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The validity of patient- and clinician-rated measures of needs and the therapeutic relationship in psychosis: A pooled analysis

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ABSTRACT

Measuring outcomes of treatments for psychosis such as needs and the quality of the therapeutic relationship is important in research and routine care. However, evidence on the validity of existing outcome measures is limited. We aimed to test the convergent, discriminant, and predictive validity of two widely used patient- and clinician-rated measures of needs and the therapeutic relationship. Multitrait-multimethod (MTMM) analysis was conducted on the Camberwell Assessment of Need Short Appraisal Schedule (CANSAS) and the Helping Alliance Scale (HAS), both the clinician (CANSAS-C, HAS-C) and patient (CANSAS-P, HAS-P) versions, in a pooled sample of 605 psychotic patients and their clinicians. CANSAS-C and CANSAS-P items loaded substantially into one common unmet needs factor. By comparison, substantial factor loadings were found for HAS-C and HAS-P items on two separate clinician- and patient-rated therapeutic relationship factors. Common unmet needs and clinician-rated therapeutic relationship factors significantly predicted reduced psychiatric in-patient days. Our findings support the convergent validity of the CANSAS, discriminant validity of the HAS, and predictive validity of CANSAS and HAS-C. The findings may inform the use of CANSAS and HAS as psychosis outcome measures in research and routine care.

1. Introduction

Outcome measurement in psychosis is used clinically to assess improvement in the treatment of individual patients and in research to evaluate the efficacy of specific interventions (Burns, 2007; Slade, 2002a). It is now widely accepted that treatment outcomes are best assessed from both the patient and clinician perspective (Priebe and McCabe, 2006; Thornicroft and Tansella, 2005). The therapeutic relationship and needs are two historically rooted, commonly used, and important outcomes in the care of patients with psychosis (Reininghaus and Priebe, in press). The quality of the therapeutic relationship is an integral part of treatments for psychosis (McGuire-Snieckus et al., 2007; Priebe et al., 2005). It can be defined as "the psychological construct held by individuals participating in the therapeutic relationship on each other and their interaction" (Priebe and McCabe, 2006, p.70). The assessment of needs as "the ability to benefit in some way from health [and social] care" (Stevens and Gabbay, 1991, p. 21) is widely used in the evaluation of care for patients with psychosis (Thornicroft and Tansella, 2005).

The association of patient and clinician ratings of the same treatment outcome has frequently been reported to be moderate at best (Hansson et al., 2001; Lasalvia al., 2008; Ochoa et al., 2003; Priebe and Fakhoury, 2008; Slade et al., 1998). Numerous studies have found that patients and clinicians agree only to a limited extent in their assessment of needs (Hansson et al., 2001; Lasalvia et al., 2008; Ochoa et al., 2003; Slade et al., 1998). In addition, McGuire-Snieckus et al. (2007) have reported associations between patient and clinician ratings of the quality of the therapeutic relationship of trivial to moderate magnitude. These findings may be due to measurement problems (i.e. measures capture different concepts unintentionally) and, therefore, suggest that the convergent validity of existing measures of needs and the therapeutic relationship is limited. However, they may also suggest that patients and clinicians indeed hold different concepts based on different backgrounds, views, values, principles and priorities and, therefore, true associations between these different concepts are, in psychometric speak, 'at the latent level' trivial to moderate.

There is also evidence suggesting a considerable overlap across measures designed to assess different outcomes. Substantial

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correlations have been reported among measures of needs and the therapeutic relationship (Reininghaus et al., 2011). Further, previous reports found that a single general factor accounted for variance across measures intended to assess different treatment outcomes (Fakhoury. et al., 2002; Hansson et al., 2007; Priebe et al., 1998; Reininghaus et al., 2011; Salvi et al., 2005) including needs and the therapeutic relationship. On the one hand, this may suggest that discriminant validity is limited due to measurement problems (i.e. measures capture both needs and the therapeutic relationship unintentionally) and, on the other, that needs and the therapeutic relationship are indeed very similar concepts and, therefore, true associations at the latent level are substantial (i.e. measures capture specific concepts that are truly correlated).

