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Original Article

The role of self-leadership strategies in coping with stress level of freshmen students entered in 2020 at Hawassa University

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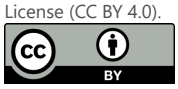
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Coping skills;
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stress

Abstract

This research scrutinizes the role of self-leadership strategies in coping with stress among freshmen students entered in the 2020 entry at Hawassa University. To achieve the objective, convergent parallel design (QUAN+QUAL) and mixed-methods were employed with pragmatism research paradigms perspectives. Consequently, 362 students from the natural and social science streams were selected by simple random sampling techniques, and 8 lecturers, 12 student class representatives, and 4 counseling office members were taken by purposive sampling techniques. The data was collected through questionnaires, semi-structured interviews, and FGD. The analyses of the data were conducted by applying both descriptive statistics and inferential statistics including person correlation and linear regression and qualitative data by using a thematic analysis approach was employed. The results revealed that there was a high level of academic stress, a moderate level of psychological, social, and environmental stress, and a low level of physiological stress among the students. Besides, the students do not effectively practice self-leadership strategies. The relation between self-leadership strategies and stress positively correlated and as a significant predictor of stress is behavior focused strategies were found to have the strongest effect on coping stress followed by other strategies. Thus, if freshmen do not use adequate stress-coping techniques to deal with a negative stressful event, their stress can linger over time, increasing their chance of having serious academic, social, psychological, and environmental difficulties. Thus, structured and integrated self-leadership training is given to students in a continuous and systematic manner, orienting and supporting them through their academic tenure at their institutions and providing freshman-oriented counseling services by counselors through psycho-education approaches to strengthen the habits of self-leadership culture in coping with stress. Moreover, students should construct an effective time management program for studying and pleasure activities during their study years to enhance learning outcomes.

1 Introduction

Self-leadership is a process of behavioral and cognitive self-evaluation and self-influence whereby people achieve the self-direction and self-motivation needed to shape their behaviors in positive ways in order to enhance their overall performance. More precisely, self-leadership involves specific sets of strategies and normative prescriptions designed

to enhance individual performance (Neck and Houghton, 2006; Neck and Manz, 2010). Self-leadership is the process by which a person controls his/her own behaviors, creates influence and leads oneself using specific behavioral and cognitive strategies (Manz, 1986, Manz, 2015; Manz and Neck, 2004; Manz and Sims, 2001). From the above definition, it can be conclude that, self-leadership is an enabling process where by a person learns to know him/herself better and through this better self-understanding is able to steer his/her life better. Thus, self-leadership offers the opportunity for students to take responsibility for themselves and the notion that one can be responsible for leading oneself through life is exciting, especially in University's life.

However, one of the greatest challenges University students face in leading themselves is the effective management of stress. Stress is a situation where environmental demands exceed the capacity for effective response by the individual and can potentially have physical and psychological consequences (Rout and Rout, 1993). College students undergo numerous educational, social, environmental and psychological adjustment difficulties in the new campus atmosphere which may affect their psychosocial well-being and learning outcomes. These happen because the new tertiary educational system has a big difference in its methods of teaching, academic requirements, type of relations between faculties and even relations among students themselves (Thawabieh and Qaisy, 2012).

In short, stress seems to be very common in college students' life because college students need to ensure their academic survival and prepare themselves for the further career. It is not a surprise that much of the academic stress at the college level is associated with what students learn and how they learn it. Therefore, if University students fail to employ effective stress coping mechanisms to handle the negative stressful situation, their feeling of stress can persist over time and, in turn, become at a higher risk of developing severe physical and mental problems (Auerbach and Gramling, 1998). Coping can be described as the ability with which one handles a stressful event (Walton, 2002a and Misra and McKean, 2000). In response, some researchers have suggested that self-leadership has the potential to reduce stress and enhance coping (Kariv and Heiman, 2005).

According to Manz and Neck, self-leadership strategies are grouped into three primary categories (Neck and Manz, 2007). 1) Self-leadership's behavior-focused strategies include self-observation, self-goal setting, self-reward, and self-correcting feedback (Mahoney and Arnkoff, 1978, 1979; Manz and Sims, 1980). 2) Natural reward strategies focus on learning to see the naturally rewarding aspects of work and trying to implement to work aspects that are naturally rewarding (Deci and Ryan, 1985; Neck and Houghton, 2006; Mahoney and Arnkoff, 1978, 1979). 3) Constructive thought pattern strategies include positive self-talk, beliefs and positive mental imagery. The strategies are meant to reframe one's mind and to create more positive and constructive ways of thinking (Neck and Houghton, 2006; Neck and Manz, 1992, 1996). Thus, the purpose of the current study is to examine the role of self-leadership strategies in coping with stress among freshmen in 2012 entry at Hawassa University.

2 Research Problem

While time spent at University is a fond memory and a happy experience for most. University life is not without its rough patches. Every student's situation is unique, but there are a few problems that almost all University students deal with at least once during their time at college. These happen because the new tertiary educational system has a big difference in its methods of teaching, academic requirements, type of relations between faculties and even relations among students themselves (Thawabieh and Qaisy, 2012).

The transition of students from high school to the college environment is very much stressful for students. It could cause psychological, academic and social shock to them. Despite this fact, stress, depression and anxiety are prevailing mental health problems among college students (Kitzrow, 2003 & Sofyan et al., 2018). Colleges and universities across the nation are facing stress with no regard to their age, gender, educational status or socioeconomic status.

