

Validation of the Mexican version of the Weinberger Adjustment Inventory (WAI)

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SUMMARY

Introduction

The inability to control emotional outbursts and the excessive inhibition of emotions are associated with a variety of personal and interpersonal problems, psychological disorders, and states of health. Weinberger developed an inventory to assess two central aspects of socio-emotional adjustment: the subjective experience of distress and restraint. As the inventory was in English, we decided to translate it into Spanish and validate it in a population of Spanish-speaking Mexicans.

Method

The revised Spanish WAI was applied to 452 participants using the same Likert scale used in the English WAI, in which each answer was given a score out of five points. The participants were adults (over 18 years) of either gender, with at least a high school level of education.

Results

After analyzing the discriminatory power of the questions by the method of extreme groups and factorial analysis by the principal components method, the Spanish WAI was composed of 44 items, which were divided into four factors: 1. Self-control, consisting of a total of 19 questions, which explained 18.68% of the variance, 2. Subjective experience of distress, consisting of 12 questions, which accounted for 10.84% of the variance, 3. Defensiveness, consisting of seven questions that explained 7.10% of the variance, and 4. Consideration of others, which grouped together six questions that explained 6.54% of the variance. Finally, we assessed the reliability of the questionnaire using Cronbach's alpha as follows: Self-control 0.89, Subjective experience of distress 0.84, Defensiveness 0.69, and Consideration of others 0.74.

Conclusions

Weinberger's Inventory is a useful instrument to assess self-control as an important aspect of individuals' emotional distress, and to measure the magnitude of restraint in a population, thus allowing preventive and therapeutic actions in cases that merit it.

Key words: Spanish validation, Weinberger inventory, distress, emotional restraint, socio-emotional adjustment, Spanish-speaking.

RESUMEN

Introducción

La incapacidad para aprender a regular los arranques emocionales y la inhibición excesiva de emociones se asocian con una gran variedad de problemáticas personales e interpersonales, así como con alteraciones psicológicas y de salud. Weinberger desarrolló un inventario que evalúa dos aspectos centrales del ajuste socioemocional: la experiencia subjetiva de distrés y la contención emocional. El inventario sólo existía en inglés, por lo que resolvimos traducirlo al español y validarlo en una población de hispanoparlantes mexicanos.

Método

El cuestionario traducido y revisado se aplicó a 452 participantes, respetando la escala Likert del cuestionario original de cinco puntos. Los participantes fueron personas adultas (mayores de 18 años) sin distinción de sexo que tenían un nivel de escolaridad mínimo de secundaria.

Resultados

Tras el análisis de la capacidad discriminatoria de los reactivos por el método de grupos extremos y el análisis factorial por el método de componentes principales, el cuestionario quedó conformado por 44 reactivos, agrupados en cuatro factores: 1. *Dominio de sí mismo* con un total de 19 preguntas que explicaron 18.68% de la varianza, 2. *Experiencia subjetiva de distrés*, compuesto por 12 preguntas que explicaron 10.84% de la varianza, 3. *Defensividad*, el cual constó de siete preguntas que explicaron 7.10% de la varianza y 4. *Consideración hacia los demás*, que agrupó seis preguntas que explicaron 6.54% de la varianza. Finalmente, se evaluó la confiabilidad del cuestionario utilizando el alpha de Cronbach, y quedó como sigue: Dominio de sí mismo 0.89, Experiencia subjetiva de distrés 0.84, Defensividad 0.69 y Consideración hacia los demás 0.74.

Conclusiones

El Inventario de Weinberger es una herramienta útil para evaluar el ajuste socioemocional, así como para determinar la magnitud de la inhibición emocional en una población, abordar su prevención e instrumentar acciones para la atención de los casos que lo ameriten.

Palabras clave: Validación, inventario de Weinberger, distrés, contención emocional, ajuste socioemocional, propiedades psicométricas, hispanoparlantes.

