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Psychological Evaluation

Validity evidence of the Brazilian version of the Young-Rygh Avoidance Inventory (YRAI) for the population of Rio Grande do Sul

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Abstract

This study examines the factorial structure, internal consistency, and convergent validity of the Young-Rygh Avoidance Inventory (YRAI). Five hundred and four adults from the state of Rio Grande do Sul participated, with an average age of 34.2 (SD = 12.9), who completed the Young Scheme Questionnaire (YSQ-S3), the Symptom Assessment Scale (SCL-90-R), and YRAI, through an online platform. An exploratory factor analysis was made to verify the distribution of items in common factors and convergent analysis with Spearman's non-parametric correlation to verify associations with psychopathological symptoms (SCL-90-R) and schemes (YSQ-S3). Three factors were found: Somatization and Search for Stimulation (α = 0,84), Cognitive Avoidance (α = 0,78), and Emotional Withdrawal (α = 0,62), with an omega value between 0,75 and 0,87. It was concluded that the Brazilian version of YRAI has appropriate psychometric properties, being valid for the concerned population. In addition, the interpretation of the construct validity was consistent with the theory.
Keywords: avoidance inventory; evidence of validity; coping styles; schema therapy; psychometrics.

EVIDÊNCIAS DE VALIDADE DO INVENTÁRIO DE EVITAÇÃO DE YOUNG-RYGH (YRAI) PARA A POPULAÇÃO DO RIO GRANDE DO SUL

Resumo

Este estudo examina a estrutura fatorial, consistência interna e a validade convergente do Inventário de Evitação de Young-Rygh (YRAI). Participaram 504 adultos do estado do Rio Grande do Sul, com média de idade de 34,2 anos (DP = 12,9), que preencheram o Questionário de Esquemas de Young (YSQ-S3), a Escala de Avaliação dos Sintomas (SCL-90-R) e o YRAI, através de uma plataforma *online*. Realizaram--se a análise fatorial exploratória para verificar a distribuição dos itens em fatores comuns e a análise convergente com correlação não paramétrica de Spearman para verificar associações com sintomas psicopatológicos (SCL-90-R) e esquemas (YSQ--S3). Três fatores foram interpretados: Somatização e Busca por Estimulação (α = 0,84), Evitação Cognitiva (α = 0,78) e Retraimento Emocional (α = 0,62), com valor de ômega entre 0,75 e 0,87. Concluiu-se que a versão brasileira do YRAI possui pro-priedades psicométricas adequadas, sendo válida para a população em questão. Além disso, a interpretação da validade de constructo mostrou-se condizente com a teoria.
Palavras-chave: inventário de evitação; evidências de validade; estilos de enfren-tamento; terapia do esquema; psicometria.

EVIDENCIA DE VALIDEZ DE LA VERSIÓN BRASILEÑA DEL INVENTARIO DE EVASIÓN DE YOUNG-RYGH (YRAI) PARA LA POBLACIÓN DE RIO GRANDE DO SUL

Resumen

Este estudio examina la estructura factorial, consistencia interna y validez convergente del Inventario de Evitación de Young-Rygh (YRAI). Participaron 504 adultos de Rio Grande do Sul con edad media de 34,2 años (DE = 12,9), que completaron el Cuestionario de Esquemas de Young (YSQ-S3), Escala de Evaluación de Síntomas (SCL-90-R) y YRAI, por una plataforma *online*. El análisis factorial exploratorio se realizó para verificar la distribución de ítems en factores comunes. El análisis convergente con la correlación no paramétrica de Spearman para verificar las asociaciones con los síntomas (SCL-90-R) y esquemas psicopatológicos (YSQ-S3). Se encontraron tres factores: Somatización y Búsqueda de Estimulación (α = 0,84), Evitación Cognitiva (α = 0,78) y Retracción Emocional (α = 0,62). Com un valor omega entre 0,75 y 0,87. Se concluyó que la versión brasileña de YRAI tiene adecuadas propiedades psicométricas, siendo válida para esta población. Además, la validez de constructo fue consistente con la teoría.

Palabras-clave: inventario de evitación; evidencia de validez; estilos de afrontamiento; terapia de esquema; psicometría.

1. Introduction

The Schema Therapy (ST), developed by Jeffrey Young, proposes a therapeutic approach focused on identifying and treating Early Maladaptive Schemas (EMSs). These EMSs can be understood as mental structures formed by memories, thought patterns, emotions, and bodily sensations. These schemas develop from the combination of temperament, deprivation of fundamental basic needs, and harmful experiences from childhood and adolescence. They function as stable and long-lasting structures, which can influence a distorted interpretation of reality and, consequently, how the individual relates to the world. Thus, the activation of a schema in different situations of life can cause great emotional discomfort. In the face of this suffering, emotional techniques focused on the therapeutic relationship and the identification and change of schematic activations can be used (Young, Klosko & Weishaar, 2008; Wainer, Paim, Erdos, & Andriola 2016).

