

Coping Styles Scale For The Use Of Digital Technologies And Metacomplex Learning Environments

Victor del Carmen Avendaño Porras¹, Andrés Correal Cuervo², Claudia Inés Bohórquez Olaya³, Rodrigo Correal Cuervo⁴

¹Universidad de Boyacá, vcavendano@uniboyaca.edu.co

²Universidad de Boyacá, sacorreal@uniboyaca.edu.co

³Universidad de Boyacá, cibohorquez@uniboyaca.edu.co

⁴Universidad de Boyacá, rocorreal@uniboyaca.edu.co

Abstract

The study aimed to elaborate the Coping Styles Scale for Adolescents, using the Skinner and Zimmer-Gembeck (2009) model, in the contexts of family, peers and school. The instrument was validated by a panel of judges and applied to a non-probabilistic sample composed of 130 adolescents (85 females and 45 males) with an average age of 17.24 years, students of the Escuela Normal Experimental “Fray Matías Antonio de Córdova y Ordóñez” (n= 53) and the Escuela Preparatoria No.1 del Estado (n=77), both in San Cristóbal de Las Casas, located in Chiapas, Mexico. A total of 119 items were obtained, with an overall Cronbach’s alpha of 0.939.

Keywords: adolescents, coping, COVID-19, instrument, validity, validity

Introduction

The COVID-19 pandemic has been declared a public health emergency by the World Health Organization (2020), and countries are facing a situation with tragic consequences. It is an unprecedented multimodal crisis - health, labor, economic and social - with particular repercussions in developing countries. Preventive measures to avoid contracting the virus include social distancing and confinement, both of which have a terrible side due to the long-term consequences they cause.

Home confinement by COVID-19 is an unprecedented measure in our country, which can have a negative impact on the physical and psychological well-being of children and adolescents (Brazendale et al., 2017; Brooks et

al., 2020). According to early studies reflecting on the psychological impact of quarantine on children and adolescents, factors affecting mental health include loss of habits and routines and psychosocial stress (Wang et al., 2020; Zhang et al., 2020).

Some studies (Benjet et al., 2010) indicate that up to 66.7% of adolescents have experienced at least one adversity and nearly 50% have experienced more than one. The most frequently reported adversities are parental illness (24%), economic difficulties (22%), family discord (18%) and parental alcohol consumption (17%); during the pandemic period, it is very likely that these adversities will occur on a larger scale.

Adolescence

According to the World Health Organization (2021), adolescence is a period of growth in life that occurs between 10 and 19 years of age and is characterized as a stage of accelerated growth and change. Beyond the biological aspects, this growth refers to acquiring experiences and competencies that will lead the person to face the difficulties of independence and adult life. For this development, the primary social circles such as family, community and school are vital. It is considered a crucial stage in the development of every human being since emotional, cognitive, affective and growth changes occur, in addition to the consolidation of the personality, there are many definitions of the term adolescence and most agree in considering change as one of its primary characteristics (Cedo, 2016).

Coping with stress in adolescence

According to Casullo and Castro (2002), adolescence as a stage of change, together with the limited life experience of adolescents, means that the difficulty in coping with stressful situations may manifest itself in emotional or behavioral problems and affect physical health.

Casullo and Castro (2002) state that it is essential to study the different coping styles in the different stages of life, especially in the early stages, considering adolescence is essential because it has been established that over time, coping styles are modified; it is important to consider that, compared to children and the elderly, adolescents perceive that they suffer from few direct harmful consequences that represent a threat to their lives.

Gonzalez et al. (2002) mention that younger adolescents more frequently use the coping style focused on emotion, while older

adolescents focus on the problem. Knowing how to cope effectively with problems, having effective strategies, and having a good decision-making capacity are considered protective factors for adolescents. In addition, they use social support as their primary coping resource to a greater extent than older adolescents, meaning that they find the greatest support in their peers to cope with the problems that generate stress. The difficulties faced by adolescents will force them to modify their ways of thinking and acting, and the society they develop should provide them with physical and psychological support to help them cope successfully with these problems. Therefore, it would be ideal to create spaces where adolescents have the opportunity to learn about appropriate ways of coping with stress in their lives that will lead them to achieve their goals.

