

# Assessment of Perceived Sources, Consequences and Coping Mechanisms of Stress among Wolkite University First Year Regular Students: A Descriptive Survey Study

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## Abstract

A number of studies have been carried out on sources of stress focusing on general prevalence rather than specific dimensions of the various sources of stress and their consequences along with coping mechanisms. Thus, the objective of this study was to assess perceived sources, consequences and stress coping mechanisms among first year regular undergraduate students' of Wolkite University. Three hundred and twenty nine (329) first year students were selected from all colleges using multi-stage stratified sampling techniques. A structured questionnaire consisting of items on various dimensions of sources of stress, consequences and coping mechanisms were administered. The finding explicate that freshmen students in Wolkite University had experienced all the major forms of sources of stress mainly intrapersonal sources than academic, interpersonal and environmental sources respectively. The independent t-test analyses in terms of gender indicated that female freshmen students are more prone to all forms of such sources of stress, chiefly of intrapersonal sources of stress with ( $M = 3.95$ ,  $SD = .26$ ),  $t_{(287)} = -16.71$ ,  $p < 0.05$  as compared to their male counterparts. Psychological, academic, social, physical and health related negative consequences of stresses were some commonly revealed ones. Active problem coping followed by active emotional coping approach was the most applied one to handle stress and there was significant gender differences in utilizing coping strategies in which female students employed less active problem and active emotional focused coping strategies than male students ( $M=2.93$ ,  $SD = .55$ ),  $t_{(287)} = 13.37$ ,  $p < 0.05$  and ( $M = 2.51$ ,  $SD = .48$ ),  $t_{(287)} = 16.89$ ,  $p < 0.05$  respectively. Moreover in this study, a significant negative correlations were found between all forms of perceived sources of stress (intrapersonal, academic, interpersonal and environmental), and active problem coping style and active emotional coping style while passive problem coping style and passive emotional coping style found to be positively correlated to sources of stress. Female students have experienced all major forms of perceived sources of stress with its damaging effects and used more passive problem and emotional coping mechanisms. Hence, university officials, student's counselors and policy makers have to make conducive learning environment in the University to curb difficulties first year students face difficulties in their academic, social, health and psychological wellbeing.

**Keywords:** consequences of stress, coping mechanisms, freshmen students, perceived sources of stress.

## 1. INTRODUCTION

In each academic year, up on the successful preparatory school completion, students arrive from one area to another area to attend higher-level education. This new phase of education contains multitude and complex problems. According to Cohn 2008, college and /or university students face stress every day and it is complex problem among them (as cited in Parisi, 2011). Basically, stress has been viewed as a transaction between individuals and their environments: and it then related to any psychological threat in which individual perceives stressors and /or a situation as a potential that affect his/her normal functioning (Seyedaftemi, Tfreshi, & Hagani, 2007). Stress in academic institutions needs concern and there is a growing evidence base which suggests that high levels of stress are particularly prevalent among University students. From worldwide, Adlaf, Glikzman, Demers & Newton - Taylor, 2001, found that the stress levels among Canadian university students significantly exceeded the stress levels among the general Canadian population. Another study in USA, shown that the elevation in college - level stressors may be precipitated by the transition from high school to college, which appears to be an especially challenging period for young adults (Welle & Graf, 2011). Egan, 2011, found stress as common problem among college students and high level of it negatively affects their academic performance and the commonly noticed sources of stress in these college students include classes, illness or death of a loved one, relationships and conflict with roommates or parents. Bitsika & Holmes, 2010, also revealed that there is ample of evidence that the transition from secondary school to further studies either at college or university, both of which may entail leaving home and living independently for the first time presents a major challenge as perceived sources of stress to students. Perception of high stress levels in students can also lead to poor academic performance, depression, attrition and serious health problems (Pengilly & Dowd, 2000; Misra, McKean, West & Russo, 2000; Hudd, Dumlao, Erdman-Sager, Murray, Phan, Soukas, & Yokozuka, 2000) as cited in Walton, 2002.

A study conducted by Debora, Lana and Kerry (2003), on African-American college and/or university students, revealed that university students are very vulnerable group to experience stress and the common sources of stress among those students were interpersonal stress, intrapersonal stress, academic stress like low grades and poor time management, the latter of which is related to a variety of negative outcomes such as health problems and poor academic performances. Moreover, Hodgson 2010, in china found that particularly, first-year university students experience a number of problems when they transit from high school to university study. On the other hand, a study conducted among Iranian nursing first year students on experienced stressors and coping strategies revealed that just as everyone deals with stress in a unique ways, college and/or university students' experienced a rage of consequences including heavy drinking, weight gain or lose, dropout rate, physical and psychological consequences following the appraisal of stress as threatening (Seyedfetami et al, 2007). A study among first-year university students in South Africa by Pillay, 2010, indicated that first-year university students face numerous challenges, some of which prove more than they can cope with. As a result, their prospects of graduating were reduced, as reflected in the high failure and drop-out rates nationally.

The effects of stress are directly linked to coping (Naghton, 1997). A study conducted by Bray et al, (1999), revealed that stress and how it managed has an impact on the dropout rate/attrition of first year university students; and this researcher found that with a lessened ability to manage stress, the chance of discontinuing their education increased. Taylor et al. (2004) found that using social support and substance use as coping mechanisms have observed between Korean- American college students in which the former reported using social support less frequently and the later reported substance use more frequently in coping with stress. According to Yusuf (1998), cited in Jibril, 2012, Ethiopian university and college level students, especially newly enrolled students undergo challenges such as economic, psychosocial, educational and health. In addition, the recent study conducted on adjustment problems among first year university students by (Jibril, 2012) in Ethiopia the case of Jimma University also indicated that about half of the study participants experienced at least one form of the common adjustment problems such as educational, social and personal-psychological in which social adjustment problem appear to show relative significance as compared to other difficulties. Although Surveys of the literatures on freshmen university students has been carried out related to stress across different countries, little has been written about students in Ethiopia, especially in relation to sources, consequences and coping strategies. Thus, the present investigation was aimed to identify perceived sources and consequences of stress along coping strategies first year regular under graduate students use to manage stress in Wolkite University, upon lack of pertinent studies which show the combination of the three variables such as perceived sources, consequences and coping mechanisms of stress that first year regular under graduate students experienced.

