Validación de cuestionario para medir los factores psicosociales asociados con la autoestima en universitarios

Validation of a Questionnaire to Measure Psychosocial Factors Associated with Self-Esteem in University Students

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Resumen

El objetivo de este estudio consistió en el diseño y validación de un instrumento que contribuya a actualizar y optimizar la aplicación de los programas de Universidad Saludable y Tutorías de la Universidad Autónoma de Occidente (UAdeO), ya que no existía una herramienta metodológica que mostrara propiedades psicométricas confiables y de fácil aplicación para los estudiantes. Uno de los objetivos medulares de estos programas consiste en potenciar el desarrollo de la autoestima en los estudiantes como parte de las acciones educativas institucionales. Con la finalidad de lograr una mayor eficiencia del cuestionario, se seleccionaron las escalas de Ambiente Escolar, Ambiente Familiar, Habilidades Sociales, todas ellas para ser correlacionadas con la de Autoestima. Para lo cual se empleó una metodología cuantitativa y un diseño de tipo descriptivo-correlacional. Así, se llevó a cabo la aplicación de un cuestionario de tipo transversal, que demostró que posee una consistencia interna en cada una de las dimensiones que integran las escalas. La muestra estuvo representada por 520 estudiantes de las 16 diferentes carreras con las que cuenta la UAdeO, de los cuales 51.4 % eran mujeres y el 48.6 % hombres. La edad del alumnado osciló entre los 17 y 34 años. Los resultados indican que los instrumentos
utilizados en el estudio tienen una alta confiabilidad y validez, así como que existe un nivel alto de desarrollo de la autoestima cuando se correlaciona con los factores psicosociales.

**Palabras clave:** autoestima, encuesta, factores psicosociales, universitarios.

**Abstract**

The objective of this study consisted in the design and validation of an instrument that contributes to update and optimize the application of the Healthy University and Tutoring programs of the Universidad Autónoma de Occidente (UAdeO), since there was no methodological tool that showed reliable psychometric properties and easy application for students. One of the main objectives of these programs is to promote the development of self-esteem in students as part of institutional educational actions. To achieve greater efficiency of the questionnaire, the scales of School Environment, Family Environment, and Social Skills were selected to be correlated with that of Self-Esteem. A quantitative methodology and a descriptive-correlational design were used. Thus, the application of a cross-sectional questionnaire was carried out, which showed that it has internal consistency in each of the dimensions that make up the scales of the instrument. The sample consisted of 520 students from the 16 different careers at UAdeO, of which 51.4% were female and 48.6% male. The age of the students ranged from 17 to 34 years old. The results indicate that the instruments used in the study have high reliability and validity, as well as a high level of self-esteem development when correlated with psychosocial factors.

**Keywords:** self-esteem, survey, psychosocial factors, university students.

**Resumo**

O objetivo deste estudo consistiu na conceção e validação de um instrumento que contribua para atualizar e otimizar a aplicação dos programas Universidade Saudável e Tutoria da Universidade Autónoma do Oeste (UAdeO), uma vez que não existia nenhuma ferramenta metodológica que apresentasse propriedades fiáveis e fácil de aplicar psicometria para os alunos. Um dos objetivos centrais desses programas é promover o desenvolvimento da autoestima dos alunos como parte das ações educativas institucionais. Para maior eficiência do questionário, foram selecionadas as escalas de Ambiente Escolar, Ambiente Familiar e Habilidades Sociais, todas para serem correlacionadas com a escala de Autoestima. Para o qual foi utilizada uma metodologia quantitativa e um desenho descritivo-correlacional.
Assim, foi realizada a aplicação de um questionário transversal, que demonstrou que o mesmo possui consistência interna em cada uma das dimensões que compõem as escalas. A amostra foi representada por 520 alunos das 16 diferentes carreiras que a UAdeO possui, dos quais 51,4% eram mulheres e 48,6% homens. A idade dos alunos variou de 17 a 34 anos. Os resultados indicam que os instrumentos utilizados no estudo têm alta confiabilidade e validade, bem como que há um alto nível de desenvolvimento da autoestima quando correlacionados com fatores psicossociais.