In response to schematic activations, individuals tend to develop different Dysfunctional Coping Strategies (DCSs). These are behavioral strategies, which can

also be cognitive and emotional, aim to deviate the individual from experiencing the painful emotions generated by the activation of the schema, thus providing a healthy and adapted survival to reality. These coping strategies were developed primarily in the childhood environment and may have been functional in some specific contexts. However, as the individuals' natural tendency is to perpetuate learned behaviors, these strategies can be used again in the adult context, in a generalized and dysfunctional way. Thus, although DCSs can cause momentary relief from the painful experience as the individual moves away from schematic activation, they cannot satisfy the deprivation of basic needs and often end up perpetuating the activation of the schema (Young et al., 2008; Can Gök, 2012).

There are three general ways that DCSs manifest themselves, which correspond to the basic responses that living organisms have when they are in danger: Schema Surrender (paralyze), Schema Avoidance (escape), and Schema Overcompensation (fight). In the Schema Surrender strategy or Maintenance, the individual tends to accept the schema as true and behave to validate and reinforce the schema. In the Compensation strategy, or Schema Overcompensation, the individual may fight against the schema's characteristics, that is, thinking, feeling, and behaving as if the opposite end of the schema was true. In the Schema Avoidance strategy, the individual usually looks for ways to avoid the situations that activate the schema. In these three forms of coping, as they are maladaptive, the schema is reinforced and perpetuated (Young et al., 2008; Rijo, 2009; Wainer et al., 2016).

In the Avoidance strategy, when there is a schematic activation, the individual seeks to disconnect from any stimulus, trying to repel the emotions, cognitions, and mental images related to the schema. There are three ways of expressing Avoidance strategies: cognitive, when the individual has the intention of not thinking about the problem; affective, when the individual moves away from the possibility of experiencing emotions; and behavioral, when the individual moves away from situations that may become activators of the EMS. These expression forms can occur simultaneously (Young et al., 2008; Wainer et al., 2016).

Avoidance DCS usually involves behaviors that distract the individual from reality, such as binge eating and drinking, doing drugs, having sex, or shopping compulsively. Depending on the intensity of the schema activation and the use frequency of the avoidance strategies, the individual may have difficulties and

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4
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losses in social interaction and intimate relationships, as well as fear of being involved in relationships that can awaken feelings of vulnerability, which leads to isolation and may result in psychological problems. The individual may also suffer losses in professional or academic activities by avoiding contact with tasks and challenges that activate the schema. (Young et al., 2008; Wainer et al., 2016; Rijo, 2009).

In the Schema Therapy Inventories and Related Materials (Young, 2014), the most common characteristics in the Avoidance DCS are grouped into four subtypes: Withdrawal from People and Excessive Autonomy, in which the individual has a tendency to face reality through social isolation, disconnecting and withdrawing, or with an exaggerated focus on independence and autonomy, living their lives away from other people; Compulsive Stimulation Seeking, the individual tends to seek stimulation through compulsive behaviors; Addictive Self Soothing, refers to the individual engaging in addictive behaviors related to the body, such as consuming alcohol, doing drugs or overeating; and Psychological Withdrawal, in which the individual seeks to deny reality by dissociating or numbing. These subtypes are the author's suggestions based on clinical observations.

Young and Rygh (1994) developed the Young-Rygh Avoidance Inventory (YRAI) to empirically investigate patient avoidance strategies. The YRAI is a self-report questionnaire, composed of 40 items, assessing the most used avoidance strategies and their intensity. Answers are objective, measured using a 6-point Likert scale. The item scores are added together and higher scores indicate a higher frequency of using schematic avoidance strategies.

In the research field, studies have been carried out to assess coping styles in the general or clinical population. Some studies, for example, have assessed the use of avoidance in a clinical population with Eating Disorders (Spranger, Waller, & Bryant-Waugh, 2001; Luck, Waller, Meyer, Ussher, & Lacey 2005), obsessive-compulsive symptoms (Tenore, Mancini, & Basile, 2018) and university students (Soleimani-Sefat et al., 2007).

Considering the lack of studies related to Avoidant Coping Styles in ST with the Brazilian population, this article aims to investigate the validity evidence of the adapted version of the Young-Rygh Avoidance Inventory (YRAI) in the population of the state of Rio Grande do Sul, Brazil. In addition, the relevance of this study is evidenced by the need for a deeper understanding of the avoidance strategies most

used in the population of Rio Grande do Sul. In order to improve the theoretical and explanatory models and improve the understanding of the construct, it is believed that the data collected and analyzed can contribute to future studies and assist in the construction of more efficient intervention techniques. It should be noted that Jeffrey Young, Ph.D. in Schema Therapy, along with the International Society of Schema Therapy (ISST), granted the research group authorization for the official adaptation of the questionnaires, ensuring exclusivity in the adaptation and distribution of the questionnaires for their use in Brazil.