## 2. MATERIALS AND METHODS

A descriptive survey study design was conducted among Wolkite University freshmen students from March to April, 2014. Kurtz's (1983) standard sample size determination formula was used. In order to obtain the maximum sample size, its assumption of maximum heterogeneity or maximum variation sampling, the estimate of the population ( $p$ ) was assumed to be 50% (.50), the maximum allowable error ( $E$ ) was assumed to be 5% = .05 and the standard normal value corresponding to the desired level of confidence ( $z$ ), or a confidence interval of 95%, was assumed ( $z = 1.96$ ). Using this formula, the final sample size was 329 first year students. The sample size was proportionally allocated to each college based on the total number of freshmen students and finally, using simple random sampling technique, 329 participants where 209 (65.4%) are male and 120 (34.6%) are female was selected. Data were collected using a pre-tested questionnaire followed by open ended questions containing forms of sources of stress, consequences and coping mechanisms items. The self-administered questionnaire is used to minimize problem of validity and different strategies including giving clarification if something was unclear was used. Moreover, the objective of the study was clearly communicated to the study participants orally and in written form, and good rapport was also established in order to maximize the trustworthiness of the information students provided. The questionnaire contained four sections. The first section contained items on demographic information. The second part consisted of items on perceived sources. The section three consisted items on consequences of stress and section four consisted items on coping mechanisms used among freshmen students. Before the actual survey was conducted, a pre-test (pilot test) on 50 freshmen students was done. Cronbach's alpha reliability estimate for both student stress scale and coping style inventory were 0.83 and 0.71 respectively. Based on the pilot testing results, the wording and overall organizations of the items were reviewed and some items were omitted and others modified. Content and face validity was checked by experts after constructing the draft questionnaire, special focus was on clarity of terms and statements. In addition, open ended questions developed to measure other sources of stress, coping mechanism of stress, and consequences of stress were reviewed by experts of measurement and evaluation, advisors and the researcher. Comments were incorporated; clarity of statements made, wording and grammar were corrected before final data collection.

Mean and standard deviation was computed to identify various forms of perceived sources of stress and coping mechanisms. Independent sample t-test was used to determine perceived sources and coping mechanisms of stress by gender. One way- ANOVA test of difference was conducted to determine the difference in experiencing perceived sources of stress by fields of study. Pearson correlation coefficient was also employed to examine the relationship between perceived sources of stress and coping mechanisms utilized by students to cope with stress. Statistical Package for Social science (SPSS) software, version 20.0 was used to process statistical data. Ethical clearance was obtained from Jimma University ethical committee, permission letter was obtained from Department of Psychology and participants were told the objective of the research and then oral consent was obtained from the participants for their willingness to participate in the study. The participants also were told that the information they provide would be used solely for the research purpose. Confidentiality of participants was also assured throughout the research process.

### 3. RESULTS

Of 329 first year student respondents, 289 respondents properly filled questionnaire. The majority of them 193 (67%) are male, and 96 (33%) female students participated in the study from regular undergraduate programs of Wolkite University. Concerning the total distribution of study subjects among different departments of the university, 49 (17%) from pre-engineering, 48(16.6%) from department of civic and ethical education, 43 (15%) from department of statistics, 42 (14.5%) from department of information system, 37(12.8%) from department of management, 26(9%) from health officer, 23 (8.9%) from school of law and the remaining 21(7.3%) from department of natural resource management. The self-reported potential sources of stress have been identified as perceived sources of stress. On the average, intrapersonal perceived sources shared the highest mean score among the participants' of the study with ( $M=3.72$ ,  $SD = 1.13$ ), followed by the mean score of academic perceived sources of stress with ( $M=3.28$ ,  $SD = .87$ ). Interpersonal perceived sources of stress shared mean score ( $M=3.07$ ,  $SD = .69$ ) and the least mean score was, the mean score of environmental sources of stress with ( $M=2.79$ ,  $SD = .85$ ). (Table1).

**Table 1. Means and standard deviations of factors- categories of perceived sources of stress**

Categories of sources of stress	Mean	Std. Deviation
Interpersonal sources of stress	3.07	1.13
Intrapersonal sources of stress	3.72	0.69
Academic sources of stress	3.28	0.87
Environmental sources of stress	2.79	0.85

As measured by independent sample t-test regarding difference by gender on perceived sources of the stress, there are statistically significant gender differences in facing all forms of sources of stress. A statistically significant difference was found between gender on interpersonal sources of stress [ $t(287) = -10.67$ ,  $p = .000$ ] in which first year female students' had mean score somewhat below the scale value of "agree" in experiencing interpersonal sources of stress ( $M=3.57$ ,  $SD = .28$ ) than did male students ( $M = 2.8$ ,  $SD = .64$ ). Moreover, there was statistically significant difference between gender among first year students' about intrapersonal perceived sources of stress [ $t(287) = -16.71$ ,  $p < 0.05$ ] in which female students faced this source of stress ( $M=3.95$ ,  $SD = .256$ ) than did male students ( $M = 3.48$ ,  $SD = .21$ ) having mean score nearly below the scale value of "agree". With reference to academic sources, there was also statistically significant gender difference among first year students [ $t(287) = -16.24$ ,  $p < 0.05$ ] in which female first year students had mean score to a certain extent below the scale value of "agree" in facing academic perceived sources of stress ( $M=3.68$ ,  $SD = .24$ ) than did male students ( $M = 3.08$ ,  $SD = .32$ ). It was also found statistically significant gender differences among freshmen students in relation to facing environmental perceived sources of stress [ $t(287) = -11.72$ ,  $p < 0.05$ ] in which female freshmen students on average had somewhat above scale value of "neither" in facing this type of sources of stress ( $M = 3.03$ ,  $SD = .25$ ) than did male counterparts ( $M = 2.67$ ,  $SD = .24$ ). (Table2).

