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Turkish Adaptation of the Revised Version of the Diagnostic Criteria for Psychosomatic Research (DCPR-R): A Validity and Reliability Study

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ABSTRACT

Objective: This study aimed to adapt the Diagnostic Criteria for Psychosomatic Research-Revised Semi-Structured Interview (DCPR-R-SSI) into Turkish and assess its psychometric properties.

Method: This study was conducted with two separate samples of patients diagnosed with psychosomatic disorders between the ages of 18-65 at Gazi University Psychiatry Clinic. For inter-rater reliability analysis, a sample of 100 participants was evaluated by two raters and kappa coefficient was calculated. Validity analysis used samples from both patient and community groups. For criterion validity, the relationship between DCPR diagnoses and the Hospital Anxiety Depression Scale (HADS), Patient Health Questionnaire 15 (PHQ-15), Health Anxiety Inventory (HAI) and Toronto Alexithymia Scale (TAS) was analyzed with the Point Biserial Correlation Coefficient. The distribution of DCPR diagnoses in the community and hospital samples was analyzed.

Results: The mean age of the sample for inter-rater reliability analysis was 33.5±13.0 years and 55% were female. Kappa values for 14 DCPR-R diagnoses were between 0.823-0.964. The hospital and community samples included 110 people from the community and 100 from the hospital. In the validity analyses, Allostatic Overload showed a significant relationship with HADS-Depression, HADS-Anxiety, PHQ-15 and HAI. Demoralization and Demoralization with Hopelessness showed a significant relationship with all scales. Type A Behavior was weakly correlated with all scales, whereas Alexithymia was strongly correlated with the TAS. The five most common DCPR-R diagnoses were Allostatic Overload (55.2%), Demoralization (36.1%), Alexithymia (29.0%), Type A Behavior (27.6%), Irritable Mood (15.7%), Persistent Somatization (11.9%) and Health Anxiety (10.9%).

Conclusion: This study demonstrated that the Turkish version of DCPR-R is a valid and reliable measurement tool.

Keywords: Alexithymia, consultation liason psychiatry, conversion, health anxiety, psychosomatic medicine, somatization

INTRODUCTION

Biological, psychological, and social factors, collectively conceptualized within the biopsychosocial framework, are recognized as influential determinants in the etiology and progression of health and disease (Barron 1998). Within this framework, the psychosomatic medicine perspective, focusing on the dynamic interactions of psychosocial factors that influence the health-illness continuum, has emerged as a significant area of inquiry (Wise 2014). Psychosomatic medicine enhances the multidisciplinary nature of healthcare

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by systematically combining standard medical evaluations with psychosocial assessments to elucidate the role of psychosocial factors in shaping individual vulnerability, clinical course, and prognosis of medical conditions (Evers et al. 2014, Fava et al. 2017). Recent literature indicates a growing recognition of the limitations inherent in current psychiatric diagnostic models regarding the adequate assessment of somatic symptoms (Porcelli and Rafanelli 2010). In this respect, it has been argued that the clinical use of the DSM in the psychosomatic field is limited due to the fact that the DSM-5 contains single diagnostic rubrics, the title of hypochondriasis was removed from the fifth version, and the phrase "abnormal disease behavior" in its content is not conceptually defined sufficiently (Cosci and Fava 2016). Informed by this perspective, Fava and colleagues (1995) established the Diagnostic Criteria for Psychosomatic Research (DCPR). The DCPR consists of 12 psychosomatic diagnoses designed to assess the influence of psychosocial factors on the development and course of physical illnesses. These diagnostic categories include Health Anxiety, Disease Phobia, Thanatophobia, Persistent Somatization, Conversion Symptoms, Anniversary Reaction, Somatic Symptoms Secondary to a Psychiatric Disorder, Illness Denial, Demoralization, Irritable Mood, Type A Behavior, and Alexithymia. The DCPR was later revised in 2017 with the addition of two new diagnostic categories—Allostatic Load and Hypochondriasis—resulting in the updated DCPR-R (Fava et al. 1995, Porcelli and Guidi 2015, Fava et al. 2017).

The DCPR-R has been utilized in various medical and psychiatric studies involving samples of patients from cardiology, dermatology, endocrinology, consultation-liaison psychiatry, hyperemesis gravidarum, nutrition, and those with medically unexplained symptoms (Grandi et al. 2001, Porcelli and De Carne 2001, Grassi et al. 2002, Porcelli and Rafanelli 2010, Desai and Chaturvedi 2016, Porcelli et al. 2020, Cui et al. 2022).

