

To cite this article: Joash Onyango Oyugi, Jane Amunga and Joseph Masinde (2023). PARTICIPATION IN BODA BODA OPERATIONS AND ACADEMIC PERFORMANCE: THE CASE OF STUDENTS IN PUBLIC DAY SECONDARY SCHOOLS IN UGUNJA SUB-COUNTY, KENYA, International Journal of Education and Social Science Research (IJESSR) 6 (5): 51-63 Article No. 836, Sub Id 1303

## **PARTICIPATION IN BODA BODA OPERATIONS AND ACADEMIC PERFORMANCE: THE CASE OF STUDENTS IN PUBLIC DAY SECONDARY SCHOOLS IN UGUNJA SUB- COUNTY, KENYA**

**Joash Onyango Oyugi<sup>1</sup>, Jane Amunga<sup>2</sup> and Joseph Masinde<sup>3</sup>**

<sup>1</sup>Department of Education Management and Curriculum Studies, School of Education, Mount Kenya University, Kenya

<sup>2</sup>Department of Educational Foundations, Psychology, and Management, School of Education and Social Sciences, Kaimosi Friends University, Kenya

<sup>3</sup>Department of Education and Technology, School of Education, Murang'a University, Kenya

DOI: <https://doi.org/10.37500/IJESSR.2023.6505>

### **ABSTRACT**

Education is a critical component of social and economic growth in any society. Many countries worldwide strive to provide quality education to their citizens. However, the high cost of education makes some countries only offer partial financial support to education at the secondary school level. This has consequently led to increased pressure on economic and other resources as individuals strive to meet the other education costs. Students in developing countries participate in activities such as Boda Boda Operations as alternative ways to finance their education. This research sought to establish the relationship between students' participation in Boda Boda Operations and their academic performance in public day secondary schools in Ugunja sub-county, Kenya. The objective of this study was to establish the relationship between students' participation in Boda Boda operations and their academic performance in public day secondary schools in Ugunja Sub-County, Kenya. Social conflict theory was used as a basis for this research. A descriptive survey research design was used to execute the study. The target population was the 1498 students in public day secondary schools within the research area who participated in Boda Boda operations regularly. The sample comprised 306 respondents, who were selected by snowball sampling technique. The data was collected using two instruments; a questionnaire for independent variables and a document analysis guide for the dependent variable. Data were analyzed descriptively using means, standard deviations, and percentages. The hypothesis was tested inferentially at a 0.05 alpha level of significance using Bivariate Pearson's Correlation. The r values Boda Boda Operations was -0.809. Results revealed a significant negative relationship between the Boda Boda operations the sampled students engaged in and their academic performance in the study area. It is recommended that The Ministry of Education should increase capitation towards funding for public day secondary school education so that students from poor backgrounds do not absent themselves from school to engage in BBO for purposes of financing their education, as this negatively affects their academic performance.

**KEYWORDS:** Boda-boda, public day secondary school, students, academic performance

## INTRODUCTION

Education is a critical component of social and economic growth in any society (World Bank, 1998) cited in World Bank (2018) and connects significantly to all the aspects of social, political, and economic development in all countries across the globe (Abdullahi et al., 2015). This is because education enhances productivity, reduces poverty, eliminates hunger, promotes gender equality, reduces mortality rates, and promotes economic progression (Amdany, 2017). Globally, in most countries, primary and secondary education are considered basic for every child between 6 and 18 (UNESCO, 2021), and thus, these education sub-sectors are fully funded. The government also partially or fully supports higher education in government-run colleges and universities based on individual students' skills and economic backgrounds in these countries. This explains the high academic performance rate in these countries.

