



PSYCHOMETRIC PROPERTIES OF THE SOCIAL DEFEAT SCALE IN THE COLOMBIAN POPULATION

Erika Yohanna Bedoya-Cardona¹
Yanet Quijada²
Cesar Alveiro Montoya-Agudelo³
Camilo Andrés Garzón-Correa⁴

ABSTRACT

Theoretical Framework: Social defeat is the feeling of breaking a status or goals, due to loss or difficulty in reaching resources, humiliation or social attack, self-criticism, unfavorable social comparison and unrealistic expectations, related to psychopathology and suicidality.

Objective and Method: The aim of the study was to evaluate the psychometric properties of the Social Defeat Scale in 412 Colombian adults. To explore the discriminant validity, the Social Well-being Scale was used, and to explore the convergent validity, the Okasha Suicidality Scale was used.

Results and Discussion: The exploratory factor analysis showed a two-dimensional structure, both factors presented good internal consistency. Confirmatory factor analysis found good fit indicators for the unifactorial model. Convergent validity was found with suicidality and discriminant validity with social welfare. The Colombian version of the Social Defeat Scale is valid for evaluating social defeat, a relevant concept in Colombia given the high rates of social disadvantage and mental health problems in its population.

Implications: Having an instrument that evaluates social defeat adapted to the Colombian context contributes to detecting mediating variables between the complex social scenario of the country and mental health, to the development of preventive and intervention strategies based on evidence, considering psychosocial aspects poorly integrated into current public health policies.

Originality/Value: Currently, the scale only exists in an English version, in Brazilian Portuguese and in Spanish, validated in the Chilean population.

Keywords: Social defeat, Social comparison, Submission, Suicide, Social Well-Being.

PROPRIEDADES PSICOMÉTRICAS DA ESCALA DE DERROTA SOCIAL NA POPULAÇÃO COLOMBIANA

RESUMO

Estrutura Teórica: A derrota social é o sentimento de ruptura de um status ou de objetivos, por perda ou dificuldade de obtenção de recursos, humilhação ou ataque social, autocrítica, comparação social desfavorável e expectativas irrealistas, relacionadas à psicopatologia e ao suicídio.

Objetivo e Método: O objetivo do estudo foi avaliar as propriedades psicométricas da Escala de Derrota Social em 412 adultos colombianos. Para explorar a validade discriminante foi utilizada a Escala de Bem-Estar Social e para explorar a validade convergente foi utilizada a Escala de Suicídio de Okasha.

¹ Universidad Cooperativa de Colombia, Colombia. E-mail: erika.bedoyac@campusucc.edu.co

Orcid: <https://orcid.org/0000-0002-3398-8188>

² Universidad San Sebastián, Chile. E-mail: yanet.quijada@uss.cl

Orcid: <https://orcid.org/0000-0002-0741-0649>

³ Universidad Cooperativa de Colombia Colombia. E-mail: cesar.montoyaag@campusucc.edu.co

Orcid: <https://orcid.org/0000-0001-7618-4713>

⁴ Universidad Cooperativa de Colombia Colombia. E-mail: camiloa.garzon@ucc.edu.co

Orcid: <https://orcid.org/0000-0002-2851-2716>



Resultados e Discussão: A análise fatorial exploratória apresentou estrutura bidimensional, ambos os fatores apresentaram boa consistência interna. A análise fatorial confirmatória encontrou bons indicadores de ajuste para um modelo unifatorial. A validade convergente foi encontrada com a tendência suicida e a validade discriminante com o bem-estar social. A versão colombiana da Escala de Derrota é válida para avaliar a derrota social, um conceito relevante na Colômbia dadas as altas taxas de desvantagem social e os efeitos na saúde mental da sua população.

Implicações: Ter um instrumento que avalie a derrota social adaptado ao contexto colombiano contribui para detectar variáveis mediadoras entre o complexo cenário social do país e a saúde mental, para o desenvolvimento de estratégias preventivas e de intervenção baseadas em evidências, considerando aspectos psicossociais pouco integrados nas políticas de saúde pública atual.