Some authors have noted that, if patient and clinician ratings are used in combination, they may predict better treatment outcomes (Lasalvia et al., 2008). Warner (1999) argued that the combination of emic (i.e. self-rated) and etic (i.e. observer-rated) data may lead more directly to service improvements. In the context of outcomes relevant to psychosis, Lehman (1999), in his outcomes-oriented framework, further emphasised the distinction between proximal and distal outcomes. This framework implies a temporal cascade of outcomes, in which success with proximal outcomes may lead to success with more distal outcomes (Lehman, 1999). One of the most important, distal treatment outcomes of psychosis is reduced hospitalisations (Burns, 2007). Priebe and Gruyters (1995) found that a better patient-rated therapeutic relationship was associated with reduced hospitalisations. Taken together, it is therefore attractive to hypothesise that patients' and clinicians' assessment of the therapeutic relationship and needs may not only reflect proximal outcomes, but also be predictive of more distal outcomes such as psychiatric in-patient admissions.

Using a pooled data set obtained from patients with psychosis and their clinicians, the current study aimed to examine: (1) the convergent validity of patient- and clinician-rated measures designed to assess the same treatment outcome (i.e. the Camberwell Assessment of Need Short Appraisal Schedule (CANSAS), patient (CANSAS-P) and clinician (CANSAS-C) version to assess needs, and the Helping Alliance Scale (HAS), the patient (HAS-P) and clinician (HAS-C) version to assess the therapeutic relationship); (2) the discriminant validity of measures designed to assess different treatment outcomes (i.e. the CANSAS to assess needs and the HAS to assess the therapeutic relationship) and (3) the predictive validity of patient- and clinician-rated outcome measures in terms of reduced psychiatric in-patient days as a treatment outcome.

2. Methods

2.1. Sample

We analysed data from the FOCUS (Slade et al., 2006) and DIALOG (Priebe et al., 2007) studies. The data presented here are the needs and therapeutic relationship assessments made at baseline. FOCUS was a randomized controlled trial to evaluate the effectiveness of standardized outcome assessments. Patients were recruited from eight community mental health teams (CMHTs) in London (United Kingdom) using the following inclusion criteria: (1) on the caseload of the CMHTs for at least 3 months on 1 May 2001; (2) aged between 16 and 64 years. During the study period, 160 patients were recruited from the eight CMHTs. Of these, 98 patients with psychosis were included into the current study.

The DIALOG study was a multi-centre randomized controlled trial to test a new computer-mediated intervention structuring patient-clinician dialogue in patients with schizophrenia. The study was conducted in community mental health services in London (UK), Granada (Spain), Groningen (The Netherlands), Lund (Sweden), Mannheim (Germany), and Zurich (Switzerland) between December, 2002, and May, 2005, using the following inclusion criteria for patients: (1) living in the community (not 24 h supported accommodation) and treated as out-patients by CMHTs; at least 3 months of continuous care in the current service; (2) capable of giving informed consent; (3) having sufficient knowledge of the language of the host country; (4) having a primary diagnosis of schizophrenia or related psychotic disorder (ICD–10, F20–F29 (World Health Organization, 1992)); (5) aged between 18 and 65 years; (6) having no severe organic psychiatric illness or primary substance misuse; (7) having routinely at least one meeting every 2 months with their keyworker; and (8) with the expectation that they would continue with the service for the next 12 months. The DIALOG sample comprised 507 patients with schizophrenia or related psychotic disorder, which were included into the current study. More detailed information on the studies is available in Slade et al. (2006) and Priebe et al. (2007).

2.2. Measures

The Camberwell Assessment of Needs Short Appraisal Schedule (CANSAS), patient (CANSAS-P) and clinician (CANSAS-C) version (Phelan et al., 1995) was used to assess patient-and clinician-rated needs. CANSAS-P and CANSAS-C both comprise 22 items on health and social needs, which can be grouped into five domains (health, basic, social, service, and functioning) (Slade et al., 1998). Each item is rated on a 3-point scale distinguishing between 'no need' (rating of 0), 'met need' (rating of 1) and 'unmet need' (rating of 2).