Therefore, in this situation, if students fail to cope with such demands, stress may lead to anxiety, drinking problems, depression and a multitude of other mental health problems. Raised stress levels amongst students can go beyond the decline in their academic accomplishments and can affect both the physical and mental health of students. All these causes can be eased with adequate adaptation of self-leadership methods, because it helps to recognize priorities and decreases inefficient time management.

Scott (2009) has also attested that college students are bare to the extensive amount of stress, which necessitates successfully and constantly changing coping strategy. To cope it, practicing self-leadership can have remarkable positive effects and significantly increase their self-efficacy and self-esteem and help maintaining balance in less fortunate times. Therefore, it deserves more attention.

Self-leadership has a primary effect which has a relation to all other areas of life (Myöhänen, 2010) and (Kurikka, 2010). However, students at higher institutions are not even aware of the existence of the actual concept self-leadership. Oneself is the most difficult person to lead and if one cannot lead oneself it is not easy to lead his/her life. Many situations will arise which will cause conflicts if own mind cannot be controlled. Succeeding in self-leadership regulates the balance of own mind and after that it is easy to lead life. Even though a wide range of studies have conducted on stress among students, the findings are self-contradictory and mixed up (Agolla, 2009). Self-leadership is a relatively new approach in leadership. There is no cross-scientific unified theory of self-leadership and also little scientific research has been done on individual change. Despite the lack of scientific background self-leadership is often the starting point of all leadership training nowadays. It will receive more scientific attention in the future (Sydänmaanlakka, 2005). More importantly, there was a significant paucity of empirical studies on the self-leadership practices and stress management in the Ethiopian context in general and Hawassa University in particular.

To address such research gaps, the present study took an initiation to explore the role of self-leadership on reducing students' levels of stress. The study is believed to theoretically contribute to the body of scientific knowledge on contribution of self-leadership on reducing stress and enhancing college student's academic achievement. Practically, the study may guide college communities to take concrete steps towards the improvement of the learning environment and subsequently mitigating the adverse impact of stress on students' wellbeing and learning outcomes. Based on the theoretical and empirical bases reviewed above, researcher advances the following research questions:

1. To what extent do the sources of stress contribute to the level of stress among freshmen?
2. To what extent are self-leadership strategies practiced by freshmen to cope with stress?
3. To what extent do the self-leadership strategies influence on reducing stress levels among freshmen?

2.1 Objectives

The general objective of this study is to examine the role of self-leadership strategies in coping with stress among freshmen students entered in the 2020 entry at Hawassa University. The study helps to:

1. Identify the sources of stress contribute to the level of stress among freshmen?
2. Examine the culture of self-leadership practices among freshmen?
3. Examine the extent of self-leadership strategies influence on coping stress among freshmen?

2.2 Significance

It is thought that the findings of this study have the following significance:

1. Provides an excellent framework for stress reduction that may be emulated across multiple disciplines in higher education resulting in higher levels of student well-being and personal effectiveness.
2. It could play a role in assisting the instructors and the student representatives to provide the necessary support and follow-up for the implementation of guidance and counseling services.
3. The findings of this study may helpful to the educationists, educational planners and policy makers, teachers and students to makes strategy to overcome the problems of students, who are displaying the aggressive behavior.
4. The research findings may encourage and inspire other researchers to conduct associated studies and to explore related concerns to solve interrelated problems.

3 Literature Review

3.1 Concept of self-leadership and stress

Self-leadership is a relatively new approach in leadership. There is no cross-scientific unified theory/definition of self-leadership. Thus, different scholars define self-leadership in different way. Among, Neck and Manz (2007) defined it as the process of influencing oneself more specifically to establish the self-direction and self-motivation needed to perform a task. Furthermore, **freeman2004<empty citation>** defines self-leadership besides having self-discipline as a "set of well-defined strategies for personal improvement". Fundamentally self-leadership has three elements: sufficient self-confidence, good self-knowledge and the ability to reflect (Sydänmaanlakka, 2005). It is a life-long process in which one can learn to lead bigger entities starting from leading himself and proceeding step by step towards bigger teams (Sydänmaanlakka, 2006). From this one can deduce that with self-leadership one learns to know oneself better and is able to control own life better through improved self-understanding. In short, it is a self-executed process.

According to Lazarus and Folkman (1984), stress is defined as an individual's physical and psychological reaction to an event or object or which is appraised as a threat. Similarly, according to **campbell2006<empty citation>** as cited in Bataineh (2013), stress is an adverse reaction that individuals manifest when they encounter excessive pressure or other types of demands placed on them. Stress especially arises when individuals are

under overwhelming situation and believe that they are incompetent to handle. The definitions reflect that stress is psychophysical phenomena which come into existence as a result of a continuous interaction between the individual and the environment.

