

A COMPARATIVE STUDY ON STRESS COPING MECHANISMS OF TEENAGERS AGES FROM 13-19 YEARS OLD IN MALOLOS, BULACAN

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Paper Received: 28.02.2023 / **Paper Accepted:** 10.04.2023 / **Paper Published:** 11.04.2023

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Abstract

Stress is an inevitable part of everybody's life. It is normal to be experienced since it is a response to stressor/s. This study aimed to identify and compare the symptoms and level of stress the teenagers of Malolos, Bulacan experiencing and their coping mechanisms in terms of Profile of the Residents, Symptoms of Stress, Perceived Level of Stress, Ardell Wellness Stress, Stress Coping: Self-Assessment. The study was done online through questionnaires that were answered by the participants in a snowball sampling that works in a chain referral system. A total of 138 respondents were able to represent the population to determine how teenagers are doing well, dealing with stress, and their coping mechanisms. Using the Perceived Stress Scale, the researchers identified the stress level teenagers most like to experience. The Ardell Wellness Test was also used to identify how stress affects teenagers and their feelings during these times. This test was able to initially assess if the teenagers were self-actualized or if they were candidates for psychological counseling. The stress Coping Self-Assessment test was also administered to identify how teenagers deal with stress. The results of these tests are only self-assessments for research purposes and are not subject to diagnosis.

Keywords: Stress, Coping Mechanism, Teenagers, Comparative Study.

Introduction

Stress is a certain part of everybody's life. It is actually normal to be experienced since it is a response to stressor/s. Stress influences our physical, mental, academic success and even in every part of life unless they discover how to cope with it appropriately. Just like the world at large, teenagers also experience stress. It plays a huge role on how motivated or problematic their life's outcome may be.

According to the cognitive-transactional model of stress, stress is the dynamic relationship between an individual and the environment in which a stimulus; whatever it may be, disturbs an individual's homeostasis. It causes him/her to respond to the situation with all available resources. When this occurs, we evaluate the demand relative to our available resources. In addition, we also evaluate the amount of stress we experience which is governed by the following rule; the more resources we have, the less stress we will experience.

Teenagers undergo many stresses like educational stress resulting from testing and exams, homework and additional school necessities which may go beyond their abilities. Mothers have their own stress resulting from child schooling. Workers, leaders, and the whole society have diverse forms of stress and sometimes, the same person undergoes different

kinds of stress at one moment (Hussien and Hussien, 2006). Hancock and Szalma (2008) noted that two common themes exemplify modern stress theory. First, psychological meaningfulness; which is the most important factor, is the attendance of a mechanism through which individuals evaluate events in terms of their meaning depth to mental or physical happiness. Second, individuals control their inner states and assign these mechanisms to reimburse for perturbations persuaded by exterior events which include task demands.

Statement of the Problem

The researchers of this study aim to identify and compare the symptoms and level of stress the teenagers of Malolos, Bulacan experiencing and their coping mechanism in terms of:

I. Profile of the Residents

I.1 Age

I.2 Sex

I.3 Civil Status

I.4 Educational Background

I.4.1 Year Level

I.4.2 Working Student or Non-Working

Student

II. Symptoms of Stress

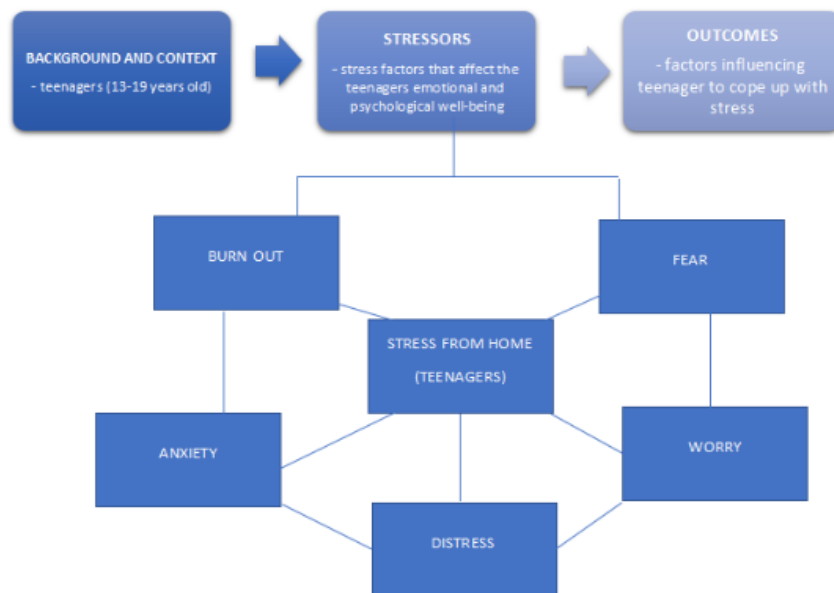
III. Perceived Level of Stress

IV. Ardell Wellness Stress

V. Stress Coping: Self-Assessment

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Conceptual Framework



The figures present and display the different aspects of stress.

Scope and Delimitation

This study would be helpful to other researchers to broaden the scope of the study and understand how teenagers frequently experience such problems such as headaches, problems going to sleep or staying asleep, unexplained muscle pain, jaw pain, uncontrolled anger, and frustration. Experts will be able to derive more information about individual stress levels among teenagers living in Malolos, Bulacan. Through this research, community, parents, academic institutions, mental health advocates, students and future researchers may promote programs and advocacies regarding stress coping techniques that can help teenagers deal with their stress. This study also spread awareness about mental health concerns and how stress coping techniques can be useful to reduce stress.

Methodology

Research Design

The design used in this study is a descriptive cross-sectional study which was conducted to teenagers ages between 13-19 years old residing in Malolos, Bulacan.

Participants/Respondents of the Study

Using the prevalence sample size computation, a total number of 138 participants between ages 13-19 years old residing in Malolos, Bulacan were invited to participate through an online survey form.
138 = 1.9621-090.052

Instrument/s of the Study

The research survey questionnaires were divided into 5 sections composed of personal data of participants, symptoms of stress, perceived stress scale, the Ardell wellness stress test and stress coping techniques.

Data Collection and Analysis

The study was done online through questionnaires that were answered by the participants in a snowball sampling that works in a chain referral system. Links were sent through their emails or social media messaging apps. Prior to answering the form, an original referral would message the researchers about their recruit until a desired population was collected. They were informed that all data collected would be confidential, but they could access their own results if they desire so.

Frequency distributions were used to summarize the data for easier comparison. Mean scores and standard deviation were also calculated to measure the center of the numerical data set and determine how much variation in the scores from the mean. Low standard deviation dictates that the data points or scores are closer to the mean while high standard deviation depicts that the data points or scores are spread out over a large range of values. (Ref <https://assessment.tki.orgnz/Using-evidence-for-learning/Working-with-data/Concepts/Mean-median-and-standard-deviation>).

Identifying the differences on Ardwell Wellness Test and Stress Coping Self-Assessment were analyzed on two-way analysis of variance

(ANOVA) using statistical software called Statistical Package for the Social Sciences (SPSS).

Results and Discussions

Demographic Data

The respondents were from Malolos, Bulacan. The total number of respondents were 138. The maximum respondent belongs from the age group 19 years (33%), then age 18 represents 28%, age 17

represents 12%, age 16 and 15 represents 10%, and lastly, age 14 and 13 represents 4% of the population. The male respondents were 33% while 67% were female. Majority of the respondents were single (97%) and non- working (81%) while 4% of the respondents were married and 19% are working students. In addition, the mean age of the participants was 19.71, and the standard deviation was 15.59. Findings have been summarized in table

