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Research Article

Academic Burnout and Academic Achievement among Secondary School Students in Kenya

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The study examined the relationship between academic burnout and academic achievement among secondary school students in the Kenyan context. Data were collected from 714 form 4 students (equivalent to 12th graders) drawn from 31 public secondary schools. The Maslach Burnout Inventory Student Survey was used. Academic achievement was measured using students' grades in end of term examinations. The results of the Pearson product moment correlation of coefficient revealed a significant inverse relationship between academic burnout and academic achievement ($r\,(712) = -0.24$, $p < 0.01$). Furthermore, regression analysis revealed that academic efficacy significantly predicted academic achievement ($\beta = 0.18$, $p < 0.01$). A key implication of the findings is that examination-oriented approach to learning be reduced to ease the pressure exerted on learners for good academic grades.

1. Introduction

Around the world, education is an essential stepping stone towards any societal development. Academic achievement, which comes as a result of formal education offered in any society, is of utmost importance for the wealth of a nation and its prosperity. This is because academic achievement is used as a pointer to one's ability, a prerequisite to college entrants, and a determinant of one's career and job placements in society. For this reason, therefore, learners are under constant pressure for good academic grades.

Research has shown that when a lot of pressure is exerted on learners without adequate supportive mechanisms, they become susceptible to academic burnout [1, 2]. Academic burnout is defined by Schaufeli et al. [1] as a feeling of exhaustion due to high academic requirements and demands, which makes learners develop negative attitudes and pessimistic feelings about assignments. In addition, Schaufeli et al. maintained that academic burnout comprises of three main sub-categories: emotional exhaustion, cynicism, and academic inefficacy. Emotional exhaustion is a condition that arises from the academic pressure exerted upon the students for academic excellence. Cynicism emerges when learners are not able to excel as expected, and as such, they tend to become indifferent and develop a negative attitude towards academic work. Academic inefficacy which comes as the last phase of academic burnout refers to a feeling of inadequacy and a diminished feeling of competence leading to low academic achievement.

Empirical studies have revealed that students who experience academic burnout exhibit characteristics such as negative perceptions of the learning environment, high levels of perceived workload, lack of enthusiasm in subjects of study, inability to constantly attend classes, lack of participation in classroom activities, and meaninglessness in academic activities, resulting in poor academic achievement [3–6]. Most of these available studies focused on students in institutions of higher learning. There was need therefore to conduct a study in Kenyan context, specifically focusing on form four students who were preparing to undertake national examinations. The learners at this stage were more likely to experience the greatest amount of academic pressure from significant others for good academic grades. Exploring academic burnout may be helpful in understanding the relationship between academic burnout and academic achievement among secondary school students.

Many educational researchers have taken keen interest in finding out the possible factors influencing academic

achievement in the Kenyan context. Such studies have revealed that learners' academic achievement is affected by both psychological and contextual factors such as principals' leadership styles [7], interpersonal conflicts [8], and students' characteristics [9–11]. Despite all these, little emphasis has been given on academic burnout among high school learners. It therefore remains uncertain how academic burnout accounts for academic achievement among secondary school students in Kenya.

1.1. Purpose of the Study. The main aim of the study was to establish the relationship between academic burnout and academic achievement among form four secondary school students in Homa Bay County, Kenya. The study was guided by two main objectives mainly (i) to establish the relationship between academic burnout and academic achievement and (ii) to determine the predictive weight of the three domains of academic burnout on academic achievement.

1.2. Literature. A high level of academic burnout and reduced academic achievement have been found to exist among students. Friedman [12] carried out a study among 351 university students from Witwatersrand in South Africa. Pearson correlation coefficient results revealed a significant inverse correlation between academic burnout and academic achievement. The study did not investigate the specific domains of academic burnout that related to academic achievement, a gap that the current study intended to fill.

In Turkey, Duru et al. [13] examined the relationship among burnout, academic achievement, and self-regulation among 383 undergraduates in the western part of Turkey. The participants consisted of both male (39.4%) and female (60.6%) aged between 18 and 24 years. Using the structural equation model, the results revealed that academic achievement was negatively associated with three dimensions of academic burnout. Cynicism entirely mediated the effects of emotional exhaustion on academic achievement and reduced academic efficacy; academic achievement partly mediated the effect of cynicism on reduced academic efficacy. A related study by Salanova et al. [5] with 527 university students aged between18 to 43 also revealed that students who experience academic burnout perform poorly in academics. This is because they feel fatigued, used up, irritable, frustrated, detached, and pessimistic about academic activities. Despite these revelations, there was still a justifiable need to carry out another study focusing on secondary school students in Kenya to widen the scope to which the results can be generalized among the learners.

