

Jigger Infestation a Menace to Children's School Attendance

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Abstract

This study intended to investigate the relationship between jigger infestation and participation at school by pre-primary school and lower primary school children. The objective of the study was to find out the relationship between jigger infestation and children's rate of school attendance. The study was carried out in Gatundu District because it is one of the highly jigger infested districts in Kiambu County, Kenya. The study utilized the Ecological systems theory and it employed the descriptive survey design. The population of the study comprised of pre-primary, lower primary school children and their class teachers from all the public schools in Gatundu District. Forty four jigger infested children were purposively sampled for the study. An equal number of pupils not infested were randomly sampled to be compared with those who were infested. The teachers handling pre-primary school and lower primary classes were also purposively sampled. Questionnaires for teachers, observations schedules for children and document analysis were utilized for data collection. Qualitative and quantitative methods of data analysis were applied. The Statistical Package for Social Sciences (SPSS) was used to prepare and organize data for analysis. Pearson's correlation coefficient test was used to compute the relationship between the variables. Frequency distribution tables, percentages, and descriptions were utilized for data presentations. Findings revealed that jiggers were a major threat to the realization of children's educational goals. The Pearson correlation coefficient indicated that jigger affected children's school attendance in that $r = -0.123$, $n=44$ and $\text{sig}(2 \text{ tailed})= 0.426$. The study recommends that the school managers liaises with other stakeholders to seek for strategies of curing those infested, carry out routine checkups on children and sensitize communities on the causes, dangers and preventive measures of the jigger parasite in order to help all children realize their full educational potential in life.

Keywords: Jigger infestation, school attendance, jigger infestation, health hazard

Background Information

The United Nations Convention on the Rights of Children (1989), Article 29, stipulates that the education of the child shall be directed to the development of the child's personality, talents, mental and physical abilities to their fullest potential (United Nations, 1989). This can only be done through regular school attendance and participation. Attending school regularly is also important to the child's future in that it helps them to achieve the goal of academic excellence, stimulate their brain and promote their social experiences. These experiences set the course for intellectual development (Winter, 2007). In her study, Ndani (2008) observes that community participation was important in assisting children to attend school. It involves being supportive to children's learning through taking part in their activities, providing physical facilities and offering services that promote healthy early childhood development. In her study, Mueni (1994) also analyzed some factors which contribute to pupil absenteeism from school and found out that extended illness, family problems and school phobia were among the leading causes. She adds that children who come from poor environmental conditions tend to suffer from illnesses brought about by parasites which live in those environments.

Other studies by Gakii (2003) and Ngasike (2004) have shown that most Early Childhood and Development (ECD) centers lack necessary facilities, equipment and materials that would promote holistic development of children. These studies established that most public centers have rough mud walls and floors. They are also congested. The dusty conditions may be a fertile breeding place for the jiggers. In addition, Mugo (2005) found out that several factors inhibited access to effective pre-school education by the children. These factors included insufficient financing by parents, transport problems due to inaccessible roads, and lack of necessary facilities at school. A study by Othoro (1996) revealed that parasitic infestations like malaria caused disability and death among children. In his study, Mburia (1999) found that most persistent absentees show withdrawal, irritability and aggressive behavior. Moreover, he added that poor health was a cause of poor school attendance and high repetition of classes. According to Gitonga (1997), unhealthy children also exhibit depression, anxiety and low self-esteem. Subsequently, these children do not acquire quality basic education and skills hence the government's aim of achieving Education for All (EFA) and the Millennium Developmental Goals by 2015 is slowed down (Ngunjiri, 2009). Whereas several studies have shown causes of absenteeism from schools and their effects, very little has been done on parasitic infestations and their effects on education and especially the jigger parasite which is a health issue.

Purpose of the Study

The current study sought to establish the relationship between jigger infestation and children's school attendance.

Methodology

The study was conducted in Gatundu district Kiambu County. A sample size of 44 children was sampled from those who were jigger infested and those who were not. Another sample of 44 teachers teaching preschool to class three from the sampled schools was also selected.