Originalidade/Valor: Atualmente, a escala existe apenas em versão em inglês, em português brasileiro e em espanhol, validada na população chilena.

Palavras-chave: Derrota Social, Comparação Social, Submissão, Suicídio, Bem-Estar Social.

PROPIEDADES PSICOMÉTRICAS DE LA ESCALA DE DERROTA SOCIAL EN POBLACIÓN COLOMBIANA

RESUMEN

Marco teórico: La derrota social es la sensación de ruptura de un status o metas, debida a pérdida o dificultad para alcanzar recursos, humillación o ataque social, autocrítica, comparación social desfavorable y expectativas poco realistas, relacionada con psicopatología y suicidalidad.

Objetivo y Método: El objetivo del estudio fue evaluar las propiedades psicométricas de la Escala de Derrota Social en 412 adultos colombianos. Para explorar la validez discriminante se utilizó la Escala de Bienestar Social y para explorar la validez convergente se utilizó la Escala de Suicidio de Okasha.

Resultados y Discusión: El análisis factorial exploratorio mostró una estructura bidimensional, ambos factores presentaron buena consistencia interna. El análisis factorial confirmatorio encontró buenos indicadores de ajuste para un modelo unifactorial. Se encontró validez convergente con suicidalidad y validez discriminante con bienestar social. La versión colombiana de la Defeat Scale es válida para evaluar la derrota social, concepto relevante en Colombia dados los altos índices de desventaja social y afectaciones en salud mental de su población.

Implicaciones: Contar con un instrumento que evalúe la derrota social adaptado al contexto colombiano contribuye a detectar variables mediadoras entre el complejo escenario social del país y la salud mental, al desarrollo de estrategias preventivas y de intervención basadas en evidencia, considerando aspectos psicossociales pobremente integrados en las políticas de salud pública actuales.

Originalidad/Valor: Actualmente solo existe la escala en versión en inglés, en portugués brasileño y en español validada en población chilena.

Palabras clave: Derrota Social, Comparación Social, Sumisión, Suicidalidad, Bienestar Social.

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1 INTRODUCTION

Social defeat is defined as the feeling of a failed struggle in relation to the rupture or loss of a valuable status or important personal goals (Gilbert & Allan, 1998). The main events



that give rise to the perception of defeat are the loss or difficulty in reaching resources (material, financial, social), humiliation or social attack, self-criticism, unfavorable social comparison and unrealistic expectations (Gilbert, 2006; Taylor et al., 2011). According to the social comparison approach (Price, 1972), defeat is considered an individual component from which the person creates a psychological hierarchy of goals, objectives and social position (Gilbert, Price & Allan, 1995), which in adaptive conditions lead that when faced with an unfavorable social comparison, the feeling of defeat is momentary and motivates the search for new goals (Sloman, Gilbert & Hasey, 2003).

Social comparison is a strategy used by different species to analyze their own resources and those of their opponents in situations of competition, territorial defense, attraction and selection of sexual partners, verification of social position and power before a conflict (Gilbert, Allan & Trent, 1995; Gilbert et al., 1995; Gilbert, 2001). In human contexts, negative social comparison, understood as a low social status, is related to mood effects (Gilbert, 2000), likewise it has been found that staying for a long time in hostile environments and with deficiencies can lead to behaviors of (involuntary) subordination as preservation mechanisms before experiences of disadvantage (Price et al., 1994; Sloman & Gilbert, 2000). If the perception of social defeat is intense and prolonged, it can limit the ability to search for social opportunities that improve the individual situation (Gilbert, 2006), and in a psychopathological extreme lead to the deregulation of mechanisms or the use of cognitive strategies that are considered ineffective, assuming behaviors of hypervigilance or inhibition and inability to experience positive emotions (Taylor et al., 2011).