An association among academic burnout, academic engagement, and performance was also revealed by Ghadampour et al. [14] who carried out a study among university medical students. Comparable results have also been reported in another study by Akbay and Akbay [3] who sampled from three different universities in Turkey. The participants were 277 (62.9% female, 37.1% male), comprising 1st to 4th year students. A causal relationship between academic burnout and academic performance was explained and academic burnout was found to have a negative direct effect on academic achievement.

Regionally, Kotzé and Kleynhans [15] conducted a study among South African University students involving 789 first year students (43% female, 57% male). Using stepwise multiple regression analysis, the study found out that burnout, especially emotional exhaustion and cynicism were significant predictors of academic achievement. More importantly, the study revealed that emotional exhaustion was related to higher academic achievement of 1st year students and this was attributed to long hours of studying. In Kenya, Winga et al. [6] investigated the relationship between academic burnout and academic achievement with a sample of 390 form four secondary school students of which 230 were male and 160 were female. The study revealed that students who failed to score high marks in their academic work experienced more academic pessimism and more reduced academic efficiency than high achievers. Additionally, low achievers reported higher school burnout than high achievers. Another study was still deemed necessary in an attempt to reveal a cross-cultural applicability of the burnout model in explaining academic outcome among high school students.

2. Methodology

2.1. Participants and Procedure. The participants comprised 772 form 4 secondary school students (12th graders) drawn by means of simple random sampling, from a population of 3867 secondary school students and 31 public secondary schools in Homa Bay County, Kenya. Gorard [16] postulates that an important factor that determines the choice of a sample size is the number of subgroups needed for analysis. In this study, the more the subgroups used, the larger the sample needed to be for representativeness and generalizability to the whole population. Gorard adds that a sample between 10 and 20 percent is considered appropriate. Based on Gorard's recommendation, a sample size of 31(10%) schools and 772 (20%) participants were selected for the study. The participants were drawn from girls' boarding schools, boys' boarding schools, and co-educational day secondary schools.

The criteria for the choice of the schools were mainly two: first, the schools had presented candidates for national examinations for at least five consecutive years. Such schools were more likely to exert pressure on learners to either maintain or surpass the schools' past national examination performance records. Secondly, involving secondary schools in Kenya, specifically, helped in addressing the gap in literature regarding the relationship between academic burnout and academic achievement. The choice of form four students (12th graders) was based on the fact that they were preparing for national examinations and therefore they were likely to experience the greatest amount of both internal and external pressure for good academic performance, a situation that made them more susceptible to academic burnout.

In line with ethical guidelines, the researchers were granted a permit for data collection from the National Commission for Science, Technology, and Innovation

(NACOSTI) and the Director of Education, Homa Bay County. In addition, school heads gave permission to conduct the study in their schools. The participants' informed consent was sought and their confidentiality ensured. The participants were briefed about the broad aim of the study and how to fill in the questionnaire and the rating scales.

All the selected participants filled in the questionnaires, an exercise which we conducted in the classrooms during the normal class hours. It took the participants an average of 30 minutes to complete the exercise. The return rate was 92.5% because 58 questionnaires were discarded after we discovered that they contained either incomplete work or double responses on items. As a result, 714 questionnaires were found to be valid and used for the study. We collected academic achievement records from the various selected schools after the administration of end of term-one examinations.

The participants consisted of 436 boys and 278 girls drawn from national schools constituting 14.7%, county schools (51.4%), and subcounty schools (33.9%) of the sample. Additionally, most of the participants were drawn from boys' boarding schools, representing 41.6%, co-educational day schools 34%, and girls' boarding schools 24.4%. Subsequently, more males, constituting 61.1% compared to females (38.9%), participated in the study. The participants' mean age was 18.11 (SD = 1.49), ranging from 15 to 23 years. More participants (66.7%) were aged between 18 and 20 years, with only 31.5% aged between 15 and 17 years and a dismal number (1.8%) in the age bracket of 21–23 years.