Research Instruments

The study utilized a questionnaire for ECD and lower primary school teachers, and two observation schedules for data collection. The questionnaires were used by the teachers to provide data on jigger infestation on children. Observation schedules on the other hand, were utilized to gather direct data from the jigger victims, and the school documents analysis was used to gather information on children's school attendance rates and performance rates. According to Mugenda and Mugenda (2003) questionnaires are commonly used to obtain important information about a population within a short duration while observation schedules gather direct information from the respondents and their environment.

Questionnaire for Teachers

The questionnaire consisted of items that addressed all the objectives of the study. The questionnaire collected both qualitative and quantitative data as per the objectives. The closed ended questions attracted specific answers while the open ended questions required the respondents to give their opinions about the jigger. The teachers were requested to fill the questionnaires and return them to the researcher within the same day. Although much time was spent, the teachers were able to fill in all sections of the questionnaire depending on their classes and handed them in the same day. However, the researcher was only able to visit a school per day. The first section of the questionnaire gathered demographic information about the name of the particular school where study was being done, the teacher's designation and the class he/she was in charge of. The second section of the questionnaire comprised of items which gathered information about the jiggered and non-jiggered rate of school attendance, performance in outdoor activities, performance in evaluation tests as evidenced by teachers' records and the rate at which children dropped out of school.

Document Analysis

Secondary data was collected by studying the progress records, the attendance registers and the end term report forms. The pupil's positions in the class evaluation tests and marks that were attained by every child were recorded. The number of days that they had been out of school were also checked and recorded to assist in data analysis.

Observation Checklist

This was used by the researcher to gather data that could be observed directly from the subjects as they took part in the outdoor play activities. It captured data on the frequency of participation at which the activities were carried out. If the child changed from one activity to another within duration of five minutes or below, it was considered a frequent change and the child was awarded 5 marks, moderate change of activity was that of duration of five to ten minutes and was awarded 3 marks. Children who did not change from one activity to another for ten or more minutes were considered to have a rare change and were awarded 1 mark each.

Data Collection

Before going to the field to collect data, the researcher got a letter of approval to collect data from Graduate School, Kenyatta University. This letter was presented to the Ministry of Education to apply for the permit. The copies of the permit were issued to the DEO and the area chiefs, who then allowed the researcher to visit the sampled schools and to distribute the questionnaires to the teachers' in-charge of pre-school and lower primary classes in every school. The respondents were requested to fill the questionnaires and give them back to the researcher the same day. After distributing the questionnaires to the teachers, the researcher left them to fill. The researcher then made observations on the participation of children infested with jiggers in outdoor activities and recorded the findings. A different day was set for analyzing the documents like the attendance register, the progress records and any other evaluation records in the same school.

Data Analysis

The data collected in this study was analyzed through qualitative and quantitative methods. The Qualitative method involved coding of the data, organizing data according to themes, describing and explaining the

organized data from the questionnaires and the documents. The Statistical Package for Social Sciences (SPSS) was used to organize data for analysis. The Pearson Product Moment Correlation test was used to find the relationship between variables at 0.05 significance level. The following statistical hypothesis was tested; There is no significant relationship between children's school attendance rates and jigger infestation.

Demographic Information of the Respondents

Eleven public schools were sampled in this study. Teachers who were in charge of pre-school to standard three participated in this study by filling in all the questionnaires. Table 1 presents the total number of respondents per class;

Table 1: Number of Respondents per Class

Class	Teachers per class(frequency)	Percent
Pre-school	10	22.73
Class one	11	25
Class two	11	25
Class three	11	25
Special class	01	2.27
Total	44	100

Table 1 indicates that there were 10 (22.73%) respondents from pre-schools, 11(25%) respondents from class one, two, three and one respondent (2.27%), from a special unit.