Studies with animals and humans report that social defeat is related to adverse neurological, endocrine and immunological effects, depression, somatization, anxiety, social phobia, obsessive-compulsive symptoms, paranoid ideation, psychosis, schizophrenia and suicidality (Björkqvist, 2001; Fujii et al., 2019; Harris et al., 2018; Hollis & Kabbaj, 2014; Iñiguez et al., 2014; Li, Xu & Wang, 2018; Selten & Cantor-Graae, 2005; Selten et al., 2013; Sial et al., 2016; Siddaway et al., 2015; Solomon, 2017; Toyoda, 2018).

Suicide could then be considered an extreme response to the inability to overcome social defeat, understood as a feeling that initiates a series of mechanisms that can lead to suicidal behavior. In this regard, the integrated motivational-volitional model of suicidal behavior (O'Connor, 2011; O'Connor & Kirtley, 2018), states that this occurs in three phases, starting from the biopsychosocial context in which suicidal ideation and behavior arise (pre-motivational phase), the factors that lead to suicidal ideation (motivational phase) and the factors that lead to the transition from ideation to suicide attempts or death (volitional phase).



On the other hand, defeat has a component of social comparison and is a construct sensitive to inequality and humiliation, with which it is relevant to analyze its relationship with social well-being, defined by Keyes (1998) as "the assessment we make of the circumstances and functioning within society" (p. 122), in its five dimensions: 1) Social Integration: self-esteem as part of society, feeling of belonging and quality in relationships. 2) Social Acceptance: acceptance and positive attitudes towards others, ability to trust in the goodness, honesty and kindness of others. 3) Social Contribution: feeling of being useful to society and that said contribution is valued. 4) Social Update: confidence in society's capacity for development, progress, growth, evolution and future. 5) Social Coherence: interest in gaining an understanding of the dynamics of society.

The previously mentioned shows the indivisibility of the concepts of defeat and social well-being with respect to health, defined by the World Health Organization (WHO, 2002), as a state of physical, mental and social well-being "that allows individuals realize their abilities, face the normal stress of life, work productively and fruitfully, and make a significant contribution to their communities" (WHO, 2007, p. 4), and therefore, the relevance of the concept is evident of social defeat at an explanatory level, and potentially preventive, of the relationship between social situations of disadvantage or inequality and mental health effects, which characterize Latin American countries (UNICEF, 2012) and especially in Colombia (Observatorio Nacional de Salud-ONS, 2015; United Nations Human Settlements Programme, 2014-2015), since in recent decades it has presented consistently poor mental health indicators (Encuesta nacional de salud mental, 2015) and annual increase in suicide rates (Ministerio de Salud y Protección Social, 2018).

For all of the aforementioned, having an instrument that evaluates the state of social defeat adapted to the Colombian context would contribute to detecting mediating variables between the complex social scenario in the country and mental health at the individual level, because by understanding how the mechanisms that operate mediating the impact of social inequality on mental health could contribute to the development of preventive and intervention strategies based on evidence, which consider social aspects in their approaches, which although recognized are poorly integrated in current public health policies (Quijada et al., 2019). The present study aims to analyze the psychometric properties of the Spanish version of the social defeat scale of Gilbert and Allan (1998) in a sample of Colombian adults, since currently in Latin America it only has its validation in Brazilian (Carvalho et al., 2011) and Chilean population (Quijada & Villagrán, 2016; 2021).



2 METHOD

2.1 PARTICIPANTS

412 Colombian adults, aged between 18 and 72 years ($M = 29.25$; $SD = 10.91$), 131 men (31.6%) and 281 women (67.9%), 156 (38%) are university students, the rest are workers and students who work part time. The type of sampling was non-probabilistic for convenience.