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INTRODUCTION

From the first few months of age, babies express their emotional reactions to those around them. Later, they learn that such displays have interpersonal costs as well as advantages. Gradually, they begin to hide their emotions from other people to varying degrees, and start to use cognitive strategies that alter their behavior.¹⁻⁶ As such, in adult age there is little correlation between the experience of emotion and its expression.⁷ In fact, as individuals have to grow more and more interactions outside the family, the need to modify emotional impulses and behavior becomes a fundamental requirement of maturity and effective human functioning.⁸

It is not surprising that incapacity for understanding and regulating emotional outbursts and excessive inhibition of emotions predicts a wide variety of problems throughout one's life, such as interpersonal difficulties, and psychological and health problems,⁹⁻¹² while well-adapted people or those with healthy parameters for emotional control have little subjective distress and high levels of spontaneity, assertiveness, and free expression.^{13,14} For example, abnormal levels of distress and contentment are related to various problems including criminal behaviors, post-traumatic stress disorder among criminals, and alcohol abuse among university students.¹⁵

The instruments that use standard measurements of anxiety, depression, or rage assume that a report of low levels is optimum. However, it is often not possible to detect emotional contentment with indirect measures.¹⁶ In laboratory studies, it has been seen that although they may report very low levels of subjective distress, people who contain their emotions exhibit reaction levels to stress that are equal to or greater than those who admit to experiencing considerable distress.¹³ Although people who contain their emotions say they do not experience emotions, the changes in their cardiac rhythm, blood pressure, muscle tension, sweat gland activity, facial expression, paralinguistic speech patterns, and reaction times suggest that they are exhibiting a more elevated reactivity than those individuals who do not contain their emotions.¹⁷⁻¹⁹ Furthermore, emotional inhibition is also implicated in the exacerbation of a variety of health problems, including asthma, cancer, hypertension, and poor functioning of the immune system.^{13,20} As such, it has been concluded that from the point of view of healthy behavior, it is not necessarily ideal for a person to inhibit their emotions. However, the nature of the structure and organization of a person who inhibits their emotions is limited.^{21,22} This is due to results having been accumulated in an isolated manner (i.e., depression, impulsivity, assertiveness), without taking into account how these attributes increase the probability of pathogenic or immunogenic behaviors.²³⁻²⁷

Weinberger²⁷ employed a comprehensive perspective to develop an inventory that assesses socioemotional ad-

justment, which has two dimensions: a) The affective dimension or subjective experience of distress, which provides a general measure of individuals' tendencies to feel unsatisfied with themselves. In this way, predisposition to anxiety or depression, low self-esteem, and low wellbeing are operationally defined as subtypes of distress. b) The second dimension measures containment (as in, self-restraint) and encompasses socioemotional variables related to socialization and self-control. It is about the suppression of egoistic desires in the short term for the interests of others in the long term. As such, containment is superimposed²⁵ onto tendencies to inhibit aggressive conduct to control impulses, act in a responsible manner, and be considerate of others.

Distress and containment can also be found within the context of the "Big Five" factors of personality,^{26,27} and the three model factors of Eysenck and Tellegen.^{24,28} Furthermore, although they differ considerably in the details, the conceptualization of distress and containment as two wide and relatively stable dimensions of adjustment are parallel with the construction of ego-resilience and ego-control.²⁹

In this sense, the Weinberger Adjustment Inventory (WAI)^{13,28,30,31} is a good instrument for measuring socioemotional adjustment, as well as the personality dimensions and subdimensions in an efficient and reliable manner. It consists of 84 reactivities and is made up of three factors: Distress (anxiety, depression, low self-esteem, and low wellbeing), Containment (repression of aggression, impulse control, consideration for others, and responsibility), and Defensiveness (defensive attitude, denial of distress). The factorial structure of distress and containment scales are retained from early adolescence through to old age, both in clinical cases as well as in normal people.^{14,32-35} The three scales have demonstrated internal consistency above 0.85 in various samples, and a reliability above 0.7 through the test-retest in a sample of early adolescents, once, and then seven months later. Furthermore, on comparison with the six other instruments that measure repression, this has been the questionnaire with best psychometric properties of the existing instruments for socioemotional adjustment (the Byre scale for Repression and Sensitivity, the Weinberger Scale for Repressive Coping, the Miller Scale for Monitoring and Blunting, the Self-Deceit Questionnaire by Sackeim and Gur, and the Paulus Self-Deceit Questionnaire).³⁶

