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Personality Organization Inventory - Brazil: evidence of validity based on external criteria

Inventário de Organização da Personalidade – Brasil: evidências de validade baseadas em critérios externos

Inventario de Organización de Personalidad - Brasil: evidencias de validez basadas en criterios externos

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This is a quantitative study conducted between 2014 and 2015 in the cities of Erechim, Canoas and Porto Alegre, RS, Brazil, with patients undergoing psychotherapeutic and/or psychiatric treatment (clinical sample) and students of the Youth and Adult Education and higher education (non-clinical sample) modality, with the objective of examining the capacity of the *Personality Organization Inventory - Brazil* to discriminate people with different levels of personality organization. There were 180 participants, of which 69% were patients in psychiatric or psychological care and 31% were students. The averages of the clinical group were higher on all scales than the averages of the non-clinical group (*d* ranged from 0.60 to 1.30). When the groups of participants were compared according to their levels of personality organization, the scores did not discriminate all groups, with a pattern of three levels being observed: normal; slight injury; and, serious injury. The scores tended to differentiate these three groups. Thus, it is understood that there is evidence of validity, based on external criteria, that the scores are capable of identifying levels of impairment in the functioning of the personality.
Descriptors: Personality; Personality tests; Diagnosis; Psychometrics.

Este é um estudo quantitativo realizado entre 2014 a 2015 nas cidades de Erechim, Canoas e Porto Alegre com pacientes em tratamento psicoterápico e/ou psiquiátrico (amostra clínica) e estudantes da modalidade Ensino de Jovens e Adultos e de cursos superiores (amostra não clínica), com o objetivo de examinar a capacidade do *Inventário de Organização de Personalidade – Brasil* em discriminar pessoas com diferentes níveis de organização da personalidade. Participaram 180 indivíduos, sendo 69% pacientes em atendimento psiquiátrico ou psicológico e 31% estudantes. As médias do grupo clínico foram maiores em todas as escalas do que as médias do grupo não clínico (*d* variou de 0,60 a 1,30). Quando comparados os grupos de participantes de acordo com seus níveis de organização da personalidade, os escores não discriminaram todos os grupos, tendo sido observado um padrão de três níveis: normal; prejuízo leve; e, prejuízo grave. Os escores tenderam a diferenciar esses três grupos. Com isso, entende-se que há evidências de validade, baseadas em critérios externos, de que os escores são capazes de identificar níveis de prejuízo no funcionamento da personalidade.
Descritores: Personalidade; Testes de personalidade; Diagnóstico; Psicometria.

Este es un estudio cuantitativo realizado entre 2014 y 2015 en las ciudades de Erechim, Canoas y Porto Alegre, Brasil, con pacientes sometidos a tratamiento psicoterápico y/o psiquiátrico (muestra clínica) y estudiantes de la modalidad Enseñanza de Jóvenes y Adultos y de educación superior (muestra no clínica), con el objetivo de examinar la capacidad del Inventario de Organización de Personalidad - Brasil para discriminar a las personas con diferentes niveles de organización de personalidad. Participaron 180 personas, de las cuales el 69% eran pacientes en atención psiquiátrica o psicológica y el 31% estudiantes. Las medias del grupo clínico fueron más altas en todas las escalas que las medias del grupo no clínico (d osciló entre 0,60 y 1,30). Al comparar los grupos de participantes según sus niveles de organización de la personalidad, las puntuaciones no discriminaron a todos los grupos, y se observó un patrón de tres niveles: normal; deterioro leve; y deterioro grave. Las puntuaciones tendieron a diferenciar estos tres grupos. Con ello se entiende que hay evidencias de validez, basadas en criterios externos, de que las puntuaciones son capaces de identificar niveles de deterioros en el funcionamiento de la personalidad.
Descriptores: Personalidad; Pruebas de personalidad; Diagnóstico; Psicometría.

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INTRODUCTION

The study and understanding of personality disorders have been gaining new outlines in recent years, in a context beyond the traditional categorical model. Especially after the publication of the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5)[1], dimensional models have received increasing attention, representing a promising and updated alternative for future understandings about these disorders[2,3].

Among the various theories with a dimensional focus, Kernberg's work deserves special recognition for the usefulness of the framework built to organize, from a psychodynamic perspective, psychological types by the level of severity[4]. Such an approach describes the functioning of the personality, ranging from normal to pathological, based on the degree of identity integration, the quality of the defensive operations predominantly used and the ability to test reality[4-6]. In the healthiest part of the spectrum, there would be individuals with integrated identity, predominance of mature defenses and a stable reality test, while at the other extreme would be those with severe pathologies in the formation of identity, use of primitive defenses and failure in the reality test.