The DCPR-R has also been established as a highly reliable assessment modality in both consultation-liaison psychiatry and primary healthcare settings (Galeazzi et al. 2004, Guidi et al. 2020). When utilized in conjunction with DSM-5, the DCPR-R has been reported to provide clinical utility in delineating the psychosocial functioning of patients experiencing stress, psychological distress, and diminished quality of life. Furthermore, the DCPR-R system is considered an effective instrument for the identification of subthreshold diagnoses and the prediction of treatment outcomes (Grandi et al. 2001).

This study aims to adapt the Semi-Structured Interview for Diagnostic Criteria for Psychosomatic Research–Revised (DCPR-R SSI) into Turkish and evaluate its psychometric properties in a consultation-liaison psychiatry sample.

METHOD

Study Sample

This study was conducted with two separate sample groups. First, a clinical sample was selected for assessing inter-rater reliability. The first sample consisted of patients undergoing outpatient or inpatient treatment at Gazi University Faculty of Medicine Psychiatry clinic. Patients between the ages of 18-65 with psychosomatic disorders were included in the study. Patients with psychiatric diagnoses involving impaired reality testing and judgment (such as psychiatric disorders with psychotic features, dementia, and the manic/hypomanic phase of bipolar affective disorder) were excluded. All participants in the first sample underwent diagnostic interviews based on the ICD-10 diagnostic criteria.

After completing the inter-rater reliability analysis on the first sample, participants for the second sample were invited to study. The second sample was designed to assess the diagnostic distribution and criterion validity of DCPR. It consisted of two groups: a hospital sample and a community sample. Diagnoses for all participants were made according to ICD-10 diagnostic criteria. Information regarding the patients' diagnoses was obtained from clinical examination notes and their physicians, and a second diagnostic interview was conducted by the research team. This second diagnostic interview was conducted using the Structured Clinical Interview for DSM-5 – Clinician Version (SCID-5/CV).

The hospital sample included patients aged 18 to 65 years who were receiving outpatient or inpatient treatment at the Psychiatry Clinic of Gazi University Faculty of Medicine and had been diagnosed with Major Depressive Disorder, Anxiety Disorder, or Somatic Symptom Disorder according to the SCID-5/CV. These three diagnoses were selected because they are the most observed conditions in psychosomatic patient populations (Stein et al. 2020). The community sample consisted of individuals without any psychiatric complaints who voluntarily agreed to participate to the study after responding to announcements made via social media platforms and hospital notices, and who did not meet any diagnostic criteria according to the SCID-5/CV. Individuals who were unable to complete the assessment forms due to general medical conditions, cognitive impairment, or educational limitations were excluded from the study. Additionally, for the hospital sample, patients with psychiatric disorders characterized by impaired reality testing and judgment were excluded.

Procedure

Permission and translation

After obtaining the most recent version of the scale and permission for its use from its developer (via email), Giovanni A. Fava, the scale was translated into Turkish using the

translation-back translation method. All the statements in the interview form were translated into Turkish by two psychiatrists with at least 10 years of experience in Consultation-Liaison Psychiatry and a high level of proficiency in both Turkish and English. Following the translation into Turkish, the scale was back-translated into English by a translator proficient in English. Subsequently, the original form of the scale and its back-translated version were compared and evaluated by experts in the field.

Face Validity and Final Form Development

The purpose and scope of the DCPR was introduced to two expert physicians (experienced in psychiatry and psychosomatic medicine) and three resident physicians who did not participate in the translation process, and then their feedback was collected to improve the clarity of the scale. In this phase, particular attention was directed towards to the instructions provided in the form, linguistic clarity of the items, and the applicability of the algorithms. Based on expert feedback, ambiguous or overly interpretable statements in the scale items have been reviewed, and the instructions have been simplified to enhance clarity.

The scale, revised according to expert opinions, was pilot-tested with 20 individuals representing diverse sociodemographic characteristics. Participants were asked whether they experienced difficulties in understanding the items and instructions; individual interviews were specifically conducted to assess the clarity of items and the response process. Expressions identified as difficult to understand were further modified, and the final version of the scale was developed accordingly. Data obtained from individuals participating in the pilot study were not included in the main study.

Preparation Before DCPR-R SSI

The authors who developed the DCPR-R SSI recommend that the scale be applied alongside a psychiatric evaluation and only after receiving adequate training (Fava et al. 2017). Therefore, the DCPR-R SSI was administered by at least two randomly selected researchers, each with a minimum of five years of experience in the field of psychosomatics. The data were verified based on diagnoses made by a researcher with at least ten years of experience.

Inter-Rater Reliability

To measure inter-rater reliability, a sample of 100 individuals was selected along with three independent, experienced evaluators. The DCPR-R interview was conducted for reliability analysis by two researchers.

