). In order to determine the dimensionality of the instrument, confirmatory factor analysis (CFA) and exploratory structural equation modeling (ESEM) were performed to establish the validity of the factor structure of the scale. CFA models were estimated to test the unidimensional and multidimensional factor structure model proposed previously by Witteman et al. (2011). Since CFA resulted in a poor model fit, we re-analyzed the data using ESEM in order to identify the number of underlying factors, with all rotated loadings freely estimated using oblique Geomin rotation method. The final factor structure of the Identity, Structure and Cause subscales derived from the overall sample using CFA and ESEM were then further analyzed across the three diagnostic groups. All structural equation modeling analyses were performed on polychoric correlation matrixes using Mplus version 7.0 with the weighted least squares with mean and variance adjusted chi-square statistic (WLSMV) estimator for categorical variables. The WLSMV estimation was used due to fact that this estimator is more suited to the ordered-categorical nature of Likert scales than traditional maximum likelihood estimation (Beauducel and Herzberg, 2006). We used several criteria to determine the best fit model. Overall model fit was measured using a range of goodness-of-fit statistics based on the following criteria: the comparative fit index (CFI), the Tucker-Lewis index (TLI) and the root mean square error of approximation (RMSEA) and standardized root mean square residual (SRMR). Cutoff values suggested by Hu and Bentler (1999) were used—close to 0.95 for TLI and CFI, and values smaller than 0.08 or 0.06 for the RMSEA and SRMR support respectively as acceptable and good model fit (Browne and Cudeck, 1993). We also conducted separate multivariable linear regressions by diagnostic group to examine whether the dummy coded variables (independent variables) including age, gender, ethnicity, marital status, education, and employment status predicted each of the subscores (dependent variable). All significant levels were set at p value < 0.05.