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Measuring Empowerment Among People With Psychotic Disorders: A Comparison of Three Instruments

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Objective: **This study compared three instruments that are used to measure empowerment of people with psychotic disorders. The study evaluated internal consistency, discriminant and convergent validity, sensitivity to symptom levels, and clinical usefulness.** _Methods:_ **Fifty patients in the Netherlands were administered the Empowerment Scale (ES), the Personal Empowerment Scale (PES), and the Mental Health Confidence Scale (MHCS).** _Results:_ **The MHCS had good internal consistency, whereas the levels for the ES and PES were just below what would be considered acceptable. The instruments demonstrated moderate correlations between total scores; correlations between subscale scores were weaker. Scores for all three instruments were comparably associated with symptom severity.** _Conclusions:_ **All three instruments measure some aspect of empowerment among persons with severe mental illness. However, empowerment is too broadly defined to allow these instruments to have convergent validity. Among patients with psychotic disorders, the MHCS is recommended because it has good psychometric qualities and is clinically useful.** (_Psychiatric Services_ **59:1338–1342, 2008**)

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Empowerment is an outcome pursued by advocacy groups, consumer organizations, mental health professionals, and health care providers. It originates from the political arena, although a consensus has not yet been reached on its definition.

The many definitions of empowerment suggest that the concept is still evolving (1), and the number of empirical studies on empowerment is limited. Most definitions of empowerment include participation in society in terms of access to employment, education, and other valued resources (2,3). However, there is a distinction between definitions focusing on interpersonal characteristics—control over one's life and the recovery process or the efforts to achieve more control and self-efficacy (1)—and those that also highlight influencing the organizational and societal structure in which one lives (4).

In instruments developed to measure empowerment, these differences can be seen. In this study, we assessed the impact of these differences and examined whether these instruments measure the same concept. Also, we aimed to gain some insight into how to choose the right instrument for measuring empowerment in a population of patients with psychotic disorders.

The instruments studied are the Empowerment Scale (ES) (1), the Personal Empowerment Scale (PES) (2), and the Mental Health Confidence Scale (MHCS) (5). They are the most frequently cited instruments to measure empowerment in the literature, and their reliability and validity have already been established for people with severe mental illness (1,2,6). Here we reappraised their internal consistency, convergent and discriminant validity, and applicability for patients with psychotic disorders (7,8). As for their convergent and discriminant validity, we hypothesized that the total scores of the instruments will have correlations of at least .70 and that between subscales with common content the correlations will be even stronger. Furthermore, we assessed the association between empowerment and the level of symptoms.

Methods

Participants were recruited between August 2005 and December 2006 in inpatient and outpatient services of the University Medical Center Groningen, Groningen, and the Adhesie Psychiatric Institute, Deventer, both in the Netherlands. Recruitment occurred only for the purpose of this study. Inclusion criteria were age 18 to 65 years, a good under-

standing of the Dutch language, and a clinical diagnosis of schizophrenia or a related psychotic disorder. Diagnoses were made according to *DSM-IV* criteria by experienced psychiatrists trained in the Schedules for Clinical Assessment in Neuropsychiatry (9). There were no exclusion criteria. The study is in accordance with the Declaration of Helsinki, and all patients provided written informed consent.

All participants completed the three self-report questionnaires in one testing session. Also gathered were demographic and clinical characteristics, such as duration of illness (time since first contact with a mental health care organization) and lifetime number of psychotic episodes. Although all questionnaires were designed for self-administration, there was assistance available from an independent professional for the clarification of items if needed.

The ES reflects the construct of empowerment as defined by consumers of mental health services and encompasses both the interpersonal and the societal perspective (1). The 28-item scale consists of five factors:

self-efficacy and self-esteem, power and powerlessness, community activism, righteous anger, and optimism toward and control over the future (Table 1). The items are worded as statements. Examples are "I feel powerless most of the time" and "People have a right to make their own decisions, even if they are bad ones." The total score ranges from 1 to 4, with higher scores indicating more empowerment. The internal consistency of the ES scale as a whole is good, with past studies (1,10) calculating an alpha of .86 (N=261) and .81 (N=1,827).