Variable	N	%	Mean and Std. Dev
Age			
19 years old	46	33%	19.71; 15.59
18 years old	38	28%	
17 years old	16	12%	
16 years old	14	10%	
15 years old	14	10%	
14 years old	6	4%	
13 years old	5	4%	
Sex			
Female	92	67%	
Male	46	33%	
Status			
Single	134	97%	
Married	4	3%	
Student and Non-working			
Working Student	26	19%	
Non-working	112	81%	
Grade/ Year level			
Elementary	3	2%	
Junior High School	26	19%	
Senior High School	34	25%	
College	63	46%	
No response	12	9%	

Symptoms of Stress

As shown in Table 2 below, the result indicates that they do experience symptoms of stress. Teenagers suffer from headaches (27%) 2-3 times per week. On the same occurrence, they also experience tense muscles, sore neck and back (25%), fatigue (25%), anxiety (26%), bouts of anger/hostility (25%) and boredom, depression (20%). Almost every day,

teenagers suffer from insomnia (21%), difficulty of falling asleep (22%) and eating too much or too little (28%). Sometimes, once or twice daily, teenagers feel irritated (25%) or once a month they experience diarrhea, cramps, gas, constipation (26%). However, they never have experience being restlessness, itching or tics (28%).

Symptoms	Almost all day, every day	Once or twice daily	2-3 times per week	Once a week	Once a month	Never

Headaches	6 (4%)	28 (20%)	37 (27%)	25 (18%)	33 (24%)	9 (7%)
Tense muscles, sore neck and back	8 (6%)	27 (20%)	34 (25%)	21 (15%)	22 (16%)	26 (19%)
Fatigue	16 (12%)	20 (14%)	35 (25%)	23 (17%)	26 (19%)	18 (13%)
Anxiety, worry, phobias	20 (14%)	26 (19%)	36 (26%)	21 (15%)	23 (17%)	12 (9%)
Difficulty falling asleep	30 (22%)	18 (13%)	30 (22%)	21 (15%)	22 (16%)	17 (12%)
Irritability	23 (17%)	34 (25%)	31 (22%)	24 (17%)	15 (11%)	11 (8%)
Insomnia	29 (21%)	20 (14%)	29 (21%)	11 (8%)	27 (20%)	22 (16%)
Bouts of anger/hostility	11 (8%)	31 (22%)	35 (25%)	23 (17%)	23 (17%)	15 (11%)
Boredom, depression	27 (20%)	21 (15%)	28 (20%)	24 (17%)	20 (14%)	18 (13%)
Eating too much or too little	38 (28%)	29 (21%)	28 (20%)	15 (11%)	17 (12%)	11 (8%)
Diarrhea, cramps, gas, constipation	5 (4%)	21 (15%)	21 (15%)	22 (16%)	36 (26%)	33 (24%)
Restlessness, itching, tics	10 (5%)	13 (9%)	30 (22%)	22 (16%)	25 (18%)	38 (28%)

Perceived Stress Scale

In order to find out the significance of the problems, the Perceived Stress Scale has been used to assess the stress level of the teenagers. Table 1 shows that the majority among male teenagers have been

suffering from moderate stress (Score 14-26) with mean average of 19.71, and standard deviation of 4.88 followed by low stress (Score 0-13) with mean average of 11.5 and standard deviation of 4.34.

Table 3: Perceived Stress Scale among Male				
Category	N	%	Mean	Standard Deviation
Low Stress (0-13)	2	4%	11.5	4.34
Moderate Stress (14-26)	42	91%	19.71	4.88
High Perceived Stress (27-40)	2	2%	31	4.73

Table 4: Perceived Stress Scale among Female				
Category	N	%	Mean	Standard Deviation
Low Stress (0-13)	2	2%	13	0
Moderate Stress (14-26)	68	74%	21	4.87
High Perceived Stress (27-40)	22	24%	29.64	4.73