Coping

The term coping has been used with different meanings. Regarding the word coping, Góngora (2000, in Gutiérrez and Ángeles, 2012) analyzed what could be a correct translation into Spanish: to make attempts to overcome problems and difficulties and to connect or make an effort, especially under equal circumstances or successfully, to deal with difficulties, to act to overcome them and to find resources to overcome a problem.

Coping has been treated under different theoretical frameworks from which different definitions have been developed. According to Ewards (1988, in Otero, 2011), there are two fundamental approaches; the first proposes definitions that understand coping as a relatively stable personal style or as a habitual way of dealing with stress. Second, it is a process, i.e., a series of specific cognitions and behaviors that change over time and situations developed by individuals to manage stress.

Coping refers to how human beings react to the problems and difficulties of daily life; that is, the mechanisms used to resist stress, such as solving the problem directly, negotiating, avoiding it, etc.; therefore, the study of coping has sought to know what these mechanisms are, in order to support the generation of competent people to handle stressful situations, since it has been identified that the ability to cope adaptively with stress is an important factor in the development of good mental health (Forns et al., 2012).

Fierro (2005) develops that the concept of coping is explained together with the concept of stress due to its causal relationship. Regardless of the situations that a person may subjectively classify as stressful, the behaviors or responses with which the person responds to a difficult situation encompass what concerns his or her coping styles.

Likewise, Vázquez, Crespo and Ring (2003) define coping as those efforts to manage external and internal demands that are personally considered stressful. The strategies or behaviors employed are not always the same and may occur unconsciously.

The development of this type of coping, which involves directly facing the problem, includes a series of responses, such as negotiation, self-criticism, self-reliance, problem-solving, adaptation and seeking support, which is linked to the development of the competencies inherent to the school stage. It is known that at this age the most significant changes occur in the processes of cognitive and social skills (Masten et al., 2006), so that if the adolescent does not learn these types of responses, he/she will present maladaptive behavior and thus may develop clinical symptoms (Cicchetti, 2006).

Skinner and Zimmer-Gembeck Coping Model

Skinner and Zimmer-Gembeck (2009) propose a model in which coping is a multiple-individual process that occurs in contexts such as family, school and among peers, creating demands, resources, filters and reinforcers to the coping capacities being developed. The development of coping strategies is described according to the stage of life in which the person is: first as an adaptive process in the face of stressful situations, risk or adversity; later as an episodic process, where those mechanisms that worked previously are replicated in new stressful situations, resulting in the learning of skills and resources for future risk situations; and at higher levels or ages, as a process of interaction where multiple scenarios and previous responses are consciously compared, before giving a response to the stressor context faced at the time. Skinner and Zimmer-Gembeck (2005) consider the social circles (family, school and peers) in whose contexts coping skills are developed to be vital for development. Following this model, coping styles in adolescents are expected to use strategies based on personal values and long-term goals, and the role of their social circles will be to support and monitor the coping actions taken.

Taking up Skinner and Zimmer-Gembeck's (2009) model, a total of twelve dimensions are explored in which the following coping styles are measured:

- Problem-solving. The process's function is to adjust actions to be effective and includes strategy formulation, instrumental coping, planning and mastery.
- Information seeking. Its function is to find additional contingencies, including reading, observing and asking others.
- Impotence. The function is to find limits to actions and encompasses confusion, cognitive

interference, cognitive exhaustion and passivity.

- Escape. Its function in the adaptive process is to escape from non-contingent environments and the forms of coping grouped are mental withdrawal, flight, denial, avoidance behaviors and positive fantasy thinking.

- Self-sufficiency. The function of the adaptive process is to protect available social resources through emotional and behavioral regulation, regulation of expression and focus on emotion.

- Support seeking. Its function is to employ available social resources and includes contact, comfort, help, and social referral.

- Delegating. Whose function is to find limits in resources where forms of coping such as self-pity, complaining and maladaptive help-seeking are grouped.

- Social withdrawal. Withdrawal from supportive contexts, including avoidance of others, hiding, social withdrawal and “freezing.”

- Accommodation. The function is to flexibly adjust preferences to options through distraction, cognitive restructuring, minimization, and acceptance.

- Negotiation. Its function is to find new options through negotiation, persuasion and prioritization.

- Submission. Refers to the abandonment of preferences and includes rumination, rigid perseveration and intrusive thoughts.

- Opposition. The function is to remove restrictions and includes blaming others, aggression, projection and defiance.

