

Effect of School Feeding Programme on ECDE Pupils' Class Participation in Kenya

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ABSTRACT

World Food Programme (WFP) and the Kenyan Ministry of Education introduced school feeding programme in targeted pre-primary and primary schools in 1980. However, its effects in promoting pupils' class participation in early childhood are not clear. The objective of the study was to assess the pupils' class participation in ECDE centres with a school feeding programme and those without. The study also sought to test out the following null hypothesis (Ho1): There is no statistically significant difference in class participation of pupils in ECDE centres with feeding programme and those without. The study used descriptive survey research design. The total number of pupils was 54,629 from 1163 centres. Twenty centres were purposively selected based on high population. 380 pupils were sampled using Krejcie and Morgan's table (1970). Twenty headteachers, 20 teachers and two county directors were sampled. This study was theoretically guided by Maslow's hierarchy of needs. Data was collected by means of an interview schedule, questionnaires and an observation schedule. Data was analysed using descriptive and inferential statistics by using SPSS. The Major finding is that pupils in ECDE centres with SFP participate more than those in schools without SFP. The study recommends that SFP be implemented in all schools.

Keywords: feeding programme, ECDE, class participation

INTRODUCTION

Enhancement of quality education particularly among young children is essential and different research and policies have emphasized this importance. Several organizations and foundations have laid focus on improving education for children for instance the World Conference on Education for all in Jomtien, Thailand (1990) and the Dakar Framework for Action on Education for All (2000) that mainly focused on provision of quality education to disadvantaged and most vulnerable children. The Government of Kenya in the Constitution (2010) recognizes the right of every child to social development, a standard living, moral, physical and mental development. For this development to occur, guardians ought to provide proper care to avoid development of deficiencies that cannot be altered upon development from childhood. There have been various challenges however, in achieving the desired child development environment which includes dependence on the money economy, mother's role multiplicity and formal education. Consequently, Early Childhood Development Education (ECDE) centers have been embraced in the modern-day societies globally as an alternative childcare system.

Research findings in Kenyan ECDE centers have identified inadequate nutrition and health support service as one of the challenges facing ECDE. School feeding in Kenya faces financing issues. There is need for institutional and implementation plans essential for efficiency and sustainability. As such, it has been left up to the parents to

finance it. Kiambu and Murang'a counties are located in the central part of Kenya. The main economic activity in the areas is farming. In Kiambu, there is dairy farming as well as growing of kales as a cash crop. Murang'a depends mainly on tea and coffee farming. Though the areas are not arid or semi-arid, the fluctuating prices of coffee and milk sometimes lead to inability to support education projects. At the same time, some parents live in slum areas where their socio-economic status is very low making them unable to support feeding programmes. The county director of education in Kiambu noted that school enrollment had dropped from 130,000 in 2013 to 118,000 in 2014 after withdrawal of the feeding programme in schools (Emanikor, J. 2014). There are significant disparities in access to education and school enrolment and therefore, improving of existing school feeding efforts is essential. The area of concern was therefore to address the effect of SFP on ECDE pupils' class participation in Kiambu and Murang'a counties.

A school feeding programme is a clearly outlined programme for a school to feed children to improve education and different activities in school. In spite of the fact that school feeding projects cannot turn around the results of prior lack of healthy food, research shows that giving suppers at school can significantly affect dietary status and learning results in children. Feeding programmes progress in the direction of accomplishing a few Millennium Development Goals (MGDs) like diminishing yearning considerably and accomplishing Universal Primary Education by 2015 and accomplishing gender equality in learning by 2005. Despite the fact that the economic inventions for putting resources into learning and sustenance of the state of children in elementary school are embedded, many low income family units and those subjected to poverty typically contribute much less than the normal required contribution (Adelman et al., 2007). Mainly, too much poverty limits family units from educating their children because they mainly focus on survival. Therefore, such families are not in a position to give children the chance to attend school and receive education. Moreover, regardless of whether there is elimination of some costs such as school fees, families still do not have the ability to meet other costs, for instance, uniforms, books, shoes and fare. In this way, such family units cannot manage the cost of school fees and rather push their children to work in activities generating income or influence them to take care of the young children at home. Due to this and other financial limitations for schools to invest, SFPs give economic inducements to families to enroll their children in schools. Adelman et al. (2007) demonstrate that the family's choice to enroll their children in schools is dictated by the benefits they will reap in future alongside the current cost of education. The current approximation of these forthcoming benefits is a proportion of family's rates of discount i.e., the amount of family unit value the upgrades in existing success over forthcoming development in prosperity.

