

Relationship Between Coping Strategies And Academic Achievement Of Form Two Students In Nyandarua County, Kenya

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Abstract

The purpose of this research was to examine existing relationship between coping strategies and academic achievement of form two students in Nyandarua County public schools, Kenya. The research was guided by Expectancy-Value theory and Stage-Environment Fit theory. Convergent mixed methods research design was adopted, using predictive correlation. The target population consisted of 16,813 form two learners in 173 public high schools in Nyandarua County. Purposive, stratified, proportionate and random sampling were used to sample 391 students from 10 schools. Data were collected using questionnaires and semi-structured interview schedules. Pearson's Product Moment Correlation Coefficient was used to test the hypothesis. Qualitative data were analyzed thematically. The outcomes indicated a significant positive correlation ($r(376) = .33, p < .01$) between coping strategies and academic achievement. All the four types of coping strategies correlated positively with the respondents' academic achievement; emotional focused coping ($r(376) = .39, p < 0.01$), social support focused coping ($r(376) = .31, p < 0.01$), avoidant coping ($r(376) = .16, p < 0.01$) and problem focused coping ($r(376) = .13, p < 0.05$). Qualitative results showed that effective coping strategies helped the students to improve in academic achievement. From the findings, the study recommends that teachers and parents should foster strategies of coping with academic challenges among learners. A strong social support system ought to be created around learners as a protective and remedial measure for academic achievement.

Keywords: *Academic achievement; avoidant coping; coping strategies; emotional-focused coping; problem-focused coping; social support- focused coping*

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I. Background of The Study

The role of formal education in society is to equip students with skills that determine their ability to prosper and invest in economic, social and political development of a country. The extent to which these objectives are met leads to either bridging or deepening differences among citizens (Sosa et al., 2018). With this, Organisation for Economic Co-operation and Development (OECD) Education 2030 aims at finding the relevant knowledge, skills, attitudes and values required for today's students. It is also concerned with how these attributes can be developed effectively by instructional systems (OECD, 2018). In this regard, stakeholders ensure that academic habits that inspire progress and academic achievement are carefully nurtured. It is alleged that impressive academic outcomes guarantee better career opportunities and job security (Nesa & Haider, 2020).

Academic achievement is conceptualised by Arul and Vimala (2012) as the measure of knowledge gained from formal learning. The acquisition of this knowledge is pointed out by test scores, grade points and awarded using certificates and degrees. When students fail to achieve academic goals, they are likely to fall into a vicious cycle of life disappointments (Tanyi & Egbe, 2019). Studies on academic underachievement have cited poor administrative leadership, low tutor motivation, poor pedagogical skills and insufficient instructional resources (Kariuki, 2018; Kimani et al., 2013; Wambugu, 2018). Nevertheless, it should be noted that these attributes are out of learner's control. Dweck et al. (2011) outlines the individual's role in the learning process. Research by

Fan and William (2018) indicate that learners' motivational resources and proficiencies of their capacities play a major part in predicting academic achievement.

The concept of coping is defined by Lazarus and Folkman (1980) as the behavioural effort geared towards tolerating, mastering or reducing external and internal demands in the environment that exceeds an individual's capacity. Coping is further differentiated as problem focused, emotion focused, social support focused and avoidant coping. In problem focused coping, appropriate steps are physically taken by the individual to eliminate the perceived stressor. In emotion focused coping, the individual may not change the situation but manages the distressful emotion linked to the stressor. In social support focused coping, the individual seeks sympathy from significant people such as peers, teachers and parents. In avoidant coping, the affected student distracts self from thinking about the stressor.

Generally, studies present learners with a number of stresses and pressures whose negative impact impede well-being and optimization of performance. Wong (2014) observes that teachers, parents and peers can be resourceful in providing emotional support and scaffolding to ease the setbacks that may cause academic underachievement. It is therefore against the appraised background that the researcher in the current study explored the relationship between coping strategies and academic achievement.

II. Statement of the Problem

Underachievement on academic grades in secondary schools within Nyandarua County has persisted over the years. KNEC gives evidence that the KCSE mean score was 3.61, 3.79, 4.17, 4.15 and 3.77 in years 2017, 2018, 2019, 2020 and 2021 respectively. The low score may not only be reflected on formal assessment but also in informal and non-formal school activities, hence a vicious cycle of failures by the learners. Failure to optimize full potential of learners culminates to lower chances of enrolling in competitive careers, acquiring marketable skills and eventual job placement. If not addressed adequately, the county is likely to sustain a big population of individuals that cannot implement the country's agenda for development. Without guarantee for successful life, these young people are likely to venture into harmful behaviour and crime.

National studies have largely attributed academic underachievement to poor administrative leadership, little tutor motivation, poor pedagogical skills, use of tutor-centred learning approaches and insufficient instructional resources. In spite of these findings and their corresponding interventions, poor performance in KCSE has persisted, probably because the aforementioned attributes are not intrinsically learner centred. Research findings in other regions indicate that coping strategies are probable antecedents of academic achievement. The fundamental problem of this study was therefore to investigate the extent to which coping strategies predict academic achievement among form two students in Nyandarua County, Kenya.