3.2 Sources of stress

With respect to the levels of stress and stressors, previous literature has invariably documented that college students are exposed to different kinds of stressors and stress level. Abouserie (1994) as cited in Misra and Castillo (2004) reported that students experience academic stress at foreseeable times each semester with the highest causes of academic stress resulting from taking and preparing for exams, grade competition, and a large amount of content to master in a small amount of time. Additionally, in concord to our finding, a Bataineh (2013) reported that college students are more stressed with financial problems, inadequate resources like computers, books, lecturers, and overload hours every semester as academic stressors. Environmental related stressors are also pronounced. For example, in a study conducted in Ghana, environmental factors were found to be the source of high level of stress among students (Azila-Gbettor et al., 2015). It is not a surprise to observe college students in developing countries experiencing a higher level of stress associated with the low-quality learning environment. About the physiological component of stress, previous studies such as Walton (2002b) reported that college students with poor health habits like poor diet, lack of exercise, and inconsistent sleep patterns inflict high-stress levels. Thawabieh and Qaisy (2012) found that university students experienced stress related with the social factor, and this may be because students come from different cities and they have new relations. However, Feng (1992) stated that setting high standard goals, being perfectionist, comparing self with others and self-degradation might be sources of student's psychological stress.

3.3 Self-leadership strategies

An essential self-leadership theorist Charles C. Manz created one commonly recognized theory together with Christopher P. Neck. According to Manz and Neck, self-leadership strategies are grouped into three primary categories: 1) Behavior-focused strategies include self-evaluation, self-discipline and self-rewarding. The strategies are meant to encourage having long-term goals and desirable behaviors that lead to successful results and discourage undesirable behaviors that lead to unsuccessful results. 2) Natural reward strategies focus on learning to see the naturally rewarding aspects of work and trying to implement to work aspects that are naturally rewarding. The idea is to learn to make work feel as naturally rewarding as possible and get energized from the work itself. This leads to productive behavior and good performance. 3) Constructive thought pattern strategies include positive self-talk, beliefs and positive mental imagery. The strategies are meant to reframe one's mind and to create more positive and constructive ways of thinking (Neck and Manz, 2007).

3.4 Relationship between self-Leadership strategies and stress

Individuals can cope with stressful situations and hinder the formation of stressful situations through the effective self-leadership of their behaviors, and thus, they can increase their life satisfaction. It is suggested that behavior focused strategies lead to successful outcomes by encouraging positive, desirable response and by suppressing undesirable behavioral response tendencies (Neck and Houghton, 2006). Achieving desired results may lead to a positive outlook towards oneself, life, future and positive affect. On the

other hand, the idea that constructive thought strategies increase subjective well-being (Houghton and Jinkerson, 2007) was supported in this study. Constructive thought strategies have been said to serve satisfaction by functioning as a source for the development of positive thought (Manz, 1992).

3.5 Conceptual framework

The conceptual framework for this study was a comprehensive self-leadership framework (modified from Neck and Manz, 2007). From the below figure, one can see how everything in self-leadership connects. On the left side are self-leadership categories with their sub categories by **manz2007mastering<empty citation>** besides time management. Using these tools adequately leads to the congruency of body and mind, where physical and mental balances align and create intelligent, motivated, and purposeful thinking and behavior. This empowering congruency is self-lead to three projects of personal development in chosen areas of total wellness by Sydänmaanlakka (2006). The commitment in the projects leads to personal effectiveness and successful performances, which creates positive perceptions of self-efficacy leading to more personal effectiveness, which becomes an upward spiral leading to more successful performances as shown in Fig.1 below:.

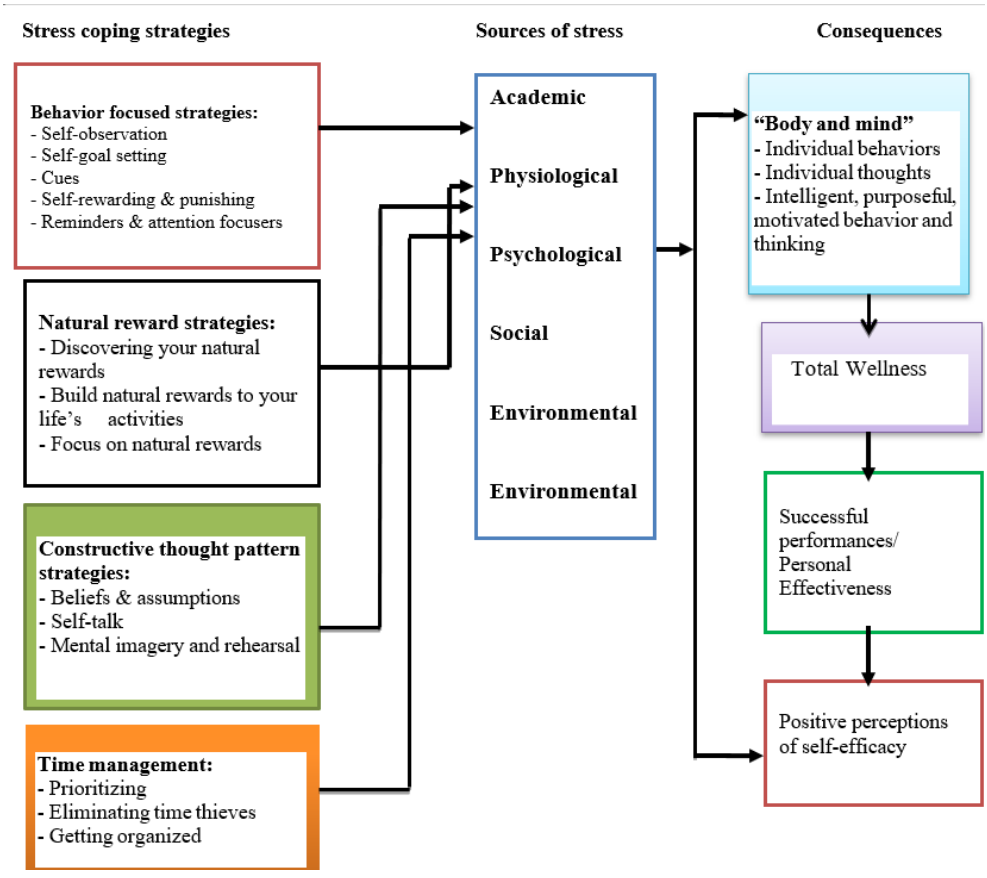


Figure 1: Comprehensive self-leadership framework (modified from Neck&Marz 2007,129,171)

