ACTIVITAS NERVOSA SUPERIOR

Activitas Nervosa Superior 2010;52:1,24-28

SHORT COMMUNICATION

THE SCORING AND INTERPRETATION OF THE SDQ-20 AND SDQ-5

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Received November 12, 2010; accepted November 21, 2010

Abstract

The 20-item Somatoform Dissociation Questionnaire (SDQ-20; Nijenhuis, Spinhoven, Van Dyck, Van der Hart, & Vanderlinden, 1996) evaluates the severity of somatoform dissociation. The SDQ-20 items were derived from a pool of 75 items describing clinically observed somatoform dissociative symptoms that in clinical settings had appeared upon reactivation of particular dissociative parts of the personality and that could not be medically explained. The SDQ-20 scores were best predicted by self-reported physical and sexual traumatization in patients with dissociative disorders and psychiatric controls (Nijenhuis et al., 1998c), even after statistically controlling for self-reported emotional traumatization (emotional neglect and emotional abuse). These traumatization scores were composed of four factors, i.e. presence of trauma, duration of trauma, relationship to perpetrator, and subjectively rated impact of trauma.

Key words: Dissociation; Somatoform dissociation; Somatoform Dissociation Questionnaire; Reliability; Validity

INTRODUCTION

The 20-item Somatoform Dissociation Questionnaire (SDQ-20; Nijenhuis, Spinhoven, Van Dyck, Van der Hart, & Vanderlinden, 1996) evaluates the severity of somatoform dissociation. The SDQ-20 items were derived from a pool of 75 items describing clinically observed somatoform dissociative symptoms that in clinical settings had appeared upon reactivation of particular dissociative parts of the personality and that could not be medically explained. The items pertain to negative (e.g., analgesia) and positive dissociative phenomena (e.g., site-specific pain).

SCORING

The items are supplied with a Likert-type 5-point scale, ranging from "1 = this applies to me NOT AT ALL" to "5 = this applies to me EXTREMELY."

The respondent is also asked to indicate whether a physician has connected the symptom or bodily experience with a physical disease. In our SDQ-studies, we have not adjusted the item scores when physical disease was indicated, as such indications often did not seem to be accurate. For example, the respondent might interpret "hyperventilation" as a physical disease. We therefore suggest that the item scores are not adjusted for indicated physical disease when the SDQ-20 (or SDQ-5) is used for research purposes. However, in clinical practice one may wish to adjust the relevant item score to "1" when physical disease is indicated, the medical diagnosis has been checked with the physician who assigned it, and this diagnosis seems valid.

The SDQ-20 score, which may range from 20 to 100, is obtained by summation of the individual item scores.

The psychometric characteristics of the SDQ-20 were explored in several studies (France: El-Hage, Darves-Bornoz, Allilaire, & Gaillard, 2002; The Netherlands/Belgium: Nijenhuis et al., 1996, 1997b, 1998b, 1998c, 1999; Turkey: Sar, Kundakci, Kiziltan, Bakim, & Bozkurt, 2000). The results of these studies demonstrated that the scalability, reliability, and validity of the instrument are very satisfactory.

SCALABILITY

Mokken scale analysis showed that the 20 items are strongly scalable (Nijenhuis et al., 1996: Loevinger coefficient of homogeneity H = .50; Nijenhuis et al., 1998b: 0.56). The items met the assumptions of single and double monotonicity. In a replication study

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(Nijenhuis et al., 1998b), one item (Mokken coefficient of homogeneity = 0.28) failed to reach the lowerbound (0.30), but its exclusion only marginally affected the Loevinger coefficient of homogeneity (increasing to 0.58). The Mokken coefficients of homogeneity of the other items ranged from 0.40 to 0.63.

RELIABILITY

The internal consistency of the SDQ-20 is excellent (Nijenhuis et al., 1996, Cronbach's alpha 0.95; Nijenhuis et al., 1998b: .96). The test–retest reliability is very satisfactory (Sar et al., 2000).

RELATIONSHIP WITH DEMOGRAPHIC CHARACTERISTICS

We have not found indications that SDQ-20 scores are affected by age or gender.