III. Research Objectives

The study objective was to establish the relationship between coping strategies and academic achievement among secondary school students in Nyandarua County. The study was guided by the following alternative hypothesis:

H_{a1}: There is a relationship between coping strategies and academic achievement among secondary school students in Nyandarua County.

IV. Significance of the Study

Firstly, the findings are intended to enrich the existing body of literature on academic achievement. It may also be used by the Ministry of Education (MOE) to develop programs for augmenting pre-service and in-service instructions for teachers. Concerning the learners' social relations in the school environment, the teachers, parents and peers may be equipped to provide social support and stimulation of the learning process for academic achievement. This may in turn transform the learner into a well-adjusted person that participates in school activities inherently and without reserved sentiments.

V. Theoretical Framework

Expectancy-Value Theory of Achievement Motivation (Eccles et al., 1983)

The theory is an expansion of Atkinson's (1964) expectancy-value model. It suggests that motivation for achievement related choices are determined by expectancy and subjective task value. Expectancy is the probable attainment of a goal through directed actions while value is the worth ascribed to the desired outcome (Vroom, 1964). In essence, learners are motivated to pursue a goal if they expect to succeed, and if they perceive the goal significant. This theory further postulates that individuals attempt to fit their behaviour on what seems desirable but also keep off from pursuing what is not beneficial. Expectancy is also about having a sense of confidence or doubt as regards achieving a goal. If an individual has sufficient confidence, they can engage and direct their effort towards a goal and sustain it. Without confidence, an action is not taken (Scheier et al., 2001).

The model distinguishes four components of task value as; attainment value, intrinsic value, utility value and cost. Attainment value is the significance attributed to doing the task well, such as scoring high marks and fulfilling academic obligations for a student. Intrinsic value on the other hand is the enjoyment gained in performing the task. A pupil in this case works hard academically for the pleasure derived in learning new concepts, contributing in a stimulating class discussion and academic satisfaction. This is driven by the student's desire to know, to achieve and to feel stimulated (Ryan & Deci, 2009, 2017). Third is utility value, the apparent worth of a task for the future. A student works hard because good grades assure him of a future job opportunity. Finally, cost is the individual's projected effort or what is given up in pursuit of a goal. This may include skipping a favourite match to do personal studies.

The basic proposition affirms that pursuit of goals is central to behaviour organisation. Goals provide the value element and their importance directs motivation towards their achievement (Scheier & Carver, 2007). Coping is defined by Lazarus and Folkman (1980) as the behavioural effort geared towards tolerating, mastering or reducing external and internal demands in the environment that exceeds an individual's capacity. Coping is differentiated into problem focused, emotion focused, social support focused and avoidant focused coping. Expectancy-value theory is used in the current study given that, knowing pupils' academic expectations and ascribed value can help to direct the learning process (Fan & William, 2018). If learners in the current population of study are motivated to believe in their ability to succeed and value education, they will adopt coping mechanisms that ensure desirable academic outcomes. More so, pupils' socializers' support such as teachers, parents and peers can be utilized.

VI. Literature Review

In the ongoing study review, the effort of coping is directed towards mastering academic demands for obtaining high scores. Few research findings have reported a positive correlation between the two constructs, coping strategies and academic achievement. A research by Vizoso et al. (2018) in Europe explored the association between coping and academic outcomes, mediated by engagement dimensions. A sample of 808 Spanish undergraduates completed an inventory on coping strategies. Their academic outcome was rated by their grade point average from the institutions' records. The findings indicated a positive correlation between adaptive coping and academic outcomes as opposed to maladaptive coping. Academic engagement was significant in mediating performance by increasing the students' vigour. While the study posted a positive correlation between coping and academic outcome, the mediating variable which plays an important role in the conclusion needed to be replaced by school type.

Later, a similar study was conducted by Carnicer et al. (2019) among 334 teacher trainees in a tertiary college. The study investigated how coping with stress influences academic achievement, moderated by age. While most students experienced stress during their studies, a majority sought to tackle it through avoidant-coping strategies. This strategy however only caused a lapse in academic outcomes. The category of students who under less stress engaged in problem focused coping did better in academic achievement than those who engaged in cognitive avoidant coping. An additional finding from this study is that increased stress implicated negatively on academic achievement but was moderated by age. What the study did not address were the other types of coping strategies such as emotion focused and social support focused coping that make the current study's objective comprehensive.

Chandra (2020) undertook a study in Asia to assess the perception of college learners under the stress created by online learning and the coping strategies used to achieve academic goals. Data was gathered using purposive sampling among 94 undergraduate and postgraduate participants. The participants filled online questionnaires that were analyzed using descriptive analysis and Chi-square. Qualitative data to help understand the coping strategies used was gained by making telephone discussions. From the findings, it was established that stress caught up with the sampled students because of taking the lessons online, fear of failing the online examinations and the isolation of studying away from the familiar school environment. As a result, most students had embraced problem focused coping to creatively take up technical skills that would enable them keep up with the new mode of learning. These findings were however inconclusive as the corresponding academic achievement was not a variable. It was therefore necessary to conduct the current study so that academic achievement can directly be investigated as an outcome variable.

