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Relationship between Fishing Industry around Lake Victoria and Enrollment of Girls in Secondary Schools of Nyangoma Division, Siaya County, Kenya

By

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Research Article (DOI: http://doi.org/10.15580/GJER.2017.4.061317074)

Relationship between Fishing Industry around Lake Victoria and Enrollment of Girls in Secondary Schools of Nyangoma Division, Siaya County, Kenya

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ABSTRACT

The Sustainable Development Goals aimed at empowering women and achieving gender equity in education. In Kenyan the government emphasizes on girls’ education to bring it at par with that of the boys as stipulated in the Constitution of Kenya of 2010. This Research Article was generated from a study that examined the relationship between fishing industry around Lake Victoria and girls’ enrollment in the secondary schools of Nyangoma Division in Siaya County in Kenya. Purposive sampling was used to select 4 out of the 10 secondary schools in Nyangoma Division from which data was collected from 159 Form 3 and 4 students. Stratified random sampling technique was used to select 16 teachers. Descriptive survey research design was used in the study. Questionnaire was used for data collection. The Data was analyzed quantitatively using descriptive statistics like frequencies, percentages and pie-charts. Chi-square statistics was used to test the null hypothesis. The study showed that there was significant relationship between fishing industry and enrollment of girls in secondary school. The study recommended enforcement of child-labour laws in Kenya in order to help retain girls in schools as well as deter their engagement in the fishing industry.

Key Words: Fishing Industry, Enrollment, and Child Labour.

LIST OF ABBREVIATIONS / ACRONYMS

AIDS: Acquired Immune Deficiency Syndrome.
BMU: Beach Management Unit.
DRC: Democratic Republic of Congo.
EFA: Education for All.
FAO: Food Agricultural Organization.
FPE: Free Primary Education.
GER: Gross Enrollment Rate.
HIV: Human Immunodeficiency Virus.
ILO: International Labour Organization.
SDGs: Sustainable Development Goals.
SPSS: Statistical Package for Social Sciences.

1. INTRODUCTION

1.1 Background of the Study

Article 26 of United Nation Charter on Universal Declaration of Human Rights says education is a human right (United Nations, 1948). The 5th Education for All (EFA) goal reiterates this fact by aiming at achieving gender equity in education and ensuring that girls access quality and equal basic education. That is why students’ enrolment has been raising worldwide with the gap between boys and girls closing as governments respond to key framework
documents like the Sustainable Development Goals (SDGs) (Muganda & Omondi, 2008). For example, in Latin America and Caribbean, the gap between girls and boys has rapidly closed and their enrollment in schools is almost equal. In Kenya, introduction of Free Secondary Education in January 2008 with a grant of Kshs 10 265 per child raised the enrolment from 45.3% (49.0 for boys and 41.8 for girls) in 2009 to 48.8% (51.0 for boys and 46.8 for girls) in 2011. The enrolment rose from 1.18 million students (639 393 boys and 540 874 girls) in 2007 to 1.8 million (819 014 girls and 948706 boys) in 2011 (Republic of Kenya, 2012). However some African nations still record low participation of girls in schools. For instance there are wide gaps in Ethiopia with only 16% of girls enrolled in secondary school compared to 28% of boys (Murphy and Carr, 2007).

Fishing is the main economic activity in fishing regions worldwide. However, these regions are among the areas that record low participation in education. For example, boys in fishing regions in Asia drop out of school to join fishing sector (Vimala, 2010). In Ghana, fishing contributes to 2.5% of child labour (Vegard, 2006). In Zambia, 300,000 people are employed in fishing sector but most of them die due to AIDS leaving behind many orphans (Musumali & Wishart, 2009). Fishers are exposed to challenges like HIV and alcoholism since they easily access cash, making them not to educate their children more so their daughters (FAO, 2005). The orphans, mostly girls end up leaving school. Poverty makes many girls in Batwa community living around Lake Kivu and Idjwi Island in the Democratic Republic of Congo (DRC) to leave school and become sex workers in beaches or to work in the fishing industry to feed their families (Fay, 2008). In the Kenyan Lake Victoria Division of Nyangoma of Siaya County fishing is the key economic activity. Men fish while women process and sell it. Anyango and Menn (2010) noted that despite the capability of fishing to generate economic growth, it has failed to reduce poverty as many families in the area are poor.

