Stability of Neuroticism and Alexithymia in Somatization

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The personality traits neuroticism and alexithymia have been hypothesized as predisposing factors for somatization. Stability over time is a basic assumption underlying any trait construct. Although there are considerable (and sometimes conflicting) data relevant to this issue, the stability of neuroticism and alexithymia has not been assessed in somatization. The main purpose of this study was to examine the temporal stability of neuroticism and alexithymia in patients presenting to their primary care physician with medically unexplained symptoms, and compare this to the stability of negative and positive affect, anxiety, and depression. A total number of 318 patients were assessed at baseline and at 6-months follow-up. Whereas the affective state dimensions changed significantly over the follow-up period, neuroticism and alexithymia were substantially stable.

A LARGE NUMBER of factors have been studied to account for the phenomenon of somatization, including personality traits, considered to be risk factors for its development and persistence. One of them is neuroticism, defined as "a broad dimension of individual differences in the tendency to experience negative distressing emotions"[1] (p. 301). Neuroticism has been repeatedly demonstrated to be related to somatization.[1-4] Another trait dimension that has been hypothesized to play a role in the development of somatization, is alexithymia.[5] This dimension, which literally means "no words for feelings," is considered to reflect a deficit in the cognitive processing and regulation of emotions.[6] The results of empirical research have demonstrated the existence of an association between alexithymia and somatization.[7]

Next to personality factors, the experience of psychological distress, especially anxiety and depression, has been considered to be an important factor in the development of somatization.[8-10] Empirical research has demonstrated a high degree of comorbidity between somatization, anxiety, and depression, both on a symptom and a syndrome level.[11-13] Despite the fact that anxiety and depression are closely related to positive as well as negative affect,[14] the association between state positive affect and somatization has seldom been studied.[15-17]

From a theoretical perspective, stability over time is a basic assumption underlying any trait construct, whereas measures of psychological distress are considered to be susceptible to changes in a person's life situation and, as such, be state-dependent.[18,19] From the literature it can be concluded that the stability of the personality trait neuroticism has been repeatedly confirmed, over shorter as well as longer periods of time, and measured with different questionnaires.[1,20,21] However, the large majority of study populations consisted of nonclinical subjects, especially students. Alexithymia was originally conceptualized as a stable personality trait, but was subsequently also defined as a state reaction, called secondary alexithymia.[22,23] Although the stability of alexithymia has been established in nonclinical as well as clinical populations,[24-27] its close association with depression,[28] together with the fact that in some study samples alexithymia was found to lack temporal stability,[29-31] has led to the discussion whether alexithymia should primarily be defined as a stable personality trait or as a state-dependent measure that closely follows increases or decreases in level of psychological distress.[29,32] To the best of my knowledge there are no data on the stability of neuroticism and alexithymia, as compared to dimensions of psychological distress, in somatization.

Somatization has been variously defined, often entailing a number of assumptions about etiology.[8] For the purpose of the present study, somatization has been defined in the broadest sense, namely, as the presentation of medically unexplained symptoms or, in other words, physical symptoms that cannot be (adequately) explained by organic findings.[33,34] This study is part of a larger longitudinal

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study examining the respective contribution of the personality traits neuroticism and alexithymia, negative affect (psychological distress) and positive affect to increases (decreases) in the number of symptoms reported and to the persistence of symptoms over a 6-month time period. The objective of the present study is to test the assumption that, within a population of patients presenting to their primary care physician with medically unexplained symptoms, the personality traits neuroticism and alexithymia remain stable over time, whereas the affective state dimensions change significantly over time.