In similar circumstances, Nurunnabi et al. (2020) took up a cross-sectional study to investigate the coping strategies used by university students in China when learning institutions were shut down. An online survey was conducted using semi-structured questionnaires to participants selected through simple random sampling procedure. 559 responses were returned, making way to analysis of variance (ANOVA) through SPSS version 27. The students' responses indicated that the psychological pressure and anxiety prompted the use of survival tactics and coping strategies such as emotion focused coping, mental support and social support focused coping. From the analysis, it was concluded that the university planners needed to scale up programs that would strengthen students' use of coping strategies for academic results. The findings were however not conclusive on the level of

academic achievement that the use of coping strategies would predict. While the importance of coping to surmount academic challenges was deemed important, it was necessary to find out its corresponding qualitative prediction on academic outcomes. There was also a need to test how coping would translate in predicting academic achievement away from the oriental country and among secondary school participants.

Later, another study by Arora et al. (2020) on the moderating effect of coping strategies on challenges presented by COVID-19 on learning supported the findings of the current study. The research hypothesized that the pandemic necessitated use of new stressful learning strategies such as virtual teaching/learning and online examinations, which tended to raise students' anxiety across the globe. The study adopted a cross-sectional survey of 434 students from several institutions of higher learning aged 18-25 years. To analyse the data, principal component analysis was done, validated by confirmatory factor analysis. The results confirmed the adverse effects of the resultant anxiety on the students' academic self-efficacy. Seemingly, the anxiety derived from online academics was higher than that induced by the pandemic itself. Additionally, it was established that higher levels of coping weakened the effects of the anxiety towards academic self-efficacy.

In relation to the previous research, El-Monshed et al. (2020) studied the COVID-19 psychosocial effects and their corresponding coping strategies among Egyptian university students. An online survey was completed through a cross-sectional research among 612 students. Among the tools used to collect the data was the loneliness scale, depression anxiety stress scale and the brief COPE scale. The respondents manifested varying degrees of depression, stress and anxiety as a result of the pandemic. From the brief COPE analysis, the lowest scores were obtained for use of dysfunctional coping strategies such as denial, venting and substance use. On the other hand, active coping and planning was ranked higher on the tool as problem-focused coping strategies. From the findings, it was evident that students were prone to stressful ordeals during the pandemic and it was therefore necessary for learning institutions to promote coping measures that would improve their mental health for academic performance.

Fuente et al., (2020) used coping strategies as the independent variable to predict the effects of undergraduate students' self-regulation and regulatory teaching on academic strain and well-being. Self-Regulated Learning and ERL theories were used as basics of the research among 944 university students. Online validated questionnaires on coping strategies were transmitted and completed by the participants, including a selection of quasi experimental research design. Analysis of variance (ANOVA) and MANOVA were done to find out the prediction. The findings confirmed the assertion of the theory used, that the types of coping strategies used by the learners to certify academic well-being depended on the combined outcome of self-regulation and teaching. Though the findings of this research were important in informing the teaching and learning process, the final implications on academic achievement were not among the scope of the prediction. More so, the research did not state coping strategy as a predictor variable as the current study undertakings. The stated variations, age differences on the sample and theories used were among the major consideration on the current study.

Students' potential challenges that have a likelihood of weakening academic engagement and eventual success prompted a study by Freire et al. (2020). The main objective was to investigate a combination of coping strategies that can be utilized to surmount the negative effects of stressful conditions. A total of 1072 (729 females, 343 male) Spanish participants from the university were sampled and their coping profiles established using latent profile analysis. The participants' age was between 18-48 years ($M = 21.09$; $SD = 3.16$). The Academic Stress Questionnaire was used to collect data. Through analysis of covariance (ANCOVA), four types of coping approaches were identified as; low generalized, prevalence of social approach, cognitive prevalence and high generalized approach. The findings suggested that when students combined at least three of the identified coping approaches, there was a higher likelihood of waxing probability towards self-efficacy and improved performance. It is noted that there was a disparity between the coping approaches used, the size and age of the sample, mode of data analysis, locale and the outcome variable. The current study was done specifically to address academic achievement among Kenyan secondary school participants using the brief COPE inventory.

In Kenya, Ogoma (2020) took up a correlational study to examine the role of coping strategies to alleviate burnout for academic performance amongst medical trainees. Self-report data were purposively taken from a sample of 182 trainees in 3 institutions (102 male, 80 female). The results revealed that problem-focused coping reduced the prevalence of burnout while avoidant and emotion-focused coping made it worse. Further, when adequate coping strategies were used, students' burnout was reduced, consequently leading to better academic outcomes. However, the three measures of coping strategies had divergent dimensions of reducing burnout for academic performance. This yielded inconclusive findings. The current study was undertaken to confirm these findings by examining the role of each level of coping strategy and the collective impact on academic achievement. Although the findings reported a positive impact regarding coping on academic achievement, there was a need to investigate the same coping variables within a local high school context.