2. Method

2.1 Participants

This research was carried out with an adult population, with a minimum age of 18 years old. The sample consisted of 504 subjects from the state of Rio Grande do Sul, 405 (80.6%) women and 99 (19.4%) men. The average age of the participants was 34.2 (SD = 12.9). The predominant educational level was Incomplete Higher Education (28.6%), followed by Graduate Degree (26.4%), Complete Higher Education (23%), Complete High School (8.4%), Master's (9.8%), and Doctorate (3.8%). As for the class, according to the *Critério de Classificação Econômica Brasil* (CCEB, Brazilian Economic Classification Criteria), the greatest predominance was found in the B2 class (31.6%), followed by A (27.4%), B1 (27.2%), C1 (11.4), C2 (1.9) and D–E (0.2%).

2.1 Instruments

- Socio-demographic questionnaire: A questionnaire was made to characterize the sample regarding sex, age, education, and social class, using the guidelines of the *Critério de Classificação Econômica Brasil* (CCEB) (Associação Brasileira de Empresas de Pesquisa, 2018).
- Young–Rygh Avoidance Inventory (YRAI) (Young & Rygh, 1994): The official Brazilian version of the Young-Rygh Avoidance Inventory (YRAI) was adapted for the Brazilian population in 2019 by members of a research group under guidance of the last author of this paper, Margareth da Silva Oliveira. The inventory consists of 40 items, with sentences such as: "I try not to think about things that upset me" or "I drink alcohol to calm down."

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6   doi:10.5935/1980-6906/ePTPPE13366

The items assess the frequency and intensity of the use of behavioral, cognitive, somatic, and emotional avoidance strategies. Each statement is rated on a six-point Likert scale: 1-Completely untrue about me; 2-Mostly untrue about me; 3- Slightly truer than untrue about me; 4-Moderately true about me; 5- Mostly true about me; and 6-Describes me perfectly. The items are added together to calculate the results and the maximum possible score is 240, with higher scores indicating a higher frequency of use of avoidance strategies by the individual (Young & Rygh, 1994). Previous studies have found acceptable levels of internal consistency, with a clinical population of Eating Disorders (Luck et al., 2005, Spranger et al., 2001), two factors with acceptable psychometric properties were found in the factor analysis: Behavioral/Somatic Avoidance (10 items) ($\alpha \geq 41$) and Cognitive/ Emotional Avoidance (8 items) ($\alpha \geq 0.64$) (Luck et al., 2005).

- Young Schema Questionnaire (YSQ-S3) (Young, 2005): The official Brazilian version of the YSQ-S3 was adapted by Souza, Damasceno, Ferronatto, and Oliveira (in press), by a thorough process of translation and adaptation, presenting good evidence of reliability. The questionnaire consists of 90 items. An example item is: "I feel like people are going to take advantage of me." Each sentence should be classified on a six-point Likert scale, being 1-Completely untrue about me; 2-Mostly untrue about me; 3- Slightly truer than untrue about me; 4-Moderately true about me; 5- Mostly true about me; and 6-Describes me perfectly. It is instructed that the instrument should be completed through self-report. The original scale proposes 18 subscales grouped into five schematic domains, and each subscale consists of five items. Thus, the score obtained in the subscales varies between 5 and 30 (Young, 2005). After completing the items, the subscale scores should be added, with higher scores indicating a higher frequency of schematic activation. According to Souza, Tavares et al. (in press), the subscales showed reliability, with Cronbach's alpha ranging between 0.74 and 0.94. Adequate convergent validity was verified with clinical psychological symptoms, based on the correlation between the total score of the Symptom Checklist (SCL-90) and the EMSs ($r = 0.37\text{-}0.65$) (Souza, Tavares, Machado, & Oliveira, in press).

- Symptom Checklist-90 (Derogatis & Lazarus, 1994): Adapted to Brazil by Laloni (2001), the SCL-90-R is a multidimensional scale of self-assessment

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7

to diagnose psychopathological symptoms according to 9 dimensions: Somatization, Obsessiveness-Compulsivity, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation, and Psychoticism. It has 90 items, and the individuals must answer how much they have been concerned with the listed symptoms (for example, pain in the heart or chest, repeated bad thoughts that do not leave their minds (heads), feeling easily bothered or irritated) in a 5-point Likert scale (0 = None to 4 = Very). The reliability in the Brazilian population is evidenced by Cronbach's alpha of the 9 dimensions assessed: Summation (α = 0.88); Obsessive-Compulsive (α = 0.85); Interpersonal sensitivity (α = 0.82); Depression (α =, 86); Anxiety (α = 0.86); Hostility (α = 0.79); Phobic Anxiety (α = 0.79); Paranoia (α = 0.75); and Psychoticism (α = 0.85) (Laloni, 2001).