High cash flow at the lake attracts many people to work in fishing industry causing them to have many sexual partners making sex a beach culture (Llewellyn, 2006). Sex for Fish is common on shores. It is called ‘Jaboya’ in Luo since it is where women have sex with fishers in exchange for fish to sell. Sex for fish is caused by the high demand for fish and decrease in fish catch causing women to compete for it. Fishers use fish to lure women and school girls into sex. The illiterate and poor women like singles, widows, divorced and young women are vulnerable to Jaboya. They befriend fishermen to get fish since they lack money to buy fish to sell or to fend for their families (Manyala & Gitonga, 2008). Women who befriend fishers get fish during low season when fish is scarce. Older women go to the lake with their nubile daughters to induce fishers to give them fish as they do not like having sex with women who are their mothers’ age mates. Thus, many women contract HIV, die and leave behind orphans. Poverty causes many girls to become sex workers on beaches to get money or to fall prey to ‘Jaboya’ forcing them to befriend fishers to give them free fish for trade or to fend for themselves and their siblings.

Statistics shows that although Gross Enrollment Rate (GER) of girls nationally rose from 27.4 % to 33.3% between 2003 and 2007, it was lower than that of boys during the same period (MoE, 2008). Girls’ enrollment in Nyanza province rose by 2% from 28.6% in 2003 to 30.6% in 2007. It was still lower than that of boys who rose by 12% during the same period. Notably, by 2011 girls’ enrollment was 41.3% in Nyanza Province but boys was 50.2% (Republic of Kenya, 2012). In Bondo district GER of girls dropped from 26.1% in 2003 to 24.4% by 2007 while that of boys rose from 36.5% in 2003 to 54.2% in 2007 implying that it was about half that of boys. The GER of girls in Nyangoma Division dropped from 26.6% in 2005 to 16.7% in 2009 and was less than a third of that of boys during the same period in the Division. The Division also had the lowest girls’ enrollment (37.0%) among all the 5 Divisions in Bondo District. Rarieda Division recorded the highest GER of girls which was nearly double that of the girls in Nyangoma Division. Based on this trend in gender gap, the researcher assumed that while fisheries was the main economic activity around Lake Victoria in Kenya, the industry attracted many school children to engage in fishing related activities in the Division. Hence it might be that the industry had the potential to negatively affect girls’ participation thus keeping more girls than boys away from school. This pattern had persisted even with the introduction of the Free Secondary School Education. It was against this background that the study sought to investigate if there was any link between fisheries around Lake Victoria and girls’ participation secondary schools of Nyangoma Division.

### 1.2 Purpose of the Study

To find out if there was a significant relationship between fishing industry around Lake Victoria and enrollment of girls in secondary schools of Nyangoma Division in Siaya County.

### 1.3 Objectives of the Study

1. To determine whether secondary school girls in Nyangoma Division of Siaya County engage in fishing related activities.
ii. To find out the status of the enrollment of girls in the secondary schools of Nyangoma Division in Siaya County.

iii. To examine whether there is a relationship between fishing industry and enrollment of girls in secondary schools.

1.4 Research Hypothesis

In this study, one null hypothesis were formulated and tested at 0.05 based on the third research objective. This was done in order to determine the relationships that exist between fishing industry and enrollment of girls in secondary schools.

i. There was no significant relationship between fishing industry and enrollment of girls in secondary schools.

1.5 Significance of the Study

The study would sensitize education stakeholders on how the industry influences the enrollment of girls in secondary schools. This will enable the stakeholders to adapt programs that will support the education of girls in the Division and hence retain them in school on an equal footing with boys. The results of the study would contribute to existing body of knowledge on fisheries and the enrollment of girls.

1.6 Scope of the Study

Although many factors contribute to the low participation of girls in schools in Nyangoma Division, the study focused on fishing industry as the main contributing factor. It focused on enrollment as the main areas of concern in the concept of participation of girls in secondary schools of Nyangoma Division. The study was only conducted in one Division around Lake Victoria due to time constraint.

1.7 Limitations of the Study

Financial and other logistic constraints like vastness of the study area and other factors that were beyond the researcher’s control dictated the study locale. Although the secondary schools selected provided relevant information on fishing industry and girls’ education as noted by the responses from the informants, all schools in the Division and all the Divisions in the District were to be involved in order to get more reliable information.