Kernberg's theory helps to carry out a structural diagnosis, and from the psychological functions mentioned, the personality structure is defined, that is, a stable and lasting configuration of mental processes or functions that organizes the behavior and subjective experiences of the individual. individual[5,6]. Four major structural organizations make up the model: Normal, Neurotic, Borderline and Psychotic. Of these, the first is related to the ability to adapt and flexibility, while the others have some degree of personality pathology and are characterized by a rigidity in psychological functioning[5,7].

More specifically, the organization of Normal Personality is characterized by the integrated conception of self and other significant ones, in which the ego identity is present and reflects an internal and external sense of self-consistency. An integrated view of oneself and other significant ones guarantees diverse capacities, such as self-esteem, fulfillment of aspirations, empathy, social tact, the possibility of caring for others and emotional investment without losing the sense of autonomy[4,5].

In the organization of the normal personality, the affects are complex and well modulated, and even in emotionally intense situations, the impulse control is maintained. In this way, the individual is able to develop trust, reciprocity, make commitments, as well as satisfactorily manage their sexual and aggressive motivations, based on the internalization of an integrated and mature value system[5].

The level of Neurotic Personality organization is based on a consolidated normal identity, the predominance of defenses based on repression and a stable reality test[4]. Therefore, what distinguishes it from the normal personality is the rigidity criterion, that is, an automatic activation of maladaptive personality traits that are beyond voluntary control. This level of organization is related to the ability to sublimate, to tolerate frustrations, to control impulses, to form deep and caring relationships with others, sexual love and emotional intimacy. However, unconscious feelings of guilt can trigger pathological patterns of interaction in relation to sexual intimacy, and inflexibility in the face of everyday situations[5].

The Borderline Personality organization is marked by a pathological formation of identity (also called identity diffusion), predominant use of primitive defenses and a relatively intact reality test, but impaired in situations involving an affective intensity[4]. This organization, in general, causes a chronic disturbance in interpersonal relationships, compromising the deeper reading of other people's behavior and internal state. In addition, the borderline type is associated with aggressiveness and an unstable sense of self and others, a combination of intensity and superficiality, a predominance of negative affects, problems in work relationships and an excess of aggressive components in intimate and sexual relationships[4-6].

The Psychotic Personality organization fundamentally involves the loss of the reality test, that is, the loss of differentiation between the self and the non-self, and between internal

and external stimuli, whose manifestation is often due to delusions and hallucinations[6]. This level of organization encompasses the diffusion of identity, due to the lack of integration of the concept of self and other signifiers, as well as the predominance of primitive defense mechanisms, especially the split[5].

As can be seen, the Kernberg model understands the personality pathology in a continuous operation, in which categories are highlighted along the spectrum. This model allows a diagnosis based on the degree of impairment typical of personality organization (PO) levels. To assist in the diagnostic process, a self-report instrument called Inventory of Personality Organization (IPO) was developed. The IPO has already been translated into different languages, with adaptations for different cultures, including Brazil[8], and has shown adequate psychometric properties[9-17].

Initially, the IPO was developed to measure five dimensions of personality, the first three of which are called Primary Clinical Scales, designed to assess the degree of pathology of identity (Diffusion of Identity), the level of use of immature defensive mechanisms (Primitive Defenses) and the degree of impairment in the ability to test reality (Reality Test). The other two dimensions, Additional Scales, aim to estimate the level of aggression directed against oneself and others (Aggression) and the degree of impairment in the formation of moral and ethical values (Moral Values)[4].

However, recent empirical studies on the covariance matrix of the data have indicated a factorial solution distinct from that theoretically established[2,11,14]. The Primary Clinical Scales have presented a tetrafactorial structure instead of a three-factor one, the domains being called Self Instability and Others (SIO), Goal Instability (GI), Behavior Instability (BI) and Psychosis (PSY)[2,11, 14].

These factors are intrinsically related to Kernberg's theoretical proposal[4,5], with the SIO and GI domains being components of the identity diffusion syndrome. The BI domain reflects the impulsive and erratic characteristics of the Borderline Personality Organization. And the PSY factor was made up of items that reflect sensoperceptual changes, which are the central aspects of the Psychotic Personality Organization.

With regard to the Additional Scales, Oliveira[14] found a solution of three factors instead of two, where the Aggression factor was divided into Self-Directed Aggression (SDA) and Sadistic Aggression (SA), and the Moral Values factor was practically the same, however being called the Distortion of Moral Values (DMV) to represent the poorly adaptive level of this dimension.

Most designs of studies carried out with the IPO aimed at investigating the relationship of the scale with other psychological measures[9,11-15,17]. Designs that sought to compare groups are more scarce. Of these, an investigation can be cited that identified that patients from mental health services tend to have higher scores on the IPO scales than control people[10].

