



Reliability of the Scale Of Perceived Social Support In Social Networks for body weight management

Guevara-Valtier, Milton Carlos^{1*}; González-De la Cruz, Patricia²; Chávez-Herrera, Alina Edith³; Cárdenas-Villarreal, Velia Margarita⁴; Gutiérrez-Valverde, Juana Mercedes⁵

SUMMARY

Introduction: Adolescence is considered a critical stage prone to the adoption of unhealthy lifestyles and thus contributing to the development of diseases in adulthood. This scenario increases the probability for adolescents to be both interested and concerned about body weight management. Important in this context are advice, encouragement, and recommendations on healthy diet to achieve favorable results; this also serves as a type of social support that can be found in virtual environments or social networks.

Objective: Design and evaluate the first short-scale reliability analysis to assess the social support perceived by adolescents in social networks for body weight management based on a healthy diet (Phase I).

Methodology: A descriptive multi-stage design was used, applied to 32 adolescents, and the reliability of the scale of perceived social support by adolescents in social networks for body weight management based on a healthy diet was designed and assessed. **Result:** The Cronbach's alpha demonstrated by the questionnaire was 0.85. **Conclusion:** The questionnaire demonstrated an acceptable reliability.

Keywords: Reproducibility of results, social support, Internet, healthy diet (DeCS; BIREME).

1. Doctorate Degree in Education. Universidad Autónoma de Nuevo León. E-mail: carlos_valtier7@hotmail.com
2. Master's Degree in Nursing Sciences. Universidad Veracruzana. Veracruz
3. Master's Degree in Nursing Sciences. Universidad Autónoma de Campeche.
4. Doctorate degree in Nursing Care Culture. Universidad Autónoma de Nuevo León.
5. Doctorate Degree in Nursing Sciences. Universidad Autónoma de Nuevo León.

*Corresponding author

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INTRODUCTION

Adolescence is considered a special stage of life, attributed to the presence of biological, psychological, intellectual, and social changes that can positively or negatively affect the health of this population group^(1,2). In this regard, the adoption of a sedentary lifestyle or the consumption of high-fat foods and other unhealthy lifestyles, are future factors that may predict the development of chronic degenerative diseases such as hypertension or type II diabetes mellitus. According to some studies the results show alarming data; for instance, in Mexico 4.2% of adolescents exhibited an unhealthy lifestyle and 63% of this population group were overweight or obese while 79.5% were physically inactive. Another study performed in Chile found that 3.6% of a sample group analyzed was overweight/obese^(3,4). In Spain, an excessive pattern of consumption of meats and meat products, including fats and sweets (> 120%) was found in a representative sample of university students. However, the consumption of oils such as olive and sunflower, cereals especially whole grains and potatoes, nuts, legumes, fruits and vegetables, was insufficient (<80%); the egg, fish, and dairy foods group is over-consumed by half of the students, and is under-consumed by a quarter of them⁽⁵⁾. In Colombia, it became apparent in that 65% of minors (including adolescents) are physically inactive and only 7.5% fail to consume fruits and vegetables in good quantity⁽⁶⁾.

In addition to the above, recent studies confirm that adolescents mistakenly perceive their real weight in comparison with the self-perception of their body shape, that is, they have an inadequate vision considering the actual Body Mass Index, a situation that increases the vulnerability of developing diseases, especially of the chronic degenerative type^(7, 8). In this regard, a study conducted in Colombia with a sample of students revealed a perception of low body weight among 48 (15.0%); adequate perception among 228 (71.0%); and high perception among 45 (14.0%). The Body Mass Index was between 14.5 and 29.8, with an average of 20.5 (SD = 3,0)⁽⁹⁾.

The scenario described suggests the need to consider available resources to affect a change⁽¹⁰⁾. A resource that is potentially useful for adolescents is the support they receive through social networks⁽¹¹⁾. Social support (SS) can be extended according to the possibilities of the suppliers and recipients such as having contact with healthy and unhealthy people, in order to look for or exchange experiences. Accordingly, one way to assess the social support that adolescents receive through social networks is to use questionnaires in shortened versions, with appropriate psychometric properties that reduce adverse effects during application such as fatigue and lack of motivation to complete them⁽¹²⁾.