The relationship between diminished emotional expressiveness and certain conditions such as cancer has been demonstrated with the use of this instrument. For example, repression (low anxiety and high defensiveness) and suppression (deliberate retention of expressing negative emotions) are associated with the faster progression of breast cancer and with a shorter life expectancy.³⁷ In fact, suppression and repression have been considered as

psychological variables that notably affect psychosocial adjustment in people with cancer, being predictors in the incidence³⁸ and prognosis of faster progression of breast cancer.³⁹

Because of all the virtues and characteristics of the WAI, the object of the present study is to translate it to Spanish and validate it in a sample of Mexican adults.

MATERIAL AND METHOD

Participants

A sample of 452 subjects was studied, of which 182 were male, 265 were female, and five did not specify a gender. Their ages ranged between 18 and 70 years (mean 27.93, SD 11.03). All participants lived in the cities of Xalapa or Veracruz, and had a middle or lower middle socioeconomic level. In terms of education, 70% had secondary or high school education and 30% had higher education. The number of participants was chosen to meet the criterion of at least five subjects for each reactive on the original questionnaire.^{40,41}

The criteria for inclusion were: 1. Adults (over 18 years old), 2. A minimum secondary level of education, and 3. Voluntary and informed participation.

The participants were contacted either in their places of work or in their homes by means of personal networks. Their participation was requested, clarifying that the questionnaire was anonymous and that the results would only be used for this investigation. When a person agreed to participate, a place and time was agreed to complete the questionnaire. Some 90% of the people who were requested to participate agreed to answer the questionnaire.

Instrument

The Weinberger Adjustment Inventory assesses general capacity for socioemotional adjustment. It consists of 84 reactives assessed on a Likert scale of five points. In the first part of the questionnaire (reactives 1 through 45) the options on the scale are: 1. False, 2. More or less false, 3. I'm not sure, 4. More or less true, and 5. True. In the second part (reactives 46 through 84), the options are: 1. Never or almost never, 2. Rarely, 3. Sometimes, 4. Frequently, and 5. Always or almost always.

It is made up of three factors: 1. Distress (divided into subscales of Anxiety, Depression, Low self-esteem, and Low-wellbeing); 2. Containment or Self-control (divided into subscales of Suppressing aggression, Impulse control, Consideration of others, and Responsibility); and 3. Defensiveness (divided into subscales of Repression-defensiveness, and Denial of distress).

Procedure

The original questionnaire was translated into Spanish and then again back into English in order to compare its correspondence with the original. Five experts in the subject were then asked to assess the drafting of the instrument to ensure that all reactives were understood. Later, a pilot study was conducted with 10 people who were asked to respond to all the questions, and at the end, comment on any that seemed confusing or difficult to understand. Some modifications were made as a consequence, and another pilot study was then conducted with 15 participants who all advised that they had understood the reactives well.

The revised questionnaire was applied to the 452 participants in the months of January and February 2012, respecting the Likert scale of the original such that each reactive was given a score of 1 to 5. The surveyor clarified that there were no correct or incorrect answers.

RESULTS

An analysis was made of the discriminatory capacity of the reactives by means of the extreme groups approach, comparing the total scores of 27% of the subjects with those of the 27% highest scores and the 27% lowest scores.⁴⁰ The Student's *t* test for independent samples was used and 22 reactives were eliminated for not reaching the level of statistical significance ($p < 0.05$).