4 Research Design

In order to collect, analysis, interpret and report the data scientifically this study was employed concurrent mixed method research design with equal priority of both quantitative and qualitative method (QUAN+QUAL) with philosophical view of pragmatism. This paradigm did not arise among philosophers who argued that it was not possible to access the 'truth' about the real world solely by virtue of a single scientific method. Supporters of this paradigm looked for approaches to research that could be more practical and pluralistic approaches that could allow a combination of methods that in conjunction could shed light on the actual behavior of participants, the beliefs that stand behind those behaviors and the consequences that are likely to follow from different behaviors. This paradigm was chosen since it advocates a relational epistemology (i.e. relationships in research are best determined by what the researcher deems appropriate to that particular study), a non-singular reality ontology (that there is no single reality and all individuals have their own and unique interpretations of reality), a mixed methods methodology (a combination of quantitative and qualitative research methods), and a value-laden axiology-conducting research that benefits people (Alise and Teddlie, 2010; Biesta, 2010; Tashakkori and Teddlie, 2003, and 2003b; Patton, 1990). Thus, the result was interpreted by giving equal priority for both quantitative and qualitative findings by triangulation.

4.1 Sources of Data

For the purpose of this study both primary and secondary sources of data was used. The primary sources were students, lecturers, guiding and counseling experts and students' representatives of selected faculty from respective departments. The students' semester result was taken as secondary data of sources.

4.2 Sample and Sampling Techniques

The target population of the study was 2012 entry students at Hawassa University. The subject on which these research activities are to be carried out includes students and lecturers. To make the study manageable and due to the homogeneity nature of the participants, from social science faculty 15 groups and 15 groups from natural science faculty were taken by quota sampling, while from each group, 12 students were selected by simple random sampling (lottery method). To obtain the representative sample size of students from selected groups, a simplified formula developed by Krejcie and Morgan (1970) is used as cited in Deribsa (2017). Because, this formula has been practically tested and used by various scholars for past years and it is valid useful up to now in educational research. Then, the representative sample size can be calculated as follows;

Questionnaire, interview and Discussion (FGD) were used to gather relevant data.

Where:

n = sample size of respondents participated in study

Z^2 = Chi-square for the specified confidence level (1.96 at 95% confidence interval), N = population size (5260), P = population proportion (0.5 in this study case), ME = acceptable margin of error 5% (0.05)

$$Thus, n = \frac{Z^2 * N * P(1-P)}{(MEii2 * (N-1)) + (Z^2 * P * (1-P))i}$$

$$n = \frac{1.96^2 * 5260 * 0.5(1-0.5)}{(0.05i2 * (5260-1)) + (1.96^2 * 0.5 * (1-0.5))}$$

$$n = \frac{5,762.4}{14.9975 + 0.9604}$$

$$n = \frac{5,762.4}{15.9579}$$

Hence, the sample size is equal to 362 selected. Moreover, 8 instructors from psychology department, 4 guiding and counseling experts from Hawassa University guiding and counseling offices and 12 student's representatives were taken by purposive sampling techniques.

4.3 Data gathering tools

4.3.1 Questionnaires

A questionnaire with both closed and open-ended items was used to collect quantitative and qualitative data from selected groups of both natural and social science students concurrently. In this case, self-made questionnaire was developed by English language and distributed to students. All investigation questions employed a Likert type scale response. Furthermore, the open-ended questions were included in the questionnaire in order to give an opportunity for respondents to express their view, feelings and perceptions related to self-leadership practices, sources of stress and coping strategies.

4.3.2 Interview

A semi-structure interview item prepared as an instrument of data collection from instructors guidance and counseling experts and conducted in English language with instructors. The purpose of selecting such type interview is because of its flexibility and could be restructured on any defects observed on questions (Abiyi et al., 2009). Because, the researcher believed that they had sufficient understanding about the extent to which students were effective in practicing self-leadership, understanding sources of stress, using coping strategies and solving the challenges they face.

4.3.3 Focus group discussion

with student's representatives of a class to find out what might be a reason for stress and to take the advantage of collecting variety of shared understanding from these interacting students. They were taken because of they have better understanding on

self-leadership, sources of stress and coping strategies. This can helped the researcher to understand the situation from the facial expression of the participants in addition to questionnaire. The researchers grouped the respondents in to 3 to get clear and in depth information and the discussion sessions were conducted in both English and Amharic for 1 hour per group in order to maximize student's participation and subsequently the data was translated in to English language. Then, the FGD result finally narrated based on the following given symbol (Group-1), (Group -2), and (Group-3). Finally, the obtained information from the focused grouped discussion was triangulated with the quantitative data.