**Palavras-chave:** auto-estima, pesquisa, fatores psicossociais, universidade.

**Fecha Recepción:** mayo 2022  
**Fecha Aceptación:** Noviembre 2022

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**Introduction**

Self-esteem is defined by Naranjo (2007) as "the value perception that a person has of himself" and as an individual development process that includes attitudinal, cognitive, affective and behavioral aspects that are acquired from human interaction (p. 10). For his part, Satir (2012) establishes self-esteem as a starting point for a positive development of human relations (p. 36).

When people develop good self-esteem, they have the social skills necessary to coexist with others and achieve a freer and more empathetic development, even in difficult situations of interrelation with others, such as the ability to get dates, have friends, express feelings, and desires, ease of making new friends or simply meeting new people in social gatherings and other places, in short, they exercise behavioral abilities that are relatively well organized and coherent with the surrounding environment (Caballo, 2007).

The environments in which students develop contribute to the formation of the socio-affective dimension necessary for people's lives. This favors the development of greater independence, adaptability, creativity and flexibility in the face of constant and accelerated change (Iniesta, Martínez and Mañas, 2014).

One of the environments considered to be one of the most important is the family, since parents play a fundamental role in the development of their children's self-esteem (Duclos, Laporte & Ross, 2010). Parents who transmit confidence to their sons and daughters from birth contribute to the formation of a healthier personality. In addition, healthier relationships are established at home that are expressed through values, affections, attitudes and ways of being (Branden, 2011). Another factor that strengthens good self-esteem is
involving sons and daughters in making important family decisions. (De la Peña y Lozano, 2017).

For their part, Perandones, Herrera and Lledó (2014) ensure that school environments are part of the satisfaction of students for the study when they relate in a positive way, considering that when there is a warm, open and human relationship, the goal can be achieved. constructive change in the person and therefore better learning.

On the other hand, in a hostile and authoritarian environment, where there is no positive relationship with students, it is unlikely to achieve better learning (Bandura & Walters, 1974).

It should be noted that the humanist theoretical perspective emphasizes the existence of the human being and its main interest focuses on the theme of love, self-esteem, belonging, self-realization, self-expression, peak experiences, meanings, values and ethics (Marcuse, 2005). In addition, it emphasizes the human potential that each person possesses and the effort that each one gives to reach higher levels of achievement and goodness, which are fundamental in the conduct of the human being, as well as to achieve positive growth (Mckay and Fanning, 1991).

However, from this perspective there are behaviors associated with high self-esteem such as: psychological well-being, positive social interaction, self-acceptance, assertiveness and personal care; while low self-esteem is linked to behaviors such as: apathy, risk behaviors, depression, disinterest in oneself and others (Urbiola, Estévez, Iruarrizaga, & Jauregui, 2017).

Currently, there are numerous investigations that have been generated around self-esteem, both in the academic field and in the personal field, which indicate psychosocial factors that are correlated with this (Ahumada y Obregón, 2015; Añer, Meza, Pompa y Torres y Landero, 2011; Barra, 2012; Leiva, Encina y Pineda 2013; Naranjo, 2007; Núñez, Mercado y Madrigal, 2014; Silva y Mejía 2015).

Within the Autonomous University of the West (UAdEo) there are university programs such as the Healthy University and the Tutoring program that have the purpose of promoting healthy habits in students such as physical and emotional care and healthy relationships, as well as promoting self-esteem for the development of capacities that allow them to face their experiences through greater psychological well-being, greater social skills and, in the professional sphere, achieve greater educational competences through clear goals and, for the fulfillment of these, personal responsibility, creativity and learning.
Precisely, with the objective of updating and optimizing the application of these programs, the present scientific investigation was carried out, since the UAdeO did not have the validation of an instrument that showed reliable psychometric properties and easy application for students. Likewise, in order to achieve a greater efficiency of the questionnaire, the scales of School Environment, Family Environment and Social Skills were selected, in accordance with the main objectives of the programs, to correlate them with the Self-esteem scale.