#### 3.1. Major categories of perceived sources of stress based on participants' fields of study

A one-way ANOVA was conducted to compare the subjects from various fields of studies such as pre-engineering, civics & ethical education, statistics, information system, management, health officer, law and natural resources management on experiencing all forms of perceived sources of the stress. Concerning perceived sources of stress by participants' fields of study, there are some mean scores difference between participants' from different departments. Relatively students' from pre-engineering had maximum score ( $M = 3.29$ ,  $SD = .44$ ) while students' from management had minimum score ( $M = 2.945$ ,  $SD = .79$ ) in facing interpersonal sources of stress. Moreover, on intrapersonal perceived sources of stress, participants' from natural resources management appear to had on average higher score ( $M = 3.76$ ,  $SD = .34$ ) whereas participants' from health officer relatively had least score ( $M = 3.54$ ,  $SD = .21$ ). Comparatively some mean score differences were observed between participants' from different departments in perception of academic sources of stress in which

subjects' from civics & ethical education seem to had score ( $M = 3.34, SD = .43$ ) and students' from law had minimum score ( $M = 3.05, SD = .42$ ). It is also shown in this table that subjects' from civics & ethical education somewhat had score ( $M = 2.86, SD = .30$ ) when participants' from law relatively had least score ( $M = 2.72, SD = .28$ ) in facing environmental perceived sources of stress (Table 3&4). In relation to differences on perception of interpersonal sources of stress by fields of study, there was non-significant effect of fields of studies on freshmen university students'  $F(7, 281) = 1.308, p > 0.05$ . Moreover, One-way ANOVA result also showed that a non-significant difference in mean scores of experiencing intrapersonal perceived sources of stress based upon students' fields of studies  $F(7, 281) = .907, p > 0.05$  (Table 5). Results of one-way analysis of variance indicated non-significant difference in mean scores of experiencing academic perceived sources of stress based upon participants' fields of studies  $F(7, 281) = 2.070, p > 0.05$ . there was also statistically a non-significant mean difference in facing environmental perceived sources of stress based on students' fields of studies  $F(7, 281) = 1.016, p > 0.05$ . Generally, taken together both descriptive and One-way ANOVA results, though comparatively some mean score differences observed between groups, the results of One-way ANOVA revealed statistically non-significant difference and diverse fields of studies do not have an effect on facing sources of stress in unlike manner (Table 6).

**Evidence on different sources of stress from the open-ended questions**

The majority 211(73.01%) of participants frequently reported common stressors they have faced. These major identified sources of stress were lack of teaching and learning materials such as laboratory and reference books, lack of diversified/ multiple options of study programs, language barriers in effective communication with instructors and students (English), feelings separating from family and friends, poor results on quiz and exams, new standards of living in the campus which is not as such free like outside the campus, worry about future job opportunity, imbalance between expectation and academic results, peer pressure and lack of using multiple assessment tools by teachers to assess students' performance.

**Table 2. Descriptive and independent sample t-test summary of the major categories of perceived sources of stress by gender**

Variable	Descriptive		t-test for Equality of Means			
	Sex	N	Mean	t	df	P-value
Interpersonal perceived sources of stress	Male	193	2.8342	-10.667	287	.000
	Female	96	3.5677			
Intrapersonal perceived sources of stress	Male	193	3.4819	-16.709	287	.000
	Female	96	3.9514			
Academic perceived sources of stress	Male	193	3.0816	-16.241	287	.000
	Female	96	3.6771			
Environmental perceived sources of stress	Male	193	2.6762	-11.719	287	.000
	Female	96	3.0326			

\*\* . Difference is significant at 0.05 alpha levels (2-tailed),  $p < 0.05$

**Table 3. Summary of descriptive results on interpersonal and intrapersonal perceived sources of stress across fields of study**

Variable	Group	N	Mean	St. Deviation
Interpersonal perceived sources of stress	1	49	3.2891	.43671
	2	48	3.0521	.65968
	3	43	3.1163	.66222
	4	42	3.0000	.69161
	5	37	2.9459	.79839
	6	26	2.9487	.52232
	7	23	3.0290	.74984
	8	21	3.1667	.62805
Intrapersonal perceived sources of stress	1	49	3.6272	.25310
	2	48	3.6458	.37891
	3	43	3.6620	.32216
	4	42	3.6159	.33602
	5	37	3.6432	.31670
	6	26	3.5436	.21474
	7	23	3.6203	.30973
	8	21	3.7651	.34229

\*\*1 stands for pre-engineering, 2 for civics & ethical education, 3 for statistics, 4 for information system, 5 for management, 6 for health officer, 7 for law and 8 for natural resources management.

**Table 4. Summary of descriptive results on academic and environmental perceived sources of stress across fields of study**

Variable	Group	N	Mean	St. Deviation
Academic perceived sources of stress	1	49	3.3367	.33580
	2	48	3.3438	.42722
	3	43	3.3401	.39371
	4	42	3.3423	.37353
	5	37	3.2027	.41285
	6	26	3.1827	.45171
	7	23	3.0543	.42276
	8	21	3.2500	.43301
Environmental perceived sources of stress	1	49	2.7296	.30655
	2	48	2.8620	.30208
	3	43	2.8227	.31485
	4	42	2.7857	.27509
	5	37	2.7905	.28876
	6	26	2.7837	.25386
	7	23	2.7283	.28368
	8	21	2.8452	.32332

\*\*1 stands for pre-engineering, 2 for civics & ethical education, 3 for statistics, 4 for information system, 5 for management, 6 for health officer, 7 for law and 8 for natural resources management.