Criterion Validity

For criterion validity analysis in the second sample, the diagnostic status obtained from the DCPR-R SSI was examined in relation to the Hospital Anxiety and Depression Scale, the Patient Health Questionnaire-15, the Health Anxiety Inventory, and the Toronto Alexithymia Scale.

Diagnostic Distribution in Hospital and Community Samples

Participants from both hospital and community samples underwent DCPR-R SSI interviews conducted by an interviewer. The data obtained from the diagnostic distribution were compared between the two groups.

Ethical Approval

Ethical approval for the study was obtained from the Gazi University Ethics Committee (Ethics Committee Decision No: E-77082166-604.01.02-7478, Reference/Date: 2021-05/12.01.2021).

Data Collection Tools

Sociodemographic/Clinical Data Form

A form developed by the researchers was administered, including sociodemographic characteristics such as age and gender, as well as questions about psychiatric and other medical histories.

Hospital Anxiety and Depression Scale (HADS)

Developed by Zigmond and Snaith (1983), the HADS is used to screen for anxiety and depression and identify at-risk groups among patients with somatic illnesses. The validity and reliability study of the Turkish version was conducted by Aydemir et al. (1997). The Cronbach's alpha coefficient, a measure of internal consistency, was found to be 0.83 for the anxiety subscale and 0.72 for the depression subscale.

Patient Health Questionnaire-15 (PHQ-15)

The PHQ-15, developed by Kroenke et al. (2010), is a self-report scale. The PHQ-15 subscale of the Patient Health Questionnaire (PHQ), which measures somatic symptoms, was utilized in this study. The validity and reliability study of the Turkish version was conducted by Güleç et al. (2012), with a Cronbach's alpha coefficient of 0.93.

Health Anxiety Inventory (HAI)

The HAI, a self-report scale consisting of 18 items, was developed by Salkovskis et al. (2002). The validity and reliability study of the Turkish version was conducted by Aydemir et al. (2013), with reliability analyses showing a Cronbach's alpha coefficient of 0.918.

Toronto Alexithymia Scale (TAS-20)

The short form of the TAS-20 was developed by Bagby et al. (2006), and its Turkish validity and reliability study was conducted by Güleç et al. (2009). Higher scores on the scale indicate a stronger tendency toward alexithymia. The Cronbach's alpha coefficient was 0.78.

Diagnostic Criteria for Psychosomatic Research – Revised Semi-Structured Interview (DCPR-R SSI)

The DCPR-R SSI has a modular structure, which covers stress, illness behavior, psychological manifestation, and personality domains, including 14 diagnostic categories. The first diagnostic category, Allostatic Overload, is characterized by an identifiable source of distress, such as a recent life event or chronic stress, which exceeds an individual's coping skills. The personality domain includes two diagnostic categories that affect general disease susceptibility: Type A Behavior and Alexithymia. The illness behavior domain assesses how symptoms are perceived, evaluated, and responded to by individuals, encompassing eight diagnostic categories: Hypochondriasis, Disease Phobia, Thanatophobia, Health Anxiety, Persistent Somatization, Conversion Symptoms, Anniversary Reaction, and Illness Denial. The psychological manifestation domain includes Demoralization, Demoralization with Hopelessness, Irritable Mood, and Somatic Symptoms Secondary to a Psychiatric Disorder (Fava et al. 2017).

The DCPR-R SSI is designed as a clinical interview tool for both research and clinical purposes and can be used to evaluate diagnoses individually. Each diagnosis is defined by its specific criteria. The interview form covers the past 12 months and consists of 79 yes/no items, along with instructions for the criteria and an interviewer-based scoring system. As a semi-structured interview, the DCPR-R SSI follows a specific order, with questions guided by instructions. However, it allows modifications when required by the circumstances, provided that the clinical content of the relevant item is carefully considered. Some items can be completed based on the interviewer's observation and clinical judgment, without the need for specific questioning (Fava et al. 2017).

The use of the DCPR-R SSI has been reported to be beneficial and reliable in assessing and identifying psychosomatic stress in general, medical, and psychiatric populations (Galeazzi et al. 2004, Guidi et al. 2020). It has demonstrated excellent results in terms of inter-rater reliability, construct validity, and predictive validity for psychosocial functioning and treatment outcomes (Galeazzi et al. 2004, Sales et al. 2014, Guidi et al. 2020). Among psychosomatic patients, kappa values for the 11 DCPR-R SSI diagnoses ranged from 0.69 to 0.97, indicating excellent inter-rater agreement (Galeazzi et al. 2004).

