

Coping with Stress in Adolescents

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Abstract:- Mental problems affect the quality of life of adolescents, disturbing their daily activities, their intellectual and interpersonal development, causing psychological problems such as anxiety and depression. This research was conducted in order to determine the stress coping of adolescents of the Nelson Izquierdo School, it was observational, analytical, cross-sectional and quantitative approach. The population consisted of 249 students, with a sample of 100 students. The assessment was carried out with the application of a survey with sociodemographic variables, Stress Coping questionnaire and the STAI State-Trait Anxiety Questionnaire, which consists of 40 items that evaluate independent concepts of anxiety, through a descriptive analysis with percentages, frequencies, measures of central tendency, normality test by Shapiro Wilk, with parametric tests for the correlation between stress and coping dimensions, through the correlation coefficient an analysis of difference of means was carried out by Student's T-test, the results obtained were: 53% male and 47% female, the representative age was 16 years with 27%, after the analysis it was concluded that there is no relationship between stress coping with age, number of siblings, state anxiety and trait anxiety, there is greater stress coping in the female sex.

Keywords:- Stress, Coping, Anxiety, Symptoms, Adolescent,

I. INTRODUCTION

Stress affects the population in general, and adolescents in particular, since this stage is unique and involves a series of physical, emotional and social changes, which can be affected by risk factors such as poverty, violence, greater academic demands and lack of social interaction, making this group more vulnerable to mental health damage. When faced with stressful situations, adolescents develop certain coping strategies to mitigate stress, according to scientific studies that show that men make more use of non-productive strategies, compared to women who use more social support (1,2).

The possible consequences of stress are regulated by coping, i.e. by a set of actions that instruct the adolescent to withstand, avoid or reduce the effects produced by a certain stressful event (3). Internationally, there is evidence that

adolescents make greater use of problem-focused strategies, followed by non-productive coping, physical distraction, etc. It is of great importance to take into account, as there is a relationship with anxiety and depression problems (4,5,6).

Within stress coping, it is very important to point out the relationship between family functionality and stress coping styles, since, in all cases, the complexity to face and overcome each stage of life must be estimated (7,8). Coping is part of the psychological resources of people and is related to the emotions experienced and will depend on values, goals and beliefs. These can be reflected in the capacity to control and reduce emotional discomfort and its long-term effects on the person (9).

Studies carried out in our country on coping with stress and the relationship with alterations such as: suicidal ideation, academic stress. They describe the importance of knowing the coping measures that can prevent potential damage to the health of adolescents, mention the relationship of the various coping strategies to stress used, there are two percentages with a higher value as open emotional expression and avoidance to the problem, and the influence of sociodemographic characteristics; revealing that in the urban area students have higher levels of stress due to work overload and educational demands. These studies show that academic stress intervenes in the quality of life of students who mostly use emotional expression and social isolation which is related to social and emotional conflicts. It is therefore important to know the coping strategies to stress and to be able to make interventions aimed at solving the problems (10, 11, 12).

At the local level, we also have valuable studies on stress, which reveal that adolescents present psychological symptoms associated with stress. According to the evaluation of coping strategies, only one out of three students used the evaluated coping strategies frequently (almost always in 26.4% or always in 5.7%); approximately one out of five rarely used any of them (13). We also have as a reference a study carried out with the purpose of knowing the coping styles related to the stages of the adolescent cycle; where they showed the application of basic strategies such as: the strategy of making an effort and succeeding; another strategy that stands out is physical distraction, finally they focused on the unproductive coping

style with the strategy related to worry and the use of two coping styles, with priority being given to the use of the style aimed at solving problems. It is of great importance to be aware of these problems and to promote physical, psychological and emotional well-being. Avoiding events that affect the intellectual and emotional capacity of the adolescent, which could influence his or her adult life (14).

Based on the above, the following research questions are posed: What is the stress coping model used by the adolescents under study, is there a direct association between stress and anxiety in adolescents, how is stress coping related to sociodemographic variables, and how is stress coping related to sociodemographic variables?