The Helping Alliance Scale (HAS, Priebe and Gruyters, 1993), patient (HAS-P) and clinician (HAS-C) version was used to assess the therapeutic relationship. The HAS comprises five items rated on a visual analogue scale ranging from 0 ('not at all') to 10 ('extremely well'). While HAS-P includes items on 'right treatment', 'understood by therapist', 'criticised by therapist', 'committed therapist' and 'trust therapist, HAS-C items cover 'getting along with patient', 'understand patient', 'look forward to meeting patient', 'feel actively involved', and 'feel I can help patient' (McCabe et al., 1999; Priebe and Gruyters, 1993).

We focused on unmet needs, as reverse coding of unmet needs ensured equivalence in the direction of coding with the Helping Alliance Scale (HAS, Priebe and Gruyters, 1993). In addition, the unmet needs were also used as primary and secondary outcome in the FOCUS and DIALOG trial, respectively. All analyses were performed on individual items rather than total scores of HAS and CANSAS.

2.3. Statistical analysis

2.3.1. Parameter estimation and model fit

Multitrait-multimethod (MTMM) analysis (Campbell and Fiske, 1959; Widaman, 1985) was performed in MPlus, Version 5.2 (Muthén and Muthén, 2009) to test whether unmet needs and the therapeutic relationship account for covariance among both patient and clinician ratings of measures intended to assess the same underlying concept. The MTMM framework is widely considered as the best method of construct validation. It evaluates the discriminant and convergent validity of at least two distinct concepts (i.e. unmet needs, the therapeutic relationship) measured by at least two measurement methods (i.e. patient ratings, clinician ratings) (Nosek and Smyth, 2007). Convergent validity is demonstrated by the convergence of different methods measuring the same concept through a single factor with high factor loadings. Discriminant validity is usually confirmed by low correlations between the different concepts (Nussbeck et al., 2006). Model estimation used the robust weighted least squares means and variance adjusted (WLSMV) estimator in MPlus, Version 5.2 (Muthén and Muthén, 2009). Data were assumed to be missing at random, which allowed for inclusion of the full sample using WLSMV.

The overall model fit of the latent variable models was assessed by computing the root mean square error of approximation (RMSEA; Steiger, 1990), Comparative Fit Index (CFI; Bentler, 1990), and Tucker Lewis Index (TLI; Tucker and Lewis, 1973). A good model fit is generally indicated by a low RMSEA (below 0.10 for acceptable and below 0.05 for very good fit; Browne and Cudeck, 1993) and a high Comparative Fit Index (CFI) and Tucker Lewis Index (TLI) (above 0.90 for acceptable and above 0.95 for very good fit; Bentler, 1990; Muthén, 1989).

2.3.2. Model building

Following Widaman (1985), three alternative latent variable models were compared to examine the convergent and discriminant validity of the CANSAS and HAS. Path diagrams of the three latent variable models are shown in Fig. S1 (see Supplementary Material). Model 1 included two general factors, one each for patient ratings on CANSAS-P and HAS-P (i.e. GP) and clinician ratings on CANSAS-C and HAS-C (i.e. GC). In Model 2, common unmet needs (i.e. *N*) and therapeutic relationship (i.e. *TR*) factors were specified in addition to the two general factors to account for shared variance of the same concept across patient and clinician ratings. Model 3 included distinct but related concept factors one each for patient- (N_P) and clinician-rated (N_C) rated unmet needs as well as patient- (TR_P) and clinician-rated (TR_C) therapeutic relationship. In all three models, general and concept factors were correlated for purposes of model identification (Nussbeck et al., 2006). Factor loadings were computed to investigate the ability of items to discriminate between patients from lower and higher outcome levels (Reise et al., 2007).