Many countries worldwide strive to provide quality education to their citizens. However, the high cost of education makes some countries only offer partial financial support to education at the secondary school level. According to UNESCO (2015), the demand for secondary school education rose by 20% in Sub-Saharan Africa between 2010 and 2014. This has consequently increased pressure on economic and other resources as individuals strive to meet the other education costs. In such cases, students have to look for ways and means to finance their education. Most students in developed countries participate in Boda Boda operations to raise funds for education and supplement family income. Although some do it for leisure or to explore how it is done (Paul et al., 2019), due to financial constraints, most students in developing countries participate in Boda Boda Operations to supplement government funding. Ehebrecht et al. (2018) describe Boda Boda as a bicycle or motorcycle used as a taxi. According to Ehebrecht et al. (2018), the Boda Boda was established as a means of public transport to address the inaccessibility of large vehicles in some areas. Globally, motorcycles are the cheapest and the most flexible means of transport. For instance, in Asian urban centres, Boda Boda is widely used for transport (Satiennam et al., 2016). Also, in West and Central Africa, Boda Boda transport came to be commonly spread in Niger, Cameroon, Nigeria, and Ghana in the 1980s (Baliarsingh et al., 2018). In Nigeria, they were called 'Okada' (additionally called inaga or achaba in reference to the business involving motorbikes). In the Eastern African Region, Kenya and Uganda referred to using the bicycle as a mode of public transport as 'Boda Boda' during the 1960s since it was used as an easy movement across the Kenya-Uganda border in Busia and Malaba (Olawo et al., 2014).

In Kenya, secondary education funding is an initiative of the government, private individuals, and non-governmental organisations (that support students from underprivileged backgrounds to pursue an education). The Government of Kenya (GoK) has been taking steps to make quality basic education fully state-funded. The right to free basic education was enshrined by law in 2003 and

expanded to include secondary schools under the new constitution. The introduction of Free Day Secondary Education (FDSE) in 2008, also referred to as Subsidized Secondary Education, was meant to relieve the poor and marginalized groups, and enable them to access education after it was realised that they were likely to terminate schooling at the end of the free primary school cycle (Amunga & Ondigi, 2016). However, many public day secondary schools still find it challenging to survive on the fees from the government since it does not provide subsistence and students meals. This has made it necessary for most public day secondary schools to charge fees for lunch and other programmes, whose costs the parents must meet. Parents have constantly faulted schools for introducing unnecessary levies, while head teachers blame the high cost of living and delays by the government in disbursing funds. Parents' inability to meet all their children's educational needs, the pressure to satisfy certain needs, peer influence, and the need to meet certain costs of their education and help their family members (Nthambi & Orodho, 2015) have made some Public Day Secondary School (PDSS) students engage in Boda Boda Operation. This happens both during and outside school-going hours.

Studies on the effect of boda boda operations on academic performance have yielded conflicting findings. Some studies have established that youth's participation in Boda Boda Operations promotes their academic performance (Olawa et al., 2014), while others show that participation in Boda Boda Operations leads to dismal performance (Ako et al., 2014; Nthambi and Orodho, 2015; Boonchooduang et al., 2021; Keino, 2020; Nyagwui et al., 2016; Amdany, 2017; Paul et al., 2019; Vieira et al., 2019; Abdullahi et al., 2015; Udoh et al., 2013; Ligeve et al., 2012; & Omwenga, 2015). A study by Olawa et al. (2014) carried out in Kisumu found that Boda Boda riding as a business tremendously improved many youths' economic empowerment and employment provision. The study established that Boda Boda operations economically empowered the youth to meet some of their education costs. Thus Olawa et al. argued that Boda Boda operations positively contribute to the success rates among the students who participate in it as it empowers them economically. On the contrary, a study by Amdany (2017) established that students who participate in socio-economic activities (including motorcycling) tend to achieve less in their educational goals. In the study, which involved 573 respondents (students, teachers, and educational officers), Amdany showed that the students who participate in these activities take most of the school time, hence absenteeism and low academic performance. Similarly, a study by Keino et al. (2020) carried out in Homa Bay County established that the Boda Boda operations significantly influence school dropouts, affecting academic performance negatively. However, this study was conducted among primary school pupils only and focused on the girl child, disregarding the boy child.