The PES focuses on control over common life domains, including shelter, income, service provision, and the individual's ability to minimize unwanted occurrences, such as personal danger and homelessness (2). It contains in total 20 items, such as "How much choice do you have about how you will spend your free time?" and "How likely is it that you will be physically threatened in the course of next month?" The two subscales are "discretion" and "reduction in chance," both consisting of ten items. The total score on the PES ranges from 30 to

100, with higher scores indicating more empowerment (4). Past studies have found that the Cronbach's alpha of the PES as a whole is .84 (N=310) (2) and .78 and .74 for discretion and reduction in chance subscales, respectively (N=1,027) (10).

The MHCS (5) is a 16-item scale with three subscales: optimism, coping, and advocacy. The focus is on the intrapersonal aspects of empowerment, because the instrument was originally designed to measure self-efficacy. The questions refer to a person's global confidence in his or her coping ability across a wide range of situations. Questions start with "How confident are you right now that you can: . . .." Examples are "set goals for yourself" and "deal with symptoms related to one's mental illness diagnosis." The total score ranges from 16 to 96, with higher scores indicating more empowerment. A past study found that the internal consistency of the MHCS is good, with an alpha of .94 (N=610) (6).

The Community Assessment of Psychic Experiences (CAPE) (11) contains 42 items and measures positive, negative, and depressive symp-

Table 1

Scores on three instruments that measure empowerment among 50 patients in the Netherlands with a psychotic disorder and comparison of internal consistency with that in the original studies describing the instruments

Scale and subscale	Number of items	Cronbach's α: original study[a]	Study presented here			
			Cronbach's α	MICC[b]	M	SD
Empowerment Scale[c]						
Self-esteem	9	—[d]	.87	.43	2.8	.5
Power	8	—[d]	.50	.11	2.6	.4
Community	6	—[d]	.73	.31	3.1	.4
Optimism	4	—[d]	.54	.23	2.8	.5
Anger	4	—[d]	.59	.26	2.4	.5
Total score	28	.85	.82	.14	2.8	.3
Personal Empowerment Scale[e]						
Discretion	10	—[d]	.77	.25	42.7	4.8
Reduction	10	—[d]	.81	.30	40.7	6.1
Total score	20	.84	.85	.22	83.4	10.1
Mental Health Confidence Scale[f]						
Optimism	6	—[d]	.88	.55	25.4	5.6
Coping	7	—[d]	.87	.49	28.8	6.0
Advocacy	3	—[d]	.76	.51	13.4	2.7
Total score	16	.94	.93	.45	67.6	12.8

[a] Original studies were Rogers et al., 1997 (1), Segal et al., 1995 (2), Markowitz, 1998 (7), and Rogers et al., 2007 (10).
[b] Mean interitem correlation coefficient
[c] Possible scores range from 1 to 4, with higher scores indicating more empowerment.
[d] No data on Cronbach's alpha available
[e] Possible scores range from 30 to 100, with higher scores indicating more empowerment.
[f] Possible scores range from 16 to 96, with higher scores indicating more empowerment.

toms. It provides a score for the frequency of these symptoms and for the distress caused by these symptoms (both subscale scores range from 42 to 168), with an overall score ranging from 84 to 336. Higher scores on the CAPE indicate more symptoms or more distress caused by symptoms. For this study, we examined symptoms and levels of distress in the previous two weeks. Each of the four instruments is available from the first author listed in its reference citation (no fee for use).

We examined the internal consistency with Cronbach's alphas and the mean interitem correlation coefficient (MICC) for each subscale and for the total score of each instrument. We considered the internal consistency to be sufficient if the alpha is ≥.80 and if the MICC has a value ≥.25. Also, correlations ≥.70 are considered to be sufficient for convergent validity, and correlations ≤.40 are considered to be sufficient for discriminant validity (12).

When surveying persons with schizophrenia, the formulation of the items is very important because many patients experience difficulties in abstract thinking and understanding ambiguous sentences, and they have problems paying attention when reading long sentences (13). For this reason, we evaluated the clinical usefulness of the three instruments in our population. We evaluated the formulation of the items (that is, ambiguity, concreteness, relevance, response alternatives, and length), the number of missing responses, and self-reported experiences of the patients. Analyses were conducted with SPSS, version 14.