Statistical Analysis

Statistical analyses were performed using SPSS version 20.0 (SPSS Inc.; Chicago, IL, USA). The normality of continuous variables was assessed using the Shapiro-Wilk test. Sociodemographic characteristics were presented as frequencies, percentages, means, and standard deviations. Comparisons of sociodemographic characteristics were performed using the independent t-test and chi-square test. The distributions of DCPR-R SSI diagnoses were presented as frequencies and percentages. The distribution ratios of DCPR-R SSI were compared using the chi-square test and Fisher's exact test to identify differences between hospital and community samples. The HADS, PHQ-15, TAS-20, and HAI scores of hospital and community groups were compared using the independent t-test. The relationship between DCPR-R diagnoses and scale scores was analyzed using the point-biserial correlation coefficient for criterion validity assessment. For each diagnosis, a high correlation was expected in related dimensions, while a low or no correlation was anticipated in unrelated dimensions. Kappa coefficients were calculated to assess inter-rater reliability. A p-value <0.005 was considered statistically significant.

RESULTS

Sample 1 and Interrater Reliability Analyses

Sample 1 consisted of 100 participants. Their sociodemographic characteristics, along with the distribution of psychiatric and non-psychiatric diagnoses according to ICD-10, are presented in Table 1. The distribution of psychiatric disorders in Sample 1, based on ICD-10, was as follows: Bipolar Affective Disorder (3%), Depressive Episode (31%), Recurrent Depressive Disorder (3%), Other Anxiety Disorders (33%), Obsessive-Compulsive Disorder (5%), Reaction to Severe Stress and Adjustment Disorders (2%), Habit and Impulse Disorders (1%), Dissociative [Conversion] Disorders (6%), and Somatoform Disorders (16%). The kappa values and agreement percentages for inter-rater reliability are presented in Table 2.

Sample 2 and Criterion Validity

Sample 2 consisted of 110 individuals from the community sample and 100 individuals from the hospital sample. The sociodemographic and diagnostic data of Sample 2, along with their scores on the HADS, PHQ-15, HAI, and TAS-20 scales, and the statistical comparisons between the two groups, are presented in Table 1. The distribution of diagnoses in the hospital sample was as follows: Depressive Disorder (41%), Anxiety Disorders (38%), and Somatic Symptom and Related Disorders (21%). The correlation analyses conducted for criterion validity are presented in Table 3.

Table 1. Sociodemographic Characteristics of the Samples, HADS, PHQ-15, HAQ, TAS Scores, and Comparison

	Study sample 1	Study sample 2				
		Community	Hospital	X^2	t	p
	(n=100)	(n=110)	(n=100)			
Gender, Female, n(%)	55(55.0)	62(56.3)	59(59.0)	0.14		0.866
Marital status, Single, n(%)	56(56.0)	88(80.0)	79(79.0)	0.03		0.858
Age (year), mean±sd	33.5±13.0	26.9±7.7	28.4±8.8		-1.350	0.178
Education (year), mean±sd	16.1±2.9	16.5±2.5	16.0±4.0		1.008	0.315
HADS-D, mean±sd		3.1±2.0	7.8±3.4		-11.885	<0.001
HADS-A, mean±sd		4.6±2.3	9.8±3.8		-11.813	<0.001
PHQ-15, mean±sd		5.1±3.2	9.6±5.7		-7.079	<0.001
HAQ, mean±sd		12.3±4.2	18.1±7.4		-7.036	<0.001
TAS, mean±sd		41.1±7.4	50.0±10.4		-7.182	<0.001

X^2 = Chi-square test; T = Independent T test; HADS-D: Hospital Anxiety and Depression Scale – Depression Subscale; HADS-A: Hospital Anxiety and Depression Scale – Anxiety Subscale; PHQ-15: Patient Health Questionnaire Scale; HAQ: Health Anxiety Questionnaire; TAS: Toronto Alexithymia Scale

Table 2. Inter-Rater Reliability Analysis Results of DCPR Diagnoses

Diagonose	Interviewer 1	Interviewer 2	Kappa	Agreement (%)
Allostatic Overloadz	68	67	0.886	95
Health Anxiety	16	17	0.964	99
Disease Phobia	6	6	0.823	98
Hypochondriasis	9	10	0.943	99
Thanatophobia	11	10	0.840	97
Illness Denial	12	14	0.823	96
Persistent Somatization	26	24	0.893	96
Conversion Symptoms	16	19	0.827	95
Anniversary Reaction	6	6	0.823	98
Somatic Symptoms Secondary to a Psychiatric Disorder	22	21	0.852	95
Demoralization	54	55	0.940	97
Demoralization with Hopelessness	15	16	0.962	99
Irritable Mood	17	34	0.932	98
Type A Behavior	32	34	0.910	96
Alexithymia	35	36	0.847	93

Sample 2 and Distribution of DCPR-R Diagnoses

The comparison of DCPR-R diagnostic distributions between the community and hospital samples is shown in Table 4. A significant difference was found between the groups for all diagnoses, except for Illness Denial, Anniversary Reaction, and Irritable Mood.