According to the data obtained from the Ugunja Sub County Director or Education office, a total of 1,498 out of the 5,589 public day secondary school students still participate in these activities in Ugunja Sub County, Kenya (source: Sub County Education Office). This is a significant number because it represents 26.80% of the total population of students from this sub-county. Also, the academic performance in public day secondary schools for 2016, 2017, 2018, and 2019 has been

3.75, 3.62, 3.7, and 4.2, respectively (source: Sub County Education Office). The performance has never passed D+ in the last four years. This dismal performance is worrying, and the global aims of education are unlikely to be achieved if the trend is not addressed. The achievement of Universal Basic Education (UBE) as outlined in Vision 2030 as well as Sustainable Development Goal (SDGs), number 4 on which other goals are hunged will remain a mirage Sustainable Development Goals (2021). This study was thus necessitated by the need to investigate how students' participation in BBO affected academic performance.

### **Objective of the study**

The objective of this study was to establish the effect of students' participation in Boda Boda operations on their academic performance in public day secondary schools in Ugunja Sub-County, Kenya.

### **Research hypothesis**

A null hypothesis was formulated from the objective mentioned above, which was tested statistically at a 0.05 alpha level of significance.

*H<sub>0</sub>*: There is no statistically significant relationship between students' participation in Boda Boda operations and their academic performance in public day secondary schools in Ugunja Sub-County, Kenya.

## **THEORETICAL FRAMEWORK**

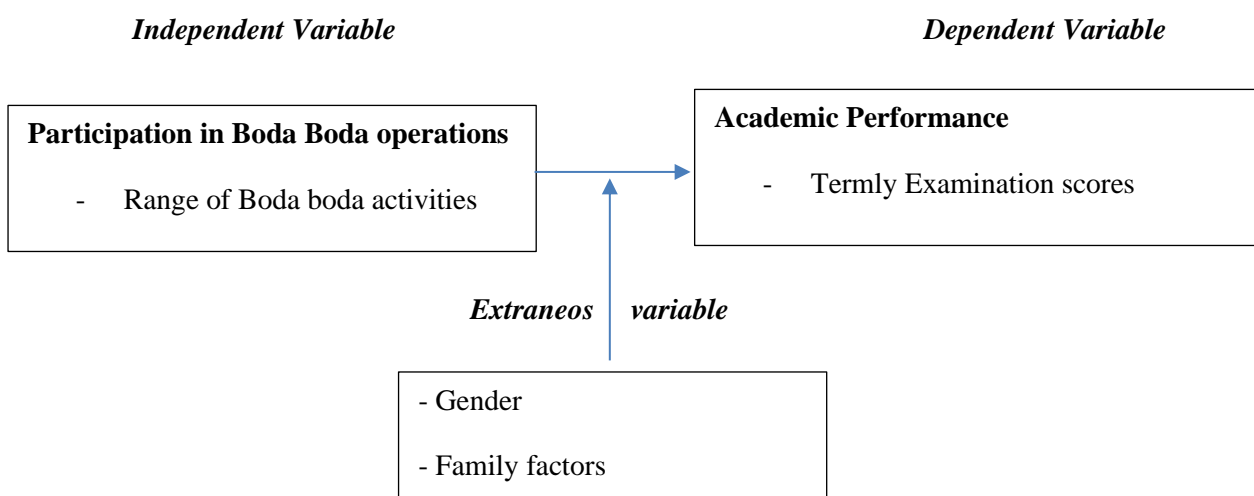
### ***Conflict Theory***

This research is supported by the Conflict theory developed by Ralf Dahrendorf and proposed by Karl Marx, as discussed by Umanilo, Pratiwi, and Indah (2019). The theory asserts that society is constantly conflicted due to the never-ending competition for limited resources. Individuals and groups in society interact based on conflict rather than consensus. These individuals and groups try to pursue their interests, creating social conflict. According to Umanilo et al. (2019), conflict theory is based on three tenets. The first is that society comprises different groups and individuals competing for resources. Secondly, although society might portray a sense of cooperation, social groups have a continual power struggle as they strive to achieve their interests because groups of individuals control specific resources and means of production. Thirdly, a few individuals possessing economic resources strive to protect and hoard them, while those without the resources also strive to obtain them; hence the conflict is perpetuated by the struggle between the rich and the poor. According to Marx, society comprises individuals belonging to different classes and must compete for social, political, and material resources such as employment, food, education, housing, and leisure time (Kühne, 2020). Social institutions like education, government, and religion reflect this conflict as social stratification and inequality manifest in institutions. Certain organisations and institutions use their influence and power to obtain and keep more resources than others. Because of these, students struggle to acquire these resources as they juggle education and engage in BBO, potentially

threatening their academic achievements. This theory was deemed relevant for the study as it explains the forces that drive students to engage in Boda Boda operation and the possible relationship between students' participation in Boda Boda Operations and their academic performance.