Factors involved in coping

The coping function is adaptive because it refers to behaviors and ways of thinking that help people escape moments of distress.

Stressful events can be external, internal, or a combination of both. The following are the factors that commonly provoke stress; therefore, ways to cope with them will be

sought: 1. Intense and extraordinary life events. Objective experiences alter or threaten the individual's usual activities, causing a substantial readjustment in the individual's behavior (Sandín and Chorot, 2002; Thoits, 1995); 2. Minor events or daily stress. Lazarus et al. (1984) consider daily stressful events to produce more stress responses and adverse psychological and biological effects than extraordinary and infrequent events; 3. Type of profession, hobbies, frequency of social contacts.

Method

Considering the theoretical aspects already mentioned about the current pandemic situation and its implications regarding the security measures taken in our country, the confinement and psychosocial stress in which adolescents are currently developing are unprecedented contexts, which demand the opening of research spaces, to know the impact and the measures that could be required to help this generation in the short and long term; specifically in skills such as coping.

For the present study, a self-administered instrument was constructed with a Likert-type response format with five response options: 1=Never, 2= Almost Never, 3= Sometimes, 4= Almost Always and 5= Always. The higher the score per dimension, the higher the score, and the more frequently adolescents use this coping style. Although the twelve dimensions proposed by the Skinner and Zimmer-Gembeck (2009) model were developed due to the relevance of the circles and social context for developing coping styles, the initial scale consisted of 134 items.

Sample

The panel comprised six experts in education, teachers and researchers in higher education with experience in instrument construction.

The pilot test sample was non-probabilistic and consisted of 130 participants. The sample was composed of 85 females (mean age=16.3 SD=1.32) and 45 males (mean age=18.9 SD=1.48), with a mean age of 17.24 years (SD=1.83), students of the Escuela Normal Experimental “Fray Matías Antonio de Córdova y Ordóñez” (n= 53) and the Escuela Preparatoria No. 1 del Estado (n=77), both in San Cristóbal de Las Casas, located in Chiapas, Mexico.

Procedure

The Skinner and Zimmer-Gembeck (2009) model were used to define the basic concepts and development of the instrument. A total of 134 items distributed in twelve dimensions were elaborated. Content validity was guaranteed by the judgment of a panel of six experts who evaluated: Clarity, the item measures a variable or category; Coherence, the item is apparent and does not generate confusion or contradictions; Scale, the item can be answered according to the scale presented in the instrument; and relevance, the item is relevant to meet the research objectives. They were evaluated using a Likert scale with five response options (1=Unacceptable, 2=Deficient, 3=Regular, 4=Good and 5=Excellent). On average, none of the items was evaluated below 3=Regular (in its four dimensions: clarity, coherence, scale and relevance). After review by the judges, the instrument was applied online to the established sample of students (n=130). Due to the health emergency experienced at the time of application (2020) and its preventive measures, the instrument was developed employing a digital survey using the Google Forms platform. The internal consistency was obtained by Cronbach's alpha and the method of split halves; after the confirmatory factor analysis, 15 items were eliminated due to their low dimensional

correlation, leaving an instrument of 119 items distributed in twelve dimensions.

Results

Once the factor analysis was performed, the scale was made up of 119 items distributed as follows: Problem-solving with 10 items (table 1), Search for information with 10 items (table 2), Helplessness with 10 items (table 3), Escape 10 items (table 4), Self-sufficiency 8 items (table 5), Search for support 11 items (table 6), Delegating 9 reagents (table 7), Social Isolation 11 reagents (table 8), Accommodation 10 reagents (table 9), Negotiation 10 reagents (table 10), Submission 10 reagents (table 11), and Opposition 10 reagents (table 12).

Cronbach's Alpha statistical tests were performed for the entire scale and by factors to estimate the degree of internal consistency of the test. The analysis yielded the following coefficients: Cronbach's Alpha overall 0.939 and Cronbach's Alpha by dimensions: Problem solving 0.833 (table 1), Information seeking 0.834 (table 2), Helplessness 0.820 (table 3), Escape 0.794 (table 4), Self-sufficiency 0.643 (table 5), Support seeking 0.881 (table 6), Delegating 0.855 (table 7), Social Isolation 0.900 (table 8), Accommodation 0.635 (table 9), Negotiation 0.828 (table 10), Submission 0.894 (table 11) and Opposition 0.799 (table 12). Likewise, a coefficient .854 was obtained with the method of split halves. The items P48, P51, P57 are negative to the dimensions, so it is necessary to invert the numerical values of the Likert Scale (5=1, 4=2, 3=3, 2=4 and 1=5) to make the total sum of the dimension.