Different questionnaires that assess social support were evaluated; all superior to the test items proposed

in this study, and, additionally, they do not evaluate the perceived SS in social networks such as Facebook, Twitter, Instagram, and others. Among the evaluated questionnaires were the 'Coping, Social Support and Food Behavior in Individuals with Diabetes and Hypertension' with 23 questions. This questionnaire presents data with adequate validity and reliability ($B = 1755$, $p < 0.01$, $KMO = 0.788$ and $\alpha = 0.547$ to 0.915)⁽¹³⁾; the 'Social Support Questionnaire for the Evaluation of Social Support Networks' with a total of 27 items ($\alpha = 0.940$) has shown adequate correlations with items from other questionnaires that assess social support ($p < 0.03$)⁽¹⁴⁾; and the 'Medical Outcomes Study (MOS) Questionnaire' composed of 20 items with 5 response options (from 1 to 5). The first is used to investigate the structural support and the rest is functional, divided into 4 sub-scales called emotional support, instrumental, positive social interaction, and affective support. This questionnaire obtained a Cronbach's alpha of 0.97 as its total score⁽¹⁵⁾.

However, it was from the scale to evaluate the SS through social networks⁽¹⁷⁾ which in turn was developed from the MOS questionnaire, and from which the base of 5 questions was taken, adapting phrases related to SS for body weight management considering a healthy diet. For instance: When you ask for some kind of support from your friends (SS), such as healthy diet tips to manage your body weight, how do they respond? (They reply to you, they visit you, etc.)

The objective of this study was to design and evaluate the first short-scale reliability analysis to assess the SS perceived by adolescents in social networks for body weight management based on a healthy diet (Phase I).

METHODOLOGY

Since a situation that occurs naturally was described and due to the fact that the design phase and the psychometric properties (Cronbach's Alpha) of the Scale of Social Support for a Healthy Diet are reported⁽¹⁶⁾, the design of the study was descriptive multi-stage. A pilot test was conducted on a sample of 32 adolescents enrolled in a public university. Those who confirmed having access to a Facebook, Twitter, Instagram, and others, answered the questionnaire.

The 'Scale of Social Support for a Healthy Diet (EASPAS)' was designed using the original questionnaire entitled 'Scale of Social Support in Social Networks (ASRS)' as a source. The scale consists of 15 items; the first item refers to the size of the social network and the remaining 14 items refer to four dimensions of functional social support: emotional/informational, instrumental, positive social interaction, and affective support. The scale has a Likert type response format (4 = a lot; some;

more or less, almost nothing, and 0 = nothing). All the items score positively. The psychometric tests of the instrument indicate an adequate internal consistency of $\alpha = .94$, according to Cronbach's alpha. Also, the original validity shows an explained variance of 84.9⁽¹⁷⁾.

The modification of the scale that resulted in the 'Scale of Social Support for a Healthy Diet (EASPAS)' consisted of adapting the content of each question focusing on the SS that young people have the ability, through social networks, to perceive and manage their body weight by considering a healthy diet. So the adaptation and analysis thereof was divided into 2 phases: first the items related to "healthy diet" were analyzed, and in a future analysis the assessment of the items related to the 'Social Support in Social Networks (ASRS)' will be conducted for the realization of healthy physical activity for body weight management. There are 5 items to assess the 'SS in Social Networks (ASRS)' related to weight management based on a healthy diet, which have a Likert type response scale that goes from 5 to 1, where 5 corresponds to "a lot" and 1 to "nothing" of SS. The sum of the points reflects minimum and maximum totals that range from 5 to 25, thus indicating that the higher the score obtained the greater the perception of SS in social networks to manage body weight based on a healthy diet. The 'Scale of Social Support for a Healthy Diet (EASPAS)' is a scale easy to answer, thus facilitating its application.

First of all, for this pilot test, the protocol was submitted to the Ethics Committee of the sponsoring institution, and an authorization was obtained whose registration code is FAEN-L-1350. The rights of voluntarily participation, privacy, anonymity, and withdrawal by decision of the participants were respected. The aforementioned aspects are indicated in the General Health Act and in the ethical principles of the Declaration of Helsinki^(18, 19).

Descriptive statistics were used, and the reliability analysis was performed using the Cronbach's alpha coefficient. The results of this analysis were compared with values between 0.70 and 1.00 and the result was considered acceptable if it landed between these values⁽¹⁷⁾. In addition to the above, descriptive results were obtained through the use of central tendency, frequencies, and percentage measurements. The data was processed using the Statistical Package called 'SPSS 23'.