4.4 Procedures of data collection

Before, the actual data collection task was took place, the researcher was first prepared questionnaires based on objective and basic research questions of the study. After questionnaires was prepared and submitted to senior department instructors to check the relevance of it. Based on the comments given by those instructors, necessary correction was made and duplication of the questionnaire was done considering the sample sizes of each group of the respondents. The researchers have contacted each department heads and making agreement on the concerned political issues after introducing the objectives and purposes of the study. Then, the final questionnaires were administered to sampled students. The participants were allowed to give their own answers to each item independently. Furthermore, the interview and FGD session was administered. Finally, the data collected was analyzed and interpreted based on basic questions.

4.5 Methods of data analysis

Both quantitative and qualitative data analysis techniques were used, depending on the type of data gathered and the instrument used. In addition to this, the data analyses were made using the Software Package for Social Science /SPSS/ program version-26 for quantitative data. Then percentage, cross tabulation, individual mean scores, average mean score and standard deviation was used to address the basic questions while independent sample t-test was employed to check whether there is a significant difference between students of natural and Social science rating (Cohen et al., 2007; James, 1982; Ravid, 2011). According to Arcağok and Yılmaz (2020), cited in Eshetu (2017), the mean value was interpreted as 5-4.21-mean score "Very High"; 3.41-4.20 "High"; 2.61-3.4 "Moderate"; 1.81-2.60 "low"; and 1.00-1.80 "Very low". Arcağok and Yılmaz (2020). In identifying the level of significance alpha level $p \leq 0.05$ was used (Burke and Larry, 2008; Ravid, 2011; Weirsma and Jurs, 2009). Person correlation coefficient was also used to analyze strengthens and magnitude of the self-leadership practices and stress level. In addition linear regression was used to predict the value of self-leadership strategies on the level of stress among freshmen. Creswell's qualitative narrative writing techniques were used in the analysis of the qualitative data. Finally, quantitative and qualitative data triangulated and results were reported.

5 Results

This part of the research deals with the results and discussion of the data obtained through questionnaire and review of literatures. The survey questionnaire was distributed to total of 362 students and 346 filled and returned mean that 95.6%. The data were analyzed by employing mean, standard deviation, correlation and linear regression.

Table 1: Demographic Characteristics of Respondents (N = 346)

Items	Variables	
Sex	Male	154
	Female	192
Age	19-24	343
	25-30	3
Marital Status	Single	339
	Married	7
Field of the Study	N science	179
	S science	167
Family Information	Both Mother & Father	233
	Single Parent	76
	Divorced family	37
Family economic status	High income	30
	Low income	187
	Moderate income	129

Table 1 shows that to obtain socio-demographic information of the students, questions related to their sex, age, marital status, family information, and family economic status along with field of the study were provided was explained on above table.

5.1 Sources of Stress

The transition of students from high school level to the college level is inherently stressful for students. From this perspective, academic, psychological, physiological, social and environmental related stress presented and analyzed below.

Table 2: Perceptions of respondents on sources of stress

Sources of Stress	Respondents	Mean		Aggregate		
		N	SD	Mean	SD	df
Academic stress	NS	179	3.53	3.48	0.53	344
	SS	167	3.43	0.55		
Physiological stress	NS	179	2.56	2.57	0.55	344
	SS	167	2.58	0.56		
Psychological stress	NS	179	3.24	3.23	0.78	344
	SS	167	3.22	0.79		
Social stress	NS	179	3.20	3.20	0.88	344
	SS	167	3.20	0.92		
Environmental stress	NS	179	3.14	3.18	0.80	344
	SS	167	3.23	0.82		

Note: NS, natural science; SS, social science; df, degree of freedom

Table 2 shows that both groups of respondents rated high academic stress (3.48) and low-level physiological stress (2.57) as high, while psychological (3.23), social (3.20) and environmental (3.18) related stresses were moderate. An independent sample t-test was computed to decide whether the perceptions of the respondents differed between the two groups of respondents. Thus, it is understandable that students face stress levels in each category feel differently.

5.2 Self-leadership's strategies in coping stress

Self-leadership tactics such as behavior-focused strategies, natural reward strategies, constructive thinking pattern strategies, and time management practices of freshmen are described in this section.

Table 3: Respondents' perspectives on the practices of self-leadership strategies

Sources of Stress	Respondents	Aggregate			
		N	Mean	SD	Mean
Self-Leadership's Behavior-Focused Strategies (SLBFS)	NS	179	2.12	0.58	2.20
	SS	167	2.30	0.61	
Natural Reward Strategies (NRS)	NS	179	2.05	0.86	2.03
	SS	167	2.03	0.90	
Constructive Thought Pattern Strategies (CTPS)	NS	179	2.19	0.95	2.10
	SS	167	2.02	0.93	
Time Management (TM)	NS	179	2.20	1.00	2.22
	SS	167	2.25	0.93	

According to Table 3, both groups of respondents rated self-behavior-focused leadership's strategies (2.20), natural reward strategies (2.03), constructive thought pattern strategies (2.10), and time management strategies (2.22). An independent sample t-test was used to determine whether respondents' perceptions differed between the two groups of respondents. As a result, it is understandable that students have a minimal culture of practicing self-leadership strategies in coping strategies.

