

The Relationships among Burnout, Engagement, Locus of Control, Coping Strategies and Academic Achievement: The Case of Gondar University Students, Ethiopia

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Abstract The objective of this study was to examine the relationships among burnout, engagement, locus of control, coping strategies, and academic achievement of Gondar university students. The study was carried out using 469 (359 male and 110 female) undergraduate students selected from different faculties of the university using simple and stratified random sampling techniques. The Maslach Burnout Inventory-student survey with reliability of 0.858 for Exhaustion, 0.806 for Cynicism, 0.894 for Reduced Academic Efficacy; Utrecht Work Engagement scale with reliability of 0.739 for Vigor, 0.936 for Dedication, 0.882 for Absorption; the locus of control questionnaire with reliability of 0.869 for Internal Locus of Control, 0.954 for External Locus of Control; and the coping strategy questionnaire with reliability of 0.907 for Active Coping, 0.830 for Reflective Coping, 0.868 for Strategic Planning, 0.901 for Preventive Coping, 0.895 for Instrumental Support Seeking, 0.877 for Seeking Emotional Support, and 0.714 for Avoidance Coping were administered. Pearson product moment correlation coefficient and multiple regression analyses were used to analyze the data. The results indicated that burnout and external locus of control were negatively and significantly related to academic achievement whereas engagement, internal locus of control and coping strategies were positively and significantly related with academic achievement. The results also showed that burnout and external locus control were “best” predictors of academic achievement than engagement, internal locus of control and coping strategies. Design programs for students to develop skills that reduce burnout and enhance engagement by evaluating their locus of control and coping strategies so as to increase students’ performance were recommended from the findings.

Keywords Burnout, Engagement, Locus of Control, Coping Strategies and Academic Achievement

1. Introduction

University level academic work can be very demanding and requires more reading and written works. Each class might require that students to read hundreds of pages of a text within a week, write at least one major term paper, take at least two examinations in a semester, and always be prepared to discuss the current topic in class. They are engaged in structured, obligatory activities, (e.g. attending classes and completing assignments) which are directed toward a specific goal (e.g. passing examinations) (Schaufeli, Martinez, Pinto, Salanova, and Bakker, 2002).

In addition, university classes emphasize communication skills and require students to present their work to their classmates and participate in classroom discussions. Debates, group discussions, and role playing are common parts of

most classes. University students are more independent and must be focused, self-motivated, and able to work autonomously to survive in the university. They are expected to get the minimum requirement grade point average to survive in universities (Arnold, Silvester, Patterson, Robertson, Cooper, and Burnes, 2005; Blonna, 2005).

Some students may perceive these and other academic demands as a challenge and they may exert too much energy to do well. They may perceive course work as a true test of their abilities and respond to its demands. They may also relish or test the freedom and view their autonomy positively. For some others, course work or academic demands might be extremely stressful. Rather than perceiving those academic demands as a challenge, they might perceive it as a stressor. Some may feel overwhelmed with the sheer volume of work. Others feel inadequate and unable to cope with the intellectual demands of university. They may lack the study skills required to cover huge number of pages of texts and compose research papers (Duran, Extremera, Rey, Berrocal, and Montalban, 2006; Blonna, 2005).

All these indicate that university students face many

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challenges in relation to their educational goals. If they perceive these challenges as negative, they can have adverse effect on their motivation and performance (Yang, 2004). Researchers argued that individuals' quality of life depend upon their ability to adjust to and cope with a wide range of demands (Baltus, 1997). Failure to do so may result in the impairment of behavior and health, and affect productivity and performance (Arnold *et al.*, 2005). If individuals are unable to adjust to and cope with those demands, it may result in behavioral problems including lack of interest in life, feeling of being a failure, difficulty in making decisions, loss of interest in other people, anger, inability to show true feelings, feelings of neglect, dread of the future, difficulty in concentrating, inability to finish ones task before rushing on to the next, withdrawal, depression, and so on (Blonna, 2005; Arnold *et al.*, 2005; Feldman, 1999).