Another can also be mentioned, in which the IPO scales were able to differentiate people into three distinct groups: control (lower scores), patients with mental disorders (intermediate scores) and patients with personality disorders (higher scores)[16]. However, no studies were found to verify the discriminatory capacity of the IPO in relation to the levels of OP proposed in the theoretical model of Kernberg[4,5].

Thus, this study aims to examine the capacity of the Personality Organization Inventory - Brazil to discriminate against people with different levels of personality organization.

METHOD

This is a quantitative study carried out between 2014 and 2015 in the cities of Erechim, Canoas and Porto Alegre with patients who were undergoing psychotherapeutic and/or psychiatric treatment (clinical sample) and students from the Youth and Adult Education (*Educação de Jovens e Adultos* - EJA) modality and from higher education courses (non-clinical sample).

A sociodemographic and health data questionnaire was applied. Then, the Personality Organization Inventory - Brazil (IPO-Br) was used: adapted from the original version of the IPO, it is a self-report instrument composed of 83 items answered on a 5-point Likert scale (1 = Never true to 5 = Always true), distributed over seven factors. Four of them comprise the Primary Clinical Scales - Instability of Self and Others (ISO), Behavior Instability (BI), Goal Instability (GI) and Psychosis (PSY) - and evaluate the central functions for structural diagnosis according to the Kernberg model[4, 5]. The other three factors make up the Additional Scales: Self-Directed Aggression (SDA), Sadistic Aggression (SA) and Distortion of Moral Values (DMV). Studies have adequate psychometric properties of the Brazilian version[14,17].

The Self Report Questionnaire (SRQ-20) was used, an instrument developed by the World Health Organization to screen for common mental disorders in primary care services. The Brazilian version has 20 questions indicating non-psychotic disorders. The alternative answers are of the type 'yes' or 'no', and the higher the score, the greater the risks for mental disorders. The cutoff point used in this study to determine the presence of common mental disorders was 8 points for both genders[18].

The Personality Profile Descriptor Guide According to the Personality Organization Model was also applied, developed exclusively for this research in order to standardize the PO indication system of patients by their clinicians. It is a document containing descriptions of the typical psychological functioning of each of the five categories that represent the PO continuum, namely: Normal, Neurotic, Upper Borderline, Lower Borderline and Psychotic.

The Upper and Lower Borderline categories were separated in view of the qualitative differences between these OP levels, in order to facilitate clinicians' understanding of the prototypical profiles of these categories. The application of instrument consisted of presenting the profiles to the clinicians, who, after reading the descriptions, indicated a patient to participate in the research who had a psychological profile similar to one of the categories.

The collection with the participants of the non-clinical group was carried out in person and collectively. The instruments were applied in a random order to avoid fatigue response bias and the instruments were answered individually by each participant. The SRQ-20 scale was used in the selection of the non-clinical group, so that only participants who had a score equal to or less than seven on the scale were included in this group. This is because the eight-point score is indicative of risk for common mental disorders[18].

With the clinical group, the collection was in person. The first stage of collection involved contact with the clinician (psychology professional or intern in the last year of undergraduate course) who attended the patient. These professionals and students underwent training on theoretical questions about the proposed structural personality model.

An explanation was also made regarding the study proposal, the handling of the application of the protocols and the profile of the indicated patients. Subsequently, clinicians elected, through the Personality Profile Descriptor Guide according to the Personality Organization Model, a patient with a psychological profile similar to one of the five prototypical profiles presented to them. The observation made by the clinician about the personality structure of their patient worked, in this study, as an external criterion for the IPO-Br validation studies.

For the application of the research protocols with the participants of the clinical sample, different strategies were used, depending on the application site. The application procedure in attendance clinics, university school services and mental health clinics took place with the collaboration of the professional/intern, who invited his patients to answer the instruments.

Patients with physical and psychological conditions were invited to participate in the research, as they would answer the instruments autonomously, without assistance in completing the questions. However, in some specific cases there was a need for the clinician to assist the patient in completing the protocols, cases with some more serious pathology and/or low education, which could compromise the quality of responses if the patient answered the

protocol alone. However, the assistance of a professional/intern was restricted to filling in the answers, and not in choosing them. With patients coming from Psychosocial Care Centers (CAPS-II) and inpatient clinics, the entire application was carried out by a group researcher, considering the degree of psychological commitment of the patients to complete the questionnaires individually.

The data were analyzed using the Statistical Package for the Social Sciences (SPSS, v.18.0) software. Initially, descriptive analyzes of the instruments used in the study were made for clinical, non-clinical and total sample groups. The effect size of the difference between the group means was calculated using the Cohen's *d* indicator. The internal consistency of the instrument scales was analyzed using Cronbach's Alpha method.

In the choice of the statistical tests to be used, the indexes of asymmetry and kurtosis were observed for the IPO-Br scales, which indicated normality for most of them, opting for the use of parametric statistical tests.

