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Original Research Reports

Interrater Reliability, Prevalence, and Relation to ICD-10 Diagnoses of the Diagnostic Criteria for Psychosomatic Research in Consultation-Liaison Psychiatry Patients

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The Diagnostic Criteria for Psychosomatic Research (DCPR) have been proposed by an international group of psychosomatic investigators as an operationalized tool for the assessment of psychological distress in medical patients. The aims of the present study were to evaluate interrater reliability, the distribution of DCPR syndromes, and their relationship with ICD-10 diagnostic categories. One hundred consecutive patients who were referred for psychiatric consultation in a university general hospital consented to assessment for DCPR syndromes as elicited in a joint interview conducted by two researchers. The results showed excellent interrater agreement, with kappa values for the 11 DCPR syndromes ranging from 0.69 to 0.97. More patients met criteria for one or more of the DCPR (87%) than for an ICD-10 diagnosis (75%). Four DCPR syndromes were particularly prevalent: demoralization, alexithymia, illness denial, and type A behavior. DCPR criteria appear to be a useful, reliable, and promising approach in the assessment and description of psychological distress in medical patients. They may serve as a focus of intervention studies in this population. (Psychosomatics 2004; 45:–)

Clinical wisdom and research findings confirm that formally diagnosed psychiatric disorders, level and type of psychological distress, disrupted attachment and relational patterns, poor social support, and dysfunction in access and utilization of the health care system all exert an important affect on subjective experience (as shown, for example, by quality-of-life measures) and the medical outcome of diseases.[1,2]

The most popular framework used to encompass all of these multiple factors interacting to shape the course and prognosis of physical illnesses is the biopsychosocial model. However, Oken[2] noted, "The problem with such an overarching model is its very generality. What is required are operational concepts derived from the model that are applicable to the practical tasks of medicine." This problem is particularly apparent in the field of psychosomatic medicine, in which a number of criticisms have been made about the adequacy of the two most widely used diagnostic systems for psychiatric disorders—DSM-IV[3] and ICD-10[4]—in characterizing psychosocial problems in the medically ill.[5,6]

In fact, the definition of psychiatric disorders presenting with predominantly somatic symptoms within DSM-IV and ICD-10, such as somatoform disorders, has significant shortcomings. These definitions tend to be either too restrictive in privileging the specificity and validity of diagnosis (as in somatization disorder) and operate either to exclude somatic pathological processes in an absolute man-

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ner or involve a complex clinical judgment requiring that suffering or impairment is in excess of what would be expected due to the somatic condition. In 1995, an international consortium of psychosomatic investigators[7] drawing on this type of criticism of DSM definitions of somatoform disorders, psychological factors affecting medical conditions, and adjustment disorders and corresponding ICD-10 categories[8–10] suggested that a more useful approach to delineating psychological distress in patients with somatic ailments would be operationalizing and studying the distribution of so-called "psychosomatic syndromes." They developed sets of criteria for 12 syndromes called the Diagnostic Criteria for Psychosomatic Research (DCPR). Four of the DCPR were designed as better-defined alternatives to the poorly delineated DSM-IV category of "Psychological factors affecting medical conditions." These factors were alexithymia, type A behavior, irritable mood, and demoralization. The other eight syndromes were intended to replace and expand the DSM somatoform disorders chapter and included disease phobia, thanatophobia (phobia of death), health anxiety, illness denial, functional somatic symptoms secondary to a psychiatric disorder, persistent somatization, conversion symptoms, and anniversary reaction. Each syndrome was defined by a categorical set of operationalized criteria. The symptom criteria of the 12 syndromes are presented in Table 1.

The majority of the symptom criteria need to be wholly fulfilled to qualify the subject as being affected by the respective syndrome (i.e., following a monothetic approach), while for alexithymia, type A behavior, and conversion symptoms, different combinations of fulfilled criteria are possible (thus, following a polythetic approach). According to Fava et al.,[7] the prevalence of these syndromes could be compared across different medical conditions in a reliable way. The psychological processes captured by the syndromes are hypothesized to play a role in aggravating disability, worsening quality of life, and influencing outcome in a variety of clinical situations.[10] This syndromal approach avoids the risk of focusing on strictly defined symptom-based specific disorders, such as chronic fatigue syndrome or irritable bowel syndrome, which typically show substantial co-occurrence of psychopathological comorbidity[11,12] and are often prematurely attributed to hypothesized somatic factors.[13]

Since their publication, the DCPR have been applied to a variety of clinical populations, including patients with functional gastrointestinal disorders,[14,15] heart transplantation recipients,[16] patients with endocrinological disorders,[17] and cancer.[18] These studies have demonstrated that the joint use of DSM and DCPR criteria improves the identification of psychological factors and assists the evaluation of psychological distress in the conditions studied. The DCPR-identified conditions that were subthreshold according to DSM criteria were ascertained by using its criteria.