Table 1 shows the items (10 items) of the Problem Solving dimension, with a Cronbach's Alpha 0.833. The table integrates the evaluation averages by experts (Clarity, Coherence, Scale and Relevance), the

corrected item-total correlation and Cronbach's Alpha of the dimension if the item is eliminated. None of the items was evaluated

below 3 (Fair) in its four dimensions. Score per dimension minimum 5 and maximum 50.

Table 1. Problem Solving Dimension.

Ask	Clarity	Consistency	Scale	Relevance	Correlation element - corrected total	Alpha if the element is removed
P1 When a problem is at home, I contribute ideas to solve it.	4.6	4.6	4.3	4.6	0.550	0.815
P3 When I cannot solve a problem among my friends, I think of other strategies.	4.3	4.3	4	3.6	0.558	0.814
P4 When a plan does not work for me at school, I generate another plan.	4.3	4	4	4.3	0.496	0.820
P6 When there is a family problem, I participate in solving it.	4.3	4.3	4.3	3.6	0.590	0.810
P7 When there is a problem among my friends, I look for ways to help them solve it.	4.3	4.6	4	4	0.495	0.820
Q8 When I have a problem with a friend, I try to fix it.	5	4.6	4.3	3.6	0.540	0.816
P9 When I have a problem at school I generate a plan to solve it.	4.6	4.3	4.6	4	0.479	0.821
P10 When a problem arises at home I seek to understand the parts of the problem.	5	4.6	4.3	4.6	0.589	0.810
P11 I have strategies for solving school problems.	4	4	4	4	0.568	0.813
P25 When there is a problem at home I prefer to intervene.	3.6	4	3.6	3.6	0.366	0.833

Table 2 shows the items (10 items) of the Information Search dimension, with a

Cronbach's Alpha of 0.834. The table integrates the evaluation averages by experts

(Clarity, Coherence, Scale and Relevance), the corrected item-total correlation and Cronbach's Alpha of the dimension if the item

is eliminated. None of the items was evaluated below 3 (Fair) in its four dimensions. Score per dimension minimum 5 and maximum 50.

Table 2. Information search dimension.

Ask	Clarity	Consistency	Scale	Relevance	Correlation element - corrected total	Alpha if the element is removed
P12 When I am not satisfied with a grade, I ask the teacher for an explanation.	4.3	4	4	4	0.494	0.822
Q13 When I have a misunderstanding with my friends, I ask them questions to understand what happened.	4.6	4.3	4.3	3.6	0.573	0.814
P14 When I don't understand what is going on with my friends, I ask one of my friends about the situation.	4.6	4.6	4.3	4.6	0.567	0.815
Q15 When I seek to solve a problem within the family, I ask what they think about the problem.	4.3	4	4.3	4.6	0.642	0.807
P16 When I don't understand something in class I ask the teacher.	4.6	3.6	4.3	4.6	0.400	0.830
P17 When there is an argument in my family, I observe their reactions.	5	4.3	4.3	4.6	0.482	0.823
Q18 When I feel a friend is distant, I ask him/her what is going on.	4	4.3	4	3.6	0.520	0.820
P19 When there is a problem at home, I look for information that can help me solve it.	3.3	3.3	3.6	3.6	0.536	0.818
P20 When I don't understand a topic in class, I look for readings or videos that explain it.	3.6	3.6	3.3	3.3	0.473	0.824

P22 When a friend has a problem, I look for strategies that might help him or her.	4	3.6	3.6	3	0.567	0.815
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Table 3 shows the items (10 items) of the dimension Impotence, with a Cronbach's Alpha 0.820. The table integrates the evaluation averages by experts (Clarity, Coherence, Scale and Relevance), the

corrected item-total correlation and Cronbach's Alpha of the dimension if the item is eliminated. None of the items was evaluated below 3 (Fair) in its four dimensions. Score per dimension minimum 5 and maximum 50.

Table 3. Powerlessness Dimension.