Adolescence comes from the Latin "adolescere" and from the verb *adolecer*, it has two meanings: the first is to have a certain degree of imperfection or defect and also the growth and maturation of the person. The process begins with puberty and ends when growth, development and psychosocial maturation are completed. According to the WHO, adolescence is considered the stage of adolescence between 10 and 19 years of age (15). This stage is characterized by the onset of various changes that produce experiences of both happiness and suffering, doubts, loneliness and confusion. Changes in moods range from joy to sadness and depression. Although depression is not a silent disease, however, it is not commonly diagnosed during medical consultation (16). The word stress comes from the Greek *stringere* = to cause tension, it was defined by Thomas Young as the intrinsic response of the object with respect to its structure (17). Selye defines stress as a response of the organism when faced with a change produced by some important event, whether unpleasant or to one's liking, which influences in a positive or negative way, producing an alteration in the physical or mental state. It is related to the problems of its environment and the difficulty to face them, it represents complex emotional states where the difficult situation, its surroundings and the needs involved that may affect the individual or family intervene (18).

The symptoms are divided taking into account the age, the person and its development, within which include physical symptoms such as: increased blood flow to the brain, tachycardia, alteration in the activity of the kidneys, decreased salivation. In the somatic system will increase blood flow and tension in the muscles, other related symptoms: headache, fatigue, difficulty falling asleep, stomach discomfort and mood swings. Psychological symptoms include: increased worry, altered emotional control, anxiety, irritability, nervousness, concentration, attention and memory deficits (17).

The classification of stress depends on the model or theory to be defined, and is divided into three categories: The response-based theory: it is focused on the theory of Hans Selye who made stress known as a non-specific reaction of the organism, independent of the stressor agent (18). The stimulus-based theory is focused on environmental stimuli, which can alter or damage the body. The theory is

mainly used in psychopathology, and mentions that the stressor is outside the person. The interaction-based theory: it is based on the relationship between the person and his or her environment and the stress response (19).

The theory of coping, stress and cognitive processes. According to the authors, they mention that the above theories support the practice of care in the nursing discipline, relating cognitive, behavioral and significant processes have a connection with the person's environment. The theories that have their origin in psychology and nursing constitute fundamental pillars for the development of other models and theories that generate benefits for the person and improve the quality of life (20).

Academic stress, defined as the tension that occurs in the educational environment, results in the presence of thoughts of hopelessness, negative emotions and psychological discomfort that lead to a decrease in effort, perseverance and academic performance. (21). Stress coping is currently defined as both cognitive and behavioral efforts that each individual makes when facing a stressful situation, i.e., to deal with both external or internal demands that have been caused by stress (22).

Individual coping strategies are models that explain the adaptive responses of the person to difficult events in order to act in conjunction with their environment defining the most organized process following a logical sequence with other resources so that the individual belongs to a context. Within the family coping strategies, it is formed with the union of bonds of consanguinity and affection, where each member of the household fulfills the designated functions and in this way the reaction or problem of one of them will affect the whole group (23).

Within the coping models expressed by Lazarus and Folkman (1984) there are two models; the first one focused on the problem or oriented to its resolution and the second one aimed at restoring the emotional balance of the individual. There are also the fundamentals of the authors Frydenberg and Lewis (1996) who distinguish 3 forms of coping: the productive that is in charge of problem solving, the non-productive that opts to walk away, feel guilty and other activities that do not deal with solving the problem, and the third style that is oriented to others that is in charge of seeking help from a professional or spiritual and moral support in other people (24).