Results

Fifty patients were recruited: 36 (72%) participants were male, and all had a white ethnic background. A total of 28 patients (56%) were inpatients, and 28 (44%) were outpatients. Participants' mean±SD age was 31.4±13.0 years, and their mean duration of illness was 6.5±6.3 years. Twenty-two (45%) were living alone, two (4%) were married, five (10%) had competitive employment, and 25 (50%) had a high school, college, or university degree. For the lifetime number of psychotic episodes, 13 participants (27%) had one episode, 12 (25%) had two episodes, and 23 (48%) had three or more episodes. The diagnostic criteria for schizophrenia were fulfilled by 39 participants (78%), and 11 (22%) had a related psychotic disorder (that is, psychosis not otherwise specified or delusional disorder).

All participants were able to complete the instruments on their own and needed only limited aid for the clarification of the items. The mean score was 71.7±16.2 on the CAPE frequency dimension and 67.7±19.5 on the distress dimension, leading to an overall score of 139.6±34.8, which indicated mild symptoms.

Results for internal consistency in the original studies (1,2,6,10) describing the instruments and in this study are presented in Table 1, together with the mean±SD scores on each subscale and the total scores. The MHCS showed the highest level of internal consistency. On some of the subscales, the ES had low levels of internal consistency, as seen by smaller Cronbach's alpha values and MICC values. For the total score, the PES also had low levels of internal consistency, as seen by a lower MICC value. The means and SDs found in our study population are comparable with another study on the effects of participation in consumer-operated services programs in severe mental illness (10).

All correlations between the total scores of the three instruments were too low to meet the standard for a satisfactory convergent validity (Table 2). Most subscales of the empowerment instruments were weakly correlated, with a mean correlation of .34 (ranging from .03 to .66). Even the comparable optimism subscales of the MHCS and the ES were weakly correlated (r=.59, p<.01).

Empowerment was negatively associated with symptom scores, as measured by the CAPE. Correlations varied from –.58 to –.67.

The clinical usefulness of the instruments was evaluated in grammatical and lexical ways (14). In the ES four items are negatively worded, which can be confusing to patients with schizophrenia. The MHCS and PES phrase items as a personal question (the MHCS starts items with "How confident are you . . . ?" and the PES starts items with "How likely is it that you . . . ?"), which is helpful for patients with schizophrenia. The ES also uses statements such as "People should try to live their lives

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Table 2

Pearson correlations between three instruments that measure empowerment and an instrument that measures psychotic symptoms among 50 patients in the Netherlands with a psychotic disorder

Variable	Empowerment Scale	Personal Empowerment Scale	Mental Health Confidence Scale	Community Assessment of Psychic Experiences
Empowerment Scale	1.00	.41[a],**	.34[a],*	
Personal Empowerment Scale	.55***	1.00	.41[a],**	
Mental Health Confidence Scale	.61***	.55***	1.00	
Community Assessment of Psychic Experiences	–.58***	–.60***	–.67***	1.00

[a] Controlled for Community Assessment of Psychic Experiences scores
*p<.05
**p<.01
***p<.001

the way they want to" or abstract sayings, such as "Making waves never gets you anywhere."

Notably, the ES and the MHCS both have one response format, whereas the PES uses three response formats (no choice to a lot of choice, 0% to 100%, and very likely to very unlikely) (multiple-choice formats can be confusing to patients with schizophrenia). The mean number of letters in the items of the MHCS, ES, and PES were 24, 42, and 53, respectively. Because of missing values a total score could not be calculated for the PES for seven patients (14%) (of these seven patients, three were inpatients and four were outpatients). (Other instruments had no missing values.)

Patients reported that many items in the PES did not apply to them (for example, "How likely is it that you have a place to stay?" and "How likely is it that you will get enough to eat in the next month?"), simply because they did not have more than minimal resources or were hospitalized at that moment. They also reported difficulties in answering the PES items that referred to a possibility in the month ahead (ten of 20 items), saying "I really have no idea" or "How do I know that?" No difficulties were reported with regard to the MHCS and ES, because all of the items on those scales refer to the present—for example, "How confident are you right now that you can set goals for yourself?"