A factorial analysis was then performed by means of the principal components with varimax rotation method. Four factors were extracted having eigenvalues greater than one. The assigning of values to each factor was done based on two criteria: that the reactive was conceptually related to the factor considered, and that it had a factorial weight greater than 0.35 in the corresponding factor. Some 18 factors that did not meet either of the aforementioned criteria were eliminated. In this way, the questionnaire was made up of 44 reactives. The four factors extracted explain 43.17% of the total variance. The first factor brought together a total of 19 reactives that explained 18.68% of the variance; these reactives refer to the degree of containment or self-control, and it is therefore called *Self-control*. The second factor was made up of 12 reactives that explain 10.84% of the variance, and refer to the emotional dimension of the perception of emotional distress; it is therefore called *Subjective experience of distress*. The third factor consists of seven reactives which explain 7.10% of the variance; these reactives refer to defensive attitude and are called *Defensiveness*. Finally, the fourth factor groups together six reactives that explain 6.54% of the variance, and indicate the degree of worry or consideration for others. It is therefore called *Consideration of others*. The first three factors were given the same names as in the original in-

Table 1. Factorial structure of the Weinberger Adjustment Inventory

Reactive	Factorial weight			
	Factor I	Factor II	Factor III	Factor IV
r66 If someone does something I really don't like, I shout and tell them off.	.654			
r68 When I am angry, I lose control and I let people notice.	.602			
r73 I offend people I don't like.	.640			
r80 Ofendo a las personas que me molestan.	.725			
r84 When someone provokes me, I respond to the provocation.	.634			
r48 I do things without paying much attention.	.543			
r54 I "go crazy" and do things that other people may not like.	.700			
r57 When I do something for fun (like partying, acting foolishly), I tend to take it to excess.	.626			
r63 I like doing new and different things, even though most people would consider them strange or not very safe.	.374			
r71 I do things that I know are not quite right.	.607			
r20 I do more illegal things than most people.	.603			
r49 When I get the chance, I take what I want, even though it doesn't belong to me.	.634			
r55 I do things that are unfair to people I don't care about.	.725			
r56 I cheat when I know nobody will realize.	.625			
r60 I break laws and rules I don't agree with.	.658			
r72 I say the first thing that comes into my mind without stopping to think.	.528			
r76 If people do things without asking me to join them, I feel rejected.	.448			
r50 If someone tries to hurt me, I make sure I get even.	.683			
r53 I feel so moody that I just stop and do nothing.	-.505			
r42 I often feel sad or miserable.		.575		
r69 I feel so downhearted and unhappy that nothing makes me feel better.		.464		
r09 I feel insecure in myself.		.472		
r21 In reality, I dislike myself.		.568		
r27 I sometimes feel so bad about myself that I would like to be someone else.		.532		
r44 I generally feel like I am the kind of person I want to be.		.673		
r01 I enjoy most of the things I do in the week.		.541		
r07 It doesn't matter what I am doing, I usually have a good time.		.575		
r15 I generally consider myself a happy person.		.687		
r22 I generally have a good time when I do things with other people.		.434		
r28 I am the type of person who smiles and laughs a lot.		.552		
r34 I am the type of person who has a lot of fun.		.694		
r12 I remember a time when I was so angry at somebody that I had the urge to hurt them.			.416	
r16 I have done things that are not right and regretted it afterwards.			.600	
r29 From time to time, I say bad things about people behind their backs.			.532	
r30 From time to time, I break promises I have made.			.588	
r39 There are times when I don't let people find out that I have done something wrong.			.387	
r37 There are times when I don't finish things because I waste a lot of time.			.519	
r02 Sometimes I intend to do something but end up doing something else.			.586	
r79 I stop to think about things before I act.				.648
r47 I think about other people before I do something they won't like.				.611
r51 I enjoy doing things for others, even if I don't get anything in return.				.477
r59 I make sure that doing what I want won't cause problems for those around me.				.541
r65 Before I do something, I think whether it will affect those around me.				.655
r77 I work hard not to hurt other people's feelings.				.709

strument. However, the fourth factor has reactivities which were grouped within the subscale of the same name in the original English version of the instrument (Consideration of others) which belonged to the Self-control factor. Table 1 shows the 44 reactivities of the final questionnaire, as well as their factorial weight.