2. LITERATURE REVIEW

2.1 Female Education from a Global Context

The impact of women on society is shaped by their education (World Bank, 2000) since their education leads to economic, social and political development of nations. According to Tembon and Fort (2008), the gains of educating girls include raised earnings, improved nutrition, ability to be employed, upward social mobility, low infant mortality and low HIV/IDS infection rates. That is why the SDG aimed at removing gender disparity in education. Girls’ education has been rising at varied pace worldwide. For example, of all out-of-school children, girls were 55% in 2006 down from 59% in 1999. For every 100 boys out of school worldwide, there were 122 girls but with wider gaps in some countries (like for every 100 boys out of school there were 426 girls in India, 270 in Yemen and 316 in Iraq). Few children finish school in Africa as two-thirds of nations with GER less than 40% are in Africa (Oronje, 2007). Kenya introduced Free Primary Education (FPE) in 2003 since education enhances development. This raised transition rate from 46% in 2003 to 60% by 2007; enrollment to over 300% and number of secondary schools to over 4000 in 2004 (Ministry of Education, 2007). But this figures hide gender and regional disparities in secondary schools since in 2006 the GER was 6.3% in North eastern province (8.6%boys and 3.6%girls) compared to the 32.2% national GER (34.6%boys and 29.9%girls). This meant that the gender parity got in primary was not maintained in secondary school (Sifuna, Fatuma & Oanda, 2006). Low transition rate affects university enrollment since 40% of
university students in 2007 were girls despite lowering of their entry points (CEDAW, 2006). This makes ladies to be under-represented in public appointments since they form 30% of the job market (Republic of Kenya, 2008).

2.2 Fishing Industry in Fishing Regions

Fishing enhances economic growth in fishing regions since it has a big local and international market (Gordon, 2005). About 38 million people are employed in fisheries worldwide, 95% of them in developing nations (FAO, 2004). Musumali and Wishart (2009) noted that over 300000 people are employed in fisheries in Zambia. In Tanzania 70-80% of males are fishers (Horrell, Kalombo, & Makoloweka, 2001). Fisheries also attract services like bars, hotels, beer brewing, lodges and sex work. High labour demand in fisheries and easy access to cash attracts children to the sector despite the risks they face. The risks include attack by marine animals; drowning; bites by insects; getting lost at sea; sun stroke; and respiratory problems (ILO, 2002). Fisheries benefit people like traders, fishers, boat builders, net/hook makers, and ice / bait sellers. Thus fisheries improve family income leading to gains like poverty reduction, education, health and investment in fishing gear, livestock and land. However these do not happen since the ready access to cash exposes fishers to problems like alcoholism and HIV / AIDS (FAO, 2005). Nite and Clare (2003) noted that fishers see their work as hazardous and unpleasant since they spend time out when it is cold, wet and windy. Hence they celebrate their safe return by drinking beer and sex with no saving as they readily access cash. The sector involves fishing, processing and trade (Lwenya & Abila, 2001). Men fish and women do post-harvest activities like processing and marketing. However, females in some developing countries like South-East Asia and West Africa also use gear to fish near-shore in canoes or using small hand nets (FAO, World Bank & IFAD, 2009). But with their role in fisheries, women have less access to benefits like credits and resources ownership. They are marginalized in fish management due to traditional gender roles; poverty; low level of education; poor enforcement of legislations on women’s rights; and men controlling access to assets like resources, savings and credit within the family (Lwenya & Abila, 2001). Beach Management Units (BMUs) address this issue by giving them a quarter of the positions in BMU committees. More support is being sought to help them get credits and training since they devote all their income on their family as men spend it on leisure (Christopha & Sonja, 2007).

3. RESEARCH DESIGN AND METHODOLOGY

3.1 Research Design

Descriptive survey research was used since it entails collecting information by administering questionnaires to a sample of individuals (Orodho, 2003).

3.2 Research Location

The study was done in Nyangoma Division of Bondo District in Siaya County. The Division borders Lake Victoria to the south, Rarieda Division to the east and Maranda Division to the north. Purposive sampling was used to select the Division. This was because fishing was the main economic activity in the area.