Jigger Infestation and the Rate of School Attendance

The first objective of this study sought to establish the relationship between jigger infestation and the rate at which children attended school. The respondents compared the rate of attendance between children who were jigger infested and those who were not. The results are presented in table 2;

Table 2: Responses to Jigger Infestation and the Rate of School Attendance

Statement	Strongly Agree		Agree		Disagree		Strongly Disagree		Total	
	F	%	F	%	F	%	F	%	F	%
Jigger infestation affects the rate of school attendance	23	52.3	18	40.9	3	6.8	0	0	44	100
children who are infested with jiggers absentee themselves from school more than those who are not	21	47.7	21	47.7	1	2.3	1	2.3	44	100
Children who are not infested with jiggers absentee themselves more than those who are infested	1	2.3	2	4.5	24	54.5	17	38.6	44	100
The rate of absenteeism is the same for those infested and to those who are not	8	18.2	18	40.9	0	0	18	40.9	44	100

Table 2 presents findings on the rate of school attendance. The findings indicated that 41 out of 44 (93.3%) either agreed or strongly agreed that jigger infestation limits children's school attendance. The findings also indicated that 42 out of 44 (95.4%) of the children with jiggers were absent from school more times as compared to those who were not. The results also indicated that 26 out of 44 (59.1%) respondents agreed that the rate of absenteeism is the same for children who are infested and to those who are not.

Information sourced from the class attendance registers in custody of class teachers showed the exact days that both groups attended school as shown in table 3;

Table 3 Records Source: Class Attendance Register

Range in days children were absent	No. of children with jiggers	%age	No. of children without jiggers	%age
0-4	4	9.1%	35	79.6%
5-9	7	15.9%	3	6.8%
10-14	14	31.8%	6	13.6
15-19	3	6.8%	-	-
20-70	16	36.4%	-	-
Total children	44	100%	44	100%

Table 3 shows that most of the children infested with jiggers (36.4%) failed to attend school regularly as compared to their fellow pupils. Data obtained from the class registers showed that they were absent for twenty

or more days during the term which had a total of seventy days. About 80% of the children without jiggers also failed to attend school for few days (5-9) during the term. The results above were used to test the null hypothesis that stated;

- a) H_{01} : *There is no significant relationship between children's school attendance rates and jigger infestation.*

A Pearson Product-Moment Correlation Coefficient was computed to assess the relationship between the school attendance by children infested with jiggers and those not infested. Table 4 presents the findings on this hypothesis:

Table 4: Relationship between Jigger Infestation and Children's Rate of School Attendance

		Infested	Not Infested
Infested	Pearson Correlation	1	-.123*
	Sig. (2-tailed)		.426
	N	44	44
Not Infested	Pearson Correlation	-.123*	1
	Sig. (2-tailed)	.426	
	N	44	44

Table 4 indicates that there was a weak negative correlation in school attendance between children who were infested with jiggers and those who were not, where $r = -0.123$, $p=0.426$ and $N=44$. The results imply that there is a negative correlation between jigger infestation and attendance rates. A negative correlation means that an increase in one variable leads to a decrease in the other variable. In this case, an increase in jigger infestation would lead to a decrease in school attendance. However, the sig 2-tailed, which is the p-value, is greater than 0.05. ($p=0.426 > 0.05$). This implies that statistically, there is no significant relationship between the jigger infestation and school attendance rates. This could have been attributed to the fact that even those without jiggers also failed to attend school on some days. The null hypothesis is therefore *accepted*.

The above findings are consistent with reports given by Ahadi (2009) who said that jiggers had deformed children's limbs to an extent that they can't walk or write, and with those of Uwezo Kenya (2011), who found out that absenteeism by pupils, lead to underscoring at school. The findings are also in agreement with those of Mburia (1999) who found out that poor health was a cause of poor school attendance and high repetition of classes.

Conclusions

Findings in this research revealed that jigger parasite is a threat to the children's education and health. Jigger infestation limits children's school attendance. Consequently, the children are not likely to cover the content they are supposed to cover by the end of the year. This may translate to poor results and the need by the child to repeat the work the following year. These children may also lag behind their peers in the development of social skills.

Recommendations

Findings of this study have shown that jiggers inhibited children from attending school effectively. In order for them to be able to attend school regularly, the school administrators should come up with strategies for curing those already infested and implement other programs aimed at eradicating the jigger parasite among the school going children. They may liaise with the Ministry of Health to have the children treated at the hospital and to get some fumigants which can be used to spray jiggers at school.

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