Data from two studies[15,19] have also demonstrated good criterion-related validity of the DCPR for alexithymia when compared with Toronto Alexithymia Scale scores.

The aim of this study was to evaluate the feasibility of the application of the DCPR in the setting of consultation-liaison psychiatry patients, to compare the distribution of ICD-10 psychiatric diagnoses with that of DCPR syndromes, and to evaluate interrater reliability of the assessment of DCPR syndromes by using a structured interview.

METHOD

Patients

Inpatients (N = 101) were consecutively recruited from among those referred for psychiatric consultation to the consultation-liaison psychiatry service of Modena General Hospital from all nonpsychiatric wards. Patients were referred to the research team as suitable for interviewing by the consultant psychiatrist if they fulfilled the following inclusion/exclusion criteria: older than 18 years, able to speak fluent Italian, without significant sensory or expressive communication impediments, and not delirious or experiencing significant physical pain. Written informed consent was obtained from all patients. Six other patients approached (four women and two men) declined consent and gave the reason of being uninterested (N = 4), feeling too tired (N = 1), and having just had a gastroscopic examination (N = 1). No data were collected for these patients. One patient (a 23-year-old woman) withdrew her consent during the interview because of fatigue, leaving a study group of 100.

The patients were 35 men and 65 women, with a mean age of 54.0 years (SD = 17.5, range 22–85); 57 were married or living in a de facto relationship, and the remaining 43 were either single (N = 15), divorced (N = 8), or widowed (N = 20). The mean number of years of education was 8.2 (SD = 3.9). Forty-six subjects were old-age pensioners, 30 were in paid employment, 10 were homemakers, eight were unemployed, and six were self-employed. They were referred to psychiatric consultation by their treating physicians for the following reasons: ascertainment of suspected psychiatric conditions (N = 51), suspected psychogenic nature of somatic symptoms (N = 32),

TABLE 1. Diagnostic Criteria Used in Psychosomatic Research

Psychosomatic Syndromes	Diagnostic Criteria
Alexithymia	• At least three of the following six characteristics must be present: 1. Inability to use appropriate words to describe emotions 2. Tendency to describe details instead of feelings 3. Lack of a rich fantasy life 4. Thought content associated more with external events than fantasy or emotions 5. Unawareness of the common somatic reactions that accompany the experience of a variety of feelings 6. Occasional but violent and often inappropriate outbursts of affective behavior
Type A behavior	• At least five of the following nine characteristics should be present: 1. Excessive degree of involvement in work and other activities subject to deadlines 2. Steady and pervasive sense of time urgency 3. Display of motor-expressive features (rapid and explosive speech, abrupt body movements, tensing of facial muscles, hand gestures) indicating a sense of being under time pressure 4. Hostility and cynicism 5. Irritable mood 6. Tendency to speed up physical activities 7. Tendency to speed up mental activities 8. High intensity of desire for achievements and recognition 9. High competitiveness • The behavior elicits stress-related physiological responses that precipitate or exacerbate symptoms of a medical condition
Irritable mood	• A feeling state characterized by an irritable mood that may be experienced as brief episodes in particular circumstances, or it may be prolonged and generalized; it requires an increased effort of control over temper by the individual or results in irascible verbal or behavioral outbursts • The experience of irritability is always unpleasant for the individual, and overmanifestation lacks the cathartic effect of justified outbursts of anger • The behavior elicits stress-related physiological responses that precipitate or exacerbate symptoms of a medical condition
Demoralization	• A feeling state characterized by the patient's consciousness of having failed to meet his or her own expectations (or those of others) or being unable to cope with some pressing problem; the patient experiences feelings of helplessness, hopelessness, or giving up • The feeling state should be prolonged and generalized (of at least 1 month in duration)
Disease phobia	• Persistent unfounded fear of suffering from a specific disease with doubts remaining despite adequate examination and reassurance • Fears tend to manifest themselves in attacks rather than in constant, chronic worries as in hypochondria; panic attacks may be an associated feature • The object of fear does not change with time, and the duration of symptoms exceed 6 months
Thanatophobia	• Attacks with the sense of impending death and/or conviction of dying soon, even though there is no objective medical reason for such fear • Marked and persistent fear and avoidance of news that reminds of death (e.g., funerals, obituary notices); exposure to these stimuli almost invariably provokes an immediate anxiety response • The avoidance, anxious anticipation, and distress interfere significantly with the person's level of functioning
Health anxiety	• Generic worry about illness, concern about pain, and bodily preoccupations (tendency to amplify somatic sensations) of less than 6 months' duration • Worries and fears readily respond to appropriate medical reassurance even though new worries may ensue after some time
Illness denial	• Persistent denial of having a physical disorder and of the need of treatment (e.g., lack of compliance, delayed seeking of medical attention for serious and persistent symptoms, counterphobic behavior) as a reaction to the symptoms, signs, diagnosis, or medical treatment of a physical illness • The patient has been provided a lucid and accurate appraisal of the medical situation and management to be followed
Functional somatic symptoms secondary to a psychiatric disorder	• Symptoms of autonomic arousal (e.g., palpitations, sweating, tremor, flushing) or functional medical disorder (e.g., irritable bowel syndrome, fibromyalgia, neurocirculatory asthenia) causing distress or repeated medical care or resulting in impaired quality of life • Appropriate medical evaluation uncovers no organic pathology to account for the physical complaints • A psychiatric disorder that includes the involved somatic symptoms within its manifestations preceded the onset of functional somatic symptoms (e.g., panic disorder and cardiac symptoms)