The expenses of education, as mentioned earlier, incorporate such uses as school charges, supplies, books, outfits, and cost of commuting to school and additionally the opportunity cost of children's time, for example, attending to other relatives, dealing with a family homestead or business, or more external work for extra pay (every single backhanded cost). The thought is family units will not send their children to school if the benefits are not reasonable compared to the cost of learning expenses and that there is need to motivate families to increase the positive outcome of learning. Consequently, school based incentives, for example, school meals and bring home food will be of great benefit to family units with no work since they will take their children to school for proper nourishment (Adelman et al., 2007; Bundy et al., 2009). The link between food and learning can be by and large comprehended in three different ways (Kazianga et al., 2009). Initially, sustenance and health condition impact the learning of the children and progress in school work. This means that poor nourishment among children influences their psychological capacity and consequently diminishes their capacity to remain active at school. Secondly, children who lack proper food or who are disadvantaged cannot go to class frequently which thus prompts poor performance at school. Third, hungry children experience troubles to think and perform complex assignments than those well-nourished. The benefits of a school feeding programme are shown in **Figure 1**.

Figure 1 shows that there is a positive link between SFPs and student participation and parent support for their children to go to school. This increases the number of students signed up in schools and the class attendance increases too as drop-outs reduce. On the other hand although SFPs increase the benefits of school participation, they could actually reduce household income due to reduced child labor supply which thus lowers household food availability thereby posing negative impact on current nutrition and health. The increased school participation due to SFPs could also lead to crowded classes and hence negatively affect learning unless school capacity is increased accordingly. Health, nutrition and psychological development of a child are all linked which influences the consumption of food and absorption. For example, a child who is not in the right emotional state may have poor consumption patterns and the food may not benefit him or her. In addition, a hungry or sick child is dull and less active reducing their interaction with the environment (Werner, 1982). It is therefore important to understand how the class participation can be improved through offering some basic needs of the children particularly food. This will add to the existing information on the basic factors that improve the interaction environment of ECDE children. The study's objective was to establish the impact of school feeding programme on ECDE pupils' class participation. The study was guided by the theory of Maslow's Hierarchy of needs. This is shown in **Figure 2**.

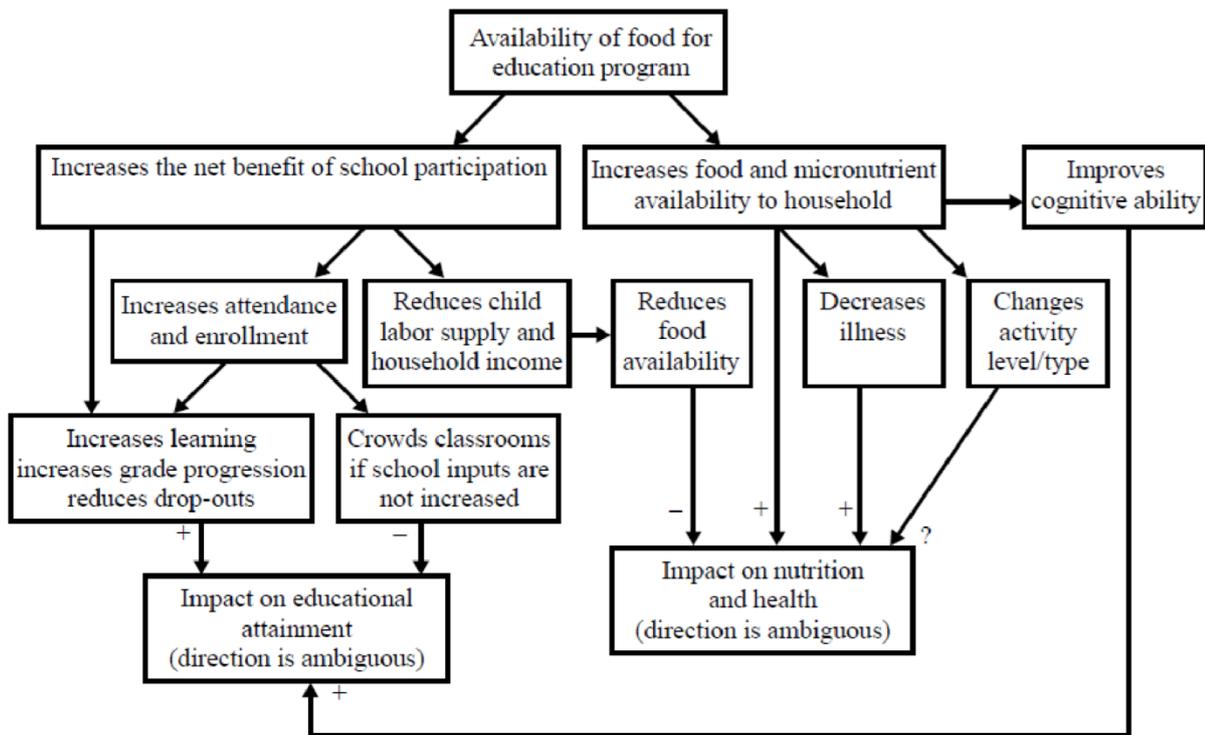


Figure 1. Potential Benefits of School Feeding Programme. Source: (Adelman et al., 2007)