Discussion

This study investigated the measurement of empowerment among persons with psychotic disorders by assessing simultaneously the internal consistency, discriminant and convergent validity, sensitivity to symptom levels, and clinical usefulness of the three self-report instruments: the ES, the PES and the MHCS.

The three instruments were developed for the broad population of all people with severe mental illness, and their psychometric qualities also extend to people with schizophrenia. The results on internal consistency favored the MHCS above the ES and the PES (the ES and the PES were just below the internal consistency standards in this study). Although the

total score on the instruments were significantly correlated, the intercorrelations were moderate, suggesting that each instrument measures different aspects of the concept of empowerment. Of note, in this study we did not validate the instruments. Nor did we address the question of whether any of them really measures empowerment.

Empowerment is still broadly defined and constitutes several domains. The low convergent validity of the instruments found in our study may very well be explained by the different definitions of the empowerment construct in the different instruments. The concept of empowerment in the MHCS is related to personal self-confidence. In the ES, the empowerment concept is defined as self-efficacy in combination with societal empowerment, whereas in the PES it is defined as the number of choices and opportunities one has in life and in the meeting of basic needs.

The instruments were equally sensitive to the symptom scores as measured by the CAPE. The correlations that we found are in accordance with the clinical notion that psychiatric symptoms are negatively correlated with empowerment (7,8). About 36% of the variance of the empowerment scores could be explained by symptom severity. All three instruments were influenced by psychopathology; however, there is also evidence for another common factor—that is, when the analyses controlled for psychopathology, correlations between the empowerment scores remained significant.

Aside from internal consistency and type of empowerment under study (intrapersonal, interpersonal, and societal), the objectives of the study and the clinical usefulness of the instrument are important factors when it comes to choosing one of the instruments.

The ES can be used in measuring empowerment in a broad category of mental illnesses—for example, in studying supported education and supported employment or in evaluating consumer-operated services. In vocational rehabilitation studies of persons who are chronically ill and homeless, the PES can assess the lack

of resources and unmet needs (2). The MHCS will fit well in studies aimed at the effect of treatment in interventions, such as peer support groups (15), dual-focus self-help groups (16), and cognitive-behavioral therapy (17), but it does not measure societal empowerment.

The clinical usefulness of the instruments depends on the cognitive disabilities of the study population. The ES and PES formulate some of their items as abstract sayings—for this reason both instruments can lead to difficulties in a population that has problems when confronted with figurative language (13). The missing values in the PES also indicated that some of the questions on this instrument were not fully applicable for patients who were hospitalized, although this is not mentioned as a restriction in the manual for the instrument. The MHCS uses positively worded, personal, and short items and had no missing values and a positive evaluation by the patients in our study. In our view, the MHCS is the most clinically useful instrument to use in a population of patients with schizophrenia.

A strength of this study is the fact that it is the first to report the Cronbach's alpha values and the MICC values for each total score and each score on the subscales. An important limitation of this study is the small sample size of 50 patients. However, our results on internal consistency are in line with a much larger study (10). Therefore, we do not expect that the sample size accounted for the lack of association between the instruments.

Conclusions

All three instruments are designed to measure empowerment among persons with severe mental illness, but they focus on different aspects.

The results of our study provide more evidence for discriminant validity than for convergent validity. The psychometric qualities of these instruments in our study population are moderate to good. The choice of an instrument depends on the research hypothesis and the target population. For research focusing on intrapersonal empowerment, the MHCS is to

be preferred, whereas the ES or the PES would be more adequate when societal empowerment is the objective. For patients with psychotic disorders, the MHCS is recommended because it has good psychometric qualities, short and personally formulated items that refer to concrete everyday situations, and applicability to people with cognitive disorders. A more precise definition of empowerment and operational definitions of subdomains of empowerment are needed before rehabilitation research that aims to improve empowerment can be performed.

Acknowledgments and disclosures

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