According to Lorenzo, Grau and Martín (25) define anxiety as a temporary emotional condition or state, characterized by feelings of tension and increased activity of the autonomic nervous system, it is important to understand that anxiety is considered a normal emotional state in the face of different common stressful situations. It is only when the adaptive capacity of the individual is exceeded that this emotional state becomes pathological. The most common signs and symptoms are: agitation, nervousness, diaphoresis, tremors, palpitations, muscle tension, paresthesia, difficulty swallowing, shortness of breath, dry mouth, nausea, abdominal discomfort, lightheadedness and fear of losing

control (26). Adolescence and anxiety are related to the development of adolescence in which multiple physical and emotional changes occur. Anxiety disorders are psychopathologies that occur in early childhood and middle adolescence. Regarding the influence of the family in anxiety, some theorists affirm that it has a genetic basis, since genes play a primordial role in the genesis of some anxiety disorders. The family nucleus constitutes an essential part for the formation of the structure of people, especially during adolescence (27).

The general objective of the study was to determine the stress coping of adolescents of the Nelson Izquierdo School of the Nazón parish, based on which specific objectives were proposed: 1) To describe the sociodemographic characteristics and the stress coping of the study population. 2) To analyze whether stress and anxiety coping is related to age and number of siblings. 3) To verify the differences in stress coping according to sex, family structure and parental marital status.

II. METHODOLOGY

Type of research

An observational, analytical, cross-sectional, quantitative, non-experimental, cross-sectional study was carried out.

Population

The study population consisted of 249 students between 13 and 19 years of age, corresponding to: basic education and high school of the Nelson Izquierdo School, in the province of Cañar.

Sample

A simple random sampling was carried out. The sample consisted of 100 students from the Nelson Izquierdo School. According to Sierra Bravo's formula of 1988, the error (5%) as an estimation of the sample, starting from a confidence level of 99%.

Instruments

Sociodemographic variables: age, sex, marital status, occupation, grade, religion, number of siblings, family nucleus.

Socio-demographic survey

A survey was applied for the collection of information detailing personal and family data and economic factors. The personal data included: age, sex, marital status, number of siblings. In the family nucleus: family structure, marital status of the parents, main caregiver, level of education of the parents, number of siblings. Regarding economic factors: sources of income, economic contributions and employment status of the parents (27).

Coping with Stress Questionnaire

Did I try to analyze the causes of the problem in order to cope with it, Did I convince myself that no matter what I did things would always go wrong, Did I try to focus on the

positive aspects of the problem, Did I take my bad mood out on others, When the problem came to my mind, did I try to concentrate on other things, Did I tell family or friends how I felt, Did I tell family or friends how I felt, Did I go to church, did I try to solve the problem by following well thought out steps, did I do nothing concrete since things are usually bad, did I try to get something positive out of the problem, did I insult certain people, did I turn to work or another activity to forget about the problem, did I ask a relative or friend for advice on how to cope better with the problem, did I ask a religious person for spiritual help, did I ask a relative or friend for advice on how to cope better with the problem, did I ask a religious person for spiritual help, did I ask a relative or friend for advice on how to cope better with the problem, did I ask a religious person for advice on how to cope with the problem, did I ask a relative or friend for advice on how to cope better with the problem, did I ask a religious person for spiritual help? Did I ask for spiritual help from a religious person (priest, etc.), Did I establish a plan of action and try to carry it out, Did I understand that I was the main cause of the problem, Did I discover that in life there are good things and people who care about others, Did I behave in a hostile way with others, Did I go out to the movies, to dinner, to "go for a walk", etc. to forget about the problem, etc. to forget about the problem, Did I ask relatives or friends to help me to forget about the problem, Did I go to the movies, to dinner, to "go for a walk", etc. to forget about the problem, etc. to forget about the problem? Did I ask relatives or friends to help me think about the problem, Did I go to church to beg for a solution to the problem, Did I talk to the people involved to find a solution to the problem, Did I feel helpless and unable to do anything positive to change the situation, Did I realize that other things, other than the problem, were more important to me, Did I go to church to pray for a solution to the problem, Did I talk to the people involved to find a solution to the problem, Did I feel helpless and unable to do anything positive to change the situation, Did I realize that other things, other than the problem, were more important to me? Did I try not to think about the problem, Did I talk to friends or relatives to reassure me when I was feeling bad, Did I have faith that God would remedy the situation, Did I face the problem by implementing several problem solutions, Did I realize that I could not do anything by myself to solve the problem, Did I personally experience that "every cloud has a silver lining", Did I get irritated with some people, Did I practice some sport to forget about the problem, Did I ask a friend or relative to help me to forget about the problem, Did I ask a friend or relative to do something positive to change the situation? Did I ask a friend or family member to show me the best way forward, Did I pray, Did I think carefully about the steps to take to deal with the problem, Did I resign myself to accept things as they were, Did I realize that things could have been worse after all, Did I realize that things could have been worse after all, Did I fight and vent my anger? Did I struggle and let off steam by expressing my feelings, Did I try to forget everything, Did I try to get a family member or friend to listen to me when I needed my feelings, Did I go to church to put candles or pray? (28).