Ask	Clarity	Consistency	Scale	Relevance	Correlation element - corrected total	Alpha if the element is removed
Q26 When I have a problem with a subject, it interferes with my other classes.	4.3	4.3	4	4.3	0.416	0.812
Q27 When there is a problem in my family I don't know how to react.	3.3	3.6	3.3	3.3	0.525	0.802
P28 When I have a problem with my friends, I feel overwhelmed.	5	4.6	4.6	4.3	0.537	0.800
Q29 When I struggle to understand a subject in one subject, I stop understanding the rest.	4.6	4.6	4.6	4.6	0.607	0.793
Q30 When I have a problem with my friends, I prefer to solve it on my own.	4	4	4.3	3.6	0.336	0.820
P31 When my friends have a problem, I prefer to let them solve it.	4	4.3	4	4	0.128	0.837
P32 When I have difficulty with a subject it makes me feel incapable.	3.6	4.3	4	3.6	0.610	0.792
Q33 When I have a family problem I feel tired.	4.6	4.3	4.3	4	0.605	0.792

P34 When I have a family problem I feel unable to solve it.	4	4.3	4	4	0.680	0.785
Q35 When I fight with my friends, I feel that everything in my life is wrong.	4.6	4	4.3	3.6	0.554	0.798

Table 4 shows the items (10 items) of the Escape dimension, with a Cronbach's Alpha 0.794. The table integrates the evaluation averages by experts (Clarity, Coherence, Scale and Relevance), the corrected item-total

correlation and Cronbach's Alpha of the dimension if the item is eliminated. None of the items was evaluated below 3 (Fair) in its four dimensions. Score per dimension minimum 5 and maximum 50.

Table 4. Escape Dimension.

Ask	Clarity	Consistency	Scale	Relevance	Correlation element - corrected total	Alpha if the element is removed
Q36 When there is a problem in my family I prefer to be absent.	5	4.6	4.3	4	0.592	0.759
Q37 When I have a problem with my family, I prefer not to talk to them.	4	4	4	3.6	0.581	0.761
Q38 When there is a problem with my friends, I avoid thinking about it.	4.3	4.3	4	4	0.325	0.791
P39 When I have difficulty with a subject, I prefer to distract myself during class.	4.3	4.3	4.3	4.3	0.534	0.767
P40 When I am doing poorly in a subject I prefer to stop attending classes.	4.6	4.6	4.3	4	0.552	0.767
Q41 When there is a problem with my friends, I think about it all the time.	5	4.6	4.6	4.6	0.266	0.800
P42 When there is a family problem, I prefer to think about other things.	4.3	4.3	4	4	0.371	0.787

Q43 When I have problems with a subject I ignore the problem.	4	4	4	3.6	0.489	0.773
P44 When I have a problem at home, I avoid thinking about it.	4.3	4.3	4	3.6	0.449	0.778
P45 I am absent from school when I miss homework.	3.6	4	4	3.6	0.509	0.772

Table 5 shows the items (8 items) of the Self-sufficiency dimension, with a Cronbach's Alpha 0.643. The table integrates the evaluation averages by experts (Clarity, Coherence, Scale and Relevance), the corrected item-total correlation and

Cronbach's Alpha of the dimension if the item is eliminated. None of the items was evaluated below 3 (Fair) in its four dimensions. Score per dimension minimum 5 and maximum 40, the items P48, P51, P56, P57 and P58 are inverted prior to the sum of values.

Table 5. Self-sufficiency dimension.

Ask	Clarity	Consistency	Scale	Relevance	Correlation element - corrected total	Alpha if the element is removed
Q48 When I have a bad day at school, I get upset with my family.	4.3	4	4.3	4	0.314	0.618
P50 When I feel sad I tell my friends about my emotions.	4.3	4.6	4.6	4	0.561	0.574
P51 When I am upset I break things.	4.3	4.3	4.3	4.3	0.099	0.664
P53 When I feel happy I express it with my friends.	4.6	4.6	4.3	4	0.351	0.608
Q56 My friends know when I am having a bad day without telling them.	4.6	4.6	4.3	4.6	0.468	0.573
Q57 My peers say that I am explosive.	4.3	4.3	4.6	4	0.272	0.627
Q58 My family knows when I am having a bad day without telling them.	4	4	3.6	3.6	0.22	0.650
P59 When I have a problem I seek support from my friends.	4	4.3	4.3	4	0.523	0.562

Table 6 shows the items (11 items) of the Seeking Support dimension, with a Cronbach's Alpha 0.881. The table integrates the evaluation averages by experts (Clarity, Coherence, Scale and Relevance), the

corrected item-total correlation and the Cronbach's Alpha of the dimension if the item is eliminated. None of the items was evaluated below 3 (Fair) in its four dimensions. Score per dimension minimum 5 and maximum 55.