Cooper and Quick (1999), cited in Arnold and others (2005), indicated that if the stressors are not dealt with and are prolonged, the individual will develop serious health problems including headaches, depression, heart disease, strokes, suicide and other health problems. Individuals under stress may also tend to drink more alcohol, smoke more, sleep less or too much, and exercise less than their peers (Lahey, 1998).

This implies that a number of variables have effects on students' academic achievement. Among these variables are burnout, engagement, locus of control, and coping strategies, which have all been linked to various positive and negative outcomes on students' academic achievement (Sweeney, 2007; Nystrand and Gamoran, 1991; Duran *et al.*, 2006). Furthermore, the relationships of those variables with academic achievement, and the relationships among themselves are important in ascertaining how the students experience with these variables and to what extent do these variables affect their academic achievement.

According to Maslach and others(2001) burnout is a psychological syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who work with other people in some capacity (Cohen and Sverdlik, 1999). Emotional exhaustion refers to feelings of being depleted of one's emotional resources, representing the basic individual stress component of the syndrome. Depersonalization refers to negative, cynical, or excessively detached responses to other people at work, representing the interpersonal component of burnout. Finally, reduced personal accomplishment refers to feelings of decline in one's competence and productivity and to a lower sense of efficacy representing the self-evaluation component of burnout (Caron, Corcora, & Simcoe, 1983; Cohen and Sverdlik, 1999; Esteve, 2008; Blonna, 2005).

Burnout among students refers to feeling exhausted because of study demands, having a cynical and detached attitude toward one's study, and feeling incompetent as a student. There are three major factor-structures or dimensions in this definition that characterize burnout; exhaustion, cynicism, and feeling of incompetence or lack of

professional efficacy (Schaufeli *et al.*, 2002).

Another factor that affects students' academic achievement is engagement. Engagement is a positive, fulfilling, and work-related state of mind that is characterized by vigor, dedication, and absorption (Schaufeli *et al.*, 2002; Esteve, 2008). Vigor is characterized by high levels of energy and mental resilience while working and doing by the willingness and ability to invest effort in one's work. Dedication refers to a sense of significance, enthusiasm, inspiration, pride, and challenge. Absorption refers to being fully concentrated and happily engaged in one's work, whereby time passes quickly and one feels carried away by one's job. Being fully absorbed in one's work goes beyond merely feeling efficacious and comes close to a state of optimal experience that is characterized by focused attention, a clear mind, mind and body unison, effortless concentration, complete control, and intrinsic enjoyment (Schaufeli *et al.*, 2002; Esteve, 2008).

Moreover, students' locus of control, which refers to the individual tendency to appraise what factors are responsible for one's successful as well as problematic outcomes (Stratton and Hayes, 1988; Harr, 1995; Spencer and Myers, 2001), is a variable that could affect academic performance. Locus of control is described as a tendency toward a more external or internal orientation. Individuals possessing an internal locus of control believe that they are able to exercise effort and intervene before a situation in their lives yields a specific outcome. In contrast, an external locus of control refers to the tendency to attribute her or his outcomes circumstances outside the realm of personal responsibility, such as luck, fate or the presence of another person exercising her or his own concerns (Harr, 1995; Spencer and Myers, 2001).

Students may employ certain coping mechanisms to deal with their academic tasks. Coping strategies are important variables that affect an individual's ability to successfully navigate his/her environment or demands. Coping represents either an adjustment to a situation or an adjustment of a situation. It is the efforts to control, reduce, or learn to tolerate the threats that lead to stress (Feldman, 1999; Lahey, 1998; Arnold *et al.*, 2005). Coping is, therefore, seen as a stabilizing factor, which helps the individual to stay adaptive in stressful events. Coping strategies refers to the set of behaviors that an individual employs to successfully handle stressful experiences and regulate the negative emotions that accompany such experiences (Arnold *et al.*, 2005; Blonna, 2005; Lahey, 1998). Inappropriate and unproductive coping strategies have been linked with a variety of deleterious outcomes such as adjustment difficulties, health problems, and poor performance (Baltus, 1997; Feldman, 1999; Blonna, 2005).