2.3 Ethical Procedures

The Scientific and Ethics Committees approved this research of Pontifical Catholic University of Rio Grande do Sul (PUCRS), Certificado de Apresentação para Apreciação Ética (CAAE, Presentation Certificate for Ethical Appreciation) protocol number 08165219.3.0000.5336. The ethical aspects proposed by Resolution 466 of December 12th, 2012 (CNS 466/2012) were respected. All participants had access to the Informed Consent Form (ICF) and signed it.

2.4 Collection procedure

Between March and July of 2019, data collections took place through the on-line platform Qualtrics Survey Software (https://pucrs.qualtrics.com). Participants were recruited by convenience. The research was disseminated through social media. When accessing the link, participants were invited to read the ICF and were directed to the instruments to be answered in case of acceptance.

2.5 Data analysis

The collected data were analyzed with the Psych Package (Revelle, 2017) of the R environment. An exploratory factor analysis was carried out in order to determine the number of factors that best explain the set of observed variables.

For the exploratory factor analysis, a parallel analysis was performed with the parametric methods of factor retention (Monte Carlo) and permutation of the

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8
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sample values (Horn, 1965). The eigenvalues of the empirical matrix and the simulated matrices were compared. The method used to extract the factors was the minimum rank factor analysis (MRFA; Shapiro & ten Berge, 2002), with a matrix of polychoric correlations and an oblique rotation. The interpretation of the items was used as a criterion to have a factor load equal to or greater than 0.3 and adequate reliability measures.

For evidence of validity through the relationship with external variables, convergent validity was performed with a non-parametric Spearman correlation between the three factors of the YRAI and the nine dimensions of the SCL-90-R and between the factors of the YRAI and the eighteen schemas of the YSQ-S3.

3. Results

3.1 Exploratory Factor Analysis

The measure of sampling adequacy, factorability index, Kaiser-Meyer-Olkin (KMO) was 0.80, considered high, attesting the factorability of the data. Barlett's sphericity test was 5537.476, p-value < 0.001 with a degree of freedom of 0.703, showing a sufficient number of correlations between the items of the instrument. Although the original correction of the YRAI instrument is unifactorial (Young, 1994) and Young's update in 2014 contains four factors, the factorial structure of this study, presented in Figure 3.1.1, resulted in an interpretation in three factors that were named according to the theory of ST: Somatization and Stimulation Seeking, Cognitive Avoidance, and Emotional Withdrawal.

The scale showed substantial internal consistency levels for each of the three factors, the highest of which was $\alpha = 0.84$. The cut-off point for minimum saturation of the factorial loads of the items was 0.32, some items scored equally for more than one factor, and items 7 and 9 did not reach the minimum saturation and, therefore, were excluded. In relation to omega, a value of 0.87 was found for the Somatization and Stimulation Seeking factor, a value of 0.83 for Cognitive Avoidance, and a value of 0.75 for Emotional Withdrawal.

The first factor, Somatization and Stimulation Seeking, consists of 20 items (02, 03, 04, 10, 11, 12, 13, 14, 15, 16, 20, 22, 23, 25, 26, 28, 30, 36, 38, 40), with a Cronbach's alpha reliability index of 0.84, considered good. The items of this factor refer to avoidant behaviors of two types: through somatization, feeling pain,

numbness, tiredness, and low energy; and through seeking for stimulation, looking for stimulating and pleasurable activities as a form of distraction and removal from their suffering and discomfort, some examples are eating, shopping, watching television, drinking, and being busy. The most representative items of this factor were: item 26, "When I am upset, I eat to feel better"; and item 14, "I do not have as much energy as people my age" (Young, 1994, Young et al., 2008). Three items had a negative score in this factor, items 3, 4, and 40, showing contents that would be the opposite of a Summation and Stimulation Seeking, and for this reason, they should have inverted scores in the correction of the instrument.

The second factor, Cognitive Avoidance, consists of 17 items (01, 03, 04, 05, 06, 17, 18, 19, 24, 27, 28, 29, 31, 32, 34, 35, 37), with a Cronbach's alpha reliability index of 0.78, considered acceptable. This factor includes cognitive withdrawal behaviors, that is, the individual seeks not to think about situations that can trigger emotional suffering, reacting in an extremely rational way. Item 32 – "I tend not to think about losses and disappointments" – had the highest loads of this factor, followed by item 1 – "I try not to think about things that upset me." (Young, 1994, Young et al., 2008).

The third factor, Emotional Withdrawal, consists of 9 items (03, 05, 08, 21, 29, 33, 34, 35, 39), with a Cronbach's alpha reliability index of 0.62, which is considered substantial. This factor contains items related to the behaviors of withdrawing emotions, in which individuals retract emotionally, not allowing themselves to experience the feelings. The items with the highest positive charges were item 21 – "I do not recall much of my childhood" – and item 33 – "I often feel nothing, even when the situation justifies strong emotions." This factor presents three items with negative loads 3, 29, and 34, which must have inverted scores in the instrument's correction, as they relate to behaviors of recognition of emotions (Young, 1994, Young et al., 2008). In Figure 3.1.1, presented below, it is possible to observe the instrument's factorial structure with the obtained factors and the division of items.