State-Trait Anxiety Questionnaire STAI

Do I feel calm, Do I feel safe, Am I tense, Am I upset, Do I feel comfortable, Do I feel upset, Am I worried now about possible future misfortunes, Do I feel rested, Do I feel anxious, Do I feel comfortable, Do I feel self-confident, Do I feel nervous, Do I feel nervous, Do I feel uneasy, Do I feel very "tied down" (as if oppressed), Do I feel relaxed, Do I feel satisfied, Do I feel worried, Do I feel dazed, Do I feel lightheaded, Do I feel very "tied down" (as if oppressed)? Do I feel very "tied down" (as if oppressed), Am I relaxed, Do I feel satisfied, Am I worried, Do I feel dazed, Do I feel cheerful, Do I feel good at this moment, Do I feel well, Do I feel well, Do I get tired quickly, Do I feel like crying, Would I like to be as happy as others, Do I miss opportunities by not making up my mind, Do I miss opportunities by not making up my mind, Do I miss opportunities by not making up my mind, Do I miss opportunities by not making up my mind, Do I miss opportunities by not making up my mind, Do I miss opportunities by not making up my mind, Do I miss opportunities because I don't make up my mind soon, Do I feel rested, Am I a calm, serene and collected person, Do I see difficulties piling up and I can't cope with them, Do I worry too much about unimportant things, Am I happy, Do I tend to take things too seriously, Do I lack self-confidence, Do I lack self-confidence, Do I feel confident, Do I tend to face things too seriously, Do I lack self-confidence, Do I lack self-confidence, Do I lack self-confidence, Do I lack self-confidence? Do I feel secure, Do I tend not to face crises or difficulties, Do I feel sad (melancholic), Am I satisfied, Am I haunted and bothered by unimportant thoughts, do disappointments affect me so much that I

cannot forget, Am I a stable person, When I think about current affairs and worries, do I become tense and agitated?

Procedure

Adaptation to the Ecuadorian context was carried out, accessing the sample (province of Cañar, Biblián canton) using digital media accessibility, in the same way the link to the computer programs managed by the educational institution was distributed to the students of the school, prior to the corresponding authorization. The information was collected by means of the Google Forms form, in which the questions corresponding to the sociodemographic and clinical variables were implemented according to the instruments to be evaluated.

The data are systematically entered in an EXCEL sheet, which cannot be used in future research. Each student's data will be identified by assigning a code without recording personal data to avoid being identified. The INFOSTAT and SPSS programs were used to process the data, the results were described, and the percentages were presented in graphs.

Statistical analysis

A descriptive analysis was performed using percentages, frequencies, measures of central tendency, followed by a normality test using Shapiro Wilk. Parametric tests were used for the correlation between stress and coping dimensions, using Pearson's correlation coefficient. Finally, a mean difference analysis was performed using Student's t-test for independent samples. The statistical analyses mentioned above were carried out using InfoStat and SPSS 26 software

III. RESULTS

Table 1. Frequency and percentages of sociodemographic variables of research interest.