This study delineates how burnout, engagement, locus of control, and coping strategies relate to academic achievement of Gondar University undergraduate students. An understanding of these variables could lead to the formulation and implementation of programs and effective management of educational demands which, in turn, will

result in improved psychological and physical health, and hence improved performance of the students.

The motives that initiated this researcher to conduct this study in the University of Gondar were informal discussions he has made with teachers and students of the University. Teachers complained that students' performance is poor and not as they expected it to be. Students, on the other hand, complained that grades are determined by the will of instructors and not by their efforts. Some others said that the learning environment is boring as well as the academic demands in University are so challenging and difficult.

The researcher of this study also observed on the walls of classrooms, tables of libraries, students' dormitories and walls and doors of toilets different graffiti written in Amharic and English which expressed their feelings, attitudes, and beliefs about various issues. Some of the writings deal with political, sexual, and religious issues. But most of them are related to the demands of academic tasks.

These writings imply a number of psychosocial and educational problems students have. Thus the researcher of this study wanted to examine the relationships among burnout, engagement, locus of control, coping strategies, and academic achievement in University of Gondar.

2. Statement of the Problem

Students' academic performance in a university determines not only their existence to continue in the university but also their future job opportunity in the real world of work (Blonna, 2005). Governmental and private organizations use cumulative grade point average (CGPA) as one of the basic criteria for the purpose of employment and promotion. For instance, Ethiopian Revenue and Customs Authority (2009) and Ministry of Education of Ethiopia (2009) selected their employees based on the CGPA of the applicants. That is why researchers are attracted to study variables that relate to the academic performance of students at different levels of education. As researchers indicated, students' academic performance could be related to their achievement motivation (Ayalew and Zeleke, 1993), measurement and evaluation systems (Chanyalew, 2003), attitude and self-efficacy (Endawoke, 2005a), parenting style and adjustment problems (Tadesse, 2006), and class accommodation (Gebremeskel, 2001).

Studies conducted mostly in the West reported that psychological constructs – burnout, engagement, coping strategies, and locus of control related to academic achievement of students (Nystrand and Gamoran, 1991; Yang, 2004; Turiman, 2007; Esteve, 2008; Schaufeli et al., 2002; Duran et al., 2006; Caron et al., 1983; Deniz, Tras, and Aydogan, 2009).

However, in the Ethiopian context, there are scanty information on the effects of those variables on the academic performance and learning progress of students. The writer of this paper did not find any research done on the effects of burnout, engagement, locus of control, and coping strategies

on academic performance of university students. Thus, it looks significant to carry out research on these psychological variables that either facilitate or hinder the learning process of students so as help them become successful in their academic career. Repeated cries among the academic community in higher learning institutions in Ethiopia that students' academic performance are declining year after year and this might be accounted for by a number of conditions which may include lack of engagement, high burnout, poor coping strategies, etc. This point is one of the most significant reasons and justifications for conducting the study.

The other motivation is that studies done on burnout, engagement, coping strategies, and locus of control failed to consistently single out the variable(s) that best predict(s) the academic achievements of students. Though researchers try to show the relationships these variables have with academic achievement, the results did not indicate clearly the strength of the relationships (Caron et al., 1983; Nystrand and Gamoran, 1991; Yang, 2004; Schaufeli et al., 2002; Duran et al., 2006; Turiman, 2007; Esteve, 2008; Deniz, Tras, and Aydogan, 2009).

In this study an effort was made to assess the extent to which burnout and engagement among undergraduate students in University of Gondar, coping strategies they employ to minimize the stress they experience, and their locus of control influenced their academic performance. The research also investigated whether locus of control and coping strategies make it possible for students to experience less burnout and more engagement. Generally, this research addressed the following research questions.

1. Are there significant relationships among burnout, engagement, and locus of control, coping strategies, and students' academic achievement?
2. Which of these variables are the best predictors of academic achievement?
3. Do locus of control and coping strategies predict student burnout and engagement?
4. Is there any significant difference between male and female students in their burnout, engagement, locus of control and coping strategies?