3.3 Variables

The independent variable was fishing industry while the dependent variable was enrollment of girls in secondary schools of Nyangoma Division. The study was to establish if the independent variable has any effect on the dependent variable.

3.4 Sample Size and Sampling Techniques

The Division had 10 secondary schools of which 6 were mixed day schools, 3 were boys’ boarding and 1 was a girls’ boarding. Purposive sampling was used to select 1 boys’ school, 1 a girls’ school and 2 mixed schools having the lowest girls’ enrollment. The Division has 1593 students in secondary schools of which boys were 1083 (68%) and girls were 510 (32%). Of these students, 10% were selected to get the sample population. Hence the sample of the study comprised of 159 students of which 51 students were girls and 108 were boys. The Division also had 56 Teachers with 16 teachers (29%) being female and 40 teacher (71%) being males. Stratified random sampling technique was used to select 16 teachers (6 female and 10 male) out of the 56 teachers in the Division.
3.5 Research Instruments

The main research instrument employed in the study was questionnaire. Questionnaires were administered to the students and teachers in the secondary schools selected for the study. A documentary analysis of the records in the selected secondary schools was done to supplement the data collected from the questionnaires.

3.6 Pilot Study

Piloting was done in two schools in Usigu Division, namely Jusa and Got Agulu secondary schools. Usigu Division was selected since Mugenda and Mugenda (2003) cautions that subjects in the actual samples should not be used in pre-test. Piloting involved forty students and four teachers. The tool was piloted to ascertain its validity and reliability. After pre-testing was done, the items in the instrument were adjusted accordingly.

3.7 Validity and Reliability of Instruments

Content validity was used to assess relevance of the content in the instruments by interrogating the content for clarity of meanings. The assistance of the experts in the School of Education at Kenyatta University were sought to ascertain the relevance of the content in the instrument of data collection.

Reliability of the tool was tested using split-half technique. The responses were split into even and odd numbers. The two halves were correlated separately and a correlation of 0.54 was obtained. Since this correlation gave the reliability of each half of the test Spearman-Brown prophecy correlation formula was used to estimate the reliability of the whole test. A reliability of 0.7 was obtained for the research instrument using the expression:

\[ P_{xx}'' = 2P_{xx}' / (1+P_{xx}') \]

Where \( P_{xx}'' \) was the reliability coefficient for the whole test and \( P_{xx}' \) was the correlation between the 2 halves. Since \( P_{xx}'' \) was greater than 0.6, then the instrument was considered reliable for Kothari (2004) confirms that a reliability of 0.6 is adequate.

3.8 Data Analysis

Qualitative data from open-ended questions in questionnaires was analyzed thematically using Atlas.ti and presented as narrative passages in textual form based on key themes. Quantitative data from questionnaires was analyzed descriptively using Statistical Package for Social Sciences version 16 and presented in form of descriptive statistic. Statistics was presented in numeral, graphical and tabular forms like pie charts, graphs and tables. Chi-Square statistics was used to find out the relationship between fishing industry and enrollment of girls.

4. RESULTS AND DISCUSSION

4.1 Engagement of Girls in Fishing Related Activities

The first objective of this study intended to determine whether secondary school girls in Nyangoma Division of Siaya County engage in fishing related activities. In order to address this first research objective, the respondents were asked to state whether girls participate in fishing related activities. Table 4.1 below shows a cross-tabulation of the responses obtained from students. The table shows that of the 159 students who responded to the questionnaires, nearly two thirds (64%) of them agreed that girls participate in fishing related activities by saying YES while over a third (37%) of them disagreed by saying no. Of the students who agreed, below a half (47%) were boys and 17% were girls while of those who disagreed, below a quarter (21%) were boys and 15% were girls.
Table 4.1: Students Response on whether Girls Participate in Fishing Related Activities

<table>
<thead>
<tr>
<th>Engagement of girls in fishing activities</th>
<th>Frequency</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>F</td>
<td>74</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>46.5</td>
</tr>
<tr>
<td>Females</td>
<td>27</td>
<td>17.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>101</td>
</tr>
<tr>
<td></td>
<td></td>
<td>63.5</td>
</tr>
<tr>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>F</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>21.4</td>
</tr>
<tr>
<td>Females</td>
<td>24</td>
<td>15.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>58</td>
</tr>
<tr>
<td></td>
<td></td>
<td>36.5</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>F</td>
<td>108</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>67.9</td>
</tr>
<tr>
<td>Females</td>
<td>51</td>
<td>32.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>159</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Field data, September 2013

Similarly, Table 4.2 below shows the responses got from teachers. The results revealed that of the 16 teachers who were involved in the study, over three quarters (81%) agreed that girls participate in fishing related activities while 19% disagreed. Of the teachers who agreed, five were female and eight were male whereas of the teachers who disagreed, two were male and one was a female.

