

Psychometric properties of the scale to measure the enjoyment experienced by children and adolescents (SEECA) in the Michoacan population (Mexico)

Propiedades psicométricas de la escala para medir el disfrute experimentado en niños y adolescentes (EDENA) en población de Michoacán (México)



**RESEARCH
ARTICLE**
Copyright © 2020
by Psicogente

**Correspondence
from authors:**
lalohdez654@gmail.com
eduardo96cr@gmail.com
fpadros@uoc.edu
fpadros@umich.mx

Received: 01/20/19
Accepted: 08/12/19
Published: 01/01/2020

Eduardo Gómez Hernández - Eduardo Carrillo
Ferran Padrós Ramírez Blázquez
Universidad Michoacana de San Nicolás de Hidalgo, Morelia, Mexico

Summary

Objective: Building a scale to measure the enjoyment experienced in children and adolescents and studying their psychometric properties.

Method: Instrumental study involving 487 secondary school students aged 11 to 15, who responded to the scale being studied (Scale to Measure the Enjoyment Experienced in Children and Adolescents, SEECA), along with the Positive and Negative Affect Schedule (PANAS-C) scales for children and adolescents prepared by Sandin (2003), and the Depression Scale of the Center for Epidemiological Studies (CES-D) of Radloff (1977) adapted to the Mexican population by Jiménez-Tapia, Wagner, Rivera-Heredia, and Gonzalez-Forteza (2015).

Results: An exploratory factorial analysis revealed that the internal structure was unifactorial. Regarding internal consistency, the Cronbach's alpha value of the scale was .650, acceptable considering that it has only five reagents, which showed adequate psychometric properties. Pearson correlations were performed with other measures, obtaining a low and positive correlation with the positive affect scale ($r = .368$) and low and negative correlations with negative affect ($r = -.361$) and depressive symptomatology ($r = -.179$).

Conclusions: SEECA can be very useful since it could be considered an indicator of the presence of anhedonia, which is associated with social and emotional dysfunction, in addition to psychopathology. SEECA has adequate psychometric properties (construct validity, confidence, and concurrent validity) to be administered in the city of Morelia (Mexico).

Keywords: Health promotion; emotional development; child welfare; instrumental study; psychometrics.

Resumen

Objetivo: Construir una escala para medir el disfrute experimentado en niños y adolescentes y estudiar sus propiedades psicométricas.

Método: Estudio de tipo instrumental, donde participaron 487 estudiantes de secundaria de edades comprendidas entre 11 y 15 años, que respondieron a la escala objeto de estudio (Escala para medir el Disfrute Experimentado en Niños y Adolescentes, EDENA), junto a las escalas PANASN (Positive And Negative Affect Schedule) para niños y adolescentes elaboradas por Sandín (2003) y la escala de Depresión del Centro de Estudios Epidemiológicos (CES-D) de Radloff (1977) adaptada a población mexicana por Jiménez-Tapia, Wagner, Rivera-Heredia y González-Forteza (2015).

Resultados: A través de un Análisis Factorial Exploratorio se observó que la estructura interna resultó unifactorial. Respecto a la consistencia interna, el valor del alfa de Cronbach de la escala resultó de .650, aceptable teniendo en cuenta que solo tiene cinco reactivos, los cuales mostraron adecuadas propiedades psicométricas. Se realizaron correlaciones de Pearson con otras medidas, obteniendo una correlación baja y positiva con la escala de afecto positivo ($r = .368$) y correlaciones bajas y negativas con el afecto negativo ($r = -.361$) y con la sintomatología depresiva ($r = -.179$).

How to cite this article (APA):

Gómez Hernández, E.; Carrillo Ramírez, E. & Padrós Blázquez, F. (2020). Psychometric properties of the Scale to Measure the Experience in Children and Adolescents (SEECA) in a population of Michoacan (Mexico) [Traducción]. *Psicogente* 23(43), 1-18. <https://doi.org/10.17081/psico.23.43.3761>

Conclusión: Se concluye que la EDENA es instrumento que puede resultar de gran utilidad, ya que podría considerarse un indicador de presencia de anhedonia, que se asocia con disfunción social y emocional, además de psicopatología. La EDENA posee adecuadas propiedades psicométricas (validez de constructo, confiabilidad y validez concurrente) para ser administrado en la ciudad de Morelia (México).

Key words: health promotion; emotional development; child welfare; instrumental study; Psychometrics.