To verify the need for control variables, Pearson correlations were performed between age and variables of interest, as well as differences between genders using the *t* test.

To investigate the validity of the IPO-Br using external criteria, that is, to verify the instrument's ability to discriminate between different personality organizations, analyzes of variance (ANOVA) were performed, with Tukey's post-hoc tests.

This study was approved by the Research Ethics Committee of the Psychology Institute of the Universidade Federal do Rio Grande do Sul (CAAE of Plataforma Brasil: 31610114.9.0000.5334). All study participants voluntarily accepted to participate in the research after signing the Free and Informed Consent Form.

RESULTS

180 individuals participated in the study, 124 (68.9%) from the clinical sample and 56 (31.1%) from the non-clinical sample. Table 1 shows the sociodemographic and health condition characteristics.

Table 1. Sociodemographic and health characteristics. Rio Grande do Sul, 2014 to 2015.

Variables	Clinical Sample	Non Clinical Sample	Total
Participants (*f, %*)	124 (68.9)	56 (31.1)	180 (100)
Age (*M*, *DP*)	35,4 (12.4)	31,8 (11.7)	34.2 (12.2)
Gender (*f, %*)			
Male	38 (21.1)	32 (17.8)	70 (38.9)
Female	86 (47.8)	24 (13.3)	110 (61.1)
Marital status (*f, %*)			
Single	68 (39.3)	29 (16.7)	97 (56.1)
Married or in civil union	32 (18.5)	25 (14.5)	57 (32.9)
Divorced	10 (5.8)	2 (1.2)	12 (6.9)
Widowed	5 (2.9)	0 (0)	5 (2.9)
Other	2 (1.2)	0 (0)	2 (1.2)
Socioeconomic level (*f, %*)			
Under 1 minimum wage	3 (1.8)	3 (1.8)	6 (3.7)
Between 1 and 5 minimum wages	76 (46.3)	32 (19.5)	108 (65.9)
Between 6 and 10 minimum wages	16 (9.8)	11 (6.7)	27 (16.5)
Between 11 and 15 minimum wages	9 (5.5)	2 (1.2)	11 (6.7)
Above 15 minimum wages	5 (3.0)	7 (4.3)	12 (7.3)
Ethnicity(*f, %*)			
White	99 (57.2)	39 (21.6)	138 (79.8)
Black/*Pardo*	17 (9.8)	15 (13.1)	32 (18.5)
Other	3 (1.7)	0 (0)	3 (1.7)
Has children (*f,* %)			
Yes	54 (31.2)	26 (15.0)	80 (46.2)
No	63 (36.4)	30 (17.3)	93 (53.8)
City in which the participant lives (*f, %*)			
Capital or metropolitan region	52 (41.9)	47 (83.9)	99 (55. 0)
Interior of the state	72 (58.1)	9 (16.1)	81 (45.0)
Educational leve (*f, %*)			
Elementary school	15 (9.0)	0 (0)	15 (9.0)
High school	41 (24.0)	20 (11.7)	61 (35.1)
Higher education	59 (34.5)	36 (21.1)	95 (52.7)
Profession (*f, %*)			
Student	14 (8.0)	8 (4.6)	22 (12.6)
Laborer	55 (31.6)	46 (26.4)	101 (58.1)
Unemployed/Retired/Housewife	34 (19.5)	2 (1.1)	36 (20.6)
Health leave	9 (5.2)	0 (0)	9 (5.2)
Other	6 (3.4)	0 (0)	6 (3.4)
Psychiatric diagnosis (*f, %*)*			
Yes	92 (51.1)	0 (0)	92 (51.1)
No	32 (17.7)	56 (31.1)	86 (48.8)
Categories of diagnosis (*f, %*)			
Mood disorder	53 (37.9)	0 (0)	53 (37.9)
Anxiety disorder	34 (24.3)	0 (0)	34 (24.3)
Psychotic disorder	29 (20.7)	0 (0)	29 (20.7)
Personality disorder	17 (12.1)	0 (0)	17 (12.1)
Other disorder	7 (5.0)	0 (0)	7 (5.0)
Uses Psychiatric Medication (*f, %*)*			
Yes	79 (45.9)	1 (0,6)	80 (46.5)
No	38 (22.1)	54 (31.4)	92 (53.5)

Key: *f* – Frequency or participants in each category; *%* – Percentage of valid participants in each category; * Variables that present statistically significant differences (p< 0,05) among groups.