Table 4.2: Teachers Response on whether Girls Participate in Fishing Related Activities

<table>
<thead>
<tr>
<th>Engagement of girls in fishing activities</th>
<th>F</th>
<th>%</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>8</td>
<td>50.0</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>6.3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>62.5</td>
<td>16</td>
</tr>
</tbody>
</table>

Source: Field data, September 2013

4.2 Status of the Enrollment of Girls’ in Secondary Schools in Nyangoma Division

The second research objective intended to find out the status of the enrollment of girls in the secondary schools of Nyangoma Division in Siaya County. In an attempt to address this second objective of the study, respondents were asked to give their comment on the rate of enrollment of girls as compared to that of boys. The results are shown in Table 4.3 below. The study revealed generally that the enrollment of girls was low. When the enrollment of girls was compared to that of boys in the Secondary Schools of Nyangoma Division, the study indicated that 11.3% of students said that it was high; 32.1% said that it was moderate; while 56.6% said that it was low as shown in Table 4.3. Further, 12.5% of the teachers involved in the study said that it was high; 25% said that it was moderate; while 62.5% said that it was low. Hence, the finding of this study showed that over a half of the respondents said that the enrollment of girls in the Division was lower than that of boys.

Table 4.3: Respondents Response on the Enrollment Rate of Girls compared to Boys

<table>
<thead>
<tr>
<th>Enrollment rate of girls compared to boys</th>
<th>Students (N=159)</th>
<th>Teachers (N=16)</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>F</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td>18</td>
<td>11.3</td>
</tr>
<tr>
<td>Moderate</td>
<td>51</td>
<td>32.1</td>
</tr>
<tr>
<td>Low</td>
<td>90</td>
<td>56.6</td>
</tr>
<tr>
<td>Total</td>
<td>159</td>
<td>100.0</td>
</tr>
</tbody>
</table>

This information which was gathered from the respondents was further supported and hence concurred with the information gathered from a documentary analysis of the records in the secondary schools selected for the study in Nyangoma Division of Siaya County. The information got from the admission books in the selected schools revealed that the enrollment of girls was lower than that of boys. This information was captured and reflected as shown in Table 4.4 below. It was further observed that the enrollment of girls was reducing as girls progress from Form One to Form Four.
Table 4.4: Students' Enrollment from Admission Books (2009 – 2013)

<table>
<thead>
<tr>
<th>School</th>
<th>Gender</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western</td>
<td>Boys</td>
<td>155</td>
<td>12.9%</td>
<td>200</td>
<td>16.6%</td>
<td>270</td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>Eastern</td>
<td>Boys</td>
<td>62</td>
<td>12.2%</td>
<td>76</td>
<td>14.9%</td>
<td>90</td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td>15</td>
<td>2.9%</td>
<td>23</td>
<td>4.6%</td>
<td>20</td>
</tr>
<tr>
<td>Central</td>
<td>Boys</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td>168</td>
<td>18.7%</td>
<td>160</td>
<td>17.8%</td>
<td>193</td>
</tr>
<tr>
<td>Southern</td>
<td>Boys</td>
<td>67</td>
<td>17.1%</td>
<td>66</td>
<td>16.8%</td>
<td>67</td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td>7</td>
<td>1.8%</td>
<td>7</td>
<td>1.8%</td>
<td>13</td>
</tr>
</tbody>
</table>