1. INTRODUCTION

Psychology has spent much of its history trying to identify, measure, and study the elements that regulate people's suffering and discomfort. However, efforts of the same magnitude have not been invested in studying and measuring the factors that can regulate the enjoyment or pleasure experienced by people (Padros, 2002). The subdiscipline known as Positive Psychology is considered to have emerged approximately in late 1999 and early 2000, which Castro (2010) conceives as the study of the optimal psychological functioning of persons, groups, and institutions. This would correct the imbalance between psychological research and practice focusing exclusively on psychopathological variables. On the other hand, according to WHO (1948, cited by Alcantara, 2008) health is defined as “a state of complete physical, psychological and social well-being and not the mere absence of disease or disability” (p.1). Health is a resource in life, not its purpose. It is a positive concept that emphasizes social and personal resources as well as physical capabilities. In addition, as noted by Bustos and Russo (2018), mental health in childhood (which can also be extended to adolescence) is a topic of national and international concern since an increase in the prevalence of mental disorders has been observed in this population.

On the other hand, before the emergence of Positive Psychology, authors such as Maslow (1968) with their concept of self-actualization, Rogers (1961) with that of full actualization, Allport (1961) with that of maturity, and Diener (1984) with that of subjective well-being, were interested in the good functioning of the human being. Ryan and Deci (2001) distinguished the organization of the study on well-being by referring to two ancient philosophical currents, hedonic and eudaimonic, which are referred to as subjective well-being and psychological well-being, respectively (Keyes, Ryff & Shmotkin, 2002).

Subjective well-being is conceived as a construct composed of one cognitive and two affective elements (Diener, 1984). The cognitive element is that of satisfaction with life, which is defined as an individual's assessment of the overall quality of their own life (Veenhoven, 1994). The two affective elements are Positive Affect and Negative Affect, conceived separately, although some theoretical controversy persists as to whether positive and negative affect are part of a single bipolar dimension (where in one pole there is an extremely

positive affect and in the other, an extremely negative affect), or two independent single dimensions (referring to the degree of positive affect in one dimension and the level of negative affect in another). In the theoretical and empirical review carried out by [Padros-Blazquez, Navarro-Contreras, and Soriano-Mas \(2012\)](#), it is highlighted that affect includes at least two affective modalities:

1) This is characterized by the emotions of being evoked from a stimulating situation, being specific, being of high intensity, being of short duration, and being provocative by eliciting remarkable physiological responses in the person and predisposing them to perform adaptive behaviors.

2) The affective tone or mood, which is a more diffuse affective modality, is unrelated to a specific event, is of low intensity, is of long duration, and is not associated with physiological changes in the organism. It seems more convenient to conceptualize the affective tone or mood as a single unipolar dimension. However, regarding emotions, the data provides greater support for the two-dimensional unipolar model [Padros-Blazquez et al. \(2012\)](#).

Enjoyment can be defined as a positive affective state that includes states such as pleasure, taste, and fun ([Scanlan & Symons, 1992](#)). [Davis \(1982\)](#) highlighted that an individual enjoys something if this “something” (exposure to a particular situation, performance of a particular action, contact with a particular object, etc.) provokes in the person a series of beliefs that this “something” significantly increases pleasure (understood to include pleasure and enjoyment) that the individual is experiencing. Thus, enjoyment can be conceived as an increase in the level of positive affect (with respect to a diffuse state, not related to any specific circumstance, that is, the mood or affective tone in which the individual is) evoked or related to a specific circumstance, with moderate or severe intensity, and with limited duration. Therefore, as [Wankel](#) highlighted (1993, as cited in [Kimiecik and Harris, 1996](#)), enjoyment can be conceived as a positive emotion.

On the other hand, [Seligman and Csikszentmihalyi \(2000\)](#) pointed out that enjoyment (complex or evolved, according to our nomenclature) refers to affective states that people experience and that cross the homeostasis barrier. It goes beyond pleasure (fundamental from our nomenclature) derived from the satisfaction of a need such as hunger or thirst (for example). Enjoyment (complex) can be experienced when an athletic competition, an artistic performance, or an altruistic act is appreciated (with a positive emotional charge) even when having a stimulating conversation.

From our perspective, the distinction between what we call basic pleasure and complex or evolved enjoyment is relevant. [Kringelbach and Berridge \(2009\)](#) make a distinction between the neural circuits of fundamental pleasures (basic pleasure) and those of superior pleasures (complex enjoyment), which

overlap, i.e., share a common neural basis. We consider that complex enjoyment is an evolved mechanism of basic pleasure in a way congruent with the idea that the most evolved systems are based on the older ones, not replacing but overlapping them (Allman, 1999). According to our proposal, neuroanatomic areas of the oldest brain, in the phylogenetic and ontogenetic sense, located in the deepest areas of the brain (nucleus accumbens, pale ventral, brain stem) would be involved in basic pleasure. Others found in the cortex (orbitofrontal, cingulate, medial prefrontal, and insular) and probably with the involvement of other parts of the neocortex, would be the substrate of complex enjoyment experiences. A review of the neuroanatomic bases of pleasure and happiness (including complex enjoyment) can be seen in Kringelbach and Berridge (2009; 2010a; 2010b).