**Materials and methods**

The construction and validation of the questionnaire was carried out through a review and analysis of the Healthy University and Tutoring programs, as well as the bibliographic content of each of the objectives of both programs, whose focus is the humanist theory, was also examined. From the results of this inquiry, it was considered convenient, following the needs found, to include different psychosocial factors associated with self-esteem, for which it was necessary to consider four scales, namely: "Self-esteem scale" by Rosenberg (1965), translated into Spanish by Atienza, Moreno and Balaguer (2000); “Family Environment Scale” by R. H. Moos (1974), adapted by Fernández and Sierra (1982); "Social skills scale" by Goldstein (1989), adapted by Rojas (1995), and "School social climate scale" by Moos (1974), adapted by Ortiz, Prado and Ramírez (2014). In addition, the fields of sex, age, career and quarter number were included. The questionnaire consists of 245 questions addressed to the students, which fully integrate the scales, since it was convenient for each of the categories evaluated.

The research design corresponds to the quantitative epistemological-methodological paradigm. In this study, the collection of empirical data was carried out by means of the integration and application of the questionnaire, since the results obtained allow us to determine average values in the variables, in addition to indicating how the psychosocial factors are correlated with high or low self-esteem and the magnitude of association that they have, can even indicate the way in which these values partially behave (Hernández, Fernández and Baptista, 2014).

The "Self-esteem Scale" consists of 10 items, five in a positive sense and five in a negative sense and from the scores it is classified as high, medium and low self-esteem; the "Family Environment Scale" includes 90 items distributed in three dimensions (Internal relations, Family stability and External relations of family members); the “Social Skills
Scale” is made up of 50 items that are grouped into six categories (Primary Social Skills, Advanced, Related to Feelings, Alternatives to Aggression, Facing Stress, and Planning); The “School Social Climate Scale” is made up of 90 items that are grouped into four dimensions (Relationships, Personal development or self-actualization, Stability or maintenance system, and Change system).

The sample was determined from a population of 1386 students and based on the following formula (Aguilar, Bravo, Gallegos, Cerón y Reyes, 2015):

\[ n = \frac{N \sigma^2 Z^2}{(N - 1) e^2 + \sigma^2 Z^2} \]

It should be noted that 20% more students were added to cover the loss of data and so that there was a confidence level of 95%, which is the desired one for the study. Therefore, the sample was as follows: (430.97) (1.20) = 520. By means of a simple random probabilistic sampling, a list was organized with the numbers of students belonging to the different majors using the Stats program. The age of the students ranged between 17 and 34 years: 88% of the students with an age between 19 and 24 years; the rest, 10%, with 18 years or less and 2% between 25 and 34 years. Regarding gender, 51.4% were women and 48.6% men.

**Psychometric properties**

The reliability and validity of the questionnaire was determined through piloting. The questionnaire was applied to a total of 52 students, who represented 10% of the sample and who were randomly chosen for this procedure. Two of them were from the Psychology major and the last one from the Nursing major of different quarters.

The questionnaire was solved in a reasonable time. In addition, it was inquired about whether it was of interest to the students or whether it was threatening or uncomfortable. In the end, no modifications were made to the questions.

**Preparation of the questionnaire**

The reliability of the items of the applied questionnaire was limited to content validity, which refers to how an instrument is structured, since it reflects a logical-rational domain in relation to the revised theoretical-conceptual structure that is specifically observed. in the questions that make it up (Pedrosa, Suárez and García, 2013).
The objectivity of the research instrument, in this case the questionnaire, does not present biases or lend itself to manipulation by the researcher, who in this case was the one who applied, qualified and interpreted the data. Likewise, the instructions and conditions at the time of application of the instrument were the same for the entire sample. (Hernández et al., 2014).

Exploratory factor analysis

The analysis and processing of the data was carried out using the statistical package SPSS V21. Reliability was estimated with each of the scales using Cronbach's alpha coefficient.

In the analysis of the questionnaire, the method of principal components with varimax rotation was used to measure the correlation between factors of each of the scales, and the Self-esteem dimension was studied using Pearson's correlations. Regarding the statistically significant differences of the different scales, an analysis of variance (Anova) was performed using Dunnett's T3 post hoc test.

Field study

The investigation was carried out at the UAdeO, Guasave Regional Unit, where the approval and collaboration of the authorities was obtained, which were notified by means of an informed consent to carry out the investigation project.

The questionnaire was completely applied to a total of 520 students and was self-administered in a classroom assigned to groups of 25 students, according to the lists of random numbers that were part of the sample.