Table 6. Dimension Search for support.

Ask	Clarity	Consistency	Scale	Relevance	Correlation element - corrected total	Alpha if the element is removed
P60 When I don't understand something at school, I seek support from my teachers.	4.6	4.6	5	5	0.568	0.873
P61 When I have a problem I look to my friends to make me feel better.	3.3	4	4.3	4.3	0.609	0.870
Q62 When I have a problem I look to my family for support.	4.6	4.3	4.6	4	0.727	0.861
P63 When I have difficulty with a subject at school, I ask my teachers how they would solve it.	4.6	4.3	4.6	4.6	0.624	0.870
P64 When I have a problem I look to my family to make me feel better.	4	4.3	3.3	4.3	0.699	0.864
Q65 When I have a problem I ask my friends what they would do in my place.	4	4.3	4	4.3	0.652	0.868
Q66 When I have a problem I ask my family how they would solve it.	4.3	4.3	4	4	0.761	0.859
P67 When I have a problem I seek support from my teachers.	4.3	4.3	4	3.6	0.431	0.880
P68 When I fight with my family I talk about it with my friends.	4	4	3.6	3.3	0.356	0.887

P69 When I have a problem with my teachers, I ask my family for help.	4.3	4	4	3.6	0.642	0.868
P70 When I have a problem with my family, I look to my friends for comfort.	4.6	4.3	4.6	4.6	0.474	0.878

Table 7 shows the items (9 items) of the Delegating dimension, with a Cronbach's Alpha 0.855. The table integrates the evaluation averages by experts (Clarity, Coherence, Scale and Relevance), the

corrected item-total correlation and Cronbach's Alpha of the dimension if the item is eliminated. None of the items was evaluated below 3 (Fair) in its four dimensions. Score per dimension minimum 5 and maximum 45.

Table 7. Delegating Dimension.

Ask	Clarity	Consistency	Scale	Relevance	Correlation element - corrected total	Alpha if the element is removed
Q72 When I have a problem at school I look to my family to solve it.	4.6	4.6	4.3	4	0.571	0.840
P73 When I get upset with my family, what I do is complain.	4	4	4	3.6	0.594	0.838
P74 When I argue with a friend, I try to get people to agree with me.	4	4	3.6	3.3	0.612	0.836
P75 When I have difficulty with a topic in class, what I do is complain.	4	4	3.6	3.3	0.580	0.839
Q76 My friends are responsible for the things that happen to me.	4.6	4.6	4.6	4.6	0.734	0.827
Q77 My family is responsible for the things that happen to me.	4.3	4.3	4.3	4	0.590	0.838
P78 My family is responsible for solving my problems.	4	3.6	3.6	3.3	0.643	0.833
P79 My achievements are due to my friends.	4.6	4.6	5	5	0.465	0.850

Q80 The school is responsible for my low grades.	4.6	4.3	4.3	4.3	0.423	0.853
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Table 8 shows the items (11 items) of the Social Isolation dimension, with a Cronbach's alpha 0.900. The table integrates the evaluation averages by experts (Clarity, Coherence, Scale and Relevance), the

corrected item-total correlation and Cronbach's Alpha of the dimension if the item is eliminated. None of the items was evaluated below 3 (Fair) in its four dimensions. Score per dimension minimum 5 and maximum 55.

Table 8. Social isolation dimension.

Ask	Clarity	Consistency	Scale	Relevance	Correlation element - corrected total	Alpha if the element is removed
P82 When I have a bad day at school, I walk away from people.	4.3	4	4	3.6	0.513	0.899
P83 When I have problems with a subject I prefer to avoid the teacher.	5	4.3	4	3.6	0.675	0.889
P84 If I get upset with a friend, I walk away from him/her.	3.6	3.6	3.3	3	0.664	0.890
P85 When I wake up in a bad mood I prefer not to see anyone.	4.3	4.3	4	3.3	0.684	0.889
P86 When I fight with a friend, I prefer to lose his or her friendship.	4.3	4	4.3	4	0.658	0.890
P87 If I do poorly in a subject and the teacher wants to talk about it, I prefer to avoid him/her.	4.3	4	4	4	0.620	0.892
P88 When there is a problem in my family I prefer to be away from home.	4	4.3	4.6	3.3	0.654	0.890
P89 When I have problems with my friends, I avoid them for a while.	4	4	4	3.3	0.746	0.886