It is important to note that there are several ways whereby an individual can obtain pleasure (basic) and probably more of those that give rise to enjoyment (complex). Kringelbach and Berridge (2009) state that the routes of taste and smell of food, which are among the fundamental pleasures when related to basic needs, are among the most studied. Although if we refer to tasting, for example, wine or delighting in the flavors of food, then the pleasure obtained goes beyond satisfying a basic need and can be considered a complex enjoyment from our perspective (and the pathway to this modality lacks research in the field of neurosciences.) The route of sex, which, in principle, can also be considered a fundamental pleasure (although in humans, factors that can elevate it to complex enjoyment are involved), is still in the first stages of knowledge development. On the other hand, the same authors highlight that in social animals, where humans are included, interactions with other specimens of the same species are one of the most important ways to obtain happiness (from our perspective, basic pleasure and above all complex enjoyment) and probably one of the most complex and unknown pathways. It can be concluded that the pathways and ways of obtaining pleasure and above all complex enjoyment are many and very varied; therefore, trying to make a list of all the circumstances or situations susceptible to obtaining enjoyment is an almost impossible task, and the person being evaluated would find this assessment long and tiring. An example of this was the list with 320 potential reinforcing agents proposed by MacPhillamy and Lewinsohn (1982).

Most of the instruments for assessing hedonic enjoyment or capacity have been carried out from the field of psychopathology, specifically, to assess anhedonia, a concept proposed by Ribot (1897), defined as the inability to obtain pleasure or enjoyment under different circumstances or by performing activities that were once rewarding.

The presence of anhedonia in childhood and adolescence is frequent in major depressive conditions, especially in the most severe ones (Gabbay, Johnson,

[Alonso, Evans, Babb, & Klein, 2015](#)). People with depression have been shown to exhibit a positive, diminished emotional response to positive stimuli when compared with healthy controls ([Bylsma, Morris, & Rottenberg, 2008](#)). Anhedonia is also a common symptom of post-traumatic stress disorder in children ([Thabet & Vostanis, 2000](#)).

Not to mention that anhedonia has been consistently related to suicidal ideation and attempt, even independently of depressive symptomatology ([Winer, Drapeau, Veilleux, & Nadorff, 2016](#)).

Instruments for assessing anhedonia have been developed to detect the presence of pathology, originally and more frequently in the case of schizophrenia. One of the most well-known instruments is [Chapman, Chapman, and Raudin's](#) scales for the assessment of physical and social anhedonia (1976). Another tool for assessing anhedonia also frequently used to evaluate psychiatric patients is the [Fawcett, Clark, Scheftner, and Gibbons Pleasure Scale](#) (1983). The [Snaith-Hamilton Pleasure Scale](#) ([Snaith, et al., 1995](#)) is frequently used to detect anhedonia in affective disorders. An instrument to evaluate people exposed to circumstances of great danger; risk to their physical or moral integrity; or risk of post-traumatic stress disorder is the [Frewen, Dean, and Lanius \(2012\)](#) Interference and Hedonic Deficit Scale. As discussed above, all of them have been designed to detect pathology, and to date, none are applied in the child and adolescent population.

Therefore, the objective of this research study was to build and study the psychometric properties of a scale to measure the Enjoyment Experienced by Children and Adolescents (SEECA).

2. METHOD

2.1. Design

The present research study is psychometric and therefore instrumental as it aims to develop tests and devices, which include the development or adaptation of scales and the study of their psychometric properties ([ATO, Lopez-Garcia, & Benavente, 2013](#)).

2.2. Participants

A sample of 487 students was taken, of which 226 (46.4%) were male and 261 (53.6%) were female students from different secondary schools in the city of Morelia (Mich, Mexico) aged 11 to 15 years old, (with a mean of 13.21 years of age and a standard deviation of 1.36 years). Of the total number of participants, 50 (10.3%) students were attending the first year, 164 (33.7%) students were in the second year, and 273 (56.1%) students were in the third

year, all of whom voluntarily agreed to participate in the study after their parents (or guardians) signed an informed consent. The sampling performed was non-random-type and by convenience.

2.3. Instruments

2.3.1. Enjoyment Experience Scale for Children and Adolescents (SEECA)

The object of study of the present research study is to evaluate the enjoyment experienced, with reagents such as “I enjoy many moments during the day” or “I am a person who enjoys with ease.” It consists of seven reagents with three response options (“Strongly Agree” (2), “Neither Agree nor Disagree” (1) and “Strongly Disagree” (0)). The seven-reagent scale approved by the judges was psychometrically studied (see procedure).