VII. Research Design

The current study adopted a convergent mixed methods research design. According to Creswell (2018), the single phase approach involves the collection of both quantitative and qualitative data independently, analyzing each separately before merging the results to compare whether the findings confirm or disconfirm each other. The researcher did not manipulate or randomize the predictor variables. Instead, both sets of data were collected concurrently using a single questionnaire for quantitative and an interview schedule for qualitative data. An impression of the thoughts, feelings, and behaviour of coping strategies were related to academic achievement in order to make future predictions (Creswell, 2017). The design was considered appropriate for the study with the assumption that both qualitative and quantitative data provide different types of information. The quantitative information collected was used to test hypotheses in order to obtain an objective conclusion as proposed by Cooper and Schindler (2006).

VIII. Location of the Study

The study locale was Nyandarua County in Central region of Kenya. Its population is 638,289 people (KNBS, 2019) in an area of 3245.3km². It has 173 public secondary schools in 7 sub-counties namely; Nyandarua North, Nyandarua South, Nyandarua west, Nyandarua Central, Mirangine, Kipipiri and Kinangop. The county has an average teacher-student ratio of 1:22. The county was selected for this study for posting low academic scores in KCSE, unlike earlier in 80s and 90s. The study target was all form two students in Nyandarua County public secondary schools. From a total of 173 public secondary schools, there were approximately 16,813 (8331 boys and 8482 girls) form two students. The distribution of population in percentage was 49.55% boys and 50.45% girls (CDE Nyandarua, 2022). The schools were classified as either single-sex or co-educational and a residential status of either day or boarding.

IX. Sampling Technique

Purposive sampling was utilized to choose Nyandarua County, public secondary schools and form two learners. Using the county's public schools' list as the sampling frame, stratified sampling was used to identify homogeneous characteristics of schools. As a result, type of school and residential status were the basis of stratification. Using proportionate sampling, 10 schools were selected considering the population size of each stratum for sub-group representation (Stangor, 2014). Thus, one girls' boarding school, one boys' boarding school, 3 co-educational boarding schools and 5 co-educational day schools were picked. Simple random sampling was applied to pick 391 students, from the 10 sampled schools. This enabled each participant equal and independent possibility of being picked (Cohen et al., 2017).

X. Research Variables

The predictor variable was coping strategies which encompass problem focused, emotion focused, social support focused, and avoidant coping, measured at the interval level. The criterion variable was academic achievement, which was also measured at the interval level. Form two 2022 mean scores for term one and two in all subjects were obtained from the school records. The average scores were changed to standard Z-scores, then to T-scores using the formula: $T = Z(10) + 50$ so as to render them comparable across the sample schools.

XI. Research Instruments

A questionnaire, a semi-structured interview schedule and an academic pro forma summary for students was used. While the questionnaire was adapted, the interview schedule was researcher's own. The questionnaire which comprised of students' demographic information; school code, student's number, type of school and school's residential status, and brief COPE Inventory (Carver, 1997) with 18 items; 3 items were on problem focused coping, 6 items measured emotion focused coping, 4 items were on social support focused coping and 5 items were on avoidant focused coping. Academic pro forma table was used to record data on students' academic performance for two terms. The interview guide for 40 students was administered to a sub-set of the 391 selected students.

XII. Data Collection Techniques

A research authorization letter was sought from Kenyatta University Graduate School, then an approval from the Kenyatta University Ethics Review Committee and a research permit from the National Commission for Science Technology and Innovation (NACOSTI). This gave way to obtaining research authorization from the Nyandarua County Commissioner, County Director of Education and all the principals of the selected schools. Informed consent was sort from the participants.

On the designated date and time of data collection, the researcher delivered research tools to the school for administration. The researcher in the company of class teachers administered the questionnaires to the form

two students with clear instructions on how to respond. Thirty minutes were allocated to fill the questionnaire after which the scripts were collected by the researcher.

Using the admission numbers of the respondents, the class teachers were requested to give 2022 end of term one and term two examination scores. The interview schedule followed immediately after filling of the questionnaires. Responses were recorded on the interview schedule sheet, complimented by a digital audio recorder, a procedure that was undertaken within 40 minutes.

XIII. Data Analysis

Quantitative Data

After collection, the raw data from the questionnaires was coded, entered into the computer and cleaned to check for incorrect entries, missing data and possible outliers. Data was analyzed using descriptive and inferential statistics using Statistical Package for Social Sciences (SPSS) Version 25. Descriptive statistics such as frequencies, percentages, measures of central tendency, and measures of variability was used to describe sample characteristics while graphs and frequency tables was used in data presentation. Inferential statistics was used to test hypotheses using suitable statistical tests at $\alpha = 0.05$. This led to the testing of the following null hypotheses.