### Conceptual framework

A conceptual framework explains the relationship among the variables. Figure 1 shows that the independent variable affects the dependent variable, while the effect is mediated by the extraneous variable.



**Figure 1: Conceptual Framework showing the relationship among variables**

The conceptual framework shows how Boda Boda Operations affect students' academic performance in public day secondary schools in Ugunja Sub-County, Kenya. These operations are connecting riders to customers, selling, repairing, connecting to repairs, selling spares, repairing, motorcycling, marketing, selling accessories, selling fuel, and connecting Boda Boda operators to clients; the outcome of this research was measured regarding exam performance.

The relationship between the independent and dependent variables is mediated by the extraneous variables. These are gender and family factors that might have contributed significantly since they might affect students' academic performance in secondary schools in Ugunja Sub-County, Kenya. The impact of these factors was minimised by the researcher as follows. The researcher concentrated on both genders but controlled for gender statistically. The impact of the family background was minimised by selecting the public day secondary schools because most parents of students in these schools have relatively lower incomes. These variables were believed to have no effect on the proposed research findings because of these steps.

## MATERIALS AND METHOD

### Research Design

According to Achoka et al. (2018), a research design is how the research data is collected and analyzed. A descriptive survey research design was used to execute the study via questionnaires and a Document Analysis Guide to extract data from the respondents. This design was appropriate for this study because it aided the collection of quantitative data on the boda boda operations engaged and academic performance. Moreover, the design was economical and faster in data collection, which could not have been possible with the other designs. The quantitative data were collected from a sample of 306 students participating in Boda Boda operations.

### Participants

This study targeted all the 1498 students from public day secondary schools in Ugunja Sub County, Kenya, who engaged in IGAs. These students were targeted as they were best placed to give information to address the research objectives adequately.

The criteria of Krejcie and Morgan's (1970) formula below were used to determine the required number of respondents;

$$S = \frac{X^2 NP(1 - P)}{d^2(N - 1) + X^2 P(1 - P)}$$

*Where* = the table value of chi-square for 1 degree of freedom at the desired confidence level (3.841),

*N* = the population size,

*P* = the population proportion (assumed to be .50 since this would provide the maximum sample size),

*d* = the degree of accuracy expressed as a proportion (.05)

Substituting N with 1498, the study's target population and the result rounded off to the nearest whole number, a sample size (S) of 306 students who participated in BBO in the research area were used as respondents. This number was sufficient to represent the target population (Krejcie and Morgan, 1970). The researcher used snowball sampling to arrive at this sample from the target population because of the sensitivity of the research topic. The researcher, therefore, identified a few student meeting the inclusion/exclusion criteria and used them to identify and trace the others. Purposive sampling was used to identify the respective schools (where the sampled students went) to collect data on their academic performance.

### Research Instruments

Two instruments were used to collect the study's raw data. These were a questionnaire and a Document Analysis Guide (DAG). Apart from the introduction section, the questionnaire had a section with 14 positively-worded statements seeking information about respondents' participation in Boda Boda Operations in the research area on a 5-point Likert scale ranging from Strongly Agree (1), to Strongly Disagree (5) to collect data used to address the research objective. The questionnaire was used since participation in IGAs is a sensitive topic, which calls for a self-reporting instrument. It is also inexpensive to administer to a larger respondent population over a short period. Additionally, the DAG was used to capture data on academic performance by scrutinizing the students' termly academic progress reports from the respective Directors of Studies (DOSs). The researcher filled in the details in person.

### Data Analysis

Data analysis refers to synthesizing raw data to produce meaningful information through interpretation (Mugenda & Mugenda, 2003). Quantitative data obtained from the Questionnaire and DAG were first analysed using descriptive statistics, namely, means, percentages, and standard deviations, using Statistical Package for Social Sciences (SPSS) Version 23. The hypothesis was then tested statistically at a 0.05 alpha level of significance using inferential statistics, namely Bivariate Pearson's Correlation. The results have been displayed in tables.