2.3.2. Positive and Negative Affect Schedule Scales (PANAS-C)

It was developed by Sandin (2003) for children and adolescents from Watson, Clark, and Tellegen (1988) PANAS Adult Form. The PANAS-C just like the PANAS, is a self-reporting questionnaire of 20 elements; 10 items assess positive affect (e.g.: “I am a cheerful person” or “I tend to get excited”), and 10 others assess negative affect (e.g. “I feel nervous” or “I feel guilty”) The questionnaire is completed by the child/adolescent considering how the child regularly feels and/or behaves, following a scale of three alternative responses, described as Never (1), Sometimes (2), and Many times (3). The interpretation of the total scores and the level of Positive Affect and Negative Affect are as follows: The higher the score in a type of affect the greater the frequency of the person assessed experiencing such a type of affect.

The PANAS-C scale has an internal consistency that does not reach the Cronbach alpha value of 0.80 but all coefficients are above 0.70 (Sandin, 2003.)

2.3.3. Center of Epidemiological Studies of Depression Scale CES-D

Developed by Radloff (1977) and adapted for the Mexican population (including the Michoacan population) by Jiménez-Tapia, Wagner, Rivera-Heredia, and Gonzalez-Forteza (2015), this scale evaluates the depressive symptomatology present in the week before the application through 20 items. In Mexico, it is an appropriate instrument to measure depression symptoms in adolescent students. The internal consistency of the scale reaches values equal to or greater than .84 (Cronbach's alpha). It consists of four factors that explain more than 52% of the total variance. It is interpreted such that the higher the total score on the scale the greater the depression symptomatology of the assessed person is supposed to be.

2.4. Procedure

This research was carried out in two phases; in the first phase, 11 reagents were written based on the construct of enjoyment. Two judges then assessed the relevance of each of the reagents to the operational definition of the concept (they reviewed the reagents, bearing in mind whether they were evaluating the enjoyment experienced in any of the three modalities: intensity, frequency, or duration). After this phase, 7 items were considered and approved by the judges, who rated them with a subjective score of 8 or higher (on a scale of 0 to 10) according to the relevance of each item to integrate the scale.

In the second phase, permission was requested from the management of the different secondary schools in the city of Morelia (Mich, Mexico) for the application of the SEECA, CES-D, and PANAS-C scales to students in the first, second, and third years of secondary school. The application of the scales was anonymous and voluntary and lasted between 25 and 30 minutes per group. The researcher arrived in the classroom, presented himself to the group, provided the scales to each student, and asked each of the participants to pay maximum attention to the task at hand and to answer all the items without exception. The researcher remained in the classroom to monitor that the task was done individually and to clarify all the doubts that might arise during the administration of the test. In the end, each of the participants gave the test to the researcher, who thanked them for their participation. After the test was done and collected, the extracted data was captured in the SPSS version 17.0 database to perform the statistical study and obtain the psychometric properties.

2.5. Data analysis

An exploratory factorial analysis was performed using the method of extracting the main components with Oblimin-type rotation. The internal consistency was studied using Cronbach's alpha index. Pearson's r and the descriptive mean and standard deviation were used.

2.6. Conflicts of interest

The authors of the article declare that there is no conflict of interest in the conduct of this work.

3. RESULTS

A total of 479 (98.36%) participants completed the SEECA scale, and 8 (1.64%) did not respond to all reagents.

3.1. Content validity

After reviewing the consistency of the contents of the reagents with the construct, seven items were approved by three judges, who rated with a subjective rating of 8 or higher (on a scale of 0 to 10) depending on the relevance of each reagent to integrate the scale.

3.2. Internal structure

Regarding the internal structure, exploratory factor analysis was carried out using the method of extraction of the main components with Oblimin-type rotation. Previously, the data was found to be adequate for this analysis (Bartlett's Sphericity Test = 325,344; $g_l = 21$ with $p < 0.001$; Kaiser Meyer Olkin index = 0.775). The two-factor solution was considered (because two factors had their own value greater than 1); however, this solution was not satisfactory (since the second factor contained only two reagents and was difficult to interpret since one refers to the frequency and the other to intensity), the reason for which reagents 1 and 4 were eliminated (see Table 1).

Table 1.
7 Item Bifactorial Configuration Matrix

STRUCTURE MATRIX		
Reactive	1	2
1.-I am easily entertained	-0,038	0,802
2.-I have a good time in many places	0,703	0,058
3.-I enjoy many moments during the day	0,648	0,237
4.-I have fun with a lot of intensity	0,330	0,619
5.-I'm comfortable with most people	0,617	-0,043
6.-I have a good time in most circumstances	0,663	0,188
7.-I am a person who enjoys with ease	0,565	0,467

The suitability of the single-factor solution with the remaining five reagents was then considered. One factor was found to account for almost 42% of the variance, plus a large difference between the proper value of the first factor (the only one greater than the unit) and the others. On the other hand, all the reagents showed an adequate factorial load (see Tables 2 and 3); therefore, this scale was concluded to be unifactorial.