2.2 INSTRUMENTS

The Social Defeat Scale (Gilbert & Allan, 1998) consists of 16 items that assess feelings of social defeat in the last 7 days and are answered in a 5-point Likert format (0 = Never, 1 = Rarely, 2 = Sometimes, 3 = Frequently, 4 = Always). The scores of items 2, 4 and 9 must be reversed, and the total of the 16 items is added up, in a range from 0 to 64, interpreting that the higher the score, the greater the perceived social defeat. Cronbach's alpha in the original version was .94 (Gilbert & Allan, 1998), in the Brazilian version it was between .89 and .93 (Carvalho et al., 2011), and the Spanish version used in the present study (Quijada & Villagrán, 2016; 2021), corresponding to the validation in the Chilean population, proposes a two-dimensional model: social defeat and triumph, both with good reliability ($\alpha = .91$ and $\alpha = .71$ respectively).

To explore the discriminant validity, the *Social Wellbeing Scale* was used (Keyes, 1998; Spanish version of Blanco & Díaz, 2005). It is composed of 25 items grouped into five subscales: integration, acceptance, contribution, updating and coherence. Answers are given on a 5-point Likert scale (1 = Totally disagree, 2 = Disagree, 3 = Neither disagree nor agree, 4 = Agree, 5 = Totally agree). In previous studies it has shown good internal consistency with Cronbach's α values between .68 and .83, and the five-dimensional structure has been verified through confirmatory factor analysis (Blanco & Díaz, 2005; Keyes, 1998). Adequate reliability levels have been found in Colombia with a Cronbach's alpha of .67 (María-Santodomingo & Cortés-Peña, 2018).

To explore the convergent validity, the *Okasha Suicidality Scale* was used (Okasha, Lotaif & Sadek, 1981; Spanish version by Salvo, Melipillán & Castro, 2009). Composed of 4 items, the first three explore ideation and are answered on a scale 4-point Likert (0 = Never, 1 = Almost never, 2 = Sometimes, 3 = Many times), and the fourth item asks about attempts (0 = No attempt, 1 = One attempt, 2 = Two attempts, 3 = Three or more attempts). The scoring range



is from 0-12, a score equal to or greater than 5 indicates risk of suicide. In Colombia, a good level of reliability has been found with a Cronbach's alpha of .85 (Campo-Arias et al., 2019).

2.3 PROCEDURE

The project was approved by the Bioethics Committee of the Universidad Cooperativa de Colombia with act number 006 of July 13, 2018. The application of the questionnaires was done in digital format through a link sent by email and published on institutional social networks. Informed consent was included in the digital questionnaire, since according to Resolution 8430 of 1993 of the Ministry of Health, studies without risk, as is the case of the present project since the tests were not diagnostic, may not require the signature of the consent and the participant's acceptance is sufficient.

2.4 DATA ANALYSIS

All analyzes were carried out with the Stata 16 software. The levels of social defeat, suicidality and social well-being were described. Sample adequacy was verified using the Kaiser-Meier-Olkin (KMO) coefficient and Bartlett's test of sphericity to perform Exploratory Factor Analysis (EFA) of the Social Defeat Scale with a principal components analysis extraction method and a rotation oblique (Oblimin; delta = 0) with Kaiser normalization since theoretically all the factors are related to each other. Internal consistency was then reviewed using Cronbach's alpha for all scales. Next, Confirmatory Factor Analysis (CFA) was performed to verify the internal structure of the Social Defeat Scale, using the maximum likelihood method, then the global goodness of fit of the model was evaluated with the χ^2 ($p > 0.05$), the Root Mean Squared Error of Approximation (RMSEA), the Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI), and the Standardized Root Mean Squared Residual (SRMR). Finally, by means of the Kolmogorov-Smirnov test it was found that there is no normal distribution for any of the variables, therefore, non-parametric correlations (Spearman) were carried out to determine convergent and discriminant validity.

3 RESULTS

The levels of perception of social defeat and suicidality are low, and those of total social well-being and for subscales are medium to high (see Table 1).