**Table 5. Summary of one- way ANOVA results on interpersonal and intrapersonal perceived sources of stress across fields of study**

Variable	Group	N	Sum of squares	Df	Mean square	F	Sig
Interpersonal sources of stress	1	49	3.835	7	.548	1.31	.246
	2	48	117.663	281	.419		
	3	43	121.498	288			
	4	42					
	5	37					
	6	26					
	7	23					
	8	21					
Intrapersonal sources of stress	1	49	.633	7	.090	.907	.502
	2	48	28.029	281	.100		
	3	43	28.662	288			
	4	42					
	5	37					
	6	26					
	7	23					
	8	21					

\*\*1 stands for pre-engineering, 2 for civics & ethical education, 3 for statistics, 4 for information system, 5 for management, 6 for health officer, 7 for law and 8 for natural resources management.

**Table 6. Summary of one- way ANOVA results on academic and environmental perceived sources of stress across fields of study**

Variable	Group	N	Sum of squares	Df	Mean square	F	Sig
Academic perceived sources of stress	1	49	2.328	7	.333	2.070	.047
	2	48	45.141	281	.161		
	3	43	47.469	288			
	4	42					
	5	37					
	6	26					
	7	23					
	8	21					
Environmental perceived sources of stress	1	49	.621	7	.089	1.016	.420
	2	48	24.540	281	.087		
	3	43	25.161	288			
	4	42					
	5	37					
	6	26					
	7	23					
	8	21					

*\*\*1 stands for pre-engineering, 2 for civics & ethical education, 3 for statistics, 4 for information system, 5 for management, 6 for health officer, 7 for law and 8 for natural resources management.*

### 3.2. Consequences/impacts of stress among participants'

Regarding participants' response on consequences they have faced from categories of sources of stress, the majority of the respondents' 244 (84.4%) faced consequences of stress from intrapersonal perceived sources of stress, 203 (70.2%) faced consequences of stress from academic perceived sources of stress and 174 (60.2%) and 147 (50.9%) respondents faced consequences of stress from interpersonal and environmental sources respectively.

**Table 7. Participants' responses to consequences of perceived sources of stress**

S/N	Categories of consequences of stress	Frequency	Percentage (%)	
1	Consequences from interpersonal perceived sources of stress	Yes	174	60.2
		No	115	39.8
		Total	289	100
2	Consequences from intrapersonal perceived sources of stress	Yes	244	84.4
		No	45	15.6
		Total	289	100
3	Consequences from academic perceived sources of stress	Yes	203	70.2
		No	86	29.8
		Total	289	100
4	Consequences from environmental perceived sources of stress	Yes	147	50.9
		No	142	49.1
		Total	289	100

### Themes that emerged from the data analysis of consequences of stress

As indicated in table 7 above, first year students have faced consequences of stress from interpersonal, intrapersonal, academic and environmental perceived sources of stress. In line with the frequency of responses regarding consequences of stress they faced, a number of participants' mentioned the impacts they encountered. Based on this result, five main themes were emerged from data analysis of consequences of stress students' experienced due to intrapersonal, academic, interpersonal and environmental perceived sources. These themes are (1) social consequences of stress, (2) psychological consequences of stress, (3) physical and health related consequences of stress, and (4) academic consequences of stress. These themes were developed for the purpose of bringing similar responses all together from the responses provided.

### Major Experienced consequences of stress among participants'

Most of the participants' presented common experiences, though there are some differences on all themes. The most marked common consequences were unhealthy social relationships, disturbed psychological

functioning, troubled physical and health related consequences of stress and academic consequences of stress. These all themes are characterized by different sets of impact on first year students of Wolkite University.

**a. Social Impacts of stress**

Regarding this, 179 (62%) of the participants negatively suffered from stress as social consequences. The social impacts these participants experienced include: poor and reduced social involvement, unhealthy contact with peers, isolation of interpersonal relationship with others, poor family contact, reduced participation in group work, dissatisfying with peer interaction, quarrel toward others, disagreement with boy or girl friend and disturbed communication.

**b. Psychological Impacts of stress**

About 246 (85%) of the participants' commonly experienced psychological consequences such as sleep disturbances, poor concentration, reduced self-confidence, use of substances such as alcohol, chat and cigarette, feeling of hopelessness, poor attention, suicidal feeling, feeling of inability to cope with problems arise, low self-esteem, apprehension and sense of loss, anxiety, criticizing oneself too much for not to do or fail to do, aggressiveness and lack of stability and control.

**c. Physical and health related Impacts of stress**

On the subject of this consequence, 219 (76 %) participants suffered from physical and health problems due to stress and the commonly experienced physical and health problems were frequent and severe headache, loss of appetite, emotional arousal, irritability, fatigue and loss of effort, loss of weight, increase in heart beat and hypertension/high blood pressure.

**d. Academic Impacts of stress**

The participants of this study had experienced mostly negative academic impacts from stress. About 208 (72%) of the participants faced academic problems such as: frequent fear of exams, failure of exams, low marks and grades in courses during under stress, lack of interest and study habits, desire to drop out academic year, too missing classes, poor preparation for exams, poor time management in academic activities, failure to follow direction/instruction during exam, failure to control emotions in the class and lack of motivation in academic activities.

**3.3. Major categories of coping mechanisms of the stress**

Different coping mechanisms students' used to cope with stress were identified and the mean scores difference here gives an indication as to which coping style used to handle sources of stress by the sample of the study as the majors. Among the categories of coping mechanisms of stress, active problem coping shared the strongest with ( $M = 3.51, SD = 1.02$ ) followed by active emotional coping ( $M = 3.14, SD = 1.09$ ). It also indicated that passive emotional coping shared ( $M = 2.86, SD = 1.15$ ) and passive problem coping reported with ( $M = 2.71, SD = 1.19$ ) mean score. Finally, the type of coping mechanisms first year students' used vary in their mean scores and coping mechanism with large mean (active problem coping) shows that most participants' of this study used this type of coping mechanism followed by active emotional coping mechanism. Furthermore, the least employed coping styles by freshmen students are passive emotional coping and passive problem coping styles respectively (Table 8).