2.2. Measures. Academic burnout was measured using the Maslach Burnout Inventory Student Survey (MBI-SS) that was designed by Schaufeli et al. [1]. The internal consistency reliability of MBI-SS was reported at 0.86 by Schaufeli et al. [1] across many samples. In the current study, the instrument was piloted on a sample of 38 students and the internal consistency was found to be 0.78. The instrument consists of fifteen items measuring burnout on three subscales: emotional exhaustion (5 items), cynical attitude towards academic work (4 items), and academic efficacy (6 items). All the items measuring emotional exhaustion and cynicism are negatively worded, whereas those measuring academic inefficacy are positively worded. MBI-SS is scored on a 7-point Likert scale ranging from 0 (*never*) to 7 (*always*). A maximum score of 30 on emotional exhaustion and 24 on cynicism and a minimum score of 6 on academic efficacy were indicative of higher levels of academic burnout. To establish the level of academic burnout among the participants, we computed the scores by summing up all the scores on emotional exhaustion and cynicism dimensions, which were then compared with the scores on academic efficacy to establish whether there was high or low level of academic burnout experienced by the participants. The categories were conceptualized as scores of 0 to 27 for low and 28 to 54 for high academic burnout.

Academic achievement of the participants was measured through grades. Marks were drawn from the official school records of the end of term-one examinations. The results were based on eight subjects for all the participants. The total marks and the mean for all the eight subjects were calculated and entered in Statistical Package for Social Sciences (SPSS). Using SPSS, these marks were transformed into t-scores to make them comparable across all schools sampled for the study.

2.3. Statistical Analysis. The obtained data were cleaned, coded, and entered into the computer for analysis using the Statistical Package for Social Sciences (SPSS) version 20. Both descriptive and inferential statistics were used. The Pearson product-moment correlation coefficient was used to test the relationship between academic burnout and academic achievement. Regression analysis was used to determine the predictive weight of the three domains of academic burnout on academic achievement. The statistical significance value was set at 95% confidence interval level ($p < 0.05$).

3. Results and Discussion

3.1. Description of Participants' Academic Burnout. The academic burnout scores and all the domains of academic burnout scores were computed to find the mean, standard deviations, skewness, kurtosis, and correlations as shown in Table 1.

Table 1 shows that the participants had a mean of 31.99 (SD = 18.79) in the global academic burnout score, which may have implied that they experienced low academic burnout. However, the standard deviation (SD = 18.79) indicated high variability in the scores on academic burnout. The skewness and kurtosis values suggested a well-behaved distribution with neither showing evidence of excessive nonnormality. The analysis revealed that 81.2% of the participants were at a low level of academic burnout and only 18.8% were at a high level of academic burnout. Further descriptive results revealed that academic efficacy had a mean of 26.7 (SD = 8.1), emotional exhaustion ($M = 11.1$, SD = 6.5), and cynicism ($M = 5.6$, SD = 6.4). The results from correlation analyses showed statistically significant correlations between burnout scores; emotional exhaustion, cynicism, and academic burnout global score were positively correlated; conversely, the three variables were negatively correlated with academic efficacy (Table 1). The results from these intercorrelations may imply that when learners experience emotional exhaustion, they develop a detached negative attitude towards academic work and likely to experience high academic burnout, reduced academic efficiency, and feelings of inability to accomplish academic tasks.

3.2. Description of Participants' Academic Achievement. We operationalized academic achievement by analyzing the scores obtained by participants from eight subjects at the end of their first-term examinations. Since the participants were drawn from different schools and the examinations had not been standardized, the mean score of each participant was

Table 1: Descriptive statistics and correlation analyses for academic burnout.

Variables (AB and its domains)	*M*	SD	*Sk*	*Kur*	1	2	3	4
1. Academic burnout global score	31.99	18.79	1.03	−0.09	—	0.87**	0.92**	−0.91**
2. Emotional exhaustion	11.1	6.5	0.42	−0.29		—	0.73**	−0.64**
3. Cynicism	5.6	6.4	1.03	−0.18			—	−0.76**
4. Academic efficacy	26.7	8.1	−0.74	−0.49				—

$N = 714$; AB = academic burnout; M = mean; SD = standard deviation; *Sk* = skewness; *Kur* = kurtosis. **Correlation is significant at the 0.01 level (2-tailed).

converted into *t*-score having a mean of 50 and a standard deviation of 10. The descriptive statistics for the participants' *t*-scores are presented in Table 2.

The scores were used to categorize the participants into three levels: low, average, and high academic achievement. The cutoff scores for each category were as follows: 24 to 42.3 for low; 42.4 to 60.7 for average, and 60.8 to 79.1 for high. Further analysis revealed that the majority (69%) of the participants were in the average academic achievement level, while participants in the low and high academic achievement contributed 15.7% and 15.3%, respectively.