Table 2 presents the results of the means and standard deviations of the IPO-Br and SRQ-20 scales for the clinical, non-clinical group and for the total sample. Cohen's *d* index, used as an effect size indicator in comparisons of means between groups, showed a large effect size (d ≥ | 0.80 |) for almost all scales, except for Distortion of Moral Values and Sadistic Aggression, which had a moderate effect size. In addition, on all instrument scales, the differences in means

between the clinical and non-clinical groups were statistically significant using the *t* test. Regarding reliability, the results showed satisfactory rates of internal consistency for all dimensions of the IPO-Br and for the SRQ-20.

Table 2. Descriptive statistics of the IPO-Br and SRQ-20 factors for the clinical, non-clinical and total samples, including the effect size of the differences in means and coefficients of internal consistency. Rio Grande do Sul, 2014 to 2015.

	Clinical Sample	Non Clinical Sample	Total	*d*	*α*
	M (SD) *n* = 124	*M* (SD) *n* = 56	*M* (SD) *n* = 180		
IPO-Br					
ISO	2.86 (0.83)	1.95 (0.54)	2.57 (0.86)	1.30	0.94
BI	2.51 (0.84)	1.77 (0.48)	2.27 (0.82)	1.08	0.89
GI	2.70 (1.23)	1.73 (0.66)	2.39 (1.17)	0.98	0.78
PSY	2.20 (1.02)	1.44 (0.36)	1.96 (0.94)	0.99	0.90
SDA	1.95 (0.89)	1.37 (0.24)	1.77 (0.79)	0.88	0.80
DMV	2.36 (0.70)	1.97 (0.52)	2.23 (0.67)	0.63	0.74
SA	1.45 (0.63)	1.16 (0.25)	1.35 (0.55)	0.60	0.81
SRQ-20	10.02 (5.29)	2.49 (1.98)	7.36 (5.70)	1.88	0.91

Key: IPO-Br - Personality Organization Inventory – Brazil; ISO - Instability of Self and Others; BI - Behavior Instability; GI - Goal Instability; PSI - Psychosis; SDA - Self-Directed Aggressiveness; DMV - Distortion of Moral Values; SA - Sadistic Aggressiveness; SRQ-20 - Self-Reporting Questionnaire.

To examine the ability of the IPO-Br to discriminate people with different levels of OP, analyzes of variance (ANOVA) were performed, the results of which are shown in Table 3. The groups were formed according to the classifications made by the clinicians who attended the patients. This classification was made independently, without the clinician having access to the scores of their patients in the instruments of this research.

It is observed that, in all factors, the lowest mean scores obtained were from the group of participants classified at the level of normal OP, as expected. However, only the ISO and BI factors showed a statistically significant difference from all other groups. In addition, in general, the means in the factors of the IPO-Br did not present statistically significant differences between the patients of the neurotic OP group and those of upper borderline OP. The same happened among patients with lower borderline OP and psychotic OP.

Thus, although some nuances between the different levels of OP have not been captured by the IPO-Br scales, the instrument has demonstrated the ability to discriminate the pattern of psychological functioning, in general, in three large groups: normal, neurotic-upper borderline and lower-psychotic borderline. Based on this empirical evidence, the five levels of OP were reorganized into three groups, which were renamed: normal OP, OP with mild impairment (neurotic - upper borderline) and OP with severe impairment (lower borderline - psychotic).

Table 3. Comparison of the means (ANOVA) of the IPO-Br factors between groups of people with different levels of personality organization. Rio Grande do Sul, 2014 a 2015.

	Normal	Neurotic	Superior Borderline	Inferior Borderline	Psychotic	*F* (*gl*)	*p*
	M (*SD*) *n* = 61	*M* (*SD*) *n* = 38	*M* (*SD*) *n* = 16	*M* (*SD*) *n* = 36	*M* (*SD*) *n* = 29		
ISO	1.92^{a} (0.53)	2.55^{b} (0.77)	2.74^{b} (0.78)	3.33^{c} (0.77)	2.95^{bc} (0.64)	27.68 (4)	< 0.001
BI	1.74^{a} (0.47)	2.18^{b} (0.69)	2.16^{bc} (0.62)	2.96^{d} (0.89)	2.71^{cd} (0.77)	21.51 (4)	< 0.001
GI	1.72^{a} (0.65)	2.63^{b} (1.14)	2.36^{ab} (1.21)	2.93^{b} (1.31)	2.87^{b} (1.26)	9.99 (4)	< 0.001
PSY	1.43^{a} (0.35)	1.76^{a} (0.64)	1.82^{ab} (0.80)	2.43^{bc} (1.05)	2.85^{c} (1.16)	19.70 (4)	< 0.001
SDA	1.35^{a} (0.25)	1.52^{a} (0.53)	1.45^{a} (0.44)	2.54^{b} (1.01)	2.16^{b} (0.84)	23.89 (4)	< 0.001
DMV	1.93^{a} (0.52)	2.16^{a} (0.62)	2.06^{a} (0.61)	2.62^{b} (0.77)	2.60^{b} (0.50)	10.44 (4)	< 0.001
SA	1.15^{a} (0.24)	1.27^{ab} (0.41)	1.29^{ab} (0.45)	1.71^{c} (0.87)	1.51^{bc} (0.53)	7.33 (4)	< 0.001

Key: In each line, the same letters mean that the averages of each Personality Organization do not have statistically significant differences from each other in the dimensions of the IPO-Br (Post-hoc: Tukey's test); ISO - Instability of the Self and Others; BI - Behavior Instability; GI - Goal Instability; PSY - Psychosis; SDA - Self-directed Aggressiveness; DMV - Distortion of Moral Values; SA: Sadistic aggressiveness.