**Table 8. Means and standard deviations of factors- coping mechanisms**

Variable	Mean	Std. Deviation
Active emotional coping	3.14	1.09
Passive emotional coping	2.86	1.15
Active problem coping	3.51	1.02
Passive problem coping	2.71	1.19

**Table 9. General summary of descriptive statistics for categories of coping mechanisms by Gender**

Variable	Descriptive					
	Sex	N	Mean	st.Deviation		
Active emotional coping mechanism	Male	193	3.4449	.42212		
	Female	96	2.5143	.47741		
Passive emotional coping mechanism	Male	193	2.4896	.31943		
	Female	96	3.5903	.95603		
Active problem coping mechanism	Male	193	3.7945	.49717		
	Female	96	2.9340	.55011		
Passive problem coping mechanism	Male	193	2.3523	.53084		
	Female	96	3.2070	.40100		

**Major categories of coping mechanisms of the stress by genders**

As examined by Independent sample t-test, male freshmen students had on average higher score ( $M = 3.44$ ,  $SD = .42$ ) than female counterparts ( $M = 2.51$ ,  $SD = .48$ ) in utilizing active emotional coping mechanisms. In contrast, female students had higher score ( $M = 3.59$ ,  $SD = .96$ ) in using passive emotional coping mechanisms than male students ( $M = 2.49$ ,  $SD = .32$ ). Furthermore, Male freshmen students had higher score ( $M = 3.79$ ,  $SD = .49$ ) than did female students ( $M = 2.93$ ,  $SD = .55$ ) in using active problem coping mechanisms to stress. Regarding passive problem coping when comparing group responses, female freshmen students ( $M = 3.21$ ,  $SD = .40$ ) also utilized this type of coping mechanisms more than male counterparts ( $M = 2.35$ ,  $SD = .53$ ) (Table 9). When comparing group responses using independent sample t-test, male freshmen students ( $M = 3.44$ ,  $SD = .42$ ) utilized active emotional coping mechanisms significantly more than female counterparts ( $M = 2.51$ ,  $SD = .48$ ),  $t_{(287)} = 16.89$ ,  $p < 0.05$ . On the other hand, it is also showed that female students with score ( $M = 3.59$ ,  $SD = .96$ ) used passive emotional coping mechanisms significantly more than male students ( $M = 2.49$ ,  $SD = .32$ ),  $t_{(287)} = -14.47$ ,  $p < 0.05$ . Besides, Male freshmen students had higher ( $M = 3.79$ ,  $SD = .49$ ) than did female students ( $M = 2.93$ ,  $SD = .55$ ),  $t_{(287)} = 13.37$ ,  $p < 0.05$  in using active problem coping mechanisms to stress. In addition, regarding passive problem coping when comparing group responses, female freshmen students ( $M = 3.21$ ,  $SD = .40$ ) also utilized this type of coping mechanisms significantly more than male counterparts ( $M = 2.35$ ,  $SD = .53$ ),  $t_{(287)} = -13.92$ ,  $p < 0.05$  (Table 10).

**Table 10. General summary of independent sample t-test for categories of coping mechanisms by Gender**

Variable	Descriptive		t-test for Equality of Means				
	Sex	N	Mean	St.Deviation	t	df	P-value
Active emotional coping mechanism	Male	193	3.4449	.42212	16.889	287	.000
	Female	96	2.5143	.47741			
Passive emotional coping mechanism	Male	193	2.4896	.31943	-14.472	287	.000
	Female	96	3.5903	.95603			
Active problem coping mechanism	Male	193	3.7945	.49717	13.370	287	.000
	Female	96	2.9340	.55011			
Passive problem coping mechanism	Male	193	2.3523	.53084	-13.919	287	.000
	Female	96	3.2070	.40100			

**Evidence on different coping mechanisms of stress from the open-ended questions**

Evidence from open ended items shown that most 187(65%) participants' frequently reported major coping mechanisms such as planning for next how to study and prepare for exam, take time and talk to one self, using



drugs as stress relieving mechanisms, regularly attending a place of worship, take time for interests outside university work, physical exercise, healthy sleeping and ask for support from family, friends, professionals, teachers and church or mosque attenders in handling experiences of stress.

#### Correlations between perceived sources of stress and coping mechanisms

Due to complexity and the dynamic nature of the stress system one would expect degrees of interdependency between sources of stress and coping mechanisms. Hence, to examine whether there are significant relationships between dimensions of sources of stress and dimensions of coping mechanisms Pearson correlation was computed. Interpersonal perceived sources of stress has significant moderate positive relationship with passive emotional coping strategies ( $r = .397, p < 0.01$ ) and problem coping strategies ( $r = .387, p < 0.01$ ). On the other hand, it has significant moderate, but negative relationship with active emotional coping ( $r = -.346, p < 0.01$ ) and active problem coping strategies ( $r = -.198, p < 0.01$ ). Similarly, intrapersonal perceived sources of stress has significant moderate positive correlations with passive emotional coping style ( $r = .475, p < 0.01$ ) and passive problem coping style ( $r = .435, p < 0.01$ ) whereas negative correlations with active emotional coping style ( $r = -.508, p < 0.01$ ) and active problem coping style ( $r = -.363, p < 0.01$ ). The academic perceived sources of stress has significant but moderately positive correlations with passive emotional coping style ( $r = .437, p < 0.01$ ) and passive problem coping style ( $r = .519, p < 0.01$ ). Contrariwise, it has significant moderate negative correlations with active emotional coping style ( $r = -.450, p < 0.01$ ) and active problem coping style ( $r = -.435, p < 0.01$ ). Furthermore, the result of correlation also shown that environmental perceived sources of stress has significant moderate positive correlations passive emotional coping style ( $r = .429, p < 0.01$ ) and passive problem coping style ( $r = .432, p < 0.01$ ) but negative moderate significant correlations with active emotional coping style ( $r = -.372, p < 0.01$ ) and active problem coping style ( $r = -.295, p < 0.01$ ).