5.3 Correlations between self-leadership strategies and stress

The correlations between the university freshmen self-leadership strategies (behavior-focused, natural reward, constructive thought, and time management strategies) in coping with stress were discussed in this section using Pearson correlation analysis.

Table 4: Correlations of self-leadership strategies and stress

Correlations						
		SL	SLBFS	NRS	CTPS	TM
SL	Pearson Correlation	1	.846**	.708**	.936**	.808**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	346	346	346	346	346
SLBFS	Pearson Correlation	.841	1	.759**	.727**	.866**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	346	346	346	346	346
NRS	Pearson Correlation	.708**	.769**	1	.895**	.849**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	346	346	346	346	346
CTPS	Pearson Correlation	.936**	.737**	.797**	1	.806**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	346	346	346	346	346
TM	Pearson Correlation	.908**	.856**	.748**	.809**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	346	346	346	346	346

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

Note: SL-Stress Level; SLBFS-Self-Leadership's Behavior-Focused Strategies; NRS-Natural Reward Strategies; CTPS-Constructive Thought Pattern Strategies and TM-Time Management.

As we can observe from correlations table, stress has strong positive relationship with all self-leadership strategies presented. Furthermore, correlations of stress in SLBFS explained by r = 0.846, $r^2 = 0.7157$ or 71.57% with p = 0.000 $<$ 0.01. This shows us the significant positive relationship or association between stress and SLBFS in which the maximization of one can result the increasing on another. Besides stress in NRS presented as r = 0.708, $r^2 = 0.5012$ or 50.12% at p = 0.000 $<$ 0.01 assures us the significant positive association between stress and NRS. The r = .936, $r^2 = 0.8760$ or 87.60% at p = 0.000 $<$ 0.01 showed the significant positive relationship between stress and CTPS. Furthermore, r = 0.908, $r^2 = 0.8244$ or 82.44% at p = 0.000 $<$ 0.01 explains significant positive relationship between stress and TM.

Hence, the relationship between dependent and independent variables (stress & self-leadership) is significant at p = 0.01. And also the independent variables showed the positive relationship between each other and their relationship is significant at p = 0.01. Now we can proceed to developing the regression equation to predict the magnitude of the influence of each variable on the level of stress. Let us see the SPSS outputs and its result analyzed here below.

Table 5: Model summary of self-leadership strategies and stress level

Model Summary					
Model	R	R^2	Adj R^2	Std. Error	Durbin-Watson
1	.858a	.871	.876	.16135	1.321
a. Predictors: (Constant), SL, SLBFS, NRS, CTPS and TM					
b. Dependent Variable: Stress Level					

Table 6: Test of model summary of self-leadership strategies and stress level

ANOVA					
Model	Sum of Squares	df	Mean Square	F-value	Sig.
1 Regression	19.546	3	4.886	270.320	.000b
Residual	.581	342	.023		
Total	20.271	345			
a. Predictors: (Constant), SLBFS, NRS, CTPS and TM					
b. Dependent Variable: Stress Level					

Table 7: Coefficients of self-leadership strategies and stress level

Model	Unstandardized β	Std. Error	Standardized β	t	Sig.	95% CI	
(Constant)	-1.13	.247		-3.61	0.00	-1.67	-0.65
SLBFS	0.49	.063	0.48	6.12	0.00	0.25	0.46
NRS	0.53	.241	0.26	2.37	0.01	0.10	1.12
CTPS	0.44	.086	0.27	3.31	0.001	0.12	0.53
TM	0.04	.106	0.04	0.38	0.69	-0.17	0.25

β, Unstandardized Coefficients β Standardized coefficient; LL, lower limit; UL, upper limit; CI, confidence interval

In table 7 of correlation we obtained the contribution or the relationship of each independent variable with dependent one. Now to develop regression equation and to predict the influences of each variable, we should find out the jointly contribution of the independent variables on the job satisfaction. To this end, R = 0.858, $r^2 = 0.7361$ or 73.61% shows the strong relationship and 73.61% amount of stress is explained by SLBFS, NRS, CTPS and TM collectively. The Durban-Watson = 1.321 found at between 1 and 3 which implies the errors are uncorrelated. Besides, the appropriateness of the regression model, the values F test = 20.271 and p = 0.000 $<$ 0.05 denotes that, the regression model developed to estimate the stress level based on SLBFS, NRS, CTPS and TM is good and strong. And also it can judge the model goodness looking at the values of tolerance and VIF. The VIF values of all independent variables lie between 1 and 10; and Tolerance values also found between 0.1 and 1. Therefore, the estimate of stress level based on SLBFS, NRS, CTPS and TM indicate no serious the level of multicollinearity despite of fact that the independent variable. To conclude, among the self-leadership practices were investigated self-leadership's behavior-focused strategies, natural reward strategies, constructive thought pattern strategies and time management as influential variables on freshmen stress level. Moreover, self-leadership's behavior-focused strategies the most influential strategies to cope stress among freshmen of specific entry of Hawassa University.