H₀₁: There is no significant relationship between coping strategies and academic achievement. A bivariate correlation analysis was conducted to test the hypothesis using Pearson Product Moment Correlation Coefficient.

Qualitative Data

The qualitative data were collected from the selected 40 respondents, 20 boys and 20 girls. Notes were taken to record the responses given on the interview schedules. The results obtained from interviews were analyzed using thematic analysis technique. According to Braun and Clarke (2012), this technique involves identifying, examining and reporting patterns (themes) within data. On the steps followed while conducting thematic analysis, the researcher was guided by the guideline provided by (Akinyode & Khan, 2018). The guideline involves a five-step process including data logging, anecdotes, vignettes, data coding, and thematic networks.

XIV. Findings

Return Rate of the Research Instruments

A total of 391 questionnaires were issued to respondents in 10 sampled schools. All the questionnaires (100%) were collected by the researcher on the spot. However, during data coding and cleaning, 378 questionnaires accounting for 97% of the expected target was used for analysis. Thirteen questionnaires (3%) were discarded because, 3 respondents' admission numbers could not be matched for exam scores, 6 responded in a defined pattern and 4 had large portions of incomplete responses. Table 1 below gives a summary of the target sample size against the return rate.

Table 1
Return Rate of the Research Instruments

School type	QA	QR	%
Co-D	191	188	98
Co-B	120	116	97
BB	40	38	95
GB	40	36	90
Totals	391	378	97

Note. Co-D = Co-educational Day; Co-B = Co-educational Boarding; BB = Boys Boarding; GB = Girls Boarding; QA = Questionnaires administered; QR = Questionnaires returned; % = Percentage

Demographic Information

The types of school involved were boys, girls and co-educational. School residential status involved was day and boarding. As shown in Table 2, 188 respondents accounting for 49.1% were drawn from day schools and 50.3% from boarding schools. While the boarding schools had all varieties of gender represented, day schools with girls and boys only were not identified within the population of study.

Table 2
Demographic Information

	Frequency				Percentage
	Girls	Boys	Co-Ed	Total	
DS	-	-	188	188	49.7
BS	36	38	116	190	50.3
Total	36	38	304	378	100

Note. Co-Ed = co-educational; DS = day school; BS = boarding school

Descriptive Statistics of Respondents' Coping Strategies

Descriptive statistics of the respondents' overall scores in coping strategies were analysed so as to get range, mean, standard deviation, skewness and kurtosis. Table 3 summarizes the findings.

Table 3

<i>Descriptive Statistics of Coping Strategies</i>								
	N	Range	Min	Max	M	SD	Sk	Kur
CS	378	36.00	37.00	73.00	60.10	6.58	-.73	.28

Note. N = 378. Min = minimum; Max = maximum; M = mean; SD = standard deviation; Sk = skewness; Kur = kurtosis; CS = coping strategies

As indicated on Table 3, the range for coping strategies was 36 since the minimum and maximum scores were 37 and 73 respectively. The mean score was 60.10 with a standard deviation of 6.58. The scores were negatively skewed (-.73) showing that most participants rated themselves highly on coping strategies extent. The kurtosis of the distribution was slightly leptokurtic (.28) implying that values were piled around the mean in a near normal distribution. A further analysis of coping strategies by sub scales was done.

Table 4
Descriptive Statistics of Coping Strategies Sub Scales

	N	Range	Min	Max	M	SD
PFC	378	9.00	3.00	12.00	10.46	1.53
EFC	378	12.00	10.00	22.00	18.40	2.45
SSFC	378	7.00	9.00	16.00	13.67	1.71
AC	378	11.00	9.00	20.00	17.20	2.23
Valid N (listwise)	378					

Note. N = 378. Min = minimum; Max = maximum; M = mean; SD = standard deviation; PFC = problem focused coping; EFC = emotional focused coping; SSFC = social support focused coping; AC= avoidant coping

The findings on Table 4 indicate that ranges on scores for the sub scales were 9 .00, 12.00, 7.00 and 11.00 for problem focused coping, emotional focused coping, social support focused coping and avoidant coping respectively. Problem focused coping had the lowest minimum score of 3.00 as compared to emotional focused coping that had the highest minimum score of 10.00. The maximum scores for emotional focused coping were the highest (22.00) while those of problem focused coping (12.00) were the lowest. Emotional focused coping had the highest mean of 18.40 (SD = 2.45) followed closely by avoidant coping with a mean of 17.20 (SD = 2.23). Social support focused coping and problem focused coping had lower means of 13.67 (SD = 1.71) and 10.46 (SD = 1.53) respectively.