**Table 11. Correlation Matrix for categories of Perceived sources of Stress and Coping mechanisms**

Variables		Active emotional coping	Passive emotional coping	Active problem coping	Passive problem coping
Interpersonal sources of stress	Corr. Coef	-.346**	.397**	-.198**	.387**
Intrapersonal sources of stress	Corr. Coef	-.508**	.475**	-.363**	.435**
Academic sources of stress	Corr. Coef	-.450**	.437**	-.435**	.519**
Environmental sources of stress	Corr. Coef	-.372**	.429**	-.295**	.432**

\*\* Correlation is significant at the 0.01 level (2-tailed).

#### 4. DISCUSSION

Basically, prior studies used the general idea of stress giving slight emphasis to its different forms, consequences and coping mechanisms. However, in this study, various sources of stress along their consequences and coping mechanisms were assessed among Wolkite University first year students. The find indicated that on average intrapersonal factors had maximum contribution in causing stress followed by academic factors, interpersonal factors and environmental factors has least contribution. These findings are consistent with previous findings of Ross, Niebling&Heckert, 1999; Dinh Do, 2007; Debora, Lana & Kerry, 2003. The rationale for the consistent findings might exist because of the nature of stress to students' especially first year university students following their transitional period from lower level of education to higher level and sophisticated phase of education which contains variety of life aspects. It also might true that first year undergraduate students undergo considerable stress due to the demands associated with change during transition, leaving home, becoming independent decision makers, and competing against new standards, demands and expectations. Not only this, but also the study identified other sources of stress including lack of teaching and learning materials such as laboratory and reference books, lack of diversified/ multiple options of study programs, loss of marks due to unexpected quizzes and exams, imbalance between expectation and academic results, lack of used multiple assessment tools by teachers to assess students' performance and language barriers in effective communication with instructors and students (English). In line with this, a study by Mudhovozi, 2012 also revealed that lack of reference Books, fear of failure, and lack of courage/motivation to ask questions in class, new teaching and assessment methods that were different from those used at high school were the main sources of stress among first year students.

The present findings based on gender and fields of study indicated that there was significant difference between first year students on the stress scale in terms of gender for all assessed categories of sources of stress in which female students experienced stressors than male counterparts. First year female students had higher mean score in experiencing interpersonal sources of stress than did male students. Moreover, the findings indicated

that there was a gender difference among first year students' concerning intrapersonal perceived sources of stress in which female freshmen students had on average higher than did male students. Regarding academic sources there was statistically significant gender differences among first year students' in which female first year students had higher mean score in facing academic perceived sources of stress than did male students.

In addition, the result of analysis of independent sample t-test revealed that there was statistically significant gender differences among freshmen students' in experiencing environmental perceived sources of stress in which female freshmen students on average had higher mean score in facing this type of sources of stress than did male students. Unlike, the present study's result, previous result showed that students between different genders showed significant differences in factor of stress sources and male students feel more stress in family (social) problems than female students (Kai-Wen, 2009). The reason for the inconsistent findings might be attributable to the socio- cultural differences of the study population. However, it is consistent with a study conducted by Jibril, 2012 on adjustment difficulties and showed significant difference in the social adjustment problems than educational and personal-psychological for male and female students, and female students are more prone to all forms of such adjustment difficulties. This consistency might be attributed to comparatively the similarity of higher education environment to new comer students. Regarding perceived sources of stress across participants from various fields of the study (departments), at 0.05 alpha levels, one way ANOVA test revealed that there were no statistically significant mean differences between pairs of means of students from different departments in facing all forms of sources of stress, and these results suggest that different fields of study do not have an effect on facing sources of stress. The implication of the present finding is that the study population shares similar living situation, share common standards of living, resources and environments whether social or physical regardless of difference in individual characteristics. In previous studies much has not been written about these issues. However, great deal of scientific literature has been done on medical school students' stress in which they had experienced than students from other fields (Mahajan, 2010). This might be due to application area of the profession on human beings.

The findings in this study suggest that freshmen students seem to be encountered with different consequences of stress from interpersonal, intrapersonal, academic and environmental perceived sources of stress. As of the finding, four main themes were emerged from data analysis of consequences of stress students experienced due to perceived sources of stresses: these were (1) social consequences of stress, (2) psychological consequences of stress, (3) physical and health related consequences of stress, (4) academic consequences of stress. The findings indicated that psychological consequences were frequently and commonly faced by majority of (85%) participants followed by (76%) of participants who faced physical and health related consequences and by academic consequences (72%) of participants. Social consequences experienced by (62%) of participants. Most of the participants presented with such common experiences and marked common consequences including disturbed social relationship as consequences of stress, disturbed psychological functioning as consequences of stress, disturbed physical and health related consequences of stress and academic consequences of stress which were characterized by different set of impacts on first year students of the University. Given that stress contains serious issues that affect university student's life and its effects could be reflected in students' social, academic, and mental health problems, in line with the current finding, previous study by Linn and Zeppa, 1984; O'Brien et al. 2008; Thawabieh and Qaisy, 2012 support that stress leads to poor relationships with peers, family members and overall dissatisfaction with life and interpersonal relationship.

Regarding psychological consequences, this finding indicated that majority of the participants' (85%) commonly experienced psychological consequences such as sleep disturbances, poor concentration, reduced self-confidence, use of substances such as alcohol, chat and cigarette, feeling of hopelessness, poor attention, suicidal feeling, feeling of inability to cope with problems arise, low self-esteem, apprehension and sense of loss, anxiety, criticizing oneself too much for not to do or fail to do, aggressiveness and lack of stability and control. This finding is consistent with prior study revealed by Bovier et al., 2004, Zhang et al., 2012; Park et al. 2004; Wolf, 1994; Ghias, 2009 that found suicidal ideation and psychiatric illness, change in lifestyle such as a decrease in sleep, leisure and recreational activities, depression, and hopelessness among university students as of perceived sources of stress.

The physical and health related impacts of stress experienced in university students were perceived to be significant in about (76%) of participants who suffered from physical and health problems due to stress which contains severe headache, loss of appetite, emotional arousal, irritability, fatigue and loss of effort, loss of weight, increase in heart beat and hypertension/high blood pressure. Congruently, previous study by (Seyedfatemi, et al, 2007), found that perceived sources of stress affect students' general health as well as cause specific physical or physiological illness like heart disease, blood pressure, weight gain or lose and other physical consequences following the appraisal of stress as threatening.