Variable	Category	f	%
Gender	Male	53	53%
	Female	47	47%
Age	13	9	9%
	14	16	16%
	15	18	18%
	16	27	27%
	17	23	23%
	18	3	3%
	19	4	4%
Ethnic Self-Identification	White	2	2%
	Mestizo	93	93%
	Indigenous	4	4%
	Other	1	1%
Religion	Catholic	97	97%
	Evangelical	2	2%
	Other	1	1%
Marital status	Single	100	100%
Locality	Urban	14	14%
	Rural	86	86%
Occupation	Studying	78	78%
	Studying and working	20	20%

	Eighth	1	1%
Year in school	Ninth	11	11%
	Tenth	18	18%
	First year of high school	30	30%
	Second year of high school	19	19%
	Third year of high school	21	21%
How do you consider your current academic performance?	Very bad	2	2%
	Bad	8	8%
	Regular	37	37%
	Average	24	24%
	Very Good	23	23%
	Outstanding	6	6%
How would you rate your satisfaction with your current career?	Very bad	1	1%
	Poor	3	3%
	Fair	40	40%
	Average	22	22%
	Very Good	30	30%
	Outstanding	4	4%
Have you considered dropping out of your current career?	Yes	82	82%
	No	18	18%
Marital status of parents	Married	58	58%
	Divorced	13	13%
	Unmarried	15	15%
	Widowed	1	1%
	Single	11	11%
	Unknown	2	2%
Primary caregiver	Parents	88	88%
	Other relative	12	12%
Number of siblings	1	20	20%
	2	22	22%
	3	25	25%
	4	10	10%
	5	13	13%
	6	3	3%
	More	5	5%
	Do not have	2	2%
Is there a migrant sibling in the family nucleus (father, mother, siblings) who contributes economically to the family?	Yes	76	76%
	No	24	24%
Type of housing	Propia	60	60%
	Rentada	25	25%
	Otro	15	15%
Total		100	100%

Out of a total of 100 participants: 53 (53%) were male, and 47 (47%) female, we found a representative age, 27 (27%) were 16 years old, 93 (93%) consider themselves mestizos, 97 (97%) of Catholic religion, 100% of participants are single, with respect to the locality, 86 (86%) correspond to the rural area. 78 (78%) study, 20 (20%) study and work, 37 (37%) consider their performance regular and 6 (6%) outstanding, 40 (40%) rate their satisfaction with the career as regular. Eighty-two (82%) have considered dropping out of their careers. According to the marital status of the parents, 73 (73%) with a partner. According to the primary caregiver, 88 (88%) are parents. 76 (76%) have a migrant relative, who contributes financially to the household. With respect to the number of siblings, 67 (67%) have between 1 and 3 siblings, 60 (60%) have their own home.

Table 2. Correlation between stress coping, age, number of siblings, trait anxiety and state anxiety.

Correlations					
Genre		Age	Number of siblings	Trait Anxiety	Anxiety Status
Male (n=53)	coping	0,110	-0,056	0,175	0,016
		0,431	0,689	0,210	0,908
Female (n=47)		0,192	0,021	-0,072	-0,221
		0,196	0,890	0,631	0,136

Pearson correlation; Significance value (p) in bold.

According to Pearson's correlation, the male sex in relation to age has a coping of 0.431, the female sex is 0.196, according to the number of siblings the male sex has a coping of 0.689 in relation to the female sex which is 0.890, when assessing trait anxiety the male sex has a coping of 0.210 and the female sex of 0.631, in relation to what is assessed in anxiety, the male sex has 0.908 and the female sex 0.136. Both the male and female sexes gave values higher than the significance value, which is greater than 0.05, in which we can determine that coping with age, number of siblings, state anxiety and trait anxiety were not found to be statistically significant. For male we have (n=53) and female (n=47).

Table 3. Application of T-test for Independent Samples.