TABLE 1. Diagnostic Criteria Used in Psychosomatic Research (*continued*)

Persistent somatization	• Functional medical disorder (e.g., fibromyalgia, fatigue, esophageal motility disorders, nonulcer dyspepsia, irritable bowel syndrome, neurocirculatory asthenia, urethral syndrome) whose duration exceeds 6 months, causing distress, repeated medical care, or resulting in impaired quality of life • Additional symptoms of autonomic arousal (also involving other organ systems) and exaggerated side effects from medical therapy are present, indicating low sensations or pain thresholds and high suggestibility
Conversion symptoms	• One or more symptoms or deficits affecting voluntary motor or sensory function characterized by lack of anatomical of physiological plausibility and/or absence of expected physical signs or laboratory findings and/or inconsistent clinical characteristics; if symptoms of autonomic arousal of functional medical disorder are present, conversion symptoms should be prominent, causing distress or repeated medical care or resulting in impaired quality of life • At least two of the following features are present: 1. Ambivalence in symptom reporting (e.g., the patient appears relaxed or unconcerned as he describes distressing symptoms) 2. Histrionic personality features (colorful and dramatic expression, language, and appearance; demanding dependency; high suggestibility; rapid mood changes) 3. Precipitation of symptoms by psychological stress, the association of which the patient is unaware 4. History of similar physical symptoms experienced by the patient, observed in someone else, or wished on someone else • Appropriate medical evaluation uncovers no organic pathology to account for the physical complaints
Anniversary reactions	• Symptoms of autonomic arousal (e.g., palpitations, sweating, tremor, flushing) or functional medical disorder (e.g., irritable bowel syndrome, fibromyalgia, neurocirculatory asthenia) causing distress, repeated medical care, or resulting in impaired quality of life • Appropriate medical evaluation uncovers no organic pathology to account for the physical complaints • Symptoms began when the patient reached the age or on the occasion of the anniversary when a parent or a close family member developed a life-threatening illness and/or died; the patient is unaware of such an association

[a]Modified from Fava et al., 1995.[7]

positive psychiatric history (N = 6), relational problems (N = 4), pre-orthotopic liver transplantation psychiatric assessment (N = 2), other (N = 5).