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10   doi:10.5935/1980–6906/ePTPPE13366

Figure 3.1.1. Factorial structure of the Young–Rygh Avoidance Inventory (YRAI).

Item	Question	Somatization and Stimulation Seeking	Cognitive Avoidance	Emotional Withdrawal
26	When I am upset, I eat to feel better.	**0.63**	−0.02	−0.13
14	I do not have as much energy as people my age.	**0.60**	−0.05	0.10
38	I get physically ill when things are not going well for me.	**0.59**	0.03	−0.15
11	I feel numb.	**0.54**	0.02	0.06
15	I suffer from muscle soreness.	**0.51**	0.01	−0.07
22	I take naps or sleep a lot throughout the day.	**0.49**	−0.01	0.04
12	I often get headaches.	**0.49**	0.06	−0.07
25	I spend a lot of time daydreaming.	**0.48**	0.01	−0.11
30	I withdraw when I feel sad.	**0.47**	0.25	0.24
10	I suffer from gastrointestinal problems (e.g., poor digestion, ulcers, colitis).	**0.47**	−0.02	−0.11
20	I walk away from people when I feel hurt.	**0.46**	0.29	0.27
36	I realize I keep buying things I do not need to improve my mood.	**0.46**	−0.01	0.02
28	I feel better when I keep myself busy, not leaving too much time to think.	**0.43**	**0.32**	0.04
16	I watch a lot of TV when I am alone.	**0.42**	0.07	−0.05
02	I drink alcohol to calm down.	**0.37**	−0.01	−0.02
13	I withdraw myself when I get angry, and I become more closed.	**0.35**	0.23	0.16
23	The moments I feel the happiest are when I go shopping, walking, or eating out, or when I am traveling.	**0.34**	0.20	−0.09
40	What others think of me does not bother me.	**−0.39**	0.19	0.24
32	I tend not to think about losses and disappointments.	−0.09	**0.70**	−0.01
01	I try not to think about things that upset me.	−0.07	**0.59**	−0.06
31	People say that I am like an ostrich, with my head underground (meaning I tend to ignore unpleasant thoughts).	0.09	**0.57**	−0.05
19	When things go wrong, my philosophy is to put them aside as soon as possible and move on.	−0.06	**0.54**	−0.03
27	I try not to think of painful memories from my past.	0.26	**0.51**	−0.01
03	I feel happy most of the time.	**−0.42**	**0.49**	**−0.35**
04	I rarely feel sad or down.	**−0.47**	**0.48**	−0.28
35	I try to stay emotionally neutral most of the time.	0.00	**0.46**	**0.35**

Figure 3.1.1. Factorial structure of the Young-Rygh Avoidance Inventory (YRAI).

Item	Question	Somatization and Stimulation Seeking	Cognitive Avoidance	Emotional Withdrawal
06	I believe I should not get angry, not even at people whom I do not like.	−0.05	**0.46**	0.12
37	I try not to put myself in situations that are difficult or that make me uncomfortable.	0.16	**0.41**	−0.07
18	I cannot dislike anyone intensely.	−0.11	**0.37**	0.02
24	Staying focused on my tasks keeps me from getting upset.	0.12	**0.35**	0.01
17	I believe reason should be used to keep my emotions in check.	0.05	**0.34**	0.28
21	I do not recall much of my childhood.	0.13	0.01	**0.50**
33	I often feel nothing, even when the situation justifies strong emotions.	−0.05	0.09	**0.48**
39	When people left me or died, I did not get terribly upset.	−0.20	0.05	**0.43**
05	I value reason more than feelings.	−0.23	**0.32**	**0.41**
08	I do not feel anything special when I remember my childhood.	−0.13	0.08	**0.41**
34	I was fortunate to have such good parents.	−0.06	**0.33**	**−0.53**
29	I had an incredibly happy childhood.	−0.20	**0.35**	**−0.54**
	Number of Items	20	17	9
	Mean of the factors	3.19	3.32	2.47
	Cronbach's Alpha	0.84	0.78	0.62
	G6	0.86	0.83	0.67
	Omega	0.87	0.83	0.75
	Eigenvalue	4.69	4.07	2.33

3.2 Construct Validity

Convergent validity with two Spearman non-parametric correlation analysis was performed. The first correlation analysis, presented in the form of a heat graph in Figure 3.2.1, was between the three factors extracted from the YRAI: Somatization and Stimulation Seeking, Cognitive Avoidance, and Emotional Withdrawal; and the nine dimensions of psychopathological symptoms of the SCL-90-R: Somatization (S), Obsessiveness-Compulsivity (OC), Interpersonal Sensitivity (IS), Depression (D), Anxiety (An), Hostility (H), Phobic Anxiety (PA), Paranoid Ideation (PI), and

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12 doi:10.5935/1980-6906/ePTPPE13366

Psychoticism (P); The highest associations were concentrated on the first factor, Somatization and Stimulation Seeking, the highest of which was with the symptom of Depression (ρ = 0.62).