Genre					
	Male (n=53)	Female (n=47)	T	gl	p
Coping	60,89	69,98	-2,16	98	0,03
Within the family nucleus there is a migrant family member who contributes financially					
	Yes (n=76)	No (n=24)			
coping	64,82	66,25	-0,28	98	0,77
Parents' marital status					
	With partner (n=73)	No partner (n=27)			
coping	65,05	65,44	-0,08	98	0,93

There are significant differences in coping between sexes, since a value of (p 0.03) is obtained, in which we can say that the female sex has greater coping than the male sex. In relation to coping with the family nucleus, if there is a migrant family member who contributes economically to the household, we obtain (p 0.77), the marital status of the parents (p 0.93). This shows that there are no statistically significant differences.

IV. DISCUSSION

The present study showed that, of the 100 participants, 53% were male, the most representative age was 16 years with 27%, the majority were mestizos (93%) and 97% professed the Catholic religion. They were 100% single, 86% lived in rural areas, 22% were studying and working. Thirty-seven percent considered their academic performance as regular, compared to 6% who considered it outstanding, 82% have considered dropping out of school, 73% of the parents have a partner, 88% of the parents are the main caregivers, 76% reported having a migrant relative who contributes economically to the household, most have between 1 and 3 siblings, which represents 67%, and 60% have their own home.

The study: Stress coping profiles in adolescents: their relationship with psychopathology, where sociodemographic variables similar to the present study are considered, reports:

Adolescents between 12 and 18 years of age participated, 51.6% are male and 48.4% female, in relation to their socio-economic level, 44.9% belong to the upper-middle class, 39.7% to the middle class (2).

In the study: Coping with stress and suicidal orientation in adolescent students, 180 students between 15 and 17 years of age participated, of which 55.6% belonged to the 4th year of high school and 80, which corresponds to 44.4% belonged to the 5th year of high school (9).

The study: Coping with stress and suicidal ideation in adolescents with low academic performance showed the following: Students with low academic performance are males with 57.5%, in relation to living with parents 85% and with other relatives 15% (10).

Correlation between stress coping, age, number of siblings, trait anxiety and state anxiety.

The results obtained show that, in both the male and female sexes, we obtained values higher than the significance value, which is greater than 0.05, in which we can determine that coping with age, number of siblings, state anxiety and trait anxiety were not found to be statistically significant differences.

In the study: Depression, anxiety and stress in new students entering higher education, it is reported: The average age of the students was 18.06 (SD. ± 1.82) years, 40.6% of the students presented combinations between anxiety and stress, the results of the parametric test demonstrate their association, contrary to our research where no statistically significant relationships were found. The rest of the characteristics have not been studied (29).

Correlation between coping, sex, migrant family member contributing within the family nucleus and marital status of parents

In the present study, the results of the application of the stress coping questionnaire showed significant differences in coping related to sex; we can say that the female sex has greater coping than the male sex. In relation to coping with the family nucleus, whether there is a migrant family member who contributes financially to the household and the marital status of the parents, there are no statistically significant differences.

The study: Coping with Stress in adolescent high school students, showed: 57.02% female, 42.94% male, the coping strategies most used by women are focused on solving the problem and emotions are involved. On the contrary, in the case of men they avoid the problem and in case of emotions they are more private (3).

According to the study: Impact of stress coping strategies on the happiness of secondary school students, the following results were obtained: 50.81% male, 49.29% female, boys make more use of non-productive strategies, while girls seek more social support (1).

V. CONCLUSIONS

It is of great importance for health personnel and the population in general to know the stress coping strategies used by adolescents in their daily lives, in order to intervene with timely activities and avoid an imbalance in their emotional state, improve their interpersonal relationships and their quality of life.

The present study was applied in the Nelson Izquierdo School in the Parish of Nazón, Canton Biblián Ecuador, to the students of the Educational Unit, where the highest percentage belong to the male sex, single, age range between 13 and 19 years, most are Catholic, a small percentage of the students work and study, a large percentage of adolescents have considered abandoning their career, have the economic support of a migrant relative, most live with their parents and reside in the rural area.

The development of the present work allowed us to find statistically significant differences between stress coping with sex, we can say that the female sex has greater coping than the male sex. After the analysis it was also concluded that there is no relationship between stress coping with age, number of siblings, state anxiety and trait anxiety.

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