From the new OP configurations, the averages were compared through analysis of variance and the results are shown in Table 4. As shown in Table 4, the IPO-Br ISO, BI and PSI

factors were able to differentiate all structures. On the GI scale, the mean values were statistically different between people in the normal OP group and those with OP with mild impairment, but the difference in means in this factor between the OP with mild impairment and the OP with severe impairment were not statistically significant. Regarding the factors of the Additional Scales, the means were not statistically significant between the groups of normal OP and of OP with mild impairment, but were statistically different from the OP group with severe impairment.

Table 4. Comparison of the averages (ANOVA) of the IPO-Br scales among the grouped personality organizations. Rio Grande do Sul, 2014 to 2015.

	Normal	Mild loss	Severe loss	*F* (*gl*)	*p*
	M (*SD*) *n* = 61	*M* (*SD*) *n* = 54	*M* (*SD*) *n* = 65		
ISO	1.92[a] (0.53)	2.60[b] (0.77)	3.17[c] (0.74)	46.89 (2)	< 0.001
BI	1.74[a] (0.47)	2.18[b] (0.66)	2.85[c] (0.84)	41.90 (2)	< 0.001
GI	1.72[a] (0.65)	2.55[b] (1.16)	2.90[b] (1.20)	56.07 (2)	< 0.001
PSY	1.43[a] (0.35)	1.78[b] (0.68)	2.61[c] (0.95)	39.79 (2)	< 0.001
SDA	1.35[a] (0.25)	1.50[a] (0.51)	2.38[b] (0.75)	19.26 (2)	< 0.001
DMV	1.93[a] (0.52)	2.13[a] (0.61)	2.98[b] (0.74)	56.86 (2)	< 0.001
SA	1.15[a] (0.24)	1.27[a] (0.42)	1.62[b] (0.74)	48.62 (2)	< 0.001

Key: In each line, the same letters mean that the averages of each Personality Organization do not have statistically significant differences from each other in the dimensions of the IPO-Br (Post-hoc: Tukey's test); ISO - Instability of the Self and Others; BI - Behavior Instability; GI - Goal Instability; PSY - Psychosis; SDA - Self-directed Aggressiveness; DMV - Distortion of Moral Values; SA: Sadistic aggressiveness.

DISCUSSION

The present study aimed to investigate the ability of IPO-Br to differentiate groups of people with different levels of personality organization. To date, no studies designed to address this issue have been found, and this appears to be the first research that proposed to conduct such an investigation.

The closest to this proposal was the study by Smits *et al*[16] who investigated the ability of IPO factors to discriminate patients in groups A, B and C from personality disorders, with no statistically significant differences between these groups and attributing this failure to a possible effect of under-representation of patients in groups A and C. In any case, groups A, B and C are theoretically organized according to the similarities of the disorder traits[1] and not by the functional severity of the personality.

The results obtained in the present study demonstrated that the IPO-Br was able to differentiate the clinical from the non-clinical group with large effect sizes in the differences in means in almost all factors. These results are congruent with other studies[2,10,16], which also report statistically significant differences between the scores of the clinical and non-clinical groups. This data suggests that the IPO-Br is a useful tool for identifying personality-related psychopathologies. In addition, satisfactory internal consistency indexes on all scales indicate adequate reliability of the instrument. Thus, there is adequate evidence of validity and reliability of the measure.

The factors Distortion of Moral Values and Sadistic Aggressiveness, presented a moderate effect size in the difference of means between the clinical and non-clinical groups. This slightly smaller effect size may be related to the fact that responses to items on these scales may be more susceptible to interference from social desirability[10].

As a result, people tend not to endorse items that describe behaviors that indicate failure in moral development and pleasure in the suffering of others because they are socially undesirable. Another hypothesis that can explain this moderate difference in effect size is the fact that the items capture very severe and/or specific behaviors of a single disorder, in this case, the antisocial[19]. Thus, for the specific investigation of these factors, it would be important for the sample to have previously established groups, such as a sample of people with antisocial personality disorder or defendants confessed to crimes committed intentionally against others.