The second correlation analysis, presented as a heat graph in Figure 3.2.2, was performed between the three factors of the YRAI: Somatization and Stimulation Seeking; Cognitive Avoidance; and Emotional Withdrawal; and the eighteen schemas of the YSQ-S3: Emotional Deprivation (ED); Abandonment/Instability (AI); Mistrust/Abuse (MA); Social Isolation (SI); Defectiveness/Shame (DS); Failure (F); Dependence/Incompetence (DI); Vulnerability to Harm (V); Enmeshment (E); Subjugation (S); Self-Sacrifice (SS); Emotional Inhibition (EI); Unrelenting Standards (US); Arrogance/Entitlement (AE); Insufficient-Self-Control (ISC); Approval Research (AR); Negativity/Pessimism (NP); and Punitiveness (Pu). Again, the highest associations are found in the Somatization and Stimulation Seeking factor, the highest of which has the symptom of Negativity and Pessimism (ρ = 0.58).

YRAI Factors	SCL-90									
	S	OC	IS	D	AN	H	PA	PI	P	Mean SCL-90 scores
Somatization and Stimulation Seeking	0.59	0.58	0.55	0.62	0.56	0.43	0.44	0.44	0.52	0.65
Cognitive Avoidance	0.02	0.01	-0.06	-0.12	-0.04	-0.13	0.08	-0.07	-0.04	-0.05
Emotional Withdrawal	0.22	0.24	0.22	0.25	0.20	0.21	0.20	0.22	0.20	0.26

Figure 3.2.1. Heat graph of Spearman correlations between the YRAI and the SCL-90.

Label: SCL-90-R: Somatization (S), Obsessiveness-Compulsivity (OC), Interpersonal Sensitivity (IS), Depression (D), Anxiety (An), Hostility (H), Phobic Anxiety (PA), Paranoid Ideation (PI), and Psychoticism (P).

YRAI Factors	YSQ-S3																		Mean YSQ-S3 scores
	ED	AI	MA	SI	DS	F	DI	V	E	S	SS	EI	US	AE	ISC	AR	NP	Pu	
Somatization and Stimulation Seeking	0.39	0.56	0.49	0.45	0.42	0.51	0.54	0.53	0.41	0.54	0.34	0.41	0.42	0.38	0.57	0.42	0.58	0.37	0.67
Cognitive Avoidance	-0.02	-0.02	-0.06	-0.04	-0.06	-0.02	0.03	-0.08	0.04	0.03	0.18	0.15	0.07	0.09	-0.07	-0.08	-0.02	0.04	0.01
Emotional Withdrawal	0.42	0.06	0.23	0.32	0.28	0.21	0.17	0.11	-0.03	0.09	-0.04	0.38	0.18	0.15	0.08	-0.06	0.17	0.20	0.25

Figure 3.2.2. Heat graph of Spearman correlations between the YRAI and the YSQ-S3.

Label: YSQ-S3: Emotional Deprivation (ED); Abandonment/Instability (AI); Mistrust/Abuse (MA); Social Isolation (SI); Defectiveness/Shame (DS); Failure (F); Dependence/Incompetence (DI); Vulnerability to Harm (V); Enmeshment (E); Subjugation (S); Self-Sacrifice (SS); Emotional Inhibition (EI); Unrelenting Standards (US); Arrogance/Entitlement (AE); Insufficient-Self-Control (ISC); Approval Research (AR); Negativity/Pessimism (NP); and Punitiveness (Pu).

4. Discussion and Conclusions

The present study aimed to validate the Young–Rygh Avoidance Inventory (YRAI) for use in Brazil, in a specific population in the state of Rio Grande do Sul, through the verification of factor analysis internal consistency, and convergent validity. The results obtained prove that the scale has adequate psychometric properties, this means that it can be applied to the population of the state of Rio Grande do Sul. The factor analysis resulted in three factors: Somatization and Stimulation Seeking (α = 0.84) with 20 items; Cognitive Avoidance (α = 0.78) with 17 items; and Emotional Withdrawal (α = 0.62) with nine items.