## RESULTS

### Demographic Data

Secondary schools are in the age range of 14-17 years. However, there are also those who are out of this age bracket. The study thus established participation in Boda boda operations by age and gender since the practice also involved both girls and boys. The results of this analysis are as displayed in Table 1.

**Table 1: Age and Gender of Participants**

AGE	FEMALE	MALE	TOTAL
14-16	47(15.4%)	87 (28.4%)	134 (43.8%)
17-19	65 (21.2%)	95 (31.04%)	160 (52.3%)
Over 19	7 (2.3%)	5 (1.6%)	12 (3.9%)
<b>TOTAL</b>	119 (38.9%)	187 (61.1)	306 (100%)

The table reveals that of the 306 respondents, 119 (38.9%) were female, while 187(61.1%) were male. Generally. There are more males than females in boda boda operations. The table further shows that 134 (43.8%) respondents were between 14 and 16 years, 160 (52.3%) were between 17 and 19 years,

and 12 (3.9%) were above 19 years. This shows there were more males than females, while most respondents were in the 17-19 age bracket.

**Participation in Boda Boda Operations**

The study sought to establish the kind of Boda Boda Operations students in public day secondary schools in Ugunja Sub-County, Kenya, participated in. Participants were asked to state the extent to which they agreed that they participated in the 14 activities listed during school hours. Table 2 shows the summary of the responses of the sampled respondents.

**Table 2: Respondents' participation in Boda boda operations**

STATEMENT	SA	A	U	D	SD	TOTAL
I ride Boda Boda	120	98	0	50	38	306
I connect motorists and their customers	122	74	0	67	43	306
I sell motorcycle spare parts	102	81	1	59	63	306
I repair motorcycles	110	75	0	57	59	301
I connect motorcyclists to their repair shops	75	98	0	66	67	306
I sell riders' costumes	95	78	0	65	68	306
I market Boda Boda products	92	81	0	60	73	306
I use Boda Boda for self-transport	101	75	0	67	63	306
I sell fuel to motorists	106	76	3	61	60	306
I transport Boda Boda products	80	98	0	66	62	306
I load merchandise to motorbikes	101	78	0	74	53	306
I sell motorbikes	97	91	0	60	57	305
I connect buyers and sellers of motor accessories	96	70	0	70	70	306
I connect the Boda Boda motorists to motorbike dealers	95	81	0	60	70	306

LEGEND: SA=Strongly Agree; A=Agree; U= Undecided; D= Disagree and SD=Strongly Disagree  
 From the table, the respondents were provided with a total of 14 statements, with the responses ranked on a five-point Likert scale ranging from Strongly Agree (S.A.) to Strongly Disagree (S.D.). The table indicates that most of the responses were affirmative of the statements in the section, which implies they participated in some or all the Boda Boda Operations mentioned therein.

From the findings, 218 (71.2%) of the respondents agreed that they participated in Boda boda riding, against 88(28.8%) who disagreed. This shows that this is a popular activity engaged in by most of the students, and the fact that this happens during school hours compromises academic performance. From the second statement, 196 (64.1%) agreed that they connected motorists and their customers, while only 110 (35.9%) disagreed. This shows that many students were affected academically by connecting the riders to their customers. On the third statement, 183 (59.8%) respondents agreed that they indeed