Regarding the levels of OP theoretically established in the Kernberg model[4,5], the IPO-Br factors failed to discriminate groups in an exact way. Regarding this result, psychometric models are not always able to capture the qualitative nuances that distinguish different groups[20]. The non-differentiation of the groups may have occurred, on the one hand, due to the fact that the items and factors of the IPO-Br do not understand all the nuances that qualify these theoretically established levels.

On the other hand, it may be that the non-differentiation occurred due to the fact that the theoretically established groupings do not correspond to the empirical reality. Thus, the present study provides evidence that the IPO-Br is capable of discriminating three levels of psychological functioning: normal, mild impairment and severe impairment.

The new diagnostic models of personality disorders, both the alternative model of the DSM-51, and the dimensional model proposed for the 11th edition of the International Classification of Diseases (ICD-11)[21], comprise the personality pathology in terms of functional severity. The diagnosis of a personality disorder is now determined by the level of impairment in subjective and interpersonal functioning.

A serious personality disorder has been determined by severe impairments in the constitution of the self, with problems in the integration of identity and self-government, as well as by serious impairments in the styles of interpersonal relationships, with problems in empathy and intimacy. These new models are intrinsically aligned with Kernberg's OP model[22-24]. In fact, one study even found items in the IPO that cover all constructs of the alternative model for diagnosing personality disorders described in DSM-51.

Considering that the greater the impairment in personality functioning, the higher the scale scores should be, theoretically increasing mean values were expected from the group of normal OP to that of psychotic OP. This result did not occur as expected, and the highest averages were from the group of participants classified with lower borderline OP, except for the Psychosis factor.

These diverging values from the expected may be the effect of the small sample size of the groups and/or the differences in sample sizes in each group. Still, this divergence may signal a need for revision in the form of classification of OP levels, considering that, empirically, the groups differ in an alternative way to the theorized one. In addition, the IPO seems to better cover the typical characteristics of borderline functioning, being more sensitive to capture aspects of this OP level than other levels[11].

The means of the IPO-Br factors in psychotic OP were lower than in the lower borderline OP group. Although the psychotic organization presents instability of self and others, and instability in behavior, the central issue in this organization, which differentiates it even from the borderline, is the serious impairment in the reality test, manifested particularly by delusions and hallucinations[5].

In fact, the scores of patients with psychotic OP were higher on the Psychosis scale, since the items are formulated in order to investigate losses in the course of thought, in the sense of perception and in the way the person self-evaluates behaviors and feelings according to social norms. The difference between average values in this factor between lower borderline OP and psychotic OP was not, however, statistically significant. This result may have been influenced by the impaired thought function that patients with psychosis have. The responses to some items of the IPO-Br demand greater self-reflection and clarity about the emotions experienced and the way the person sees himself.

Failures in this self-reflective capacity, together with losses in judgment, can generate scores in a self-report instrument that do not adequately represent the patient[25]. Still, the fact that borderline OP is widely studied while there are very few studies on psychotic OP from the perspective of the psychodynamic theory of object relationships, resulting in gaps in knowledge and deepening of psychotic structural functioning[26]. And yet the differentiation of the DSM-5, which includes personalities from the schizophrenia spectrum through the domain of

psychoticism in the alternative model and the ICD-11, which removes any mention of psychotic traits from personality disorders, leaving everyone in the category of the schizophrenia spectrum[27].

Although the present study was based on a quantitative approach, in-person e collections with critically ill patients made it possible to broaden the understanding of the differences in scores between the groups of psychotic OP and lower borderline OP. An example that can better illustrate this situation is that, when a psychotic patient participant, when asked about the item "*I feel relieved hurting, cutting or causing physical pain to myself*", of the Self-Directed Aggression factor, they gave an answer with a high score, commenting "*Yes, I do that. Sometimes it is necessary to cut oneself in order to renew the blood* ".

A borderline patient, to the same question, replied "*Yes, I am so angry inside, everything, the world, that I cut myself... I scratch myself or put a blade on my arm, but it doesn't hurt that much, I prefer to cut myself, or punch a wall until my hand bleeds, than to go there and fight with people*". The complementarity of qualitative and quantitative approaches[20] allows the understanding that self-directed aggression behaviors in patients with psychotic structure are more punctual, as in an outbreak for example, whereas in patients with borderline structure they tend to be more chronic.

This may explain the higher mean on this factor for people with lower borderline OP compared to those with psychotic OP. Likewise, the items of the Distortion of Moral Values and Sadistic Aggressiveness factors are designed to investigate antisocial and hostile attitudes. Therefore, it is expected that they will be more endorsed by patients with borderline OP than by psychotics, since it is characteristic of the former an archaic, persecutory and sadistic superego, establishing object relations based on the exploration and omnipotent control over the object[28].