In academic area this study indicated that participants experienced mostly negative academic impacts from stress. About (72%) of the participants faced academic problems such as: frequent fear of exams, failure of

exams, low marks and grades in courses during under stress, lack of interest and study habits, desire to drop out academic year, too missing classes, poor preparation for exams, poor time management in academic activities, failure to follow direction/instruction during exam, failure to control emotions in the class and lack of motivation in academic activities. In line with this finding, previous study revealed that poor academic performance, negative academic outcomes, high failure and drop-out rates are associated to perceived sources of stress (Sanders & Lushington 2002; Deborae et al., 2003; Pillay, 2010).

The other consequences of stress by majority (71.6%) of participants frequently reported as major consequences of stress were uncomfortable feelings (psychological impacts) with physical environment, inability to stay in library for extended period of time, frequently criticizing about their own chance being in the environment (psychological impacts) and drug use/abuse. Likewise, prior study by Seyedfetami et al, 2007, found that heavy drinking/drug use and psychological consequences following the appraisal of stress as threatening were the negative impacts of stress among university students.

Stress is considered to result from an imbalance between the demands of the environment and an individual's ability to cope with it. So that type of coping mechanisms used to handle stress determines whether it exacerbate or reduce the damaging impacts of stress among first year university students. The present study was conducted to assess major coping mechanisms in addition to major sources of stress and consequences associated among first year students. The study identified major coping mechanisms of stress and it indicated that the type of coping mechanisms first year students' used are vary in mean scores and coping mechanism with large mean (active problem coping) was used by most participants' of this study which was followed by active emotional coping mechanism while passive emotional coping and passive problem coping were used least. Unlike the present findings, Abdullah, Elias, Uli&Mahyuddin (2010) found that the coping strategy most preferred by first year university students was emotion-focused category followed by problem-focused coping strategy (e.g., plan full problem solving) in dealing with adjustment problems in the campus. However, it was consistent with other previous finding of Zawawi and Jye, 2012, which showed that among the four coping strategies studied, it was revealed that active problem coping was the most commonly applied by many first year university students to deal with stress while active emotional coping was the second and passive problem coping and passive emotional coping were the least adopted coping strategy among university first year students. These contradictions between different findings might be attributed to socio-cultural differences.

In addition to this, other coping mechanisms employed by the majority (64.7%) of participants to handle stress they have faced include crying during stress occurred, planning for next how to study and prepare for exam, take time and talk to one self, using drugs as stress relieving mechanisms, regularly attending a place of worship, take time for interests outside university work, physical exercise, healthy sleeping and ask for support from family, friends, professionals, teachers and church or mosque attenders. In line with the present findings, Shah, Trivedi, Diwan, Dixit and Anand (2009), found that a majority of students preferred to cope with stressful conditions by talking to their friends (28.57%), which was followed by another way of coping like going to sleep (25.39%) or playing or watching sports (19.04%), physical exercise or chewing or smoking tobacco (6.34%). Moreover, these current findings of major coping mechanisms are in line with the prior findings of (Lazarus & Folkman, 1984) as cited in Berkel, (2009) that revealed frequently reported coping mechanisms employed by university students involves strategies such as gathering information, resolving conflict, planning and making decisions under active problem coping mechanisms.

Carver et al., 1989, showed that active emotion-focused coping was also demonstrated among university students, and such coping styles that regulate emotion are effective as they prevent students from dwelling on their negative emotions and ensure they take proactive steps to resolve their negative emotions. This is also supported by Mahajan, 2010, which revealed that active emotional type of coping was seen more in the first year of students while in later years the trend is in favor of cognitive, confrontive and plan full problem solving. In addition, previous study also support that students employed passive emotion-focused strategies that focus on negative emotions are maladaptive as they require individuals to focus on their negative emotions rather than remove them (Billings & Moos, 1984) and coping styles such as venting of emotions and rumination are generally shown to be maladaptive as they do not remove the negative emotions, but in fact exacerbate them and prolong existing feelings of distress (Windle&Windle, 1996) as cited in Berkel, (2009). The other important findings of this study were that gender based reported coping mechanisms of stress by freshmen university students. There was significant difference between first year students on coping mechanism scale in terms of gender for all assessed categories of coping styles of stress. In detail, when comparing group responses, it was found that there were statistically significant genders difference in using coping mechanisms in which male students' utilized active problem coping and active emotional coping styles more than female freshmen students' whereas passive emotional and passive problem coping mechanisms were used more by female students' than male counterparts. These current findings are supported by previous some studies in that there were gender differences among freshmen university students in selection of coping strategies to deal with stress. Renk and Creasey (2003) revealed that female students tends to greater use of emotion-focused coping strategies than

male students and males inclined into higher levels of problem-focused coping strategies than females. Similarly, the present study found that male students' used active problem coping than female students. Rath & Nanda (2012) also revealed that male used more active problem-focused while female used more passive emotion-focused coping strategies though Odac & Çıkrık, (2012), revealed that, non-significant differences between students' genders for ways of coping with stress.

Finally, the correlations among sources of stress and coping mechanisms were examined and the findings showed that a significant negative correlations were found between all forms of stress (intrapersonal, academic, interpersonal and environmental) perceived sources of stress and active emotional coping style and active problem coping style while passive emotional coping style and passive problem coping style found to be positively correlated at ( $p < 0.01$ ). Similarly, previous study found that active problem-focused coping was negatively associated with stress while avoidant/passive coping was positively associated with stress and the positive association shown between avoidant/passive problem and emotion coping and stress may occur because avoidant coping fails to remove minor stressors (Holahan, Moos, Brennan, & Schutte, 2005). Some prior researchers also found that problem-focused coping to be the most adaptive coping style employed by college/university students and the associations between problem-focused copings and stress was negative (Crockett, Iturbide, Torres Stone, McGinley, Raffaelli & Carlo, 2007). Additionally, present findings revealed that an active emotion-focused coping strategy showed negative association with stress. Likewise, Windle & Windle, (2007) explored the negative relationship between active emotion-focused coping and psychological stress in university students.