CONVERGENT VALIDITY

As we found (Nijenhuis et al., 1996), the intercorrelations between the SDQ-20 score and the DIS-Q total score as well as three of the four factor scores were high ($.71<r<.76$, $p < .0001$). The intercorrelation with the absorption scale was more moderate ($r = .46$, $p < .0001$). In a replication study (Nijenhuis et al., 1998b), the intercorrelation between the SDQ 20 and the DIS Q total score was r = .82, and the correlations between the SDQ and the four DIS-Q factor scores were as follows: identity fragmentation factor r = .81; loss of control, r = .72; amnesia, r = .80; absorption r = .60.

In yet another study (Nijenhuis et al., 1997b), an intercorrelation of r = .85 with the Dissociative Experiences Scale (DES, Bernstein & Putnam, 1986) was assessed. Nijenhuis, Van der Hart, and Kruger (2002) and Sar et al. (2000) also found a strong association between the SDQ-20 and the DES in psychiatric patients, Nijenhuis and Van Duyl (2001) in Ugandan patients with spirit possession disorder, and Nijenhuis et al. (2003) in women with chronic pelvic pain.

These results strongly support the convergent validity of the SDQ-20.

DISCRIMINANT VALIDITY

The SDQ-20 discriminates between (i) Dissociative Identity Disorder, (ii) Dissociative Disorder NOS, (iii) Somatoform Disorders, and (iv) other psychiatric diagnostic categories, including bipolar mood disorder.

Sar et al. (2000) also found that somatoform dissociation was extreme in DSM-IV dissociative disorders, quite modest in anxiety disorders, major depression, and schizophrenia, and low in bipolar mood disorder. El-Hage et al. (2002) documented that patients with PTSD had higher SDQ-20 scores than psychiatric patients without PTSD or dissociative disorders. Patients with pseudo-epileptic seizures have higher SDQ-20 scores than in patients with temporal lobe epilepsy (Kuyk, Spinhoven, Van Emde Boas, & Van Dyck, 1999), and Ugandan patients with spirit possession disorder have higher SDQ-20 scores, compared to mentally healthy controls (Nijenhuis & Van Duyl, 2001). Waller, et al. (2003) documented somatoform dissociation in patients with bulimia.

Table 1. SDQ-20 scores for different diagnostic categories

Nijenhuis et al.:	1996		1998a		1999		Sar et al., 2000	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
DID	51.8	12.6	57.3	14.9	55.1	13.5	58.7	17.9
DDNOS	43.8	7.11	44.6	11.9	43.0	12.0	46.3	16.2
Somatoform disorders					32.0	9.6		
Eating disorders					27.7	8.8		
Schizophrenia							27.1	9.5
Mixed non-dissociative psychiatric patients (mainly anxiety disorders, depression, adjustment disorders)	23.5	3.97			22.9	3.9		
Anxiety disorder							26.8	6.4
Major depressive episode							28.7	8.3
Bipolar mood disorder					21.6	1.9	22.7	3.5
Non clinical probands							27.4	8.2

The above differences between (i) DID, (ii) DDNOS, (iii) somatoform disorders, and (iv) other psychiatric disorders remained statistically significant after controlling for general psychopathology as assessed with the SCL-90-R (Derogatis, 1986; Nijenhuis et al., 1999). Somatoform dissociation thus differs from general psychopathology.

CONSTRUCT VALIDITY

The SDQ-20 scores were best predicted by self-reported physical and sexual traumatization in patients with dissociative disorders and psychiatric controls (Nijenhuis et al., 1998c), even after statistically controlling for self reported emotional traumatization (emotional neglect and emotional abuse). These traumatization scores were composed of four factors, i.e. presence of trauma, duration of trauma, relationship to perpetrator, and subjectively rated impact of trauma. Self-reported traumatization in the developmental period 0-6 years predicted somatoform dissociation best.

Somatoform dissociation was strongly associated with reported exposure to potentially traumatizing events, notably cumulative trauma reporting and bodily threat from a person in a range of other studies, even after statistically controlling for self reported emotional neglect and emotional abuse (Nijenhuis et al., 1998c; Nijenhuis, Van Engen, Kusters, & Van der Hart, 2001; Nijenhuis et al., 2003; Nijenhuis, Van der Hart, Steele, & Kruger, 2004; Nijenhuis & Van Duyl, 2001; Waller et al., 2000). Physical abuse was associated with more somatoform dissociative symptoms in patients with

DSM-IV conversion disorder, described in ICD-10 as dissociative disorders of movement and sensation (Roelofs, Keijsers, Hoogduin, Naring, & Moene, 2002). Conjointly, these studies demonstrate consistent associations between somatoform dissociation and reported cumulative traumatization and threat from a person to the integrity of the body and life in clinical and nonclinical samples, and in samples from different cultures.