Initially, Young (1994) postulated the unifactorial correction. However, in the Schema Therapy Inventories and Related Materials (Young, 2014), the author updates the grouping of the Avoidance strategy's characteristics into four subtypes: Withdrawal from People and Excessive Autonomy; Compulsive Stimulation Seeking; Addictive Self Soothing; and Psychological Withdrawal. Comparing with this study, Somatization and Stimulation Seeking can encompass the type of Addictive Self Soothing and Compulsive Stimulation Seeking, for it is related to the use of different ways to relieve emotional discomfort. Cognitive avoidance can be related to Psychological Withdrawal, as the individual denies reality by dissociating or trying not to think about situations that generate emotional suffering. And the Emotional Withdrawal factor may correspond to Withdrawal from People and Excessive Autonomy, since the individual behaves in such a way as to retract emotions and move away physically and emotionally from social situations.

Some comparisons can be made considering previous studies that have assessed the psychometric properties of the YRAI in different populations. Spranger et al. (2001) sought to clarify which avoidance strategies are most associated with bulimic symptoms in a clinical population with eating disorders. The total clinical sample was 19 female patients. Of these, 11 patients were diagnosed with Bulimia Nervosa, six patients with Anorexia Nervosa, and two patients with Binge Eating Disorder. As for the YRAI avoidance factors, four of which were initially extracted: cognitive, behavioral, somatic, and emotional. Reliability tests (Cronbach's alpha) showed that higher levels of consistency would be found in the combination of Cognitive and Emotional factors in a single factor, as well as Behavioral and Somatic factors. The Cognitive/Emotional (CE) factor (α = 0.78) was composed of 18 items (1, 5, 6, 8, 13, 17, 18, 19, 20, 21, 24, 27, 30, 31, 32 , 33, 35, 39), and the Behavioral/

Somatic (BS) factor (α = 0.65) was composed of 13 items (2, 7, 9, 10, 11, 12, 14, 15, 16, 26, 28, 36, 37). The internal consistency for these factors was acceptable, total scale α = 0.79, with good concurrent validity levels, but it has some limitations such as the low number of participants and an arbitrary grouping of factors.

A more robust study was developed by Luck et al. (2005), with a sample of 121 women with Eating Disorders and a non-clinical sample of 337 women. The factor analysis of the YRAI identified two factors with acceptable psychometric properties: Behavioral/Somatic Avoidance (BS) (10 items: 3, 4, 11, 13, 14, 15, 20, 25, 30, 38) (α ≥ 0.41) when the individual benefits from somatic behaviors and strategies in order to block the affective experience; and Cognitive/Emotional Avoidance (CE) (8 items: 1, 5, 15, 17, 19, 27, 32, 35) (α ≥ 0.64) when the individual benefits from cognitive techniques and emotional strategies to block the awareness of affection. Both factors present moderate internal consistency levels for the sample of participants with and without eating disorders, with Cronbach's alpha from 0.41 to 0.74, emphasizing that the Behavioral/Somatic Avoidance factor shows differences between those with and without food disorders, distinguishing diagnostic subgroups.

The present study's findings are partially consistent with the analysis by Luck et al. (2005). Although the division of factors is not exactly the same, the two factors are similar. It should be noted that the items on the scale that make up the Behavioral/Somatic Avoidance (BS) factor are contained in the items of the Somatization and Stimulation Seeking factor of this study and the items of the Cognitive/Emotional (CE) Avoidance factor are contained in the factor Cognitive Avoidance of this study. The third factor of the present study, Emotional Withdrawal, contains items that did not reach factor loads greater than 0.4 in the study by Luck et al. (2005). These divergences can be justified by cultural differences between countries and languages and by the sample's specific characteristics, since the sample of this article concerns the general population of Rio Grande do Sul, while the study by Luck et al. (2005) uses the clinical population.

The Persian version of the YRAI investigated the psychometric properties of a non-clinical population of university students in Iran. The factor analysis extracted eight factors: Withdrawal from people, Substance abuse, Denial of unhappiness, Excessive rationality and control, Passive blocking of upsetting emotions, Psychotic symptoms, Distraction through activity, and Denial of memories (Soleimani-Sefat et al., 2007).

Tenore, Mancini, and Basile (2018) investigated coping strategies in 200 participants with obsessive-compulsive symptoms in Italy. As a result, the YRAI presented acceptable internal consistency (α = 0.84), divided between three factors: Intrapsychic, with denial of memories, excessive rationalization, and control; Behavioral, such as substance abuse, distraction from activities, and avoidance of unpleasant situations; and Dissociative, passively blocking emotions, getting distracted by fantasies, or television.

The objective of this study was to investigate the validity evidence of the Brazilian version of the YRAI in a sample from the state of Rio Grande do Sul, but it is questioned whether the results would be similar to the studies presented if the samples used were from a clinical population or from other locations.

A convergent validity performed the evidence of construct validation with Spearman's non-parametric correlation. The associations found are supported by the theory, indicating an adequate construct validity for the YRAI. The first correlation analysis, presented as a heat graph in Figure 3.2.1, was between the three factors extracted from the YRAI and the nine dimensions of psychopathological symptoms of SCL-90-R. The second analysis shows associations between the YRAI factors and the eighteen EMSs of the YSQ-S3, illustrated in the form of a heat graph in Figure 3.2.2.