3. Methods

The researcher selected sample of subjects and assessed the relationships among those identified variables by administering questionnaire to collect the data. The information obtained from the sample is inferred for the population. Therefore, the design of this study is correlation survey research (Endawoke, 2006).

This study is conducted in University of Gondar. The University is located in North Gondar Zone of Amhara Region, 180km and 748km from Bahir Dar and from Addis Ababa, respectively, in Gondar Town. The University has one college, four faculties, and one school all offering regular programs. The study focused on undergraduate

regular students attending their education in the University in 2009/2010 academic year.

The participants of this study were undergraduate regular students who were attending their education in the University in 2009/2010 academic year. University of Gondar has 10,176 undergraduate regular students enrolled in different levels or batches in the stated academic year. Since first year students had not yet completed their first semester studies they were excluded from the study. The total number of first year students enrolled in the University was 4271 so that the number of students considered in this study was reduced to 5905.

The population consists of subgroups that have different characteristics so that the researcher used stratified random sampling technique which is one of the complex random sampling procedures (Endawoke, 2006). The strata were formed on the basis of Faculties, departments, year and sex. Different writers stated that the sample size of a research could be determined by the researcher based on the nature of the study (Endawoke, 2006; Fraenkel and Wallen, 2000). The sample size was determined by the researcher. All faculties and second year and above students were considered in the sampling process for the selection of the study subjects.

First, 5905 Gondar University students were stratified initially into six groups based on their faculties and sex. Accordingly, the total sample size of the study was distributed to each faculty proportional to its size. Secondly, since College of Medicine and Health Science, Faculty of Natural and Computational Science, Faculty of Social Science, and Faculty of Business and Economics had different number of departments, the researcher selected departments from each faculty using simple random sampling. Departments such as Laboratory, Optometry, Clinical Nursing, and Health Science from College of Medicine; Biology, Chemistry and Mathematics from Faculty of Natural and Computational Science; Accounting and Economics from Faculty of Business and Economics; Psychology, Geography and English from Faculty of Social Science were selected randomly. Veterinary Medicine and Law were also included in the study. Once the required number of sample sizes were determined from each department and year of study using proportionate stratified random sampling method, simple random sampling technique was employed to choose each student from the selected departments, sex and year by applying random number table.

A total number of 500 undergraduate students were selected from the College of Medicine (170), Natural and Computational Science (108), Social Science and Humanities (120), School of Law (34), Veterinary Medicine (24), and Business and Economics (44). Of this total sample 123(24.6%) were females and 377(75.4%) were males.

The research approach followed was quantitative which investigated the relationships among burnout, engagement, locus of control, coping strategies and academic achievement. The researcher was also interested in

investigating the variable(s) that significantly predict(s) students' performance, and the strength and direction of the relationships among the underlined variables.

Two major sources of data were used for this study: one group of data were obtained using questionnaire and the other sources of data were documents from the University's Registrar Office. Four questionnaires were used in this study; namely, the Maslach Burnout Inventory-Student Survey (Schaufeli et al., 2002), the Utrecht Work Engagement Scale for Students (Schaufeli et al., 2002), the Greenglass's (2006) Coping Inventory, and Rotter's Locus of Control Inventory (Turiman, 2007). Burnout is defined by scores on three dimensions of the Maslach Burnout Inventory-Student Survey (MBI-SS), namely; emotional exhaustion (measure using 5 items), cynicism (measured using 6 items), and Reduced Academic Efficacy (7 items). Each item was measured on a 4-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree).

Engagement was measured by a 17-items questionnaire in three subscales: vigor (5-items), dedication (6-items), and absorption (6-items). The items were scored on a 4-point Likert scale from 1 (strongly disagree) to 4 (strongly agree). High scores on the three dimensions reflect strong level of engagement.

The locus of control inventory was adapted from Turiman (2007) and has two dimensions, namely; internal locus of control and external locus of control. The locus of control inventory consisted of 45 items (23-items for external locus of control and 22-items for internal locus of control) each scored on a 4-point Likert scale from 1 (strongly disagree) to 4 (strongly agree).