Table 1

Descriptive statistics of the study variables

	Minimum	Maximum	Mean	Standard Deviation	
Social Defeat	0	61	14.16	11.07	
Social Well-being	Total	58	105	85.62	8.70
	Social Integration	5	25	16.84	2.99
	Social Acceptance	12	26	18.79	2.47
	Social Contribution	5	25	20.50	3.53
	Social Update	9	25	16.17	2.66
	Social Coherence	4	20	13.32	2.14
Suicidality	0	12	2.53	2.96	

Source: Prepared by the authors (2024)

Factorial structure of the Social Defeat Scale: The KMO coefficient (.943) and the value of Bartlett's test of sphericity ($\chi^2 = 4276.37$; $df = 120$; $p < .000$) establish that the sample and its correlation matrix they are suitable to follow the EFA. Similar to the original version and previous adaptations, two factors were obtained, which explain 62.03% of the variance of the total scale. All items had saturations greater than 0.5 in at least one of the two factors (see Table 2). The first factor explained 51.27% of the total variance, and the second factor explained 10.76% and included the group of 3 items that are coded inversely (items 2, 4 and 9). The correlation between the two factors was .41.

Table 2

Exploratory Factorial Analysis of the Social Defeat Scale

Items	Factor	
	1	2
14. Me siento acabado/a	.879	
12. Siento que soy uno/a más de los/as perdedores/as en la vida	.845	
13. Siento que me he dado por vencido/a	.830	
11. Me siento completamente fuera de combate	.825	
16. Siento que no me quedan fuerzas para luchar	.811	
10. Siento que he tocado fondo	.790	
3. Me siento derrotado/a por la vida	.782	
6. Siento que la vida me ha tratado a golpes	.731	
5. Siento que he perdido mi posición en el mundo	.725	
15. Siento que he perdido batallas importantes en la vida	.724	
8. Siento que la confianza en mí mismo/a ha sido destruida	.701	
1. Siento que no he hecho nada con mi vida	.596	
7. Me siento impotente	.521	
4. Me siento un/a ganador/a		.891
2. Siento que soy una persona exitosa		.858
9. Me siento capaz de enfrentar cualquier cosa que la vida me envíe		.790
α for each factor	.936	.825

Note. The rotation has converged in 3 iterations

Source: Prepared by the authors (2024)



Table 3 shows that, although both models do not have sufficiently optimal fit indices, the one-dimensional model had better fit results than the two-dimensional model.

Table 3

Goodness of Fit Indicators of Confirmatory Factor Analysis of the Social Defeat Scale (Maximum Likelihood)

Model	X ²	DF	RMSEA	CFI	TLI	SRMR
One Factor (Original)	13402.45	120	.519	.270	.173	.085
Two Factors (AFE)	26960.44	136	.693	.181	.085	.163

Note. DF = Degrees of freedom, RMSEA = Root Mean Square Error of Approximation, CFI = Comparative Fit Index, TLI = Tucker-Lewis Index, SRMR = Standardized Mean Quadratic Residual.

Source: Prepared by the authors (2024)

Internal consistency: Cronbach's alpha for the scales of social defeat (.93 and .82) and suicidality (.86) shows a very good internal consistency in both, while the scale of social well-being (.64) showed a moderate internal consistency.

Convergent Validity: A Spearman correlation was made between the social defeat scale and the suicidality scale, finding, as expected, a positive and statistically significant relationship (Rho = .592; $p < .000$).

Divergent Validity: A Spearman correlation was made between the social defeat and the total of the social well-being scale, finding a negative and statistically significant relationship (Rho = -.232; $p < .000$) as expected.

4 DISCUSSION

The main objective with this investigation was to carry out the validation of the Spanish version of the Social Defeat Scale in Colombian adult population, analyzing its psychometric properties: factorial structure, internal consistency, convergent and divergent validity. The high found value of Cronbach's alpha indicates an excellent internal consistency, similar to the original study by Gilbert and Allan (1998), to the validation in the Brazilian population by Carvalho et al. (2011), and in the Chilean population study (Quijada & Villagrán, 2016; 2021) with the Spanish version used in this study.