P90 When there is a problem at school I feel like I stand still.	4	3	3.6	3.3	0.587	0.894
P91 When I have problems with a friend, I hide from him/her for a while.	4.3	4	3.6	3.3	0.640	0.891
P92 When there is an argument in my family I feel like I freeze.	4.3	4	4.3	3.3	0.590	0.894

Table 9 shows the items (10 items) of the Accommodation dimension, with a Cronbach's Alpha 0.635. The table integrates the evaluation averages by experts (Clarity, Coherence, Scale and Relevance), the

corrected item-total correlation and Cronbach's Alpha of the dimension if the item is eliminated. None of the items was evaluated below 3 (Fair) in its four dimensions. Score per dimension minimum 5 and maximum 50.

Table 9. Accommodation Dimension.

Ask	Clarity	Consistency	Scale	Relevance	Correlation element - corrected total	Alpha if the element is removed
Q93 I find it normal to fight with my friends.	4.3	4	4	3.6	0.517	0.563
P94 When I argue with my friends, I know they will get over it.	4.6	4.6	4.3	4	0.401	0.581
P95 It seems normal to me to fail a subject.	5	5	4.6	4.3	0.286	0.608
P96 When there is a problem in my family I prefer to leave home.	4.6	4.6	4.3	3.6	0.240	0.619
P97 I accept that I will not always do as well as I want in school.	4.6	4.6	4.3	4	0.180	0.630
Q98 Arguments (shouting, swearing) in my family are normal.	4.6	4.6	4.3	4.3	0.394	0.583
P99 When I argue with my friends, I distract myself by doing things with my family.	4.6	4.3	4.3	4	0.329	0.599
P100 I look for the positive side of family discussions.	4.6	4.6	4.3	4	0.208	0.626

P101 When I struggle with a subject in school, I know it will be temporary.	4.6	4.6	4.3	4	0.192	0.628
P102 I minimize family problems.	4.3	4.3	4	3.6	0.260	0.314

Table 10 shows the items (10 items) of the Negotiation dimension, with a Cronbach's Alpha 0.828. The table integrates the evaluation averages by experts (Clarity, Coherence, Scale and Relevance), the

corrected item-total correlation and Cronbach's Alpha of the dimension if the item is eliminated. None of the items was evaluated below 3 (Fair) in its four dimensions. Score per dimension minimum 5 and maximum 50.

Table 10. Negotiation Dimension.

Ask	Clarity	Consistency	Scale	Relevance	Correlation element - corrected total	Alpha if the element is removed
P103 For my family to give me permission I look for something I can do in return.	4	4	3.6	4	0.565	0.807
P104 When I do not turn in an activity, I ask the teacher for an extension.	4.3	4.3	4	3.3	0.491	0.815
P105 When I get a low grade I tried to convince my teacher to raise points.	4.3	4.3	4.3	4	0.504	0.814
P107 For my family to give me permission, I tell them the things I have done well.	4.6	4.6	4	4.3	0.640	0.799
P108 When I go out with my friends, I tell them the advantages of the places I want to go.	4.3	4.3	4	4.3	0.588	0.805
P109 When I make plans with my friends I am sure that I will get them to do what I want.	4.6	4.6	4.6	4.6	0.525	0.812
P110 In team work, I organize the activities.	4.6	4.3	4.3	4	0.485	0.816

P111 When I argue with my family I try to convince them that I am right.	4.6	4.3	4.3	4.6	0.564	0.808
P112 When I go out with my friends, we take turns choosing the plan.	4.3	4.3	4	3.6	0.430	0.821
P113 negotiation is the best form of organization in school teams.	4.3	4.3	4	4	0.369	0.827

Table 11 shows the items (10 items) of the Submission dimension, with a Cronbach's Alpha 0.894. The table integrates the evaluation averages by experts (Clarity, Coherence, Scale and Relevance), the

corrected item-total correlation and Cronbach's Alpha of the dimension if the item is eliminated. None of the items was evaluated below 3 (Fair) in its four dimensions. Score per dimension minimum 5 and maximum 50.