Likewise, 74% of female teenagers have experienced moderate stress (M: 21, SD: 4.87). However, 24% of females tend to experience high perceived stress (M: 29.64, SD: 4.73) than 2% male (M: 31, SD: 4.73)

Ardell Wellness Stress Test

The table 5 and 6 shows the comparison of Ardwell wellness stress assessment test between genders. Majority of the female respondents' scores fall in the +1 - +24 range which indicates a wellness-oriented

person garnering 38% with mean average of 16.31 and standard deviation of 21.70. While 48% of male teenager scores fall to mastered the wellness approach (M: 36.91, SD: 22.10). This shows that most of them have the capacity to deal with the stress efficiently with the events and certain circumstances that comes in their life. While male didn't fall to candidate for counseling (-25 - -50) and major psychological care (-51 - -75), 1% of female respondents fall to these categories.

Table 5: Ardell Wellness Stress Test among Female				
Category	N	%	mean	standard deviation
Self-actualized person (+51-+75)	13	14%	59.15	23.45
Mastered the wellness approach to life (+25- +50)	32	35%	36.84	21.94
Wellness-oriented person (+1-+24)	36	38%	16.31	21.70
Candidate for additional training in how to deal with stress (0- -24)	10	11%	10.40	22.2
Candidate for counseling (-25 - -50)	1	1%	-41	0
Candidate for major psychological care (-51 - -75)	1	1%	-57	0

Table 6: Ardell Wellness Stress Test among Male				
Category	N	%	Mean	Standard Deviation
Self-actualized person (+51-+75)	7	15%	57	21.44
Mastered the wellness approach to life (+25- +50)	22	48%	36.91	22.10
Wellness-oriented person (+1-+24)	10	22%	17.50	22.66
Candidate for additional training in how to deal with stress (0- -24)	7	15%	3.43	22.49
Candidate for counseling (-25 - -50)	0	0	0	0
Candidate for major psychological care (-51 - -75)	0	0	0	0

Stress Coping

In terms of coping up with stress, Table 5 and Table 6 shows that 88% of females (M: 2.84, SD: 0.272)

and 89% of male were both above average in the self-assessment.

Table 6: Stress Coping Resources Inventory: A Self-Assessment among Female Teenagers				
Category	N	%	Mean	Standard Deviation
Superior stresscoper (3.5+)	1	1%	3.56	0
Above average stresscoper (2.5-3.4)	81	88%	2.84	0.272
Average stresscoper (1.5-2.4)	10	11%	2.32	0.263
Below average stresscoper (1.5)	0	0%	0	0

Table 7: Stress Coping Resources Inventory: A Self-Assessment among Male Teenagers				
Category	N	%	Mean	Standard Deviation
Superior stresscoper (3.5+)	1	2%	3.88	0
Above average stresscoper (2.5-3.4)	41	89%	2.89	0.272

Average stresscoper (1.5-2.4)	4	9%	2.45	0.273
Below average stresscoper (1.5)	0	0%	0	0

Ardell Wellness Stress Test and Stress Coping Self-Assessment Test of Teenagers in Malolos, Bulacan

The researchers want to identify if there's a difference on Ardell Wellness Stress and Stress Coping Self-Assessment Test among teenagers according to their gender and working status

(Working and Non-Working student). With the help of the statistician, the mean scores of Ardell Wellness Stress and Stress Coping mean scores were analyzed if the dataset is fit for the Two-way ANOVA test.