Table 2.
Own values and explained and accumulated variance of SEECA factors

COMPONENTE	AUTOVALOR	% VARIANZA EXPLICADA	% VARIANZA ACUMULADO EXPLICADA
01	2.097	41.938	41.938

02	.805	16.108	58.047
03	.729	14.584	72.630
04	.698	13.961	86.592
05	.670	13.408	100.000

Table 3.

Factor loads of the five SEECA reagents (with the five reagents of the final version).

ITEMS	SINGLE FACTOR
1	0,684
2	0,668
3	0,583
4	0,669
5	0,629

3.3. Reliability and goodness of the reagents

With respect to internal consistency, the Cronbach's alpha value of the scale was .650, acceptable considering it has only five items. In a parallel manner, the goodness of the reagents was studied, and the values of the standard deviation and the mean of the items ranged from 0.49 to 0.56 and from 1.43 to 1.68, respectively, which shows that the average of each reagent is above the theoretical mean, considering that the response values ranged from 0 to 2. The reagents showed moderate correlation with the corrected total scale score (excluding the items themselves) that ranged from .351 to .438, and if any reagent is eliminated, the value of the total scale alpha decreases considerably (see Table 4.)

Table 4.

Mean, standard deviation, item correlation with the total scale (corrected), and Cronbach's alpha value if the item is removed from the SEECA reagents.

ÍTEMS	MEDIA	DESVIACIÓN TÍPICA	CORRELACIÓN ÍTEM ESCALA TOTAL (CORREGIDA)	ALFA DE LA ESCALA TOTAL SI SE ELIMINA ÍTEM
1	1.65	0.50	.438	.582
2	1.68	0.49	.422	.590
3	1.51	0.56	.351	.624
4	1.43	0.54	.426	.587
5	1.65	0.53	.385	.606

3.4. Relationship with other variables and concurrent validity

To obtain the first estimates of evidence of the concurrent validity of the scale, Pearson correlations were performed between the SEECA scale and the PANAS

and CES-D scales. The correlation was low and positive with the Positive Affect Scale ($r = .368$), low and negative with the Negative Affect ($r = -.361$), and not only very low and negative ($r = -.179$) but also significant with the Depression Scale (CES-D), all with $p < 0.001$.

3.5. Descriptive data and relationship with age and sex

On the other hand, the mean SEECA was observed to be 7.91 ($DE = 1.69$), the most frequent values were 8 and 9, the minimum value was 0, and the maximum value was 10. See Table 5 for frequencies.

Table 5.

Frequencies and percentages (simple and accumulated) of total score values of the SEECA scale

VALORES	FRECUENCIA	%	FRECUENCIA ACUMULADA	PORCENTAJE ACUMULADO
0	1	0.2	1	0.2
3	8	1.6	9	1.9
4	8	1.6	17	3.5
5	24	4.9	41	8.6
6	50	10.3	91	19.0
7	85	17.5	176	36.7
8	104	21.4	280	58.5
9	104	21.4	384	80.2
10	95	19,5	479	100,0

Regarding the study of possible differences by sex, the mean of female participants ($M = 7.88$, $DE = 1.68$) was observed not to differ ($t = 0.482$; $p = .630$) from that obtained by male participants ($M = 7.95$, $DE = 1.71$). Finally, about the relationship between age and enjoyment experienced, a low, negative, and significant correlation was obtained ($r = -.172$; $p < .001$).

4. DISCUSSION

The main objective of this work was to create and study the psychometric properties of a scale to assess and measure the enjoyment experienced by children and adolescents. After an exploratory factorial analysis, it was concluded that the best solution was the unifactorial one, and it consisted of five items that weighed considerably in the single factor. Finding only a single dimension could be because, in the present scale, general questions about the enjoyment obtained have been asked, and no modalities have been contemplated. It is possible that if different modalities were considered in the wording of the reagents (taste, the enjoyment of doing exercise, in interpersonal relationships, etc.), a multifactorial structure would be found.

The reliability of the scale could be considered acceptable because of the small number of reagents. The five reagents that make up the scale were adequate, taking as criteria the correlation with the total scale (except the item itself) and the impact on the internal consistency of the total scale.

The concurrent validity of the Enjoyment Experience Scale with the Positive Affect and Negative Affect Scale for Children (PANAS-C) and the Center for Epidemiological Studies (CES-D) Depression Scale was studied. A low and positive correlation with the Positive Affect Scale was obtained; in principle, a somewhat higher correlation was expected. After reviewing the contents of the reagents, we thought that the low correlation obtained could be because only two (out of 10) reagents of the Positive Affect Scale or the PANAS-C Scale are related to enjoyment (3° “I am a cheerful person,” “I tend to get excited,” and 9° “I get excited about personal things,” etc.). Although the rest are related more to attention (17° “I am an attentive, caring person”), pride (5° “I feel proud of (something) satisfied”), inspiration (14° “I feel inspired”), and how active they are (19° “I am an active person”), to mention a few, it is worth highlighting that not a single reagent asks about enjoyment.