Table 11. Submission Dimension.

Ask	Clarity	Consistency	Scale	Relevance	Correlation element - corrected total	Alpha if the element is removed
P114 When there is a conflict at home, it is difficult for me to stop thinking about it.	4.6	4.6	4.6	4.3	0.561	0.880
P115 When I argue with my family I replay the situation constantly in my head.	4	4	4	4.3	0.641	0.883
P116 When the teacher corrects me on something, I feel useless.	4.3	4.3	4.3	4.3	0.694	0.880
P117 When I argue with my friends, I repeat my point of view until they accept it.	3.3	4	3.6	3.3	0.494	0.892
P118 When the teacher asks me to participate, I think everyone will make fun of me.	4.3	4.3	4	3.3	0.625	0.885
P119 When I have problems with my friends I can't stop thinking about it.	4.6	4.6	4.3	4	0.724	0.878

P120 When I argue with my family, I repeat my point of view until they accept it.	4.6	4.6	4.3	4.6	0.520	0.891
P121 When the teacher corrects me, I think my classmates will make fun of me.	4	4	3.6	3.3	0.685	0.880
P122 When I argue with a friend, I replay the fight in my head.	3.6	4	4	3.3	0.763	0.874
P123 After discussing with my family I think about what I could have said differently.	4.3	4	4	3.6	0.652	0.883

Table 12 shows the items (10 items) of the Opposition dimension, with a Cronbach's Alpha 0.799. The table integrates the evaluation averages by experts (Clarity, Coherence, Scale and Relevance), the

corrected item-total correlation and Cronbach's Alpha of the dimension if the item is eliminated. None of the items was evaluated below 3 (Fair) in its four dimensions. Score per dimension minimum 5 and maximum 50.

Table 12. Opposition dimension.

Ask	Clarity	Consistency	Scale	Relevance	Correlation element - corrected total	Alpha if the element is removed
P124 When I have difficulty with a subject in class, it is the teacher's fault.	4.6	4.3	4.3	3.6	0.433	0.786
P125 When I have an argument with my family, they are the ones with the problem.	3.6	3.6	3.6	3.6	0.339	0.798
P126 The teacher is to blame for my poor grades.	4	4.3	4	3.6	0.660	0.762
P127 Arguments with my friends have come to blows.	4.3	4.3	4	4	0.587	0.770
P128 My friends agree with me if I insult them.	4.3	4.3	4.3	4.3	0.490	0.780

P129 Arguments in my family have come to blows.	4.6	4.6	4	3.6	0.491	0.779
P130 I bully my classmates at school to help me with my homework.	4.6	4.3	4.3	4.6	0.639	0.771
P131 When I argue with my friends I impose what I think.	3.3	3.6	3.6	3.3	0.365	0.797
P133 When I am denied permission, I still do what I want.	4	4	3.3	3.3	0.478	0.781
P134 When there is a conflict between my friends, they are to blame.	4.3	4.3	4	3.6	0.418	0.789

Discussion and conclusion

The objective of constructing a new scale on Coping Styles in young students was reliable and valid, based on the psychometric properties obtained in the results. Validity was achieved through a panel of experts and reliability was analyzed through the overall Cronbach's Alpha coefficient (0.939) and the method of split halves (0.854); the data report that the Coping Styles scale is valid and reliable. These results support that the questionnaire can be used for research purposes in a population of young high school and university students.

Regarding the theoretical bases, the scale included the twelve dimensions proposed by the Skinner and Zimmer-Gembeck (2009) model, where coping is a multiple individual processes that occurs in family, school and peer contexts, as these create demands, resources, filters and reinforcers to the coping capacities that are being developed. The items included the three contexts in each of the dimensions and general situations in which the adolescent can associate and evaluate situations in which he/she has acted. The model used considers the social context and its

functions as vital in developing coping strategies, which is relevant to this scale considering that it is aimed at adolescents.

A questionnaire of 119 items distributed in 12 dimensions was obtained, with a satisfactory level of reliability in all its variables. The instrument is self-administered and the response form consists of a Likert scale with 5 response options, which makes its application and interpretation simple and quick.

Among the limitations of the study are that it is not a representative sample of the population, and the data cannot be generalized since the sample was composed of young high school and higher education students residing in Chiapas, Mexico.

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