DISCUSSION

This study aimed to evaluate the Turkish adaptation of DCPR-R, its reliability and validity within a psychosomatic sample, and the diagnostic distribution across community and hospital samples.

Inter-rater Reliability

The inter-rater reliability of the DCPR was assessed using kappa coefficients, which ranged from 0.823 to 0.964 across 14 diagnostic categories, indicating high levels of agreement. Based on McHugh's (2012) study, the diagnoses of Type A Behavior, Irritable Mood, Demoralization, Hypochondriasis, Demoralization with Hopelessness, and Health Anxiety demonstrated near-perfect agreement, while the remaining

Table 3. Relationship between DCPR diagnoses and scale scores

		HADS-S	HADS-A	PHQ-15	HAQ	TAS
Allostatic Overload	r	0.275**	0.360**	0.301**	0.298**	0.264**
	p	<0.001	<0.001	<0.001	<0.001	<0.001
Health Anxiety	r	0.181**	0.137*	0.291**	0.402**	0.093
	p	0.008	0.047	<0.001	<0.001	0.181
Disease Phobia	r	0.036	0.160*	0.304**	0.321**	0.256**
	p	0.600	0.020	<0.001	<0.001	<0.001
Hypochondriasis	r	0.116	0.054	0.119	0.137*	0.117
	p	0.094	0.437	0.086	0.048	0.090
Thanatophobia	r	0.004	0.027	0.359**	0.129	0.181**
	p	0.951	0.697	<0.001	0.062	0.009
Ilness Denial	r	0.070	-0.004	-0.019	-0.105	0.073
	p	0.310	0.955	0.786	0.128	0.290
Persistent Somatization	r	0.216**	0.233**	0.497**	0.225**	0.387**
	p	0.002	0.001	<0.001	0.001	<0.001
Conversion Symptoms	r	0.101	0.108	0.391**	0.101	0.136*
	p	0.146	0.119	<0.001	0.146	0.049
Anniversary Reaction	r	0.157*	0.175*	0.087	0.030	0.107
	p	0.023	0.011	0.211	0.666	0.124
Somatic Symptoms Secondary to a Psychiatric Disorder	r	0.244**	0.222**	0.416**	0.212**	0.296**
	p	<0.001	0.001	<0.001	0.002	<0.001
Demoralization	r	0.341**	0.409**	0.412**	0.313**	0.283**
	p	<0.001	<0.001	<0.001	<0.001	<0.001
Demoralization with Hopelessness	r	0.246**	0.297**	0.279**	0.219**	0.291**
	p	<0.001	<0.001	<0.001	0.001	<0.001
Irritabl Mood	r	0.085	0.123	0.239**	0.108	0.110
	p	0.220	0.076	<0.001	0.12	0.111
Type A Behaviour	r	0.138*	0.263**	0.229**	0.158*	0.221**
	p	0.045	<0.001	0.001	0.022	0.001
Alexitimia	r	0.205**	0.199**	0.172*	0.065	0.511**
	p	0.003	0.004	0.013	0.347	<0.001
Total Number of Diagnoses Obtained from DCPR	r	0.386**	0.443**	0.643**	0.402**	0.551**
	p	<0.001	<0.001	<0.001	<0.001	<0.001

HADS-D: Hospital Anxiety and Depression Scale – Depression Subscale; HADS-A: Hospital Anxiety and Depression Scale – Anxiety Subscale; PHQ-15: Patient Health Questionnaire Scale; HAQ: Health Anxiety Questionnaire; TAS: Toronto Alexithymia Scale.

Table 4. Comparison of Diagnoses in Clinical and Non-Clinical Groups According to the DCPR-R