Assessment

A clinical consensus psychiatric diagnosis according to ICD-10 criteria was available for all patients because of the standard psychiatric consultation and a joint discussion between the consultant psychiatrist and a senior resident in psychiatry performing the consultations. Modena General Hospital's consultation-liaison psychiatry service has achieved high interrater reliability for ICD-10 diagnoses in previous international multicenter research studies.[20,21]

Patients were interviewed by two researcher pairs composed of a consultant psychiatrist and a third-year psychiatry resident on the same or subsequent day to the standard psychiatric consultation. The researchers were acquainted with the DCPR literature and had attended a 1-day training course on DCPR and the administration of the Italian version of the Structured Interview for DCPR (available on request from the first author), which was used to obtain the DCPR diagnoses. The interview is composed of 58 questions with yes or no answers. During the joint interviews, questioning was alternated so that one researcher conducted the entire interview, but each made independent separate notations and evaluations of patient answers. The criteria for "Functional somatic symptoms secondary to a psychiatric disorder" were omitted since the interviewers did not have the necessary information to make this diagnosis. In particular, they could not rate the criterion for this syndrome in requiring that a psychiatric disorder preceded the onset of functional somatic symptoms. The ICD-10 diagnoses were not known to the researchers at the time of the interview, but a copy of each patient's structured referral form to the consultation-liaison psychiatry service reporting basic medical information and the reason for referral was given and known to them in order to locate and approach candidates for the interview.

Statistical Analysis

Descriptive and agreement statistics were measured by using SPSS software version 10.

RESULTS

Table 2 shows ICD-10 psychiatric diagnoses: one-quarter of the patients failed to meet criteria for any psychiatric diagnosis. In subjects identified as suffering from a psychiatric disorder, the most prevalent diagnostic group had neurotic, stress-related, and somatoform disorders—F40–

48 (N = 54)—followed by mood disorders—F30–39 (N = 12). Accordingly, Table 2 subdivides these two diagnostic groups in greater detail.

The ICD-9 somatic diagnoses noted by the referring physicians as the cause of admission at the time of psychiatric consultation are presented in Table 3. It is interesting to note that a large proportion of patients (N = 38) were not found to be suffering from a specific physical disorder: 17 patients were admitted because of "symptoms, signs, and ill-defined conditions" (categories 780–799 of ICD-9), and 21 received no specific medical diagnosis.

An interrater reliability coefficient, kappa, was calculated for each of the DCPR diagnoses. This indicates good to excellent agreement between raters: disease phobia kappa = 0.97, thanatophobia kappa = 0.92, type A behavior kappa = 0.92, illness denial kappa = 0.90, demoralization kappa = 0.90, anniversary reaction kappa = 0.90, health anxiety kappa = 0.89, alexithymia kappa = 0.89, conversion symptoms kappa = 0.82, persistent somatization kappa = 0.70, and irritable mood kappa = 0.69.

Patients were assigned one or more DCPR diagnoses on the basis of positive concordance between the two raters. Table 4 displays these diagnoses, ranked according to their frequency. Demoralization, alexithymia, and illness denial were the most common syndromes, with 39, 30, and 29 subjects, respectively, meeting criteria for these diagnoses. Anniversary reaction and conversion symptoms were uncommon, with only 10 and five patients, respectively, assessed as affected by these difficulties.

Table 5 shows the percentages of participants with the

TABLE 2. ICD-10 Psychiatric Diagnoses by Rank Order

ICD-10 Diagnostic Category	N[a]
Anxiety, dissociative, stress-related, somatoform, and other nonpsychotic mental disorders (F4)	54
Other anxiety disorders (F41)	26
Reaction to severe stress and adjustment disorder (F43)	15
Somatoform disorders (F45)	10
Phobic anxiety disorders (F40)	2
Obsessive-compulsive disorder (F42)	1
Mood (affective) disorders (F3)	12
Depressive episode (F32)	5
Recurrent depressive disorder (F33)	4
Dysthymia (F34.1)	2
Bipolar affective disorder (F31)	1
Mental and behavioral disorders due to psychoactive substance use (F1)	4
Schizophrenia, schizotypal, and delusional and other nonmood psychotic disorders (F2)	2
Mental disorders due to known physiological conditions (F0)	2
Behavioral syndromes associated with physiological disturbances and physical factors (F5)	1
No psychiatric syndrome	25

[a]Because N = 100, these figures are also percentages.