A bivariate correlation analysis was done to test the relationship between academic burnout and academic achievement. The results revealed that academic burnout was significantly and negatively correlated with academic achievement (r (712) = −24, $p < 0.01$). To determine the predictive weight of the three domains of academic burnout, emotional exhaustion, cynicism, and academic efficacy on academic achievement, a linear regression analysis with stepwise method was conducted. Before using this statistical test, the relevant assumptions were evaluated as shown in Figures 1 and 2. The scatter plot and the p-p plot of the standardized residuals showed that the data were of reasonable linearity and homoscedasticity. Notably, school type, sex, and age of the participants were transformed into dummy variables so that they take the value of zero or one to indicate the presence or the absence of some categorical effects that would have been expected to change the outcome. The VIF values of dimensions of academic burnout, emotional exhaustion (2.20), cynicism (3.06), and academic efficacy (2.47), were below 10 indicating that the assumption of multicollinearity was met. The results of regression analysis are presented in Table 3.

The regression analysis revealed that school type significantly contributed to the model (F (1,712) = 154.14, $p < 0.01$, $R^2 = 0.17$). It was also evident that school type had a positive relationship with academic achievement ($r = 0.42$) accounting for 17% of the variation of academic achievement. Age of the participants explained an additional 1% of the variation in academic achievement. Finally, academic efficacy domain of academic burnout explained additional 4% of the variation in academic achievement and the change was significant (F (2,711) = 95.61, $p < 0.01$, $R^2 = 0.21$). In the overall model, all the three variables accounted for 22% of variation in academic achievement. More importantly, it was observed that among the three academic domains that were entered in the model, it was only academic efficacy that significantly predicted academic achievement ($\beta = 0.18$, $p < 0.01$). This implied that for every standard unit change in academic efficacy, academic achievement changed by 0.18

Table 2: Descriptive statistics for the participants' academic achievement of the transformed scores.

	Range	Min.	Max.	*M*	SD	*Sk*
t-scores	54.71	24.15	78.87	50.00	10.00	0.211

$N = 714$; Min = minimum; Max = maximum; M = mean; SD = standard deviation; *Sk* = skewness.

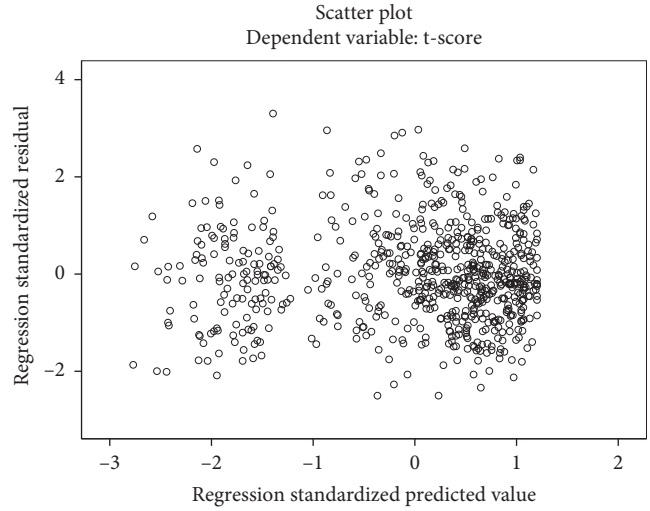

Figure 1: Scatter plot for the academic burnout prediction model.

for those students who invest more effort in studying. Such students may be believing in themselves hence are able to withstand pressures within their academic environment. Conversely, emotional exhaustion and cynicism were not significant predictors of academic achievement, implying that when learners experience these two domains, they tend to develop a negative attitude towards academic work. We further conducted a *t*-test for independent samples to compare the academic achievement scores between the low- and the high-academic burnout groups and the *t*-test found a statistically significant difference (t (712) = 7.52, $p < 0.01$). The participants categorized as having low academic burnout reported a significantly high mean in academic achievement ($M = 51.30$, SD = 9.54) compared to those categorized as having high academic burnout ($M = 44.35$, SD = 9.98).

3.3. Discussion of the Results. The current study investigated the relationship between academic burnout and academic achievement among high school students. Our results revealed that there is an inverse significant correlation between academic burnout and academic achievement. More