About the Negative Affect Scale and the Depression Scale, low and negative correlations were obtained, which was expected. As for the relationship with depression symptomatology, frequently, in unipolar depression disorders, a symptom arises. The symptom is that of a significant decrease in interest or enjoyment for all or almost all the activities during most parts of the day, almost every day (information derived from subjective appreciation or observation) as it appears in the DSM-5 diagnostic manual (APA, 2013). However, it should be remembered that to make the diagnosis of a major depressive disorder, it is not necessary to meet the criteria of loss of interest or pleasure; it must meet a minimum of five criteria out of nine (for example, depressed mood, disturbed sleep, weight alterations, movement, presence of fatigue, etc.) (APA, 2013), which explains the low correlation with depression symptoms. On the low correlation with negative affect, it should be remembered that when one refers to emotions, it appears to adjust a two-dimensional unifactorial model Padros- Blazquez et al. (2012), which explains the low correlation found.

A gender analysis was performed to determine whether there were differences between boys and girls. The results found no differences in the level of enjoyment experienced; this may be because they are at a stage where secondary sexual characteristics are beginning to appear, roles are not yet very well defined, and the onset of adolescence has a great influence on the affective state but independently of sex. In addition, other research has found no significant differences regarding positive affect between boys and girls

(Sandin, 2003). On the other hand, the older the participants the worse the level of enjoyment they were observed to experience (although a very low ratio), which is congruent since the critical periods of adolescents aged 14 or 15 are usually more intense than those experienced during the ages of 11 or 12. On the other hand, it seems that emotional self-knowledge should not be related to the enjoyment experienced since Santoya Montes, Garcés Prettel, and Tezon Boutureira (2018) obtained a positive correlation between age and self-knowledge. However, no data have been found from other researchers on the levels of positive or age-related affect in children and adolescents.

In the present paper, some important limitations were identified: the most notable being that there is no other scale to evaluate the enjoyment experienced. Therefore, there is no parameter the researchers can use to measure the validity of the instrument (as a “Gold Standard”). Some measures of response to different potential reinforcing agents, such as the one proposed by MacPhillamy and Lewinsohn (1982), could be used in the future although we would suggest that a reduced version be used. On the other hand, it should be mentioned that the PANAS-C scale is not yet standardized in the Mexican population.

Furthermore, the correlations shown by SEECA with the PANAS-C and CES-D scales show evidence of adequate concurrent validity of the scale. However, it would be advisable to make use of other scales that measured the same or other variables (for example, impulsivity, satisfaction with life, self-esteem, etc.) to corroborate the validity of the instrument. Likewise, it would be useful to test the unifactorial structure of the scale through confirmatory factor analysis.

It is also suggested that test-retest reliability be studied for future research. It would also be interesting to expand the sample to include a population with more varied sociodemographic features and to study its relationship with the enjoyment experienced. It may be interesting to study the sensitivity to change in children or adolescents with affected disorders or experiences of abuse, traumatic injuries, etc. that show a clinically significant improvement after receiving treatment.

In the assessment of the total scores, it is observed that up to 8.6% of those evaluated show a score equal to or lower than 5. This could be an indication of risk (or perhaps 4 or 6), keeping in mind that it could be an indicator of the presence of anhedonia, which is associated with social and emotional dysfunction in addition to psychopathology (Dodell-Feder & Germé, 2018). As Husain and Roiser (2018) highlight, anhedonia could be considered a transdiagnostic approach. It would be interesting in the future to carry out research that finds some cut-off point that would indicate the risk of social, emotional, or psychopathology dysfunction.

By way of conclusion, we wish to point out that considering the results of the present investigation, the SEECA scale can be conceived as a psychometric instrument with acceptable properties for the population of Michoacan (Mexico).

Funding: This work was funded by the Scientific Research Coordination of the Universidad Michoacana de San Nicolas de Hidalgo within the project “Psychometric Study of the Gaudibility Scale for Children and Adolescents (GSCA) of the Mexican Population”.

Acknowledgements: To the principals, teachers, and students of the different secondary schools of the city of Morelia (Mich, Mexico) who allowed us to carry out the application of the scales in a kindly and disinterested way.