Source: Records in Schools (Admission Books), September 2013

4.3 Relationship between Fishing Industry and Enrollment of Girls in Secondary Schools

The final objective of this study was to examine whether there was a relationship between fishing industry and enrollment of girls in the secondary schools of Nyangoma Division in Siaya County. In order to find out how fishing industry relates to girls' enrollment, respondents were asked to indicate if the industry led to the low enrollment of girls in the secondary school of the Nyangoma Division. Table 4.5 below illustrates the responses of students and teachers. The Table revealed that out of the 159 students involved in the study, over a third of them (37%) indicated that fishing industry led to the low enrollment of girls in the Division while 101 students; representing about two thirds (64%) said that it did not. This implied that over a half of the students involved in the study were of the opinion that girls were not enrolled in schools due to fishing industry. Further, Table 4.5 showed that of the 16 teachers sampled to participate in the study, seven said YES while nine said NO. This meant that the seven teachers who were involved in the study and who represented about 44% of the sample believed that fishing industry contribute to the low enrollment of girls in secondary schools. The remaining 56% of the sampled teachers believed that the industry is not responsible for the low enrollment of girls in secondary schools.

Table 4.5: Response on the Link between Fishing Sector and Low Enrollment of Girls

<table>
<thead>
<tr>
<th>Fishing sector and girls' enrollment</th>
<th>Students (N=159)</th>
<th>Teachers (N=16)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>%</td>
</tr>
<tr>
<td>Yes</td>
<td>58</td>
<td>36.5</td>
</tr>
<tr>
<td>No</td>
<td>101</td>
<td>63.5</td>
</tr>
<tr>
<td>Total</td>
<td>159</td>
<td>100.0</td>
</tr>
</tbody>
</table>

In order to determine whether there was a significant relationship between the variables of the study, a null hypothesis (H₀) was formulated for the study. The formulated null hypothesis stated that “there was no significant relationship between fishing industry and enrollment of girls in the secondary schools of Nyangoma Division”. In order, to test this hypothesis, a Chi-Square test was computed from both the questionnaires of students and teachers using SPSS version 16. The results were as shown in Tables 4.6 and 4.7 below. Table 4.6 below shows the Chi-Square value as computed from the questionnaire of students. The Chi-Square Test value got from Table 4.6 was 11.629 and its significance level was 0.001. The small p-value (0.001) got from Table 4.6 at the 0.05 level of significance, indicated that it was unlikely that the variables were independent of each other.

Table 4.6: Chi-Square Tests from Students’ Questionnaires

<table>
<thead>
<tr>
<th>Chi-Squarea</th>
<th>Value</th>
<th>Df</th>
<th>Asymp. Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>11.629</td>
<td>1</td>
<td>.001</td>
</tr>
</tbody>
</table>

a. 0 cells (.0%) have expected frequencies less than 5. Minimum expected cell frequency is 79.5
Further, Table 4.7 below shows the Chi-Square values as computed from the questionnaire of teachers. The Chi-Square Test value got from Table 4.7 was 3.429 and its p-value was 0.003. The p-value (0.003) got from the outcome of Table 4.7 was less than $\alpha = 0.05$ significance level. This indicated that it is unlikely that fishing industry and enrollment of girls were independent of each other.

<table>
<thead>
<tr>
<th>Table 4.7: Chi-Square Tests from Teachers’ Questionnaires</th>
<th>Value</th>
<th>Df</th>
<th>Asymp. Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-Square\textsuperscript{a}</td>
<td>3.429</td>
<td>1</td>
<td>.003</td>
</tr>
</tbody>
</table>

\textsuperscript{a}0 cells (.0%) have expected frequencies less than 5. Minimum expected cell frequency is 8.0

Based on the outcomes of the Chi-Square tests got from Tables 4.6 and 4.7 above, the findings of the study rejected the stated null hypothesis. Therefore it was concluded that there was a significant relationship between fishing industry and girls’ enrollment in the secondary schools of Nyangoma Division.

5. CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

Based on the first objective, the study found out that the girls in Nyangoma Division engage in fishing related activities. Secondly, it was noted that the enrollment of girls was lower compared to that of the boys in the Division. The study therefore concluded that there was a significant relationship between fishing industry and enrollment of girls in the secondary schools of Nyangoma Division in Siaya County.

5.2 Recommendations

The two kinds of recommendations that were generated are:

5.2.1 Need for Action

The study recommended that child-labour laws that deter school going children from engaging in the fishing industry and fishing related activities along the beaches should be formulation and enforcement in Kenya in order to help retain girls in schools.

5.2.2 Suggestions for Further Research

Replication of the study in another Division which is dominantly urban like Kisumu County to establish if fishing industry has the same effects on the education of girls.

REFERENCES