The coping strategy questionnaire developed by Greenglass (2006) was used to measure participants' coping strategies. The questionnaire was a multidimensional 54 items that indicated different ways in which people cope with stress in different circumstances. It measures seven different coping strategies: Active Coping Scale (14-items), Reflective Coping Scale (10-items), Strategic Planning Scale (4-items), Preventive Coping (9-items), Instrumental Support Seeking (8-items), Seeking Emotional Support (5-items), and Avoidance Coping Strategy (3-items). Items like "Rather than spending every cent I make, I like to save for a rainy day", "I make sure my family is well taken care of to protect them from adversity in the future", and "When I apply for a position, I imagine myself filling it" are adapted to academic context because they do not concern the participants (students) directly. Teachers, class-mates, dormitories, studying, poor performance, time for academic work, and course load replaced words or phrases that refer to co-workers, family members, job, unemployment, money, being destitute in old age, respectively.

Item 34 from Engagement, items 2, 9, 14 and 46 from coping strategy were negatively stated by the researcher to control response styles of the students. Item 46 was added by the researcher. These items were scored in reverse direction during coding. Items of Reduced Academic Efficacy (23, 25, 27, 29, 31, and 33) were positively stated and reverse scoring

was employed. Items of Burnout and Engagement were mixed randomly and presented in one part. Same was true for Internal Locus of control and External Locus of control. Items of Internal Locus of Control were written in bold to identify easily during coding.

In order to avoid language difficulties, all the inventories were translated from English to Amharic by three independent instructors in Psychology working in the University of Gondar. Following that semantic differences in translation were discussed and a final common translation was agreed up on. Finally, the questionnaire was checked by an English instructor who was fluent in Amharic as well. The form of questionnaire was a closed-ended rating scale type which helps to know the level of believes and feelings of respondents (Endawoke, 2006).

The researcher administered the questionnaire to 55 students of University of Gondar selected randomly to carry out pilot test. Of the 55 students who participated in the pilot test, 21 were females and 34 were males. These students were excluded from the final study. Having collected the questionnaire, Cronbach coefficient alpha was used to test the reliability of the instrument.

Accordingly, the reliability coefficients for each subscale were as follows: 0.763 for Exhaustion, 0.788 for Cynicism, 0.792 for Reduced Academic Efficacy, 0.702 for Vigor, 0.828 for Dedication, 0.775 for Absorption, 0.824 for Internal Locus of Control, 0.870 for External Locus of Control, 0.857 for Active Coping, 0.812 for Reflective Coping, 0.778 for Strategic Planning, 0.839 for Preventive Coping, 0.864 for Instrumental Support Seeking, 0.687 for Seeking Emotional Support, and 0.671 for Avoidance Coping were obtained.

Endawoke (2006) suggested that the instrument could be used to collect data if its reliability is 0.65 and above for behavioral sciences. Therefore, the instruments are said to be reliable enough to be used for a research purpose like this study.

In the final study the reliability coefficients for each subscale are as follows: Exhaustion(0.858), Cynicism(0.806), Reduced Academic Efficacy(0.894), Vigor(0.739), Dedication(0.936), Absorption(0.882), Internal Locus of Control(0.869), External Locus of Control(0.954), Active Coping(0.907), Reflective Coping(0.830), Strategic Planning(0.868), Preventive Coping(0.901), Instrumental Support Seeking (0.895), Seeking Emotional Support(0.877), and Avoidance Coping (0.714) were obtained.

Students' academic performances were obtained from Registrar Office of Natural and Computational Science, Social Science and Humanities, Business and Economics, College of Medicine and Health Science, Veterinary Medicine, and School of Law. Academic achievement in this study refers to the cumulative grade point average (CGPA) students obtained in the first semester of the year 2009/2010.

The questionnaires were collected after they have been completed by the respondents. Except 7 students (two females and five males), all questionnaires were collected. That is, 493 students gave back the questionnaires. From this,

24 students (11 females and 13 males) were excluded for the reason that they did not complete the questionnaire properly. Therefore, the study done based on a total number of 469 participants. From this, 110 (23.5%) were females and 359 (76.5%) were males. After the questionnaires were collected, the data were screened for errors and organized for statistical analysis.