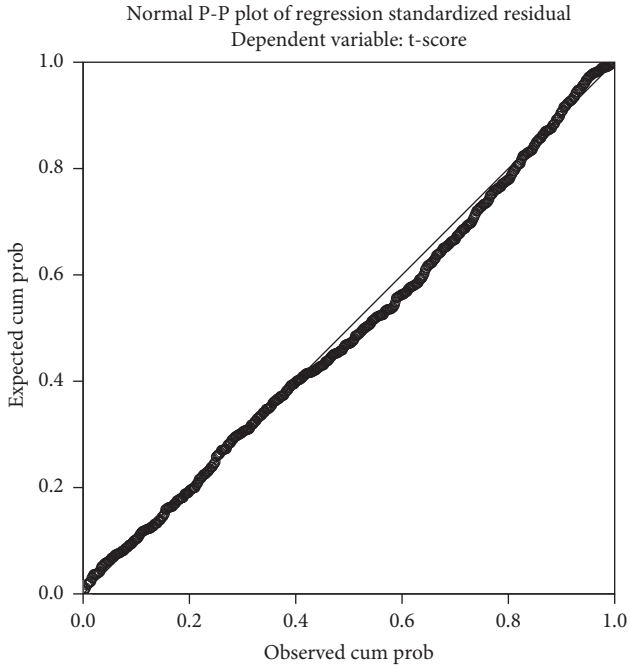

Figure 2: Normal probability plot of regression standardized residual for academic burnout mode.

Table 3: Model summary of academic burnout domains on academic achievement.

Model	R	R^2	Adjusted R^2	SEE	df	F	Sig.
1	0.42[a]	0.17	0.17	9.07	1,712	154.14	0.00[b]
2	0.46[b]	0.21	0.21	8.88	2,711	95.61	0.00[c]
3	0.47[c]	0.22	0.22	8.82	3,710	68.67	0.00[d]

$N = 714$. [a]Predictors: (constant), school type-dummy. [b]Predictors: (constant), school type-dummy, academic efficacy. [c]Predictors: (constant), school type-dummy, academic efficacy, age (15–17) -dummy.

importantly, the study established that emotional exhaustion and cynicism were not predictors of academic achievement. Conversely, it was only academic efficacy which positively and significantly predicted academic achievement. Further, a *t*-test statistic revealed that participants with low academic burnout had a high mean in academic achievement.

These findings are in tandem with a large body of research that has reported a negative relationship between academic burnout and academic achievement [3, 5, 12–15]. These earlier studies gave evidence to the fact that students who experience academic burnout perform poorly in academics because they feel exhausted, used up, irritable, frustrated, detached, and cynical about academic tasks and responsibilities. When students experience emotional exhaustion and cynicism, their dedication to academic work decreases. This is because such students lack the energy and the inner resources needed to withstand the expected academic pressures and responsibilities. On the contrary, when students experience high academic efficacy, they get more dedicated to their academic work and this promotes academic achievement.

The results that students in the low-academic burnout category have reported a significantly high mean in academic achievement than those in the high academic burnout category is also in agreement with Winga et al. [6] whose results revealed that low achievers experienced higher levels of cynicism and reduced efficacy and general academic burnout than high achievers. These study results are an indicator that academic burnout may be one of the key factors to be considered in trying to understand academic achievement of students. Academic pressure exerted on students may sometimes be counterproductive to their academic achievement. As students work hard to meet the standards set by the significant others, they need supportive mechanisms to enable them cope with the stressful situation, without which they would perceive the demands within their environment as more taxing, hence experience academic burnout [17].

However, the current results notably contradicted a study by Friedman [12] that revealed a strong positive relationship between academic burnout and academic achievement. Similarly, Kotzé and Kleynhans [15] also revealed that some aspects of burnout, specifically emotional exhaustion was a significant predictor of academic achievement among first year students in South Africa. The researchers attributed this kind of results to the high standards set by high achievers who are satisfied only with the best results, thus study for long hours positively impacting on their academic achievement but, on the other hand, predisposing them to academic burnout. This contradiction in the results may be as a result of other factors not considered in this study which may have occasioned varying outcomes in relation to academic burnout and achievement.

4. Limitations

The current study has the following methodological limitations. First, our sample comprised of form four students drawn from public secondary schools in one county. This may limit the degree to which the results can be generalized to private schools and to other counties. Academic burnout may vary with contextual factors across different socioeconomic regions within the Kenyan schools. Other learners in private schools and other counties might have shown a different pattern.

Second, this study was cross-sectional in nature, and since academic burnout falls along a spectrum, there is an evident need for a longitudinal study to shed some more light in understanding the stage at which academic burnout begins in the learners' academic life. Third, the research design was correlational and therefore the results and predictions made do not in any way imply cause and effect relationship.

5. Conclusion

The study revealed that learners experience academic burnout and this adds to the evidence that academic burnout is a warning signal to academic achievement of secondary school students.

It is therefore recommended that an approach geared towards exploitation of students' talents be adopted to enhance the acquisition of prerequisite competences for the 21st century skills, as opposed to an examination-oriented curriculum that creates academic pressure on learners.

Data Availability

The data used to support the results of this study are available from the corresponding author upon request.

Conflicts of Interest

The authors declare that there are no conflicts of interest regarding the publication of this paper.

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