Internal consistency evaluation

The reliability of the questionnaire was evaluated through internal consistency (Cronbach's α), taking into account values greater than 0.70, which indicates acceptable internal consistency.
Table 1. It shows the results of internal consistency of the following scales: Self-esteem, Family Environment, Social Skills and School Environment

<table>
<thead>
<tr>
<th></th>
<th>Autoestima</th>
<th>Ambiente Familiar</th>
<th>Habilidades Sociales</th>
<th>Ambiente Escolar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alfa de Cronbach</td>
<td>0.771</td>
<td>0.709</td>
<td>0.960</td>
<td>0.838</td>
</tr>
<tr>
<td>Alfa de Cronbach según los elementos tipificados</td>
<td>0.796</td>
<td>0.725</td>
<td>0.961</td>
<td>0.844</td>
</tr>
<tr>
<td>N de elementos</td>
<td>10</td>
<td>90</td>
<td>50</td>
<td>90</td>
</tr>
</tbody>
</table>

Source: self made

Results

The results of the validation of the questionnaire are shown below, with a detailed description in each of the different stages of the methods used.

Psychometric properties

The validity and reliability were determined through piloting, that is, the complete questionnaire was applied to 52 students, who represented 10% of the sample and who were between the ages of 17 and 34, for which no modification was made. to the items of the questionnaire, which were shown to have an acceptable internal consistency using Cronbach's alpha.

Assessment of content validity

Validity was determined from structuring the instrument through the integration of different scales, with a logical-rational domain in relation to the revised theoretical-conceptual structure and that is observed specifically in each of the items that comprise it, for which did not require any modification.
**Exploratory factor analysis**

The existing bilateral relationship was estimated, for which Pearson's correlation was used. The results reflect positive correlations between self-esteem and psychosocial factors. In all cases, the correlations are statistically significant at the 0.01 level, although of low intensity.

**Table 2.** Shows the Pearson correlations of each of the scales

<table>
<thead>
<tr>
<th>Escalas</th>
<th>Ambiente Familiar</th>
<th>Habilidades Sociales</th>
<th>Ambiente Social Escolar</th>
<th>Autoestima puntaje</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambiente Familiar</td>
<td>1</td>
<td>0.348**, 0.000</td>
<td>0.218**, 0.000</td>
<td>0.293**, 0.000</td>
</tr>
<tr>
<td>Habilidades Sociales</td>
<td>0.348**, 0.000</td>
<td>1</td>
<td>0.148**, 0.001</td>
<td>0.306**, 0.000</td>
</tr>
<tr>
<td>Ambiente Social Escolar</td>
<td>0.218**, 0.000</td>
<td>0.148**, 0.001</td>
<td>1</td>
<td>0.268**, 0.000</td>
</tr>
<tr>
<td>Autoestima puntaje</td>
<td>0.293**, 0.000</td>
<td>0.306**, 0.000</td>
<td>0.268**, 0.000</td>
<td>1</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level (bilateral).

** Correlation is significant at the 0.01 level (bilateral).

Source: self made

**Table 3.** It shows the relationship between Self-esteem and the level of Family Environment through the analysis of the chi-square test. ($\chi^2$)

<table>
<thead>
<tr>
<th>Nivel de Ambiente Familiar</th>
<th>Ji cuadrada de Pearson</th>
<th>Razón de verosimilitudes</th>
<th>Asociación lineal por lineal</th>
<th>N de casos válidos</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valor</td>
<td>29.797*</td>
<td>29.908</td>
<td>26.085</td>
<td>520</td>
</tr>
<tr>
<td>gl</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Sig. asintótica (bilateral)</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td></td>
</tr>
</tbody>
</table>

* Zero cells (0.0%) have an expected frequency less than five. The minimum expected frequency is 7.85.

Source: self made
Table 4. Shows the relationship between Self-esteem and the level of Social Skills that was analyzed using the chi-square test. ($\chi^2$)

<table>
<thead>
<tr>
<th>Nivel de Habilidades Sociales</th>
<th>Ji cuadrada de Pearson</th>
<th>Razón de verosimilitudes</th>
<th>Asociación lineal por lineal</th>
<th>N de casos válidos</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valor</td>
<td>29.759$^a$</td>
<td>28.395</td>
<td>23.337</td>
<td>520</td>
</tr>
<tr>
<td>gl</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Sig. asintótica (bilateral)</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td></td>
</tr>
</tbody>
</table>

$^a$ Two cells (22.2%) have an expected frequency of less than five. The expected minimum frequency is 1.27.