Table 5
Descriptive Statistics of Coping Strategies by School Type

Type of school	N	Min	Max	Range	M	SD
BB	38	61.00	68.00	7.00	67.05	1.52
GB	36	37.00	73.00	36.00	57.22	12.37
Co-D	188	47.00	72.00	25.00	56.99	5.21
Co-B	116	61.00	66.00	5.00	63.75	1.65
Total	378	37.00	73.00	36.00	60.10	6.58

Note. N = 378. Min = minimum; Max = maximum; M = mean; SD = standard deviation; BB = boys boarding; GB = girls boarding; Co-D = co-educational day; Co-B = co-educational boarding

As indicated on Table 5, the least score range was 5, recorded in co-educational boarding schools, followed by boys' boarding schools with 7. On the other hand, the highly dispersed scores on coping strategies were traced in the girls' boarding school category.

On average, boys' boarding category had the highest score of 67.05 ($SD = 1.52$), followed by co-educational boarding schools ($M = 63.75$, $SD = 1.65$, Range = 5). The girls boarding schools came in third ($M = 57.22$, $SD = 12.37$) while the co-educational day schools obtained the lowest ($M = 56.99$, $SD = 5.21$).

Table 6
Descriptive Statistics of Coping Strategies by School's Residential Status

Residential status	N	Min	Max	Range	M	SD
DS	188	37.00	72.00	35.00	57.78	5.98
BS	190	37.00	73.00	36.00	62.40	6.35
Total	378	37.00	73.00	36.00	60.10	6.58

Note. N = 378. Min = minimum; Max = maximum; M = mean; SD = standard deviation; DS = day schools; BS = boarding schools

As indicated on Table 6, both day and boarding schools had similar minimum scores of 37.00. The maximum scores were at 72.00 and 73.00 for day schools and boarding schools respectively. Boarding schools obtained higher scores of ($M = 62.40$, $SD = 5.72$) as compared to day schools ($M = 57.78$, $SD = 5.98$).

Descriptive Statistics of Academic Achievement T Scores

To obtain academic achievement, the respondents mean scores for all subjects in end of term one and term two 2022 were taken from the official school records. To render the scores comparable across the sampled schools, the raw scores were first converted into Z-scores and thereafter to standardized T-scores. Table 7 gives descriptive analysis of the students' scores in academic achievement.

Table 7
Descriptive Statistics of Academic Achievement T Scores

	N	Range	Min	Max	M	SD	Sk	Kur
Ac Ach T-score	378	41.37	35.42	76.79	50.00	10.00	.58	-.34
Valid N (listwise)	378							

Note. N = 378. Ac Ach = academic achievement; Min = minimum; Max = maximum; M = mean; SD = standard deviation; Sk = skewness; Kur = kurtosis

As pointed out on Table 7, the minimum t-score on academic achievement was 35.42 and the maximum 76.79. It is also indicated that the scores were skewed to the positive direction (.58), an indication that most of the respondents' performance was low. As regards kurtosis, the coefficient score was -.34 which indicated that the distribution was slightly platykurtic. The scores were thus normally distributed but spread out about the mean. Additionally, the table shows that raw scores were converted to standardized T-scores with a mean of 50 and a standard deviation of 10.

Table 8
Descriptive Statistics of Academic Achievement T Scores by School Type

Type of school	N	Min	Max	Range	M	SD
BB	38	49.90	64.38	14.48	61.60	3.24
GB	36	47.83	76.79	28.96	67.43	8.74
Co-D	188	35.42	47.83	12.41	41.75	3.77
Co-B	116	49.90	60.24	10.34	54.16	3.11
Total	378	35.42	76.79	41.37	50.00	10.00

Note. N = 378. M = mean; SD = standard deviation; BB = Boys Boarding; GB = Girls Boarding; Co-D = Co-educational Day; Co-B = Co-educational Boarding

The lowest minimum t-score (35.42) was recorded in co-educational day school while the highest minimum t-score (49.90) was recorded in a boys' boarding and co-educational boarding schools' category. On the other hand, the lowest maximum t-score was recorded in co-educational school and the highest minimum score from a boys boarding category. Girls boarding category got the highest mean score of 67.43 ($SD=3.77$, Range=28.96), followed by boys boarding category ($M=61.60$, $SD=3.24$, Range=14.48). Third on the list were the co-educational boarding schools and lastly co-educational day schools with means of 54.16 ($SD=3.11$, Range=10.34) and 41.75 ($SD=3.77$, Range=12.41) respectively.

Table 9

Descriptive Statistics of Academic Achievement T Scores by School's Residential Status

SRS	N	Min	Max	Range	M	SD
DS	188	35.42	47.83	12.41	44.38	3.77
BS	190	47.83	76.79	41.37	55.56	9.13
Total	378	35.42	76.79	41.37	50.00	10.00

Note. N = 378. SRS = school residential status; M = mean; SD = standard deviation; DS = day schools; BS = boarding schools

The findings indicated that the lowest minimum score of 35.42 was obtained in the day school category as compared to the highest minimum score of 47.83 in the boarding school category. On the other hand, the lowest maximum score of 47.83 was obtained from a day school while the highest maximum score of 76.79 was from a boarding school category. The average mean for academic achievement was higher in boarding school (M=55.56, SD=9.13) as contrasted to day school (M=44.38, SD=3.77).