METHOD

Subjects

The subject sample consisted of patients between the age of 18 and 70 presenting to their primary care physician with symptoms that, based on a physical examination, the data available in the patient's medical record, and/or the results of additional diagnostic testing, could not be attributed to a clear organic cause. Patients consulted their physician with a broad range of complaints, the most frequently reported ones being fatigue, headache, backache, and upper and lower abdominal complaints. In the majority of the cases (71%) the presenting symptom of the patient was an "old" complaint, in the sense that the patient had already consulted his/her physician on at least one other occasion for the exact same complaint. In these cases, organic causes were excluded on the basis of the data available in the patient's medical record (data with respect to prior physical examinations or additional diagnostic testing). If the patient presented to his/her physician with a "new" complaint, the distinction between an organic and a somatoform symptom was made on the basis of a thorough physical examination. In case a specialist referral and/or additional diagnostic testing (e.g., laboratory analyses, electrocardiogram, radiology) was considered necessary, the results of these tests were awaited and it was not until then that the patient received the symptom questionnaire.

The symptom questionnaire was a self-report scale, consisting of 45 non–gender-specific symptoms, and was developed from the symptoms included under the heading of DSM-III-R and DSM-IV somatization disorder.[35,36] In addition, the key symptoms of four functional somatic syndromes, namely, functional dyspepsia, irritable bowel syndrome, chronic fatigue syndrome, and fibromyalgia,[37] were included. For each of the symptoms the patient experienced during the preceding month, he/she had to specify whether or not the physician found a clear organic cause, and, if so, what cause. Each of the causes indicated by the patient was subsequently checked by their primary care physician, making use of the individual patient's medical record. Whenever there was any doubt with respect to the status (medically explained or not) of an individual symptom, a senior liaison psychiatrist made a final decision on the basis of all available data. In this way, it was possible to validly exclude organic causes for each of the symptoms recorded by the patient as being present during the past month. This procedure was followed both at baseline and at 6-month follow-up.

Table 1. Sample Characteristics at T1 (n = 377) and T2 (n = 318)

	T1	T2
Gender, male*	27.3	25.8
Mean age (SD)	43.50 (12.32)	43.94 (12.16)
Educational level*		
Primary education	10.6	9.4
Secondary education (3 years)	26.8	28.3
Secondary education (6 years)	18.0	18.2
Vocational training for 18+	9.8	10.1
College/polytechnic	21.5	20.8
University	12.7	12.6
Employment status*		
Blue collar	9.8	9.4
White collar	42.4	44.3
Middle/higher management	4.2	4.1
Independent	4.0	2.8
Student	2.9	3.1
Housewife	10.6	10.7
Unemployed	6.4	6.0
Disabled	2.9	3.5
Retired	14.9	14.2

*Numbers are percentages.

Thirty primary care practices participated in the study, each recruiting between 10 and 20 patients. A total number of 431 consecutive patients were initially addressed. Fifty-two patients (12%) refused to participate or did not return their questionnaires. One patient was excluded from the study because of a history of psychosis. One extreme statistical outlier was excluded from further analyses. The final sample at baseline consisted of 377 patients; these patients were sent a second questionnaire (which was identical to the baseline questionnaire) after 6 months. The response rate at follow-up was 84% (N = 318).

The mean number of symptoms reported at time 1 (T1) was 8 (SD 5.3), the mean number of symptoms reported at time 2 (T2) was 7 (SD 5.4). The decrease in number of symptoms from T1 to T2 was statistically significant ($t = 5.13$; $df = 306$; $P < .001$). The sample characteristics at T1 and T2 are reported in Table 1. None of the sociodemographic characteristics significantly differed between responders and nonresponders, either at T1 or T2 (data not shown).

Study Measures

The NEO Five-Factor Personality Inventory (NEO-FFI)[38] was used to assess neuroticism. This measure was shown to have good reliability and validity on medical samples.[38] The NEO-FFI Neuroticism subscale contains 12 items.

Alexithymia was measured by the 20-item Toronto Alexithymia Scale (TAS-20).[39] The TAS-20 is a widely accepted self-report measure of alexithymia. Validity and reliability of the measure have been demonstrated.[39,40] The TAS-20 has a three-factor structure consisting of (1) Difficulty Identifying Feelings