RESULTS

The average age of the adolescents was 17 years (SD = 1.5), 60% were women. Table 1 describes the percentage of participants by item/response category; it was found that with respect to perceived SS from friends to solve problems about healthy diet to manage body weight, 6.9% indicated that they perceive no social support, 25.0% receive more or

Table 1. Percentage of participants by item/response category

Item	A lot (5)		Some (4)		More or Less (3)		Almost Nothing (2)		Nothing (1)	
	f	%	f	%	f	%	f	%	f	%
	1. Do your friends help you solve problems regarding a healthy diet to manage your body weight?	1	3.1	3	9.4	8	25.0	5	15.6	15
2. Do you get advice from your friends (SS) on how to eat a healthy diet to manage your body weight?	1	3.1	4	12.5	7	21.9	10	31.3	10	31.3
3. Do you have the support of your friends (SS); do they encourage you to eat a healthy diet to manage your body weight?	7	21.9	9	28.1	9	28.1	4	12.5	3	9.4
4. Do you tell your friends (SS) about your diet to manage your body weight?	6	18.8	8	25.0	5	15.6	9	28.1	4	12.5
5. When you ask for some kind of support from your friends (SS), such as healthy diet tips to manage your body weight, how do they respond? (i.e. they are going to talk to you; they are going to see you, etc.)	7	21.9	4	12.5	12	37.5	6	18.8	3	9.4

Source: EASPA

n = 32

less social support (question 1); with respect to question 3, which inquires whether friends of social networks (Facebook, Twitter, Instagram, or other) provide encouragement to eat a healthy diet to manage body weight, 28.1% indicated that they receive some social support, and with the same percentage, another group indicated that they receive social support more or less.

After performing the reliability coefficient, an acceptable result of 0.85 was obtained⁽¹⁷⁾. Table 2 shows that each selected question contributed significantly to the overall internal consistency of the short version of the 'Social Support for a Healthy Diet (EASPAS)' questionnaire. Table 3 shows the final version of the proposed questionnaire.

DISCUSSION AND CONCLUSIONS

The results of this study indicate an acceptable internal consistency. The shortened version questionnaire to identify SS perceived by adolescents with respect to recommendations or other resources focused on eating a healthy diet are consistent with the scale used for the modification and design⁽¹⁷⁾.

There is a possibility that results consistent with the original version used to design the short version of the questionnaire may have been the result of situations that motivate the students to make positive use of social networks. In this sense, due to the fact that the participants were adolescents enrolled in the early stages of their career in the area of healthcare, this can be a contributing factor to the uniformity of the findings. Moreover, because they are young people with very specific needs (i.e. having concerns about their health, especially for body weight management through a lifestyle based on a diet) there is the possibility that the larger and more open relationships in social networks could be a contributing factor to Cronbach's alphas compared to

the original questionnaire, that is, 0.85 versus 0.94.

Other research has previously analyzed the relationship between perceived social support and the attitudes and uses of online social networks in users of different tests. Likewise, social support in these groups has been studied according to age or gender, variables that were considered in this study^(20, 21).

Currently, the frequent use of information and communication technologies generates replacement possibilities, although with certain peculiar aspects of mediated communication through technological equipment. However, there is no doubt that these technologies can be used to obtain resources or meet different needs; for instance, it is possible to ask for support about concerns or to become familiar with peer experiences related a successful treatment, or to prevent behaviors that raise the risk of developing diseases normally associated with adolescence⁽²²⁾.

It has been concluded that the questionnaire in its shortened version offers good internal consistency. Studies with higher samples should be conducted to assess the stability of the results and contribute to the knowledge of the 'Social Support in Social Networks (ASRS)'.

Table 2. Reliability coefficients (Cronbach's alpha) by item of the EASPA questionnaire (Short Version)

Item	Cronbach's alpha
1. Do your friends help you solve problems regarding a healthy diet to manage your body weight?	0.83
2. Do you get advice from your friends (SS) on how to eat a healthy diet to manage your body weight?	0.82
3. Do you have the support of your friends (SS); do they encourage you to eat a healthy diet to manage your body weight?	0.78
4. Do you tell your friends (SS) about your diet to manage your body weight?	0.86
5. When you ask for some kind of support from your friends (SS), such as healthy diet tips to manage your body weight, how do they respond? (i.e. they respond you, they visit you, etc.)	0.81

Source: EASPA

n = 32

Table 3. Final version of the EASPA Questionnaire (Short Version)

Item	A lot	Some	More or Less	Almost Nothing	Nothing
1. Do your friends help you solve problems regarding a healthy diet to manage your body weight?	5	4	3	2	1
2. Do you get advice from your friends (SS) on how to eat a healthy diet to manage your body weight?	5	4	3	2	1
3. Do you have the support of your friends (SS); do they encourage you to eat a healthy diet to manage your body weight?	5	4	3	2	1
4. Do you tell your friends (SS) about your diet to manage your body weight?	5	4	3	2	1
5. When you ask for some kind of support from your friends (SS), such as healthy diet tips to manage your body weight, how do they respond? (i.e. they respond you, they visit you, etc.)	5	4	3	2	1

Source: EASPA

n = 32

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