sell motorcycles, while only 122 (39.8%) disagreed. This trend indicates that more than half of the students engaged in selling motorcycle spare parts, which would have compromised their academic performance. In the fourth statement, 185 (60.5%) confirmed that they repair motorcycles. This is against 116 (37.9%) who disagreed. This trend is almost similar to the selling of spare parts above. On the fifth, sixth, and seventh statements, 173 (56.5%) respondents agreed that they connected motorcyclists to their repair shops, sold riders' costumes, and marketed Boda Boda products, while only 133 (43.6%) disagreed. Although the pattern of response shows that these factors moderately affected the respondents' academic performance, the effects of these factors should not be overlooked. Also, 176 (57.5%) students agreed that they used Boda Boda for self-transport, against only 130 (42.4%) who disagreed. On the ninth statement, 182 (59.5%) respondents agreed that they sold fuel to motorists, while only 121 (39.5%) affirmed negative. From the tenth factor, 178 (58%) of the respondents confirmed that they transported motorcycling products, while 128 (41%) disagreed with the statement. The trend was almost the same in the eleventh statement, in which 179 (58.5%) said they loaded merchandise onto motorcycles, and 127 (41.5%) indicated they did not take part in this activity. Additionally, 188 (61.4%) respondents agreed that they sell motorbikes, while only 117 (38.2%) did not. This trend was almost similar to the responses to most of the statements in the tool. Also, 166 (54.2%) participants confirmed that they connected buyers and sellers of motorcycle accessories, while (45.7%) disagreed. From the response, connecting the buyers and sellers of motorcycle accessories had the least participants. This indicates that this factor had the least effect on the student's academic performance. Finally, 176 (57.5%) students agreed that they connected the motorcyclists to the motor dealers, while 130 (42.4%) disagreed. This case is similar to Boda Boda for self-transport because it also has a nearly average number of participants.

These results can also be attributed to the fact that students found connecting Boda Boda riders to their clients and actual riding of Boda Boda to be the Boda Boda operation activities that were either easier to do, had no strict legal requirements, or promised higher rates of income since the activities that had the greatest number of participants. It also implies that because other Boda Boda Operations such as selling motorcycle spare parts, repairing motorcycles, connecting motorcyclists to their repair shops, selling riders' costumes, using Boda Boda for self-transport, marketing Boda Boda products, selling fuel to motorists, transporting Boda Boda products, loading merchandise to motorbikes, selling motorbikes, and connecting buyers and sellers/dealers, also received more than half the participants scoring strongly agree and agree, they equally have a significant relationship with their academic performance.

### **The relationship between Boda Boda operations and academic performance**

The scores of students engaged in Boda Boda Operations were obtained using DAG and analysed descriptively to generate Means and Standard Deviations (S.D). The outcomes here were mean and standard deviations for the Boda Boda Operation part of the questionnaire, which were 75.02 and 3.9576, respectively, while the means scores and standard deviation for their academic performance were 29.39 and 8.9395.

To establish the relationship between students' participation in Boda Boda operations and their academic performance in public day secondary schools in Ugunja Sub-County, Kenya, the null hypothesis was formulated thus:

*H<sub>0</sub>: There is no statistically significant relationship between students' participation in Boda Boda Operations and their academic performance in public day secondary schools in Ugunja Sub-County, Kenya.*

This null hypothesis was tested statistically using the Bivariate Pearson's Correlation (BPC). This parametric test was performed on all the sampled students' responses on the questionnaire on participation in Boda boda operations as the independent variable and their academic performance scores as captured in the DAG as the dependent variable. The outcome of this correlation analysis is presented in Table 3.

**Table 3: Correlation between Boda Boda Operations Participation and A.P. Scores**

VARIABLE	Boda Boda Operations participation Score	AP Score
Boda Boda Operations participation Score	-	-0.809*
A.P. Score	-0.809*	-

\*  $p < 0.001, \alpha = 0.05$

Table 3 indicates that BPC yielded a strong negative association between students' participation in Boda Boda Operations' scores and their academic performance scores [ $r = -.809, p < .001$  at  $\alpha = .05$ ]. This was because the Pearson's correlation coefficient for BBO and A.P. scores obtained is closer to -1 than to zero, hence the description of the association as 'strong.' Additionally, the table also reveals that the sign of the correlation coefficient ( $r$ ) is negative, which implies that a respondent who obtained high scores in the Boda Boda Operations part of the questionnaire recorded low scores in the DAG, an indicator of low academic performance and vice-versa. These inferential statistics provide evidence that refutes the assertions of the null hypothesis. For this reason,  $H_0$  was rejected. Alternatively, it can be asserted that a strong negative relationship exists between students' participation in Boda Boda operations and their academic performance in public day secondary schools in Ugunja Sub-County, Kenya. The negative value of the correlation coefficient implies that the more students engaged in

Boda Boda operations, the lower their academic performance. It can be argued that students' lost time engaging in Boda Boda operations cannot be recovered.