Source: self made

Table 5. It shows the relationship between Self-esteem and the level of School Environment through the analysis of the chi-square test. ($\chi^2$)

<table>
<thead>
<tr>
<th>Nivel de Ambiente Escolar</th>
<th>Ji cuadrada de Pearson</th>
<th>Razón de verosimilitudes</th>
<th>Asociación lineal por lineal</th>
<th>N de casos válidos</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valor</td>
<td>22.654$^a$</td>
<td>28.315</td>
<td>17.881</td>
<td>520</td>
</tr>
<tr>
<td>gl</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Sig. asintótica (bilateral)</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td></td>
</tr>
</tbody>
</table>

$^a$ Zero cells (0.0%) have an expected frequency less than five. The minimum expected frequency is 8.30.

Source: self made

Application of the questionnaire

The version used in the application consists of 245 questions and was applied to a total of 520 UAdeO students. The results show that the scales have an internal consistency of values greater than 0.70, according to Cronbach's alpha test, for which it was possible to obtain consistent and coherent results in relation to the purpose of the investigation.
Discussion

With the aim of having an instrument that contributes to updating and optimizing the application of the UAdeO Healthy University and Tutoring programs, the questionnaire in question was designed as a methodological tool that demonstrated that it has internal consistency in each of the dimensions that make up the scales.

The main objectives of these programs consist of reducing school dropout, apathy and lack of interest in the profession that generate a low commitment and responsibility regarding school work, considering some cases where an evident concern on the part of the students can be frequently observed. Problematic situations in their homes, at work, with their family, with friends, with their partner, alcohol and drug use, among others, revealed by teachers in academy meetings.

Promoting the development of a strong and healthy self-esteem of students is one of the core objectives of these programs, since it is considered one of the institutional educational actions in order to contribute to an integral development of students as part of mental health, the self-confidence and self-care necessary to face socio-emotional problems in the different contexts to which they belong, such as the family, school, their friends and among peers. Hence, it is considered important to correlate psychosocial factors with self-esteem, since they are environments and situations that young people must face on a daily basis through the development of social skills necessary to have healthy habits and coexistence, to manage assertively, which which has also been investigated in various studies (Añez et al., 2011; Barra, 2012; Núñez et al., 2014; Silva y Mejía 2015).

The results of this instrument can also be used in scientific research or as a validation instrument, in addition to using it in the school context, like other studies, for example, that of Escofet, Folgueiras, Luna and Palou (2016), who developed a questionnaire in order to assess service-learning projects using university students as a sample. In addition, these studies turn out to be very useful when carrying out educational interventions that the institutions consider convenient, including the Healthy University and Tutoring programs of the UAdeO.

Finally, in this, as in other studies around the world, it has been shown that in the educational field it is necessary to innovate in methodological instruments that allow students to be objectively measured (Rojas, 1995), in order to create or strengthen educational programs aimed at development of competencies that allow them to reach higher levels of achievement based on their positive growth.
Conclusions

The questionnaire meets the necessary requirements for the elaboration of a valid and reliable methodological instrument, it has a humanist theoretical support that allows measuring the environments in which students develop, such as the family environment, the school environment and social skills, which have a direct correlation with self-esteem.

In accordance with the previously described results, the consistency of the items has been clearly demonstrated through Cronbach's alpha, as it has a high degree of reliability and validity. Likewise, the factorial analysis of the scales confirmed that there is a consistent correlation of relationship levels, between factors and dimensions to which each of its elements belongs; thus, its content validity has been demonstrated.

Future lines of research

It should be noted that the results show a consistent presence in the dimensions of each of the scales used in the research, which can be included in other works that were not planned in this study, through new lines of research, such as the cases which are presented below:

- Interpret and solve problems related to the educational environment that include situations related to the scales that make up the questionnaire, such as Social Skills and School Environment.
- Use the questionnaire with new students entering the university in order to update and improve existing plans and programs.
- Test the consistency of the questionnaire in other educational levels such as primary and secondary.
- Use the scales that make up the questionnaire separately based on the needs that arise in the context in which the study is carried out.
References