Finally, in order to assess the reliability of the questionnaire, Cronbach's alpha coefficient was obtained for each one of the factors, as well as for the scale in general. The results showed a satisfactory internal consistency and are shown in Table 2.

CONCLUSIONS

Weinberger's Inventory is a tool that assesses two central aspects of socioemotional adjustment. The first is the dimension of the subjective experience of distress, which provides a general measure of individuals' tendencies to feel unsatisfied with themselves and their capacity to achieve desired results. The second is the dimension of containment (i.e., self-control), which includes socioemotional variables related to socialization and self-control, and refers to the suppression of egoistic desires in the short term in favor of the interests of others in the long term.²⁷ Furthermore, although they differ considerably in the detail, the conceptualization of distress and containment as broad and relatively stable dimensions of adjustment is parallel to the construction of ego-resilience and ego-control.⁴¹

In this sense, the inventory is a good instrument to measure socioemotional adjustment and the dimensions (and subdimensions) of the personality in an efficient and reliable manner, given that the factorial structure of the scales of distress and containment are comparable in pre-adolescence and old age in both clinical and normal populations.

The results obtained show that it maintains its characteristics of internal consistency with a factorial structure that is conceptually congruent. Furthermore, the reduction of the reactivities to 44 make the inventory more manageable in its application.

The factorial structure of the Weinberger Inventory was made up similarly to the original factors. However,

the subdimension Consideration for others, which formed part of the factor Self-control in the original, made up a fourth factor in the Spanish version. The reactivities in this factor were "I think of others before I do something they would not like (r47)", "I enjoy doing things for others, even if I don't get anything in return (r51)", "I make sure that doing what I want won't cause problems for anybody (r59)", "Before doing something, I think whether it will affect those around me (r65)", "I work hard not to hurt other people's feelings (r77)", and "I stop to think about things before I act (r79)". This seems to be an indicator of important cultural differences in the Mexican population, although other base elements are not ruled out. For example, Weinberger suggests that self-control covers four elements which are guided by intrapersonal (impulse control), interpersonal (suppression of aggression and consideration of others), and common (responsibility) goals, and they have been validated as a single factor. However, Farrel and Sullivan⁴⁰ suggest that the subscale Consideration of others should not be included within self-control or containment. This is because, in accordance with typology of personality, while impulse control and responsibility reflect self-control or morality, consideration of others is associated with kindness. In fact, these and other authors have re-examined the factorial structure of this subscale and have found differences such as those that are shown here.^{40,42}

Furthermore, the reactive "I feel so moody that I just stop and do nothing (r53)", located in the factor Self-control, was previously in Subjective experience of distress. This variation could be a product of cultural differences with respect to how emotions are perceived and acted upon.

In terms of the possible usefulness of this questionnaire, now that it has been previously shown that Weinberger's Inventory is a useful research tool in the areas of social psychology, mental health, and public health, it now allows for an assessment of emotional inhibition as an important aspect of emotional discomfort in individuals. Furthermore, its use has allowed the magnitude of the problem to be determined in various populations, as well as the approach to carry out prevention and treatment actions. Because of the above, the translation and validation of this instrument in the Mexican population will open up the field of research in this and other Spanish-speaking populations, and allow comparisons between populations. Finally, the questionnaire in Spanish has been substantially reduced in terms of the number of reactivities, making its application and analysis easier and allowing the application of other instruments that broaden or confirm its usefulness.

Table 2. Internal consistency indexes of the Weinberger Adjustment Inventory

	Number of reactivities	Alfa
Factor I. Self-control	12	.89
Factor II. Subjective experience of distress	19	.84
Factor III. Defensiveness	7	.69
Factor IV. Consideration of others	6	.74
Total questionnaire	44	.78

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