Table 10

Academic Achievement Levels

Ac Ach levels	Frequency	Percent
Low	69	18.3
Moderate	237	62.7
High	72	19.0
Total	378	100.0

Note. N = 378. Ac Ach = academic achievement

The obtained t-scores were categorized into three such that; those with scores below 40 as low, between 41 to 59 as average and those with over 60 as high. 237 (62.7%) of all respondents had an average level of academic achievement. While 69 (18.3%) had a high level, 72 (19%) obtained low level of academic achievement.

XV. Discussion of the Results

The findings presented indicated a statistically significant positive correlation between coping strategies and academic achievement ($r(376) = .33, p < 0.01$). The implication is that; better mastery of coping strategies leads to a corresponding increase in academic achievement. Further research was conducted to find out the individual relationship between the dimensions of coping strategies and academic achievement. All the four subscales of coping strategies had a positive and significant correlation with academic achievement. The highest correlation was between emotional focused coping and academic achievement while the lowest significant correlation was between problem focused coping and academic achievement.

The findings of this objective are supported by the expectancy-value theory guiding the current study (Eccles et al., 1983). Optimistic students possibly invest in coping strategies because of the value they anticipate from academic work. A learner takes deliberate steps to eliminate threats that inhibit the attainment of academic goals. Some will manage distressful emotions impeding their academic goals while others will seek help from teachers, parents and fellow learners. Finally, some learners will distract themselves from thinking about a stressor that blocks their pursuit of academic goals.

These findings were in agreement with those obtained by Cao et al. (2021) in a study of coping strategies and social sustainability resources on academic pressures. The study was carried out among Chinese international students within a host country, to determine whether the coping strategies utilized depend on their culture of origin or the context of the host. Using semi-structured interviews in a qualitative research, a range of academic stressors were identified and ranked on their frequency of occurrence. It was established that in order to deal with the identified stressors, the participants utilized a variety of coping strategies and social support systems. For academic competency challenges, a majority of participants utilized problem-focused coping strategies but preferred tolerance coping to overcome other academic stressors.

Another study that supported the findings of the current study was done by Meneghel et al. (2019), on a quest to promote academic resilience and performance through coping strategies. In a two phase study of 185 and 780 participants, the influence of coping strategies on academic satisfaction and performance among Spanish university respondents was established. The distinctive role of a variety of coping strategies was confirmed in strengthening participants' resilience and indicating this relationship towards academic performance.

However, not all studies supported the significance of coping strategies in predicting academic achievement. A correlational study by Ogoma (2020) sought to examine the role of coping strategies in alleviating burnout, which in turn boosts academic performance amongst medical trainees. Self-report revealed that problem-focused coping reduced the prevalence of burnout while avoidant and emotion-focused coping made it worse.

Further, when adequate coping strategies were used, students' burnout was reduced, consequently leading to better academic outcomes. However, the three distinctions of coping strategies had divergent dimensions of reducing burnout for academic performance.

To conclude, the findings of the above discussion support that various modes of coping are significantly linked to academic achievement. The findings are supported across cultural contexts, age and school setting. Learners should invest in coping strategies in order to overcome huddles that impede their academic achievement. In absence of the effort to cope, learners are likely to be overwhelmed by foreseen and perceived obstacles, thus giving up on the pursuit of academic goals. Similarly, significant team players should be willing to offer social support whenever an opportunity arises.

Qualitative Data Analysis

Table 13

Summary of the Qualitative Analysis Themes on Coping Strategies

Major Coping Strategies Themes	Girls	Boys	Total
Help-seeking	3 (30%)	5 (50%)	8 (80%)
Avoidance	2 (20%)		2 (20%)
Total	5 (50%)	5 (50%)	10 (100%)

From the above responses, more than half of the respondents had good coping skills. From Stage-Environment Fit Theory (Eccles & Midgley, 1989), the school environment plays a key role towards academic performance of a student. The theory asserts that any behaviour portrayed by a student is as a result of how well the student's interests, capability, and features are aligned to the present social environment. Where there is a perfect match between behaviour and student's interest and capability, the behaviour is geared towards the highest possible level. Any obstacle in between dilutes the student's motivation, especially when the environment goes against the interest of the students. The higher the difference between the environment and the student's interest the lower the motivation to achieve a set goal.

Majority of the respondents who were interviewed portrayed good coping skills (help seeking), thus explaining the quantitative results where the coping strategies mean was above average. It also explains why coping strategies positively influenced academic outcomes. The qualitative findings agree with the findings from previous studies done. For instance, Vizoso et al. (2018) established that adaptive coping positively influences the students' academic performance, moderated by academic engagement which was responsible for increasing student's stamina. Carnicer et al. (2019) established that the category of students who practiced problem focused coping skills did better in their academic performance than those who engaged cognitive avoidant coping.