SOMATOFORM DISSOCIATION AND SUGGESTION

Some authors claim that dissociation scores result from suggestion. For example, Merskey (1992, 1997) maintains that dissociative disorder patients are extremely suggestible, and therefore vulnerable to indoctrination by therapists who mistake the symptoms of bipolar mood disorder for "dissociative" symptoms. However, there are noteworthy reasons to believe that suggestion and indoctrination do not explain somatoform dissociation. Patients who completed the SDQ-20 in the assessment phase, and prior to the SCID-D interview, had higher scores than dissociative patients who completed the instrument in the course of their therapy (Nijenhuis et al., 1997a; Nijenhuis, Van Dyck, Van der Hart, & Spinhoven, 1998d; Nijenhuis, Van Dyck et al., 1999b). Moreover, prior to our research, the symptoms described by SDQ-20 were not known as major symptoms of dissociative disorders among diagnosticians and therapist, let alone patients. It was also found that the dissociative patients who were in treatment with the present author did not exceed the SDQ-20 scores of dissociative patients who were treated by other therapists. Given this author's theoretical orientation and expectations, he was the most likely person to suggest somatoform dissociative symptoms (Nijenhuis, Spinhoven, Vanderlinden, Van Dyck, & Van der Hart, 1998a). Hence, the available empirical data run contrary to the hypothesis that somatoform dissociation results from suggestion.

SDQ-5

The 5-item SDQ-5 was derived from the SDQ-20, and includes the items 4, 8, 13, 15, and 18. The 5-items as a group discriminated best between patients with dissociative disorders and non-dissociative psychiatric comparison patients (Nijenhuis et al., 1997b, 1998b). The scores range from 5 to 25.

Sensitivity and specificity were high, positive predictive value corrected for prevalence of dissociative disorders, rated at 10% among psychiatric patients, was satisfactory, and prevalence-corrected negative predictive value was excellent. Studying three independent samples we found that a score of ≥8 yielded the optimal balance between sensitivity and specificity. Among all patients of these samples, only one patient who did not have dissociative disorder obtained a score ≥11.

Compared with the DES as a screening instrument for dissociative disorder (Draijer & Boon, 1993), the SDQ-5 did at least equally well.

According to the results of three samples we studied, 43% - 84% of the respondents who obtain a score of ≥8 would have dissociative disorder. When one would assume that the prevalence of dissociative disorders among psychiatric outpatients is 5%, one in two patients with above cut-off scores would have one of the DSM-IV dissociative disorders.

Table 2. Sensitivity, specificity, as well as prevalence-adjusted positive and negative predictive value at the optimal cut-off value

Cut-off ≥ 8	Nijenhuis et al. 1997 Sample I	Nijenhuis et al. 1997 Sample II	Nijenhuis et al. 1998a
Sensitivity	94%	82%	94%
Specificity	96%	88%	98%
Positive predictive value			
adjusted for prevalence	72%	43%	84%
Negative predictive value			
adjusted for prevalence	99%	98%	99%

The SDQ-5 was more sensitive than the DES to assess dissociative pathology among patients with somatoform disorders. About two thirds of them passed the SDQ-5 cut-off, while a quarter passed the DES cut-off. Many somatoform disorder patients thus seem to experience substantial somatoform dissociation, while a minority experiences considerable psychological dissociation.

A third of the 50 eating disorder patients we studied obtained above cut-off SDQ-5 scores. None of the bipolar mood disorder patients passed this value, as did very few of a mixed comparison group which mainly included anxiety disorders, depression, and adjustment disorder.

Patients who obtain SDQ-5 scores ≥8 should be interviewed using the SCID-D (Steinberg et al., 1993) or DDIS (Ross et al., 1990) in order to assess or exclude dissociative disorder.

The SDQ-5 performed less well in a sample of Turkish psychiatric patients (Sar et al., 2000). In this sample, the sensitivity and specificity of the SDQ-20 were more satisfactory. At the optimal cut-off of 35, and corrected for a prevalence of dissociative disorders estimated at 10%, the sensitivity was 0.45, and the specificity 0.98. The sensitivity and specificity of the DES at a cut-off of 25 were very similar. In Dutch/Flamish samples, the discriminating power of the SDQ-20 was slightly less, compared to this power of the SDQ-5 (Nijenhuis et al., 1997b).

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