The data obtained from students and the Registrar Offices were analyzed using quantitative method to answer the research questions and achieve the purpose of the study. The data were screened, coded, entered into computer, and re-screened to ascertain the accuracy of the data.

To analyze the collected data, different statistical techniques were used. Among these, mean, standard deviation, Pearson product moment correlation coefficient, linear regression, t-test and F-test were used. To determine the relationships among the variables, Pearson product moment correlation coefficient was used. Multiple regression analysis was used to see the effects or contributions of burnout, engagement, locus of control, and coping strategies on academic achievement (Endawoke, 2005b and 2006). F-test was used to test the significance of the prediction and t-test was also employed to investigate sex differences that may exist between female and male students in their burnout, engagement, locus of control, and coping strategy, and to test the significance of the relative effect of the independent variables on the dependent variable (academic achievement). Statistical Package for Social Science (SPSS version 17.0) software was used to carry out the analysis.

4. Results

The main purposes of this study were to examine the relationships among those psycho-educational variables and academic performance of university students. To achieve these purposes, data were collected from 469 male and female students taken from various departments and year levels. In this part of the paper, the results of the analysis are presented.

Inter-correlation Matrix for the Dimensions of the Independent Variables and Academic Achievement

The independent variables treated in this study have components or dimensions and analysis was made to examine which component(s) correlated significantly with students' academic achievements.

The correlations among burnout components; exhaustion, cynicism, reduced academic efficacy, and academic achievement were negative and highly significant ($r = -0.629$, $r = -0.485$ and $r = -0.520$, $P < 0.05$, respectively). The correlations among the components of engagement, namely; vigor, dedication, absorption, and academic achievement were positive and significant ($r = 0.370$, $r = 0.398$ and $r = 0.418$, $P < 0.05$, respectively).

The result also showed that the relationships among dimensions of locus of control – internal locus of control and

external locus of control – and academic achievement were significant. Internal locus of control correlated positively and significantly high with academic achievement but external locus of control negatively related with academic achievement ($r = 0.459$ and $r = -0.493$, $P < 0.05$, respectively).

Except avoidance coping, all dimensions of coping strategies were positively and significantly related to academic achievement. Active coping ($r = 0.341$), reflective coping ($r = 0.143$), strategic planning ($r = 0.263$) instrumental support ($r = 0.193$) and emotional support ($r = 0.250$) correlated positively and significantly with academic achievement. But avoidance coping is negatively and significantly related to academic achievement ($r = -0.247$). Preventive coping, though its correlation with academic achievement was positive it was not significant ($r = 0.019$).

Interrelationships among the Variables

The means, standard deviations, and Pearson correlation coefficients of Burnout, Engagement, Internal Locus of Control, External Locus of Control, and academic achievements of students are presented. The results showed that burnout has negative and significantly high relation with academic achievement ($r = -0.617$, $p < 0.05$), engagement has also a moderate positive and significant relation with academic achievement ($r = 0.447$, $p < 0.05$). Similarly coping strategy has positive and significant relation with academic achievement but it was weak ($r = 0.290$, $p < 0.05$).

Moreover, burnout is negatively and significantly related with engagement, internal locus of control and coping strategy ($r = -0.760$, $r = -0.628$, and $r = -0.409$, $p < 0.05$, respectively), but it related positively and significantly with external locus of control ($r = 0.598$, $p < 0.05$). Engagement was positively and significantly related with internal locus of control and coping strategy ($r = 0.593$ and $r = 0.573$, $p < 0.05$, respectively), but negatively and significantly with external locus of control ($r = -0.430$, $P < 0.05$). The correlation between the two dimensions of locus of control, i.e., internal locus of control and external locus of control was negative and significant ($r = -0.648$, $P < 0.05$), but the internal locus of control related positively and significantly with coping strategy ($r = 0.416$, $P < 0.05$) but external locus of control was negatively related with coping strategy but weak ($r = -0.111$, $P > 0.05$).