	Community (n=110)	Hospital (n=100)	Total (n=210)	X^2	P*
	n(%)	n(%)	n(%)		
Allostatic Overload	42(38.2)	74(74)	116(55.2)	27.179	<0.001
Health Anxiety	2(1.8)	21(21)	23(10.9)	19.762	<0.001
Disease Phobia	0(0)	9(9)	9(4.2)	10.343	0.001**
Hypochondriasis	1(0.9)	7(7)	8(3.8)	5.303	0.029**
Thanatophobia	0(0)	9(9)	9(4.2)	10.343	0.001**
Illness Denial	5(4.5)	7(7)	12(5.7)	0.586	0.444
Persistent Somatization	4(3.6)	21(21)	25(11.9)	15.058	<0.001
Conversion Symptoms	0(0)	9(9)	9(4.2)	10.343	0.001**
Anniversary Reaction	0(0)	4(4)	4(1.9)	4.485	0.050**
Somatic Symptoms Secondary to a Psychiatric Disorder	0(0)	21(21)	21(10.0)	25.667	<0.001
Demoralization	20(18.2)	56(56)	76(36.1)	32.441	<0.001
Demoralization with Hopelessness	4(3.6)	18(18)	22(10.4)	11.523	0.001
Irritable Mood	14(12.7)	19(19)	33(15.7)	1.556	0.212
Type A Behavior	19(17.3)	39(39)	58(27.6)	12.369	<0.001
Alexithymia	23(20.9)	38(38)	61(29.0)	7.424	0.006
At least one DCPR-R Diagnosis	56(50.9)	89(89)	145(69.0)	35.561	<0.001

n: number, % percent , * Chi-square test, ** Fisher's Exact Test

diagnoses reflected strong agreement. In a study conducted in Taiwan by Huang and Liao (2017), the inter-rater reliability coefficients of the Chinese version of DCPR ranged from 0.644 to 0.859. Galeazzi et al. (2004) reported kappa values between 0.69 and 0.97 for 11 DCPR diagnoses within a consultation-liaison setting. These findings demonstrate similar inter-rater reliability of DCPR-R across both Asian and European samples, thereby providing further evidence for the reliability of the Turkish version of the DCPR as a valid assessment tool.

Criterion Validity

Allostatic overload was found to be associated with HADS-D, HADS-A, the PHQ-15, and HAI. Allostatic overload manifests through symptoms such as sleep disturbances, irritability, impaired social or occupational functioning, a sense of being overwhelmed by daily demands, and potentially leads to physical and/or mental health problems (Fava et al. 2019). As an objective measure of the biological components of chronic stress, allostatic overload may have an effect on the development of depression and anxiety (Gou et al. 2024). The findings of the present study support these associations. The lack of a significant relationship between allostatic overload and alexithymia, as measured by the TAS scale, stands out as evidence supporting the scale's discriminant validity.

Health Anxiety, Disease Phobia, and Hypochondriasis showed stronger correlations with HAI compared to other scales. Given their conceptual overlap, strong associations between Health Anxiety and Hypochondriasis were anticipated (Bailer et al. 2016). In addition to significant correlation of Disease Phobia and HAI, the strength of this correlation was relatively lower than that observed for Health Anxiety and Hypochondriasis. This may be attributable to the definition of Disease Phobia as a persistent and unfounded fear of a specific illness (Porcelli & Rafanelli 2010). Two key criteria distinguish Disease Phobia from Hypochondriasis: the nature of the fear -acute in Disease Phobia and chronic in Hypochondriasis- and the nature of the fobic object -fixed in Disease Phobia and variable in Hypochondriasis- (Porcelli and Rafanelli 2010). In conclusion, the observed associations between HAI and Health Anxiety, Disease Phobia and Hypochondriasis provide evidence of convergent validity, while the relatively weaker correlations with other scales indicate the discriminant properties of these diagnoses with respect to depression and alexithymia.

The strong association observed between the diagnoses of Persistent Somatization and Somatic Symptoms Secondary to a Psychiatric Disorder and scores on the PHQ-15 provides evidence of convergent validity. This relationship, being more robust compared to other scales, suggests that these diagnostic categories effectively capture the presence of somatic symptoms.

The diagnoses of Demoralization and Demoralization with Hopelessness were found to be associated with all the scales used in this study. The strongest correlation was observed with HADS-A, with similarly moderate associations detected across the remaining scales. Although a stronger association with HADS-D might be expected, Demoralization—despite its overlap with Major Depressive Disorder—represents a distinct construct (Clarke and Kissane 2002). While individuals with depression are unable to experience pleasure due to a loss of motivation and energy, demoralized individuals may still experience momentary pleasure but are unable to envision future pleasure due to a suppression of initiative (Clarke and Kissane, 2002). Demoralization may serve as a risk factor in the development of psychopathology, a prodromal stage of psychiatric disorders, or a trigger for symptom exacerbation (Figueiredo 2013). The broad associations observed in our study—particularly with anxiety symptoms—support this conceptualization. Although the absence of a specific demoralization scale poses a limitation for validity assessment, the consistent relationship with all measured domains contributes to evidence of convergent validity.

A significant association was observed between Irritable Mood and the PHQ-15. The diagnostic criteria for Irritable Mood involve the emergence of somatic symptoms as a result of stress-related physiological responses (Porcelli and Rafanelli, 2010). The findings of this study support the link between irritability and somatic symptoms. Although irritability frequently co-occurs with depression and anxiety, it is considered as a distinct clinical construct (Mangelli et al., 2006). Its differentiation from anxiety, depression, and alexithymia provides evidence supporting its discriminant validity.