Figure 8.0: Ardell Stress Score Histogram

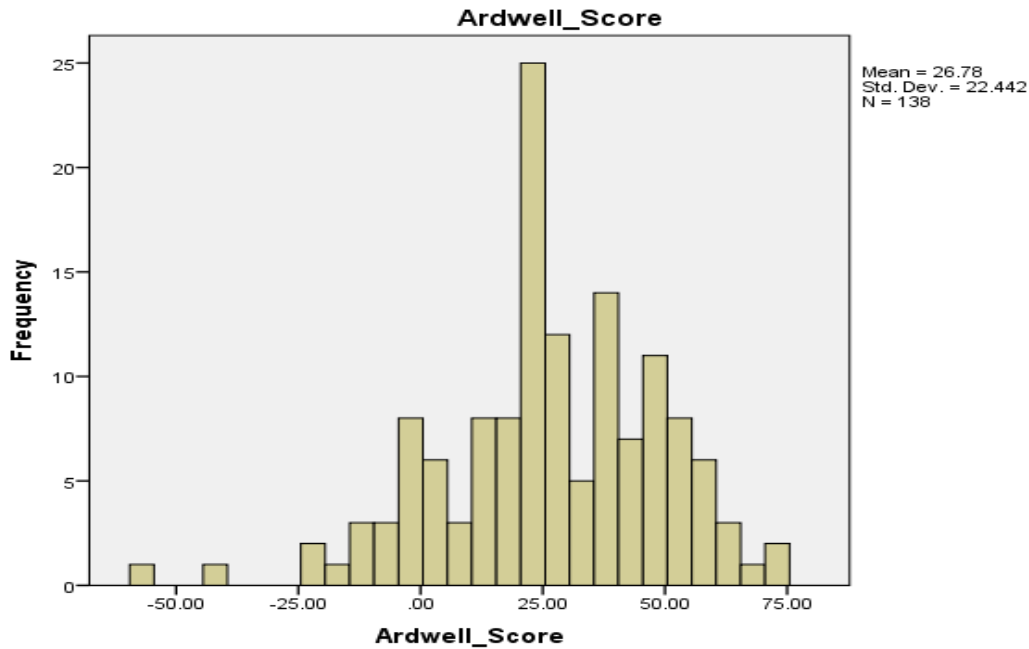


Figure 8.1: Stress Coping Score Histogram

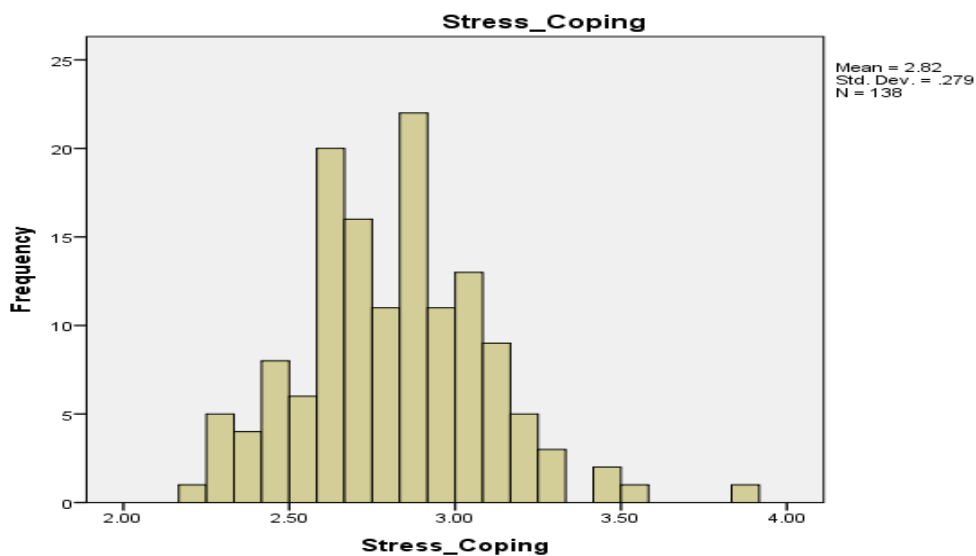


Figure 8.0 Ardell Stress Score histogram shows that the dataset is normally distributed with two outliers on the left. Likewise, Figure 8.1 Stress Coping histogram are roughly normal distributed with three outliers on the right. This concludes to proceed on analyzing the data using Analysis of Variance or ANOVA. In table 8.0 below shows the descriptive statistics of the two dependent variables. There were

no missing values on the variables states that all questions have responses. The mean and standard deviation of Ardell Wellness scores (μ : 26.77, SD: 22.44) state that they are close to the mean, same with Stress Coping scores (μ : 2.82, SD: 0.28). Since ANOVA is a test of variance, the first variable has a wide spread of data (σ^2 : 506.66) while the second has a thinner spread of data. (σ^2 : 0.78).