Contributions of Burnout, Engagement, Locus of Control and Coping Strategies to academic achievement

In order to investigate the independent and combined contributions of burnout, engagement, locus of control and coping strategies to the variance in academic achievement multiple regression analysis was employed.

Multiple regression analysis indicated independent variables burnout, engagement, locus of control and coping strategies jointly predicted 40.8% of the variance in students' academic achievement ($F = 63.796$, $df = 5, 464$, $P < 0.01$). As the result indicated burnout, engagement, locus of control and coping strategies together were found to be a significant predictors of academic performance of students.

Using stepwise regression analysis, the study examined

which predictor variable(s) had a significant predictive power to students' academic achievement. Results revealed that burnout ($\beta = -0.525$, $t = -8.398$, $p < 0.05$) and External Locus of Control ($\beta = -0.152$, $t = -2.898$, $p < 0.05$) had significant negative effects on the academic achievement of students. But Engagement ($\beta = -0.027$, $t = -0.435$, $p > 0.05$), Internal Locus of Control ($\beta = 0.069$, $t = 1.257$, $p > 0.05$), and coping strategy ($\beta = -0.055$, $t = -1.186$, $P > 0.05$) failed to significantly predict the academic achievement of students.

To determine the effect of Locus of Control and Coping Strategy on student Burnout and engagement, further analysis was carried out. Multiple regression analysis showed that internal locus of control, external locus of control and coping strategies jointly predicted 50.8% of the variance in students' burnout ($F = 160.262$, $df = 3, 466$, $P < 0.05$). Moreover, internal locus of control, external locus of control and coping strategies predicted 50.2% of the variance in Engagement ($F = 156.139$, $df = 3, 466$, $P < 0.05$).

Further analysis was conducted by taking sex of students as an independent variable. The purpose was to see whether there exist differences in the level of students' burnout, engagement, coping strategies, and locus of control as a result of their sexes. The results showed that there were no significant differences between male and female students on their level of burnout, engagement, internal locus of control, external locus of control, and coping strategies.

5. Conclusions

The findings of this research were summarized according to the objectives set for the research. The main objectives of this study were investigating the relationships among burnout, engagement, locus of control, coping strategies and academic achievement. The research also examined the extent to which burnout, engagement, locus of control and coping strategies predict academic achievement of university students.

The study revealed that the relationships of the independent variables burnout, engagement, locus of control, coping strategies and the dependent variable, i.e., academic achievement, were statistically significant. The study also confirmed that the combined prediction of burnout, engagement, locus of control, coping strategies to academic achievement was statistically significant.

The independent contribution of engagement, internal locus of control and coping strategies was not statistically significant while the independent effect of burnout and external locus of control was statistically significant to academic achievement. Therefore, it could be concluded that burnout and external locus of control were the "best" predictors of academic achievement of students than engagement, internal locus of control and coping strategies. In other words, the predictive power of burnout and external locus of control to academic achievement was higher than engagement, internal locus of control and coping strategies. This implies that more attention should be given to these variables to enhance students' performance. The level of

students' burnout should be reduced in order to increase their academic performance. In addition, an effort should be done on students' locus of control to believe that the results (good or bad) they perform are highly related to their efforts than external factors.

Generally, it is advisable to focus not only on cognitive aspects but also on non-cognitive aspects like these variables that may have great effect on academic performance of students. As it is discussed on the introduction part, education at university level needs high academic works than the previous levels of education. Students at this level may face different psychosocial problems in relation to their academic demands. Being other things equal, students' academic achievement could be affected not only by their level of burnout and engagement but their locus of control and coping strategies they employ as this and other studies indicated. Therefore, the concerned bodies via counselors and instructors should deal with these variables as part of the teaching learning process.

This study has some limitations that should be considered and it is important to acknowledge these limitations. First year students were excluded from the study. The results might be changed if those students were considered in the study. Therefore, a note of caution should be taken when generalizing the finding and the results to other populations. In addition, the data were collected using self-report methods which may be influenced by perceptions rather than actual experiences, which could affect the results of the study. Hence future researchers should use other measuring instruments like interviews and focus group discussions.

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