## 5. CONCLUSION

In conclusion, this study indicated that the overall perceived sources of stress among Wolkite University students were high and the most common sources were 'intrapersonal' followed by 'academic and interpersonal sources' among University students. The least reported source of perceived stress was environmental sources. It appears that the comparison between students from various fields of the study in experiencing perceived sources of stress did not confirm that students from one field of study are more stressful than another. However, comparison between genders of students significantly showed that freshmen female university students significantly experienced all forms of sources of stress more than male students. The commonly faced consequences of stress by first year undergraduate university students were psychological, physical & health related, academic and social consequences.

Regarding coping mechanisms employed by freshmen university students to deal with stress, they were employing more frequently active problem focused and active emotional focused coping strategies, While passive problem focused and passive emotional focused coping styles were the least. There was significant difference in utilizing coping strategies in terms of genders of participants in that male students employed active problem and active emotional focused coping mechanisms than female counterpart while passive problem and passive emotional coping mechanisms frequently employed by female students than male students. The findings of this study suggest that the majority of freshmen university students used adaptive coping (active problem focused) strategies in dealing with their sources of stress. Moreover in this study, the scores of all forms of sources of stress correlated to the scores of all forms of coping styles and the results revealed that a significant negative correlations were found between all forms of stress (intrapersonal, academic, interpersonal and environmental) perceived sources of stress and active emotional coping style and active problem coping style while passive emotional coping style and passive problem coping style found to be positively correlated. This implies that as active problem and emotion focused coping style employed the damaging impacts of stress reduced and passive problem and emotion focused coping style employed exacerbate the chance of increasing sources of stress. Generally, the result of this study shows that freshmen, especially female students' of Wolkite university have faced all forms of perceived sources of stress with its damaging effects and used more maladaptive or passive problem and emotional coping mechanisms. Therefore, encouraging students to use adaptive and problem oriented coping mechanisms and providing care, stress focused coping skill training and social supports were suggested by the researcher as solutions to enhance the overall wellbeing of the new comer University students'.

These findings have important implications for the university administrators, counselors, instructors, health professionals and students themselves. It is noticeable from the results of this study that Wolkite university freshmen students' surveyed were exposed to a variety of intrapersonal, academic, interpersonal and environmental stressors. Hence, these findings point toward the need for stress management programs specific to the needs of college and/or university students, especially to the new comers. School counselor should be available in the campus and then he/she should conduct stress survey each year through the use of emotion-related questionnaires in order to identify students' physical, social, academic and mental conditions and provide consulting services, discuss with students, and offer proper coping assistance to reduce the development of damaging stress impacts in students. Sufficient stress-related programs such as the stress management programs

and training on common stressors among university students should be designed by the help of counselors, instructors, especially psychology professionals in the team approach. The most commonly identified sources of stress should be discussed with incoming freshmen (new comer students) each year to enhance their well-being, stress management abilities and to help their understanding of learn how to cope with stress-induced problems. The university administrators should consider help and initiate the developed program to change it into training orientation activities for first year (freshmen) students. Educational administrators, instructors, counselors and college deans should introduce adaptive and effective coping strategies through counseling programs for newcomers and they should support at risk students during their studies/academic activities. For variation between genders in experiencing sources of stress and utilizing coping mechanisms, which showed female students were more prone to all forms of stresses than male students and less employed active problem coping and emotional coping strategies. Therefore, to reduce these problems, gender specific stress management programs, workshops, skill training should be developed and given for female students.

The school counselors, health professionals and instructors in the campus should work in collaborative to provide effective educational, counseling and health services to the students in minimizing the damaging effects of stress. A pleasant teaching-learning environment needs to be created by the university so that students can pursue their studies with less anxiety or fear. Teaching staff and college administrators also have to implement effective student support services, such as academic advising, guidance and team works sprints between students. Freshmen students need to be oriented about learning skills, time management skills and communication skills in order to meet academic requirement, arrange their time effectively for learning and recreation activities, and overcome difficulties in being and working in new social and physical environment. In addition, continuous freshmen students' based language (English) improvement skill workshop/training should be designed and practiced in order to minimize the communication barriers experienced as stressors and maximize their capacities in communication. Instructors should employ multiple academic performance assessment techniques so as to include various methods, understand students' capacity and difficulties and don't limit themselves on some assessment methods. The Instructors should also assist students with poorer academic achievement to minimize their stress related troubles with learning.

The university should solve teaching and learning related materials such as laboratory and reference books to reduce stress induced from these issues. First year students need to be equipped with adaptive behaviors in areas such as time management, effective study skills, the capacity to complete courses and the ability to see transition from school to university as a normative shift and not a crisis for them to realize their academic potentials. University students should pay attention to their physical, social and mental health and learn to understand their emotions, take a positive attitude toward getting along with their friends, learn to express and manage their emotions and effectively manage their emotions so as to develop positive relations and an optimistic view of life in their learning process. They should also consider the occurring situations as challenge not as problem and should try to solve at early stage by communicating with their friends, instructors, families, professional counselors, in general seeking social support. Instructors and students themselves should work together to help students in utilizing adaptive coping mechanisms in reducing maladaptive coping strategies.

### **Future implication of the research**

Since the present research focused on identifying the major perceived sources of stress, consequences along coping mechanisms employed, further research could be carried out the stress levels perceived by freshmen undergraduate students. Further research could also explore individual differences in experiencing stress as the function of personality types. Future study can incorporate other non-students factors such as instructors, university administrator, school counselor and health workers qualitatively in assessing student stress related issues to strength obtained data. Consequently, university officials, student's counselors and policy makers have to organize conducive learning environment in the University that may facilitate better ground in decreasing stress related factors in the students' academic, social, health and psychological wellbeing.

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