### **DISCUSSION**

The findings in this study are similar to those of Boonchooduang et al. (2021), which found that students who take part in motorcycling underachieved academically more than those who did not. Through a cross-sectional survey design, the study conducted in Chiang Mai, Thailand, involved 4,372 adolescent Boda Boda riders as respondents. The findings of this study also agree with those of Keino (2020), which established that participation in Boda Boda operations significantly influences school dropout cases among the affected students, consequently lowering their academic performance. The descriptive survey by Keino (2020) used both learners, Boda Boda operators, and teachers as respondents to find out how Boda Boda operations influence the school dropout rate and how it does. However, the findings in the study differ from those of Olawo et al. (2014), who posited that Boda Boda operations positively contribute to the success rates among the youth who participate in it. Olawo et al. (2014) argue that youth can raise their fees and attend school afterward by engaging in Boda Boda operations. The study by Olawo et al. (2014) had a different result from the just completed one because of the difference in location and the respondents used. Additionally, the study indicated that those participating in boda boda operations created time for their academic performance.

### **CONCLUSION**

Based on empirical evidence arising from data that were collected in this descriptive survey and the subsequent statistical testing of the null hypothesis of this study, it is concluded that there was a statistically significant negative relationship between Boda Boda Operations and the academic performance of students in public day secondary schools in Ugunja Sub-County, Kenya. This revelation confirms that these students indeed participate in Boda Boda Operations, which is negatively associated with their academic performance. It could also be argued that the three had the greatest effect on students' academic performance in public day secondary school.

### **RECOMMENDATIONS**

As it has been found in this study, there is a strong negative relationship between students' participation in BBO and their academic performance in public day secondary schools in Ugunja Sub-County, Kenya. Based on these findings, several recommendations are hereby made to key stakeholders in the education sector for policy action. This is especially so because their implications directly concern the problem that necessitated this study in the first place.

The findings from this study have implications for policymakers. The Ministry of Education needs to increase capitation towards funding for public day secondary school education so that students from poor backgrounds do not absent themselves from school in the name of engaging in BBO for purposes of financing their education, as this negatively affects their academic performance.

**CONFLICT OF INTEREST**

No conflict of interest by the authors

**REFERENCES**

1. Achoka, J. S. K., Wakwabubi, S., Shiundu, J. O., & Ejakait, E. (2018). Students' Socio-economic Status and Enrolment in Public Secondary Schools in Kenya. *IJASSH*.
2. Abdullahi, H. A., Mlozi, M. R. S., & Nzalayaimisi, G. K. (2015). Determinants of students' academic achievement in agricultural sciences: A case study of secondary schools in Katsina State, Nigeria. *African Educational Research Journal*, 3(1), 80-88.
3. Ako, T. A., Onoduku, U. S., Oke, S. A., Idris, F. N., Umar, A. N., Ahmed, A. A., & Abba, F. M. (2014). Environmental Effects of Sand and Gravel Mining on Land and Soil in Luku, North Central Nigeria.
4. Amdany, E. J. (2017). Boy-Child Participation and Retention in Public Secondary Schools: The Role of Socio-economic Factors with Examples from Baringo County, Kenya.
5. Amunga, J., & Ondigi, B. (2016). The Effect of User Charges on Access to Basic Education in Kenya. *International Journal of Advanced Engineering Research and Science (IJAERS)* 3, (3), 73-78.
6. Ehebrecht, D., Heinrichs, D., & Lenz, B. (2018). Motorcycle-taxis in sub-Saharan Africa: Current knowledge, implications for the debate on “informal” transport and research needs. *Journal of transport geography*, 69, 242-256.
7. Boonchooduang, N., Likhitweerawong, N., & Louthrenoo, O. (2021). Prevalence of unprotected motorcycle riding and its association with other risk behaviors among adolescents in Chiang Mai, Thailand. *Traffic injury prevention*, 22(1), 85-89.
8. Keino, K. J. (2020). *Influence of Motorcycle (Boda Boda) Business on Pupils' Dropout in Public Primary Schools in Rangwe Sub County, Homa-bay County, Kenya* (Doctoral dissertation, University of Nairobi).
9. Krejcie, R.V., & Morgan, D.W., (1970). Determining Sample Size for Research Activities. *Educational and Psychological Measurement*
10. Kühne, O. (2020). Landscape conflicts—a theoretical approach based on the three worlds theory of Karl Popper and the conflict theory of Ralf Dahrendorf, illustrated by the example of the energy system transformation in Germany. *Sustainability*, 12(17), 6772.
11. Ligeve, S. N., Poipoi, M. V., & Maragia, S. N. (2012). The Influence of Participation in Fishing activities on Academic Achievement of Primary School Pupils in Suba & Homabay Districts, Kenya. *An International Journal of Academic Research in Progressive Education and Development*, 1(3), 1-11.
12. Mugenda, O.M and Mugenda A.G. (2003). *Research methods: Quantitative and qualitative approaches*. Nairobi: African Centre for Technological studies, (ACTS).
13. Nthambi, M. V., & Orodho, J. A. (2015). Effects of Sand Harvesting on Environment and Educational Outcomes in Public Primary Schools in Kathiani Sub-County, Machakos County, Kenya. *Journal of Education and Practice*, 6(24), 88-97.