The results of the EFA of the Social Defeat Scale suggest that it could be a two-dimensional measure instead of a unifactorial one (Quijada & Villagrán, 2021), however, according to the results of the CFA, following the interpretation of the results made by the authors of the Portuguese version (Carvalho et al., 2011) and regarding the appearance of two



factors instead of a single factor suggested by the authors of the original scale, several aspects must be taken into account. First, the fact that the three items that loaded on the second factor have a positive linguistic content (2. "I feel that I am a successful person"; 4. "I feel like a winner"; 9. "I feel able to face whatever life sends me"), and that therefore the scores must be reversed, this does not mean that its meaning changes, since the result could be the same even when the wording of the items is changed to a negative sense ("I don't feel like I'm a successful person", "I don't feel like a winner", "I don't feel capable of facing the things that life throws at me").

Secondly, the content of these three items could be referring to aspects related to success, achievement, triumph, resilience or satisfaction, which do not necessarily imply an independent factor or construct, but which are part of the repertoire of responses to a low perception of social defeat or the disposition to leave it. The above is also supported by the fact that none of these three items presented low saturations and therefore it was not necessary to eliminate them. On the other hand, although the correlation between both emerging factors was not strong enough to consider that it is possible to replace them with a single factor, from a conservative and theoretical point of view it is preferable to maintain a position from which both factors are not considered as different subscales (Carvahlo et al., 2011; Gilbert & Allan, 1998).

Regarding the convergent validity, a moderate and statistically significant correlation coefficient was found with suicidality. Although previous studies have mostly addressed this type of validity with depression, anxiety, hopelessness and other psychopathological symptoms (Acosta et al., 2009; Bedoya & Montaña, 2016; Brown et al., 2005; Henriques et al., 2003; López et al., 2008; Scholes & Martin, 2013), it has also been proposed as part of the processes that can lead to suicidal behavior, specifically if the person is unable to overcome the feeling of defeat and chronically suffers the cognitive, emotional and behavioral consequences associated with it (O'Connor, 2011; O'Connor & Kirtley, 2018; Siddaway et al., 2015).

Regarding the divergent validity explored with social well-being, a low correlation coefficient was found. Although both constructs are opposites, the perception of social defeat depends fundamentally on the person's interpretation of it, and therefore experiencing defeat in the face of a socially adverse event can vary from person to person and even at the situational level (Selten & Cantor -Graae, 2005), because as stated by Buelvas and Amarís (2010) "subjective, psychological and social well-being, as well as the sub-elements that make them up, do not manifest themselves in a positive or negative way at the same time, but that both assessments coexist without offering too many contradictions for the person" (p. 175).



However, the direction of the relationship between both variables was as expected, that is, higher levels of social defeat correlated with lower levels of social well-being. According to studies in well-being and its relationship with the social dimension, this would be associated with a positive projection about the future, the ability to establish good relationships, to work and cope better with stressful situations, thus contributing to better health in general (García & González, 2000; González et al., 2014) and counteract the permanence of the feeling of social defeat and its consequences.

The results of the present study must be interpreted with caution due to some limitations such as the fact that when performing an exploratory factor analysis with oblique rotation, the resulting factorial solution may be specific to the sample and not generalizable (Hair et al., 2010). Similarly, the fact that the correlation coefficients for convergent and divergent validity were relatively low should be taken into account. Therefore, for future studies, the sample size could be expanded, a clinical sample could be implemented as in the original study, and new confirmatory factorial analyzes should be carried out in order to correct the deficiencies of the exploratory study. As for convergent validity, it is suggested to explore using other variables such as depression, hopelessness, stress; and for divergent validity it could be contrasted with dispositional optimism, resilience, coping strategies, among others.

Despite the aforementioned limitations, it was possible to verify that the Social Defeat Scale in Colombian population has psychometric properties similar to the original English version created with the British population, and the versions in Portuguese and Spanish respectively validated in the Brazilian and Chilean populations, since it presents a high internal consistency, a unidimensional underlying structure with good fit is confirmed, it is positively related to suicidality and negatively to social well-being.

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