Table 8.0: Statistics

		Ardell_Score	Stress_Coping
N	Valid	138	138
	Missing	0	0
Mean		26.7754	2.8177
Std. Deviation		22.44247	.27861
Variance		503.664	.078
Skewness		-.609	.450
Std. Error of Skewness		.206	.206
Kurtosis		.928	.981
Std. Error of Kurtosis		.410	.410
Range		129.00	1.66
Minimum		-57.00	2.22
Maximum		72.00	3.88

Levene's Test of Homogeneity was used to identify if the variances are all equal over subcategories. First, is to identify if the variances are statistically significant on the dependent variables – Ardell Wellness Stress and Stress Coping Self-Assessment.

Table 8.1 shows we do not reject the null hypothesis: population variance are equal to Ardell Wellness Test [F(6,131) = .185, p = 0.981] and Stress Coping Self-Assessment [F(6,131) = 1.366, p = 0.233].

Table 8.1: Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Ardell_Score	.185	6	131	.981
Stress_Coping	1.366	6	131	.233

Since the main dependent variables are not significant, researchers would like to know if independent variables will be significant to Levene's Test. Based on the results, table 8.4 shows

that age by working and non-working students are statistically significant [F(1,136) = 7.120, p = 0.009] as well in table 8.3, age by gender [F(1,136) = 5.902, p = 0.016].

Table 8.2 Working vs Non-Working Test of Homogeneity of Variances

Age			
Levene Statistic	df1	df2	Sig.
7.120	1	136	.009

Table 8.3: Gender Test of Homogeneity of Variances

Age			
Levene Statistic	df1	df2	Sig.
5.902	1	136	.016

Difference on Ardell Wellness Test

A two-way analysis of variance was used to identify if there is a significant ($p < 0.05$) difference on Ardwell Wellness Test, according to working status as a student. Table 8.4 shows that age ($p=.480$) and

working and non-working student groups ($p=.741$) are not significant. Therefore, there were no difference between working and non-working students on Ardell Wellness Test.

Table 8.4: Working and Non-Working Students Tests of Between-Subjects Effects

Dependent Variable: Ardell_Score

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	6228.373 ^a	12	519.031	1.034	.423	.090
Intercept	23934.009	1	23934.009	47.659	.000	.276
Age	2782.821	6	463.804	.924	.480	.042
Student_Status	55.017	1	55.017	.110	.741	.001
Age * Student_Status	2851.616	5	570.323	1.136	.345	.043
Error	62773.663	125	502.189			
Total	167937.000	138				
Corrected Total	69002.036	137				

a. R Squared = .090 (Adjusted R Squared = .003)

Likewise, age ($p=.400$) and gender ($.546$) are not statistically significant. Therefore, table 8.5 shows that there was no difference between male and

female, regardless of their age in Ardell Wellness Test ($p=.454$).

Table 8.5: Gender Tests of Between-Subjects Effects

Dependent Variable: Ardell_Score

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	6517.385 ^a	13	501.337	.995	.460	.094
Intercept	50376.108	1	50376.108	99.971	.000	.446
Age	3159.626	6	526.604	1.045	.400	.048
Gender	185.157	1	185.157	.367	.546	.003
Age * Gender	2907.486	6	484.581	.962	.454	.044
Error	62484.651	124	503.908			
Total	167937.000	138				
Corrected Total	69002.036	137				

a. R Squared = .094 (Adjusted R Squared = .000)

Difference on Stress Coping Self-Assessment Test
 In table 8.6 shows that age (p=.437) and working status (p=.881) of a student are not significant.