REFERENCES

- Alcántara, G. (2008). La defi de la salud de la Organización Mundial de La Salud y la interdisciplinariedad. *Sapiens*, 9(1), 93–107. [_vila/Sapiens/2008/vol9/no1/4.pdf](#)
- Allman, J. M. (1999). Evolving brains. http://authors.library.caltech.edu/25078/1/Evolving_Brains.pdf. Scientific Publishing American Library.
- Allport, G. (1961). *Pattern and growth in personality*. Rinehart and Winston, Inc.
- American psychiatric association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed). <https://doi.org/10.1176/appi.books.9780890425596>. Autor.
- Ato, M., López-García, J. J., & Benavente, A. (2013). Un sistema de clasifi ación de los diseños de investi ación en psicología. *Anales de Psicología*, 29(3), 1038–1059. <https://doi.org/10.6018/analesps.29.3.178511>
- Bustos, V. A., & Russo, A. R. (2018). Salud mental como efecto del desarrollo psicoafectivo en la infancia. *Psicogente*, 21(39), 183–202. <https://g/10.17081/psico.21.39.2830>
- Bylsma, L. M., Morris, B. H., & Rottenberg, J. (2008). A meta-analysis of emoti reacti in major depressive disorder. *Clinical Psychology Review*, 28(4), 676–691. <https://doi.org/10.1016/j.cpr.2007.10.001>
- Castro, A. (2010). Fundamentos de psicología positi. *Argenti* Editorial Paidós.
- Chapman, L. J., Chapman, J. P., & Raulin, M. L. (1976). Scales for physical and social anhedonia. *Journal of Abnormal Psychology*, 85(4), 374–382. <http://www.ncbi.nlm.nih.gov/pubmed/956504>. <https://doi.org/10.1037/0021-843x.85.4.374>
- Davis, W. A. (1982). A causal theory of enjoyment. *Mind*, 91(362), 240–256. <https://doi.org/10.1093/mind/XCI.362.240>
- Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, 95(3), 542–575. <https://doi.org/10.1037/0033-2909.95.3.542>
- Dodell-Feder, D., & Germine, L. (2018). Epidemiological dimensions of social anhedonia. *Clinical Psychological Science*. Clark, 6(5), 1–9. <https://doi.org/10.1177/2167702618773740>
- Fawcett J., Scheft, W. A., & Gibbons, R. D. (1983). Assessing anhedonia in psychiatric patients: The Pleasure Scale. *Archives of general psychiatry*, 40(1), 79–84. <https://dx.doi.org/10.1001/archpsyc.1983.01790010081010>

- Frewen, P. A., Dean, J. A., & Lanius, R. A. (2012). Assessment of anhedonia in psychological trauma: Development of the Hedonic Deficit and Interference Scale. *European Journal of Psychotraumatology*, 3(1), 8585. <https://doi.org/10.3402/ejpt.v3i0.8585>
- Gabbay, V., Johnson, A. R., Alonso, C. M., Evans, L. K., Babb, J. S., & Klein, R. G. (2015). Anhedonia, but not irritability, is associated with illness severity outcomes in adolescents with major depression. *Journal of Child and Adolescent Psychopharmacology*, 25(3), 194–200. <https://doi.org/10.1089/cap.2014.0105>
- Husain, M., & Roiser, J. P. (2018). Neuroscience of apathy and anhedonia: A transdiagnostic approach. *Nature Reviews. Neuroscience*, 19(8), 1. <https://doi.org/10.1038/s41583-018-0029-9>
- Jiménez-Tapia, A., Wagner, F., Rivera-Heredia, M. E., & González-Forteza, C. (2015). Estudio de la depresión en estudiantes de la Ciudad de México y del Estado de Michoacán por medio de la versión revisada de la CES-D. *Salud Mental*, 38(2), 103–107. <https://doi.org/10.17711/SM.0185-3325.2015.014>
- Keyes, C., Ryff, C., & Shmotkin, D. (2002). Optimal well-being: The empirical encounter of two traditions. *Journal of Personality and Social Psychology*, 82, 1007–1022. <https://doi.org/10.1037/0022-3514.82.6.1007>
- Kimiecik, J., & Harris, A. T. (1996). What is enjoyment? A conceptual/definitional analysis with implications for sport and exercise psychology. *Journal of Sport and Exercise Psychology*, 18, 4–8. <https://doi.org/10.1123/jsep.20.3.247>
- Kringelbach, M. L., & Berridge, K. C. (2009). Towards a functional neuroanatomy of pleasure and happiness. *Trends in Cognitive Sciences*, 13(11), 479–487. <https://doi.org/10.1016/j.tics>
- Kringelbach, M. L., & Berridge, K. C. (2010a). The functional neuroanatomy of pleasure and happiness. *Discovery Medicine*, 9(49), 579–587. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3008658/>
- Kringelbach, M. L., & Berridge, K. C. (2010b). The neuroscience of happiness and pleasure. *Social Research*, 77(2), 659–678. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3008658/>. <https://doi.org/10.1353/sor.2010.0049>
- MacPhillamy, D. J., & Lewinsohn, P. M. (1982). The pleasant events schedule: Studies on reliability, validity, and scale intercorrelations. *Journal of Consulting and Clinical Psychology*, 50(3), 363–380. <https://doi.org/10.1037/0022-006X.50.3.363>
- Maslow, A. (1968). *Towards a Psychology of being*. New York: D. van Nostrand. (Trad. cast: *El hombre autorrealizado: hacia una psicología del ser*. Barcelona: Kairós. 1998, 1ª ed).
- Padrós, F. (2002). *Disfrute y bienestar subjetivo: un estudio psicométrico de la felicidad*. (Tesis Doctoral Universidad de Barcelona). <http://tesisenred.net/bitstream/handle/10803/4741/fpb1de2.pdf?sequence=1>.
- Padrós-Blázquez, F., Contreras-Navarro, G., & Soriano-Más, C. (2012). Afecto positivo y negativo: ¿una dimensión bipolar o dos dimensiones unipolares independientes? *Interdisciplinaria y ciencias Afines*, 29, 1, 1–14. <https://doi.org/10.16888/interd.2012.29.1.9>
- Radloff, L. S. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*, 1(3), 385–401. <https://doi.org/10.1177/014662167700100306>
- Robt, T. (1897). *The psychology of emotions*. W. Scott Publishing. Co. <https://archive.org/details/psychologyofemo00ribo>.
- Rogers, C. (1961). *On becoming a person*. http://pubsebooks/pdfs/Carl_Rogers_On_Becoming_a_Person.pdf. s-f-walker.org. Houghton Mifflin (Trad. cast: *El proceso de convertirse en persona*. Barcelona: Paidós. 2004).