Based on the empirical evidence found, and, considering that the structures which did not present significant differences between them are configured in a continuum in relation to the level of psychopathology in the organization of personality, the five levels of organization of personality were reorganized in three comprehensive groups, which were named: 1) Normal, 2) Mild personality impairment (neurotic - upper borderline) and 3) Severe personality impairment (lower borderline - psychotic).

Such groups discriminated against each other in all Primary Clinical Scales of the IPO-Br, except IO, which did not differentiate the groups of OP with mild impairment and OP with severe impairment. Therefore, although the IPO-Br has not been able to capture the nuances between some organizations, it has proved to be a good instrument to indicate the degree of severity of personality functioning, presenting evidence of validity in relation to external criteria.

Regarding the Additional Scales of the IPO-Br, the differences in the averages that were statistically significant occurred only with the OP with serious impairment. In Kernberg's model[5], aggressiveness and failures to internalize a system of moral values are conditions characteristic of more serious cases of personality pathology. Aggression has been characterized as a central point in disorders that include the borderline personality OP[29].

However, according to the psychodynamic theory of object relations, there is a subdivision of this OP. Personality disorders as avoidant, dependent and histrionic are part of the upper borderline organization, which have less pronounced psychopathological characteristics compared to the lower borderline, with no marked aggressive characteristics. Lower borderline OP, within the borderline structure, is associated with personality disorders such as antisocial, schizotypic and borderline disorder itself[6].

Crawford *et al*[30] claim that most personality disorders have problems associated with interpersonal relationships, with attachment being characterized by a lot of anxiety and avoidance. In this sense, aggression is the aspect that differentiates upper and lower borderline OP, as well as distinguishes personality disorders from Group B of DSM-5, especially borderline

personality disorder, from other disorders that also present high levels of anxiety in the establishment of bonds, such as the dependent and the avoidant. In addition, the high aggression scores obtained in this study may be the result of a bias in relation to lower borderline OP, since most of the participants in this group are patients with borderline personality disorder.

CONCLUSION

This study presented evidence of validity of the IPO-Br from the comparison of scores between clinical and non-clinical samples. Much of the preceding research using the IPO has focused on investigating the relationship of this instrument with other psychological measures and constructs. In this sense, one of the main contributions of the present study was to verify the clinical value of the IPO to differentiate individuals with different personality structures, from the non-pathological ones to those with severely compromised functioning. This is considered to be a differential in relation to the knowledge previously accumulated in the area.

A limitation of the study, which may have influenced the fact that the IPO-Br did not discriminate the nuances between the five structures, refers to the method of grouping participants in the structural diagnostic categories. The groups were formed from the evaluation of the personality structure made by the clinician's judgment from the prototypical profiles built for this research.

Although the study has clinical richness as it relies on the therapist's position on the patient, this method employed did not allow the estimation of the reliability of this structural diagnosis. The use of standardized instruments can help in this matter. Thus, future research can implement more reliable methods of classifying participants, according to their personality structures.

In order to minimize the subjective bias of the clinicians and reduce possible errors related to the method of classifying the participants, both the training of the clinicians in the theoretical model considered, as well as the construction of the Personality Profile Descriptor Guide according to the Personality Organization Model.

Another limitation concerns the small sample size. The data collection with the patients was carried out individually, demanding a logistics, sometimes complex to obtain the data. Thus, the context in which this research was carried out made it possible to access this number of participants.

When participants were classified into the categories of OP levels, the number of individuals per group was reduced. It is known that the sample size has an impact on the power of several statistics, making the results obtained here to be considered with caution. Thus, it is suggested that further studies may include a larger number of participants in each diagnostic category to examine whether the IPO-Br factors would be able to discriminate the nuances between the OP groups. Furthermore, the increase in cases tends to favor the heterogeneity of pathological personality styles within each structural category. Thus, the under-representation of other characteristic features of OP levels is no longer a problem.

Despite the limitations exposed here, it is possible to observe that the present investigation advances the knowledge about IPO-Br, as a useful tool in clinical practice for structural assessment of personality. In addition to indicating the severity of the personality pathology, the IPO-Br also allows, through the scores of its factors, to describe the pathological features that most require clinical attention.

Thus, the results of the IPO-Br can support the development of specific therapeutic intervention plans for each patient. In scientific terms, this research also contributes to the discussions about the diagnostic models of personality pathology in relation to the severity of functional impairments. The IPO-Br has proved to be a useful, valid and reliable measurement model for estimating the severity of personality pathology.

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CONTRIBUTIONS
Liége Barbieri Silveira contributed to the study design, data collection, data analysis and interpretation and, writing. **Sérgio Eduardo Silva de Oliveira** and **Denise Ruschel Bandeira** collaborated with the study design, data interpretation, writing and review.

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