14. Nyagwui, A. E., Fredinah, N., Che, L. B., & Yulia, B. (2016). Motorcycle injury among secondary school students in the Tiko municipality, Cameroon. *Pan African medical journal*, 24(1).
15. Olawo, K. W., Ochieng, I., Ombok, O. B., & Achieng, F. (2014). The effect of increased investment in Boda Boda business on economic empowerment of people in Kisumu west district. *European Journal of Business and Management*, 6(39), 177-184.
16. Omwenga, P. C. (2015). The effect of child labour on academic achievement of primary school pupils: a case of Voi division of Voi district, Taita-Taveta County Kenya (Doctoral dissertation, Moi University).
17. Paul, A., Allison, R., & Dickay, A. (2019). Street Hawking Effect on Teenagers Educational Performance in Wukari Metropolis. *International Journal Of Innovative Research And Development*, 8(10). DOI: 10.24940/ijird/2019/v8/i10/oct19087
18. Satiennam, T., Jaensirisak, S., Satiennam, W., & Detdamrong, S. (2016). Potential for modal shift by passenger car and motorcycle users towards Bus Rapid Transit (BRT) in an Asian developing city. *IATSS Research*, 39(2), 121-129.
19. Sustainable Development Goal 4 (SDG 4). (2021). Sustainable Development Goal 4 (SDG 4) | Education within the 2030 Agenda for Sustainable Development. Retrieved 11 November 2021, from <https://sdg4education2030.org/the-goal>
20. Udoh, M. T., Achike, A. I., & Mkpado, M. (2013). Effects of Fishing Activities on the Academic Performance of Teenagers in Riverine Areas of Nigeria: Implications for Educational Development Policy in Nigeria. *Journal of Studies in Social Sciences*, 2(2).
21. Umanailo, M., Pratiwi, R. D., & Indah, F. P. S. (2019). Negative Impact of Industry on Society Using Ralph Dahrendorf's Conflict Theory. In *Proceedings of the International Conference on Industrial Engineering and Operations Management* (pp. 673-76).
22. UNESCO, G. (2015). Education for all 2000–2015: Achievements and challenges. *EFA Global Monitoring Report*, 500.
23. UNESCO. (2021). Education transforms lives. Retrieved 11 November 2021, from <https://en.unesco.org/themes/education>
24. Vieira, N. C., Moraes, S. C. D., & Nunes, Z. M. P. (2013). A study of fishing and educational level of young fishers on the Bonifácio Village, Bragança, Pará, Northern Coast of Brazil. *Boletim do Instituto de Pesca*, 39(2), 195-204.
25. World Bank. (2018). World Bank World Development Report 2018: Learning to Realize Education's Promise Washington, DC: World Bank, 2018. *Population and Development Review*, 44(2), 404-405.