- Ryan, R. M., & Deci, E. L. (2001). On happiness and human potential: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology*, 52, 141–166. <https://doi.org/10.1146/annurev.psych.52.1.141>
- Sandín, B. (2003). Escalas Panas de Afecto Positivo y Negativo para Niños y Adolescentes (PANASN). *Revista de Psicopatología y Psicología Clínica*, 8(2), 173–182. <https://doi.org/10.5944/rppc.vol.8.num.2.2003.3953>
- Santoya Montes, Y., Prettel, G., M., & Tezón Boutureira, M. (2018). Las emociones en la vida universitaria: Análisis de la relación entre autoconocimiento emocional y autorregulación emocional en adolescentes y jóvenes universitarios. *Psicogente*, 21(40), 422–439. <https://doi.org/10.17081/psico.21.40.3081>
- Scanlan, T. K., & Simons, J. P. (1992). The construct of sport enjoyment. In G. C. Roberts (Ed.), *Motivation in sport and exercise* (pp. 199–215). Human Kinetics.
- Seligman, M. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, 55, 5–14. <https://doi.org/10.1037/0003-066X.55.1.5>
- Snaith, R. P., Hamilton, M., Morley, S., Humayan, A., Hargreaves, D., & Trigwell, P. (1995). A scale for the assessment of hedonic tone: the Snaith-Hamilton Pleasure Scale. *British Journal of Psychiatry*, 167(1), 99–103. <https://doi.org/10.1192/bjp.167.1.99>
- Thabet, A. A., & Vostanis, P. (2000). Post-traumatic stress disorder in children of war: A longitudinal study. *Child Abuse and Neglect*, 24(2), 291–298. [https://doi.org/10.1016/S0145-2134\(99\)00127-1](https://doi.org/10.1016/S0145-2134(99)00127-1)
- Veenhoven, R. (1994). El estudio de la satisfacción con la vida. *Intervención Psicosocial*, 3, 87–116. <http://personal.eur.nl/veenhoven/Pub1990s/94d-fulls.pdf>
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54(6), 1063–1070. <https://doi.org/10.1037/0022-3514.54.6.1063>
- Winer, E. S., Drapeau, C. W., Veilleux, J. C., & Nadorff, M. R. (2016). The association between anhedonia, suicidal ideation and suicide attempts in a large student sample. *Archives of Suicide Research*, 20(2), 265–272. <https://doi.org/10.1080/13811118.2015.1025119>

APPENDIX 1. Enjoyment Experience Scale for Children and Adolescents (SEECA)

INDICATE THE LEVEL OF AGREEMENT IN EACH OF THE FOLLOWING STATEMENTS:	TOTALLY AGREE	NEITHER AGREE NOR DISAGREE	TOTALLY DISAGREE
1. I have a good time in many places.			
2. I enjoy many moments during the day.			
3. I feel comfortable with most people.			
4. I have good time in most circumstances			
5. I am a person who enjoys it with ease			

This work is under: Creative commons attribution 4.0 international license. The Licensee has the right to copy, distribute, display, and perform the work and make derivative works if it recognizes and cites the work in the manner specified by the author or licensor.