TABLE 3. ICD-9 Somatic Diagnoses by Rank Order

Somatic Diagnosis	N[a]
Symptoms, signs, and ill-defined conditions (780–799)	17
Headache (346)	10
Chronic cardiovascular diseases (390–459)	9
Endocrinopathies (240–279)	6
Neoplasms (140–239)	6
Other neurological syndromes (320–359)	6
Chronic liver disease (571)	5
Diseases of connective tissue (710–739)	4
Injuries (800–958)	4
HIV (042)	3
Others	9
No somatic diagnosis	21

[a]Because N = 100, these figures are also percentages.

TABLE 4. Diagnostic Criteria for Psychosomatic Research (DCPR) Diagnoses in Order of Prevalence

Diagnosis	Patients (%)	Total Diagnoses (N = 219) (%)
Demoralization	39	17.8
Alexithymia	30	13.2
Illness denial	29	13.2
Type A behavior	25	11.4
Health anxiety	21	9.6
Disease phobia	19	8.7
Irritable mood	15	6.9
Persistent somatization	14	6.3
Thanatophobia	13	5.5
Anniversary reaction	10	4.6
Conversion symptoms	5	2.3
Patients with no DCPR diagnosis	13	

most frequent ICD-10 psychiatric diagnostic categories who also had with the most frequent DCPR diagnoses. Illness denial and type A behavior were found to be frequently associated with an F4 anxiety diagnosis, whereas demoralization and alexithymia corresponded frequently with an F3 mood disorder.

Table 6 presents an analysis of DCPR diagnoses that co-occurred with an ICD-10 psychiatric diagnosis. As shown, a large percentage of patients with the most frequent DCPR diagnoses (demoralization, alexithymia, illness denial, and type A behavior) also met criteria for ICD-10 diagnoses. Similar associations to those previously illustrated in Table 5 were found, with anxiety disorders particularly common in those with illness denial and type A behavior and mood disorders in those with demoralization and alexithymia.

Finally, Table 7 displays the overlapping rates between the most frequent DCPR diagnoses, that is, the associations between different DCPR diagnoses in the same patients. The most frequent association was between illness denial and type A behavior.

DISCUSSION

The present study shows the reliability and applicability of the DCPR to consultation-liaison psychiatry patients referred for psychiatric assessment. This builds upon previously published research,[14–18] which has demonstrated the use of the criteria in other settings. The reliability of the criteria as elicited by the Structured Interview for the DCPR was found to be high for all of the 11 psychosomatic syndromes analyzed (kappa values higher than 0.70, except for irritable mood, which achieved an acceptable kappa = 0.69). To our knowledge, this is the first study to investigate the reliability with which the DCPR criteria can be elicited and evaluated. DCPR interrater reliability appears to be higher than that achieved for the ICD-10 diagnoses of somatoform disorders (mean kappa = 0.61) and adjustment disorders (mean kappa = 0.54)[22,23] and does well also when compared to DSM categories.[24]

Another notable feature found in this group of nonpsychiatric patients with known or suspected medical conditions was the high prevalence of "psychosomatic" DCPR-positive syndromes. This reflects, in part, the fact that these inpatients were referred to a consultation-liaison psychiatry service by their treating physicians for suspected emotional or behavioral problems. Nevertheless, it highlights the importance of further research into the relationship between psychological factors and medical illness and the need for a more scientific approach to demonstrate their causal links, other than simple "mechanistic evidence."[25] The DCPR were developed as a complemen-

TABLE 5. Rates of Co-Occurrence of Diagnostic Criteria for Psychosomatic Research Syndromes in Patients Meeting Criteria for ICD-10 F4 and F3 Diagnostic Categories

Diagnostic Category	Demoralization	Alexithymia	Illness denial	Type A behavior
Anxiety, dissociative, stress-related, somatoform, and other nonpsychotic mental disorders (F4) (N = 54)	24.8	25.9	38.9	29.6
Mood (affective) disorders (F3) (N = 12)	58.3	41.6	25.0	8.3

TABLE 6. Rates of Co-Occurrence of ICD-10 F4 and F3 Diagnostic Categories in Patients Meeting Criteria for Diagnostic Criteria for Psychosomatic Research Syndromes

Syndrome	Anxiety, Dissociative, Stress-Related, Somatoform, and Other Nonpsychotic Mental Disorders (F4)	Mood (Affective) Disorders (F3)
Demoralization (N = 39)	38.5	17.9
Alexithymia (N = 30)	46.7	16.7
Illness denial (N = 30)	70.0	10.0
Type A behavior (N = 25)	64.0	4.0