Therefore, there were no difference between working and non-working students regardless of their age on coping with stress. (p=.898)

Table 8.6: Tests of Between-Subjects Effects

Dependent Variable: Stress_Coping

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	.663 ^a	12	.055	.692	.756	.062
Intercept	273.564	1	273.564	3429.248	.000	.965
Age	.472	6	.079	.987	.437	.045
Student_Status	.002	1	.002	.023	.881	.000
Age * Student_Status	.129	5	.026	.323	.898	.013
Error	9.972	125	.080			
Total	1106.266	138				
Corrected Total	10.635	137				

a. R Squared = .062 (Adjusted R Squared = -.028)

Similarly, age (p=.310) and gender (p=.338) are not statistically significant. Hence, there were no

difference on coping with stress between male and female, regardless of their age. (p=.613)

Table 8.7: Tests of Between-Subjects Effects

Dependent Variable: Stress_Coping

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1.076 ^a	13	.083	1.073	.388	.101
Intercept	527.650	1	527.650	6844.645	.000	.982
Age	.555	6	.093	1.201	.310	.055
Gender	.071	1	.071	.927	.338	.007
Age * Gender	.346	6	.058	.747	.613	.035
Error	9.559	124	.077			
Total	1106.266	138				
Corrected Total	10.635	137				

a. R Squared = .101 (Adjusted R Squared = .007)

Discussion

This research identified the frequency of occurrence of stress symptoms among teenagers in Malolos, Bulacan. A total of 138 respondents were able to represent the population to determine how teenagers are doing well, dealing with stress and their coping mechanisms. Using Perceived Stress Scale, the researchers were able to identify the stress level that the teenagers most like to experience. Ardell

Wellness Test, was also used to identify how stress affects the teenagers and what they feel during these times. This test was able to initially assess if the teenagers were self-actualized person or if they are candidate for psychological counseling. Stress Coping Self-Assessment test was also administered to identify how teenagers deal with their stress.

The results of these tests are only self-assessments for research purposes and not subject as diagnosis.

1. Experiencing fatigue, headaches, tension of muscles (sore neck and back), anxiety and bouts of anger/hostility mostly occur two to three times a week, when you are stress.
2. When you are stress, almost every day may suffer on difficulty of falling asleep or insomnia and imbalance appetite (eating too much or too little).
3. Twice a day you may feel irritated or once a month you may experience diarrhea, cramps, gas and constipation when you are stress.
4. Teenagers most likely experienced moderate stress level.
5. In Ardwell Wellness Test, female was wellness-oriented person when it comes to dealing with their stress, while male mastered the wellness approach to life.
6. For Stress Coping Self-Assessment Test, teenagers were above average when coping up with their stress.
7. Statistically, there were no significant difference between male and female, regardless of their age in Ardell Wellness Stress. The same with stress coping self-assessment test.
8. Likewise, there were no significant difference between working and non-working students, regardless of their age in Ardwell Wellness Stress. Similarly with their stress coping self-assessment test.

Conclusion

In general, we may be young or old, male or female, working or not, the way we experience the symptoms of stress and dealing with it are statistically the same. However, in medical field, experiences, symptoms and coping mechanisms are different. These results only rely to the data provided and should not be subject as diagnosis. If you think yourself is experiencing extreme stress that may lead to counseling, please seek for professional help.

Recommendations

In the light of the limitations identified and the findings of the study, the following are recommended as future research subjects

- What are the other sources of stress coping mechanism of teenagers ages from 13-19 years old.
- Stress coping of not only in teenagers but also in different age groups.

- Use other standardized stress coping self-assessment.

Conflict of Interest

There is no conflict of interest between the authors in this manuscript.

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