5.4 Findings from FGD and interview sessions

Focus group participants were 12 and grouped under three, and each group consisted of four members represented by G1, G2, and G3. Each group discussed the guiding questions for one hour with one student from the group who acted as moderator and discussed major sources of stress, the practices of self-leadership strategies and coping mechanisms in line with the guiding questions. The result found that the possible sources of stress among freshmen were the newness of the environment (the university life) and the worry about how to adapt to a new learning process (independent learning technique) because the teaching-learning process and the way of life in the dormitory and the community they were living in were quite different from what they knew before (G1). In addition, a number of false statements from their alumni and senior students about the hard and unclear assessment and grading system (G2) and the strict law of the university (G3). They also came to a common agreement that the activities, assignments, and final exams came together at the end of the semester, and that made them think over to completion which of those activities they had chosen. It also made them confused about their work.

G3Q2 Monday 4:00; the discussion leading question was forwarded by a moderator and the group started the discussion, among the members said that

"higher elements for my frustration on the university stay were studying for long hours like attending class morning and afternoon, doing individual as well as group assignments every day, and I was also too busy to prepare for the mid and final exam." (G3Q2 Monday 4:00).

G2Q2 Other FDG group members also responded about prevalent stress. Student Y said that "I was confused by the instructors' teaching style because they did not give a note on board what I knew in high school but they described the lesson orally and gave us reading material." In addition to that, participant Z forwarded that "when I think about university stay and study pressure, I did not sleep and became stressed. That made me becomes unstable."

As discussed during the interview session, the new education policy being implemented on their batch causes stress, as does the manner of exam administration and the number

of invigilators and supervisors (12,3,8). In addition, I4,5,7 explained that the political situation of the country and the alarming rate of death in other countries, including Ethiopia due to COVID-19, can be a source of stress.

In addition to this, the interview conducted with instructors from (11:30) expressed the academic stress conditions as follows:

...the students' academic background (lower, medium, and higher achievers), the culture of the new institution, and previous ways of life with their family, and their expectations and experiences of entering university and simply listening to others speaking on the social media, especially on FB, without triangulating it with the situation and their goal are sources of stress.

The guidance and counseling expert of HU discussed that;

...among the sources of stress for undergraduate students' were wasting time on using Face-Book (FB), sexual preference due to freedom from the influence of their family, unwanted pregnancy, low scores in exams, and simply listening to others speaking on the media, especially on FB, without triangulating their goal. He also stated that self-leadership practice is not cultured and even though it is a new concept to freshmen students, their lives depended on their families before they joined university (GCE1 and 2).

6 Discussion

6.1 Sources of stress and its level

The research determined the general level of stress of the students as a result of the five components of stress taken in the present study. The extent of stress level was high in academic, low in physiological and; moderate in psychological, social and environmental stated in table 1. Therefore, academic stress was causing factors and needs effective self-leadership strategies of the students. This finding is similar to Yikealo et al. (2018) academic stressors have been found to contribute to the level of stress of the students. Pressure in daily studying, difficult to deal with academic problems, depression due to low CGPA, difficulty in studying for long hours, dissatisfaction with one's program and boringness in attending classes regularly were reported to be the most academic stress causing factors among freshman students of Hawassa University. Parallel to this finding, Abouserie (1994) as cited in Misra and Castillo (2004) reported that students experience academic stress at foreseeable times each semester with the highest causes of academic stress resulting from taking and preparing for exams, grade competition, and a large amount of content to master in a small amount of time. Apart from this, they do not bother too much about unfair grading system. Generally, academic stress was at high level prevalent among freshman students of Hawassa University of the particular entry year. Therefore, academic stress was causing factors and needs effective self-leadership strategies of the students to cope stress.

But, respect to physiological stress overall mean 2.57 falls at low level which indicates that issues rose under physiological stressor rarely perceived as source of stress. Related study indicated that tiresomeness contributes most to a high level of stress which is high in comparison with a daily headache, breathing problem, increased heartbeat, and poor appetite (Yikealo et al., 2018). And also, about the physiological component of stress, previous studies such as Walton (2002b) reported that college students with poor health habits like poor diet, lack of exercise, and inconsistent sleep patterns inflict high-stress levels. In contrary to these findings, the majority of the participants reported a lower level

of stress as a result of various physiological problems. The low level of physiological stress in sample might be due to the students might not have any physical health problems that can be sources of stress. Therefore, it is concluded that, as a result of physiological stressors, the stress level of freshman of Hawassa University is low in particular entry year.

The calculated mean values (ranging from 3.18 to 3.23) show that rest, psychological, social, and environmental stress all have a moderately negative impact on stress levels. This indicates that these stressors have the power to negatively influence the success of students unless well managed and with ample information. Therefore, it is deduced that the lack of good relationships with others, conflict with others, lack of electricity rarely causes stress on their reading and studying, lack of a well-equipped dormitory, difficulty in computer and internet access, discomfort with the quality of the classroom settings, being unable to enjoy the institution's cafeteria service, water supply problems, quality health service, terrible problems in latrine, shower service, and disappointment due to the inadequate study rooms moderately cause stress on the freshman students of Hawassa University.

From the interview and FGD, the policy being implemented on their batch, the culture of exam examination and scoring low, the political situation of the country and the alarming rate of death in other countries, including Ethiopia due to COVID-19, the students' academic background (lower, medium, and higher achievers), their new environment, and previous ways of life with their family, and their expectations and experiences of entering university and simply listening to others speaking on the social media, especially on FB, without triangulating it with the situation and their goal are sources of stress.