About the correlations between the YRAI and the SCL-90-R, the Somatization and Stimulation Seeking factor was the one that obtained associations with higher values, the highest of which with the symptom of Depression (ρ = 0.62) and Somatization (ρ = 0.58). This correlation may have occurred considering that the individual seeks immediate relief from unpleasant sensations not only from depression symptoms, such as withdrawal and low motivation, but also from physical disorders arising from a perception of bodily dysfunction, usually in the cardiovascular, gastrointestinal, and respiratory systems. Thus, the individual uses the avoidance strategy to face these symptoms and to seek relief from discomfort (Laloni, 2001; Young et al., 2008).

The Somatization and Stimulation Seeking factor also showed high associations with Negativity/Pessimism (NP) schemas (ρ = 0.58). This may have occurred because when this schema is activated, individuals tend to have a catastrophic view of reality and often use escape as a way to face these constant concerns about the future and about themselves. The Insufficient-Self-Control

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doi:10.5935/1980-6906/ePTPPE13366   **17**

(ISC) schema ($\rho = 0.57$) was also correlated to the avoidance strategy. In this schema, individuals may have difficulties in controlling impulses and postponing gratifications. Thus, they may seek relief and immediate pleasures. The association with the Abandonment/Instability (AI) schema ($\rho = 0.56$) may have occurred because individuals avoided getting involved in relationships due to fear of abandonment and the constant concern that important people would leave them, tending to seek relief from suffering and to avoid physical symptoms characteristic of anxiety (Laloni, 2001; Young, et al., 2008).

The other factors of the YRAI obtained lower and sometimes negative associations. In the Cognitive Avoidance factor, the highest negative values were with Hostility (H) ($\rho = -0.13$) and Depression (D) ($\rho = -0.12$), showing a distancing from emotional activations through the rational processing of facts. These negative correlation results may indicate that the more individuals use cognitive avoidance strategies, the lower their depression and hostility symptoms. Associations were also low with the Self-Sacrifice (SS) ($\rho = 0.18$) and Emotional Inhibition (EI) schema ($\rho = 0.15$). In the Self-Sacrifice schema, individuals can cognitively move away from their own problems by worrying about solving others' problems, and, in the Emotional Inhibition schema, they often seek to use more rational thinking of facts to avoid feelings. This can be explained from the ST, which refers to the use of the rationalization of thoughts, emotions, and facts to get away from the emotional pain *per se*.

The Emotional Withdrawal factor also showed low associations with psychopathological symptoms, the highest being with Depression (D) ($\rho = 0.25$), in order to retract negative emotions and lack of motivation. When this factor was associated with the schemas, the greatest associations were with Emotional Deprivation (ED) ($\rho = 0.42$), when individuals tend to believe that the needs for affection and care will not be met, therefore the most effective coping strategy logic may be to withdraw from emotions by the belief that their feelings will never be adequately matched, and with Emotional Inhibition (EI) ($\rho = 0.38$) when individuals usually have difficulties in expressing their emotions spontaneously and naturally, some of the most common are as sadness and hostility, which meet the symptoms of depression mentioned above. Although weak, these associations are consistent with the ST theory, reflecting characteristics common to the constructs (Laloni, 2001; Young et al., 2008).

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18   doi:10.5935/1980-6906/ePTPPE13366

It is concluded, based on the results, that the adapted version of the Young-Rygh Avoidance Inventory (YRAI) has adequate psychometric properties for the population of the state of Rio Grande do Sul. It is known that the evidence of instrument validation must be supported by empirical scientific research to make sure that the interpretations about the psychological characteristics of individuals, suggested in score assessment, are legitimate. For this reason, the validity evidence process becomes important, combining effectiveness in assessing what it intends to assess and offering a technical and ethical resource for professional practices (Primi, Muniz & Nunes, 2009).

This is the first study, with authorization from ISST, which aims to seek validity evidence of the YRAI in Portuguese to be used in the population of the state of Rio Grande do Sul. Therefore, it is of fundamental importance for therapists and the academic community, as well as for the clinical population, since it can be used as an instrument for the assessment and identification of avoiding behaviors. The data found make it possible to enrich the research and the theory of ST and to provide an adequate and reliable instrument in relation to the evaluation of the Avoidant coping style.

It is important to note that the present study also has methodological limitations, such as the sample being predominantly composed of female university students. If there was a greater balance in the proportion between men and women, it is questioned whether there would be different results, indicating other associations between the YRAI factors and psychopathological schemas or symptoms. In addition, it is recommended to carry out future studies with specific clinical populations, such as patients with Obsessive Compulsive Disorder, Eating Disorders, or Abuse of Psychoactive Substances, as well as with the general population of other regions of the country, in order to refine the understanding of the Avoidance DCS in ST.

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22
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