In India, Chandra (2020) established that stress caught up with the sampled students because of taking the lessons online, fear of failing the online examinations and the isolation of studying away from the familiar school environment. As a result, most students had embraced problem focused coping to creatively take up technical skills that would enable them keep up with the new mode of learning. These worked for them and were able to improve academic performance. In their study, Nurunnabi et al. (2020) established that psychological pressure and anxiety prompted the use of survival tactics and coping strategies such as emotion focused coping, mental support and social support focused coping. Balaji et al. (2019) established that stress and anxiety implicated negatively on academic performance. Freire et al. (2020) found that when students combined at least three of the identified coping approaches, there was a higher likelihood of waxing probability towards self-efficacy and improved performance. In Kenya, Ogoma (2020) the students who adopted problem-focused coping skills had lower instances of exhaustion and stress while those who adopted avoidance to difficult situations increased instances of exhaustion and stress. Those who adopted coping strategies, their level of exhaustion and stress reduced resulting in increased academic outcomes. In conclusion, it is notable that by adopting the right coping strategies, like the ones established in our qualitative study described above, academic performance of the students will improve.

XVI. Conclusions and Implications

The results verified the existence of a relationship between coping strategies in predicting academic achievement. The implication is that teachers and parents should develop ways of arousing students' desire in academic pursuit for its value and relevance in career growth. When learners are motivated to work hard, achievement of the academic goals is a likely indicator of a spiral effect of expecting positive results. Findings supported the view that students' coping strategies may explain the differences observed in academic achievement. All the four subscales of coping strategies had a positive and significant correlation with academic achievement. Students who invest in emotion-focused coping during studies are more likely to overcome academic set-backs as compared to those who invest in social-support focused and avoidant coping. Problem-focused coping is the least effective in dealing with academic challenges among learners.

XVII. Recommendations

Based on the findings of this research, the following are the recommendations for policy and future research.

XVIII. Policy Recommendations

1. Learners ought to be furnished with strategies of coping with challenges so that both anticipated and unforeseen circumstances do not deter them from achieving desired academic goals.
2. Learners' social support from significant individuals was found to be a strong influence in coping strategies. The school administration through guidance and counselling should ensure that learners are within a strong support system with schoolmates, teachers and parents. This will not only provide remedial but also protective measures against academic challenges. More so, peer teaching, group discussions and collaborative authentic tasks should be encouraged among study habits.

XIX. Recommendations for Future Research

This study focused on coping strategies as a motivational construct predicting academic achievement among form two students in Nyandarua County. Future researchers could consider other psychological aspects such as intelligence, interests, beliefs, emotions and attitudes, against academic achievement. For comparison, the study could be corroborated in other counties, cutting across primary, secondary and tertiary levels.

References

- [1]. Akinyode, B. F., & Khan, T. H. (2018). Step By Step Approach For Qualitative Data Analysis. *International Journal Of Built Environment And Sustainability*, 5(3). <https://doi.org/10.11113/ijbes.V5.N3.267>
- [2]. Arora, S., Chaudhary, P., & Singh, R. (2021). Impact Of Corona Virus And Online Exam Anxiety On Self-Efficacy: The Moderating Role Of Coping Strategy. *Interactive Technology And Smart Education*. <https://doi.org/10.1108/ITSE-08-2020-0158/Full/Html>
- [3]. Atkinson, J. W. (1964). *An Introduction To Motivation*. Princeton, N J: Van Nostrand
- [4]. Balaji, N., Murthy, P.S., Naveen, K., & Chaudhury, S. (2019). Perceived Stress, Anxiety, And Coping Strategies In Medical And Engineering During Examinations. *Industrial Psychiatry Journal*, 28(1), 86-97. <https://doi.org/10.4103/Ipj.7018>
- [5]. Braun, V., & Clarke, V. (2012, January). *Thematic Analysis*. Researchgate; American Psychological Association. https://www.researchgate.net/publication/269930410_Thematic_Analysis
- [6]. Cao, C., Zhu, C., & Meng, Q. (2021). Chinese International Students Coping Strategies, Social Support Resources In Response To Academic Stressors: Does Heritage Culture Or Host Context Matter? *Current Psychology*, 40, 242-252. <https://doi.org/10.1111/J.1464-0597.1997.Tb01087.X>
- [7]. Carnicer, J., Calderon, C., & Garrido, D. (2019). Stress, Coping Strategies And Academic Achievement In Teacher Education Students. *European Journal Of Teacher Education*, 42(3), 375-390. <http://doi.org/10.1080/02619768.2019.1576629>
- [8]. Carver, C. S. (1997). You Want To Measure Coping But Your Protocol's Too Long: Consider The Brief COPE. *International Journal Of Behavioural Medicine*, 4, 92-100. <https://doi.org/10.1207/S15327558ijbm04016>
- [9]. Chandra, Y. (2020). Online Education During COVID-19: Perception Of Academic Stress And Emotional Intelligence Coping Strategies Among College Students. *Asian Education And Development Studies*, ISSN: 2046-3162