6.2 The practices self-leadership strategies to cope stress

Self-leadership consists of several strategies. These strategies are named behavior-focused strategies, constructive thought strategies and natural reward strategies. Individuals with self-leadership strategies choose the environments and activities in which they can achieve success, fulfill these activities or tasks, feel proud of them-selves (self-esteem) and are satisfied with life. Individuals use a series of cognitive, behavioral and emotional strategies in controlling their own behaviors, affecting themselves and leading themselves (Neck and Houghton, 2006; Unsworth and Mason, 2012). However, based on data obtained from the questionnaire, FGD and interview session, self-leadership's strategies are poorly or unwell implemented by freshmen. This can be deduced from poorly practiced self-leadership's thought pattern strategies, and poor time management culture of freshmen in Hawassa University. Individuals who do not make use of self-leadership strategies can have difficulty in setting goals and coping with stress, engage in unpleasant aspects of a task or activity and concentrate on the negative sides of life (Unsworth and Mason, 2012), and they may not be satisfied with life. In contrary to this, individuals who could act as self-leaders had high proficiency and positive feelings (Stewart et al., 2011); have the ability to use adaptive coping abilities (Wang et al., 2016); and knowledgeable about how to manage themselves and what road maps to follow in differing situations (Carmeli et al., 2006 and Georgianna, 2015). Therefore, self-leadership strategies function as effective mechanisms for freshmen to cope with a stress in a healthy way. In a sense, self-leadership is an individual's use of the effects he has on himself. Individuals with self-leadership strategies choose the environments and activities in which they can achieve success, fulfill these activities or tasks, feel proud of them (self-esteem) and are satisfied with life and can cope stress.

6.3 Correlations of self-leadership strategies and stress

Correlation analysis was applied to demonstrate the correlations between self-leadership strategies practiced with stress. There is a significant positive relationship or association between stress and self-leadership strategies in which the maximization of one can result the increase of another. In this study, liner regression analysis showed that of the self-leadership strategies, behavior-focused strategies significantly contributed to coping stress. This was consistent with the idea that self-leadership applications could have positive effects on self-esteem (Williams, 1997). Constructive thought strategies have been said to serve satisfaction by functioning as a source for the development of positive thought (Manz, 1992). In nutshell, as a significant predictor of stress is behavior focused strategies were found to have the strongest effect on coping stress followed by natural reward, constructive thought pattern and time management strategies.

7 Conclusions

Based on the findings from this study, this research indicates that the high level stress among freshman was academic stress while psychological stress, environmental stress and social stress of the students has leveled as moderate. Explicitly speaking, academic overload, difficulty in dealing with one's academic problems, and poor subject matter and pedagogical competence of instructors were among the academic stressors that inflict high academic stress. In regard to the environmental stressors, lack of electric supply, lack of well-functioning latrines and showers, water supply problem, computer and internet access problem, lack of recreational centers, lack of quality health service, and lack of adequate study rooms were found the most stressful items causing high level of environmental stress among the students. On the other hand, the study revealed that the student's self-leadership strategies are not effectively implemented by freshmen of Hawassa University. The study also revealed that there was a statistically significant relationship between the student's self-leadership strategies and their level of stress. As a result, there was a strong positive relationship between self-leadership strategies and stress. Regression analysis shows that the sub-scales of self-leadership strategies that are behavior-focused strategies, natural reward strategies, constructive thought pattern strategies, and time management have a significant contribution to coping stress. The beta coefficients show that for every one unit increase in the self-leadership strategies, there is a corresponding increase in the ability to cope with stress by .48, .26, .27, and .04 units, respectively, which indicates that behavior-focused strategies are the most influential strategies to cope with stress among freshmen.

8 Recommendations

1. Structured and integrated self-leadership training should be conducted for freshman students in continuous and systematic manner to strengthen the habits of self-leadership. It could have the dual effect of increasing self-leading behaviors, which may affect students future work habitude and also present studying practices improving students' accomplishments and intrinsic motivation.
2. Based on the finding, researchers recommend understanding freshman characteristics and planning freshman-oriented counseling, and assist students in adapting and enriching university students' campus engagement experiences, and promoting the enhancement of students' learning outcomes. Student counseling approaches could include psycho-education about different coping strategies and the relationship between emotional response and coping, as well as emphasize the role of awareness of one's emotions at different stages of dealing with stressors.

3. More importantly, the colleges should strengthen the provision of guidance and counseling services that deal with the mental health problems of their students and subsequently promote their psychological, social and emotional wellbeing.
4. Based on the study results discussed previously, university students must strengthen their club participation, teacher-student interaction, breadth of thinking, and development of multifarious abilities during their campus experience.
5. These findings have implications for universities' approach to orienting and supporting students through their academic tenure at their institutions. For example, student support offices could develop workshops and screening and monitoring programs to help prevent at-risk students from falling through the cracks. In addition, it could be helpful to tailor student programs so that they support students in developing a range of coping options and take into account their unique stressors and specific developmental stages.
6. In line with good communications and discussions (like seminars, meeting) with their students, more attention should be paid to improve the methods of teaching and the quality of study environment within our college campus. Some form of student support should be available in the form of mentoring and guidance to help in coping with stress and to educate the students about unhealthy consequences of stress. Moreover students should construct an effective time management program for studying and pleasure activities during their study years, in addition to adopting a healthy life-style in the context of physical, psychological, and spiritual wellbeing.

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Data Availability

Data can be made available on the behavior of the request

Declaration of interests' statement

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