TABLE 7. Overlapping Rates Within Diagnostic Criteria for Psychosomatic Research Classification

Symptom	Demoralization (N = 39)	Alexithymia (N = 30)	Illness denial (N = 30)	Type A behavior (N = 25)
Demoralization (N = 39)		25.6	28.2	33.3
Alexithymia (N = 30)	33.3		36.7	20.0
Illness denial (N = 30)	36.7	36.7		81.8
Type A behavior (N = 25)	52.0	24.0	36.0	

tary integration to DSM criteria for somatoform disorders, adjustment disorders, and psychological factors affecting medical conditions. In addition, the DCPR operationalize traditional psychosomatic constructs but also reflect more recent notions of emotional, cognitive, and behavioral characteristics of medical patients arising specifically out of this controversy.[26] As a result of these characteristics, it has been proposed that the constant work in progress of psychiatric nosography of the DSM could incorporate the DCPR criteria for further research in future editions of the DSM.[5]

As expected, the DCPR were highly prevalent in this consultation-liaison group: all but 13 patients met the criteria for at least one of the 11 syndromes evaluated. In contrast, 25% failed to meet the criteria for any ICD-10 psychiatric diagnosis. Other authors[14,16] have suggested that the DCPR more thoroughly describes the psychiatric morbidity of medical (or supposedly medical) populations than traditional psychiatric diagnostic categories. In our study, the number of DCPR diagnoses doubles that of ICD-10 diagnoses; elsewhere, the reported ratio was three to one: DCPR diagnoses tripled DSM diagnoses.[16] The prevalence of DCPR diagnoses is comparable to that found previously in other samples,[14,16,18] with demoralization the most frequently occurring syndrome found and alexithymia and type A behavior among the top four diagnoses.

Demoralization is often described in the medically ill: 39% of patients endorsed such difficulties in the present study. Slavney[27] has pointed out that 1) demoralization is not a synonym for adjustment disorder or subthreshold depression and that 2) demoralization should not be considered a straightforward psychiatric disorder but more correctly an understandable psychological reaction to adverse events similar to uncomplicated grief. He also outlines the need to operationalize demoralization and to avoid its nonrecognition or misinterpretation. This study confirms the hypothesis that demoralization is differentiable from depression[10,16,27] and from the combination of depression and anxiety,[28,29] with only 18% of demoralized patients also affected by a mood disorder versus a 58.3% converse overlap.

Alexithymia is also held to be common in the medically ill population, the construct itself developed and originally related to psychosomatic diseases.[30] About a third of patients were found to meet the criteria for DCPR-defined alexithymia. The nature of the association between alexithymia and depression is controversial, with researchers holding differing beliefs about the mechanisms underlying the observed comorbidity.[31–34] As with demoralization, our data suggest that alexithymia is common among those with a mood disorder but only a low percentage of alexithymics have a full-blown mood disorder.

Just under one-third of the patients met criteria for illness denial and a quarter for type A behavior. These two syndromes showed a marked association, with the latter exhibiting a strong overlap with demoralization. This is consistent with the concept that type A behavior entails a sense of dissatisfaction with previously attained goals and a sense of urgency to achieve more: these are typical traits seen in the *typus melancholicus* (a personality constellation considered to be prone to demoralization), whose association with type A behavior has been shown.[35] In the current study group, these two syndromes tended to cluster in the ICD-10 F4 subcategories.

A number of limitations of this study must be acknowledged. The ICD-10 diagnoses reported were the principal psychiatric diagnoses obtained by routine clinical interview. The reliability of these diagnoses was not assessed as part of study and may well underestimate the presence of multiple psychiatric diagnoses. The interviewer-auditor design adopted, which tends to produce higher agreement than independent separate interviews, probably contributed to the high level of agreement observed. The likelihood of agreement was further enhanced by the use of researchers familiar with the DCPR as interviewers. Despite these limitations, this study has demonstrated that the DCPR can be elicited and diagnosed with good interrater reliability when psychosomatic syndromes are rated by using a structured interview. It further supports the DCPR as a viable and reliable system for the assessment of psychological distress in the presence of medical disease. There is a need to test the hypothesis that the typical cognitive and affective styles portrayed by the DCPR syndromes can mediate the psychological effect of medical conditions and explain a fraction of their outcome variance.

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