Type A Behavior demonstrated weak correlations with all scales. This diagnosis is considered as a significant psychosomatic factor that requires careful evaluation across various clinical contexts (Porcelli and Rafanelli 2010). Type A Behavior is characterized by traits such as intense ambition, competitiveness, time urgency, and hostility (Tindle et al. 2009). Although the literature on Type A Behavior remains limited, studies have suggested that individuals with Type A personality traits exhibit poorer mental health outcomes compared to those with Type B personality traits (GhorbaniAmir 2011). While the absence of a specific scale measuring Type A Behavior limits the strength of validity evidence, the findings of this study suggest that the diagnostic construct has been captured at an adequate level.

The association between alexithymia and the TAS represents the strongest evidence of validity in this study. The alexithymia diagnosis shows a high degree of convergent validity in capturing alexithymic traits.

The total number of diagnoses obtained from DCPR showed moderate correlations with all assessment scales. While this relationship has not been previously investigated, it is considered plausible since DCPR is designed to conceptualize subthreshold symptoms. Therefore, the total number of diagnoses may reflect the cumulative presence of clinically meaningful psychiatric and somatic symptoms.

Illness Denial was not significantly associated with any of the assessment scales. While this limits the ability to draw conclusions regarding convergent validity, the lack of such associations suggest that Illness Denial may represent a clinically distinct construct, separate from anxiety, depression, and somatization.

Thanatophobia demonstrated a significant association with the PHQ-15, while Conversion Symptoms were correlated with both the PHQ-15 and TAS. Additionally, Anniversary Reaction showed associations with both HADS-D and HADS-A. The limited associations observed between conversion symptoms and the HSA-15 and TAS, as well as between anniversary reactions and HADS-A and HADS-D, may provide a modest contribution to evidence of overlap. The association between Thanatophobia and the SHAI-15, however, remains debatable when considering the diagnostic criteria of Thanatophobia. In Sample 2, which was used for validity analyses, the prevalence of Thanatophobia, Illness Denial, Conversion Symptoms, and Anniversary Reaction ranged between 1.9% and 5.7%, limiting the statistical power of the validity analyses. Similar limitations apply to the relatively low frequencies observed for Disease Phobia (4.2%) and Hypochondriasis (3.8%).

Diagnostic Distribution of DCPR Across Groups

In the combined hospital and community sample, the most frequently identified DCPR diagnoses were Allostatic Overload (55.2%), Demoralization (36.1%), Alexithymia (29.0%), Type A Behavior (27.6%), Irritable Mood (15.7%), Persistent Somatization (11.9%), and Health Anxiety (10.9%). In a similar study conducted by Huang et al. (2017), the five most prevalent DCPR diagnoses were; Persistent Somatization (28.94%), Health Anxiety (24.18%), Demoralization (19.41%), Type A Behavior (19.05%), and Alexithymia (%18.32). In another study conducted within consultation-liaison psychiatry setting showed that the most frequent diagnoses were Demoralization (17.8%), Alexithymia (13.2%), Illness Denial (13.2%), Type A Behavior (11.4%), and Health Anxiety (9.6%) (Galeazzi et al. 2004). Considering that Allostatic Overload was introduced as a diagnostic category at a later stage, findings of both of these studies suggest that Demoralization, Alexithymia, and Type A Behavior are more commonly observed in consultation-liaison psychiatry settings.

None of the participants within the community sample met criteria for Conversion Symptoms, Anniversary Reactions, or Somatic Symptoms Secondary to a Psychiatric Disorder. The prevalence of other DCPR diagnoses in this sample ranged from 3.6% to 38.2%. The presence of these diagnostic categories in individuals without an ICD-10 diagnosis highlights the limitations of conventional psychiatric classification systems in adequately capturing the full spectrum of somatic symptomatology (Porcelli and Rafanelli 2010).

All DCPR diagnoses, except for Illness Denial, Anniversary Reactions, and Irritable Mood, showed significant differences between hospital and community samples. This finding suggests that DCPR-R has the capacity to differentiate between clinical and non-clinical populations in these domains. The lack of significant differences for Illness Denial, Anniversary Reactions, and Irritable Mood may indicate that these constructs are similarly distributed in both samples. Illness Denial refers to patients who do not acknowledge the presence or severity of their medical condition (Fava et al. 2017). The similar rates observed across both samples may reflect the broader prevalence of illness denial in the general population. Indeed, the prevalence of illness denial has been reported to range from 1.8% to 74% (Patierno et al., 2023). In their systematic review, Patierno and colleagues (2023) reported that the prevalence of illness denial varies across medical specialties, such as 3.3–22.9% in cardiology, 1.8% in dermatology, 3.7% in gastroenterology, 13.4% in nephrology, 8.2% in oncology, 3.5–68% in primary care, and 20.4–32.7% in rheumatology. The similar distribution of Illness Denial in clinical and community samples in this study may be attributable to low health literacy in Turkey. According to Özkan et al. (2018), health literacy levels in Turkey are predominantly inadequate (30.9%) or problematic/limited (38%). Health literacy is defined as the capacity to obtain, understand, appraise, and apply health-related information to maintain and improve one's health (Yakar et al. 2019). Illness Denial, as a construct involving the rejection of illness and its severity, is thought to be closely related to knowledge, skills, attitudes, and motivation. The lack of differentiation between groups in this context may be attributable to the generally low levels of health literacy within Turkish population.

Anniversary Reaction refers to the recurrence of somatic symptoms on the anniversary of significant events. Porcelli et al. (2012) noted that the prevalence of anniversary reactions in psychiatric and medical settings is largely unknown, though their study reported a prevalence of 3.6% among individuals with medical conditions. Similarly, a study conducted in Taiwan reported low rates of Illness Denial and Anniversary Reaction in both hospital and community samples (Huang and Liao 2017). Evidence on the prevalence of these conditions in the general population remains scarce.

Further research with larger samples is warranted to explore whether these diagnoses are more frequently observed among individuals with medical illnesses.

Irritable Mood is characterized by persistent negative affect and considered as a component of various psychiatric disorders. Behavioral or verbal outbursts of anger are typically devoid of cathartic relief. According to DCPR criteria, the prevalence of Irritable Mood is reported to be 10–15% in conditions such as myocardial infarction, heart transplantation, gastrointestinal disorders, cancer, and dermatologic diseases, and up to 46% in endocrine disorders (Sonino et al. 2004, Porcelli and Guidi 2015). In the general population, its prevalence is approximately 15% (Mangelli et al. 2006, Porcelli and Todarello 2012). In the present study, the prevalence of Irritable Mood was 19% in the hospital sample and 12.7% in the community sample, aligning with existing literature. The absence of a significant distinction between the two groups may reflect the non-specific nature of this construct.

In the community sample, approximately half of the individuals received at least one DCPR diagnosis. Moreover, a high prevalence of DCPR diagnoses was observed in both the hospital and community samples. Many of the diagnoses showed significant differences between the two groups, underscoring the utility of DCPR in capturing psychosomatic syndromes that are often overlooked by DSM-5. Although DSM-5 remains the most widely used framework for psychiatric diagnosis, its symptom-based approach may overlook some psychosomatic conditions. Developed to address this gap, DCPR offers a more comprehensive assessment of psychosocial phenomena such as health anxiety, alexithymia, demoralization, and illness denial—thus facilitating a more nuanced understanding of patients' psychosomatic profiles. DCPR can support multidisciplinary treatment planning in chronic medical conditions such as cardiovascular disease, diabetes, and cancer by identifying relevant psychological factors, and enabling early intervention. Furthermore, its applicability across a range of medical specialties beyond psychiatry, enhances its clinical utility. In conclusion, by addressing limitations of the DSM-5, the DCPR enhances psychosomatic conceptualization and contributes to the development of more holistic and personalized treatment strategies.

Limitations

Although the diagnostic distribution in the first sample represents a broader clinical spectrum, the inclusion of only three diagnostic groups (Somatic Symptom Disorder, Major Depressive Disorder, and Anxiety Disorders) in the second sample somewhat limits its clinical representativeness. Certain DCPR diagnoses namely Conversion Symptoms, Anniversary Reactions, and Somatic Symptoms Secondary to a Psychiatric Disorder were not observed in the community sample. The absence of the latter diagnosis among individuals without a DSM-5 diagnosis is an expected finding; however, the absence of the other two diagnoses may be attributed to the limited sample size, and their presence could potentially emerge in larger samples. In terms of criterion validity, the low prevalence of certain diagnoses in both the clinical and community samples made it difficult to conduct meaningful comparisons between groups. Additionally, the absence of standardized instruments to assess Type A Personality traits, Demoralization, and Irritable Mood limited the strength of the validity analyses.

CONCLUSION

The Turkish version of the DCPR Semi-Structured Interview (DCPR-R-SSI) was found to be a valid and reliable assessment tool. This scale reflects the growing need for a comprehensive psychosomatic approach in the field of medicine. Its implementation in future studies involving Turkish-speaking populations is anticipated to make a significant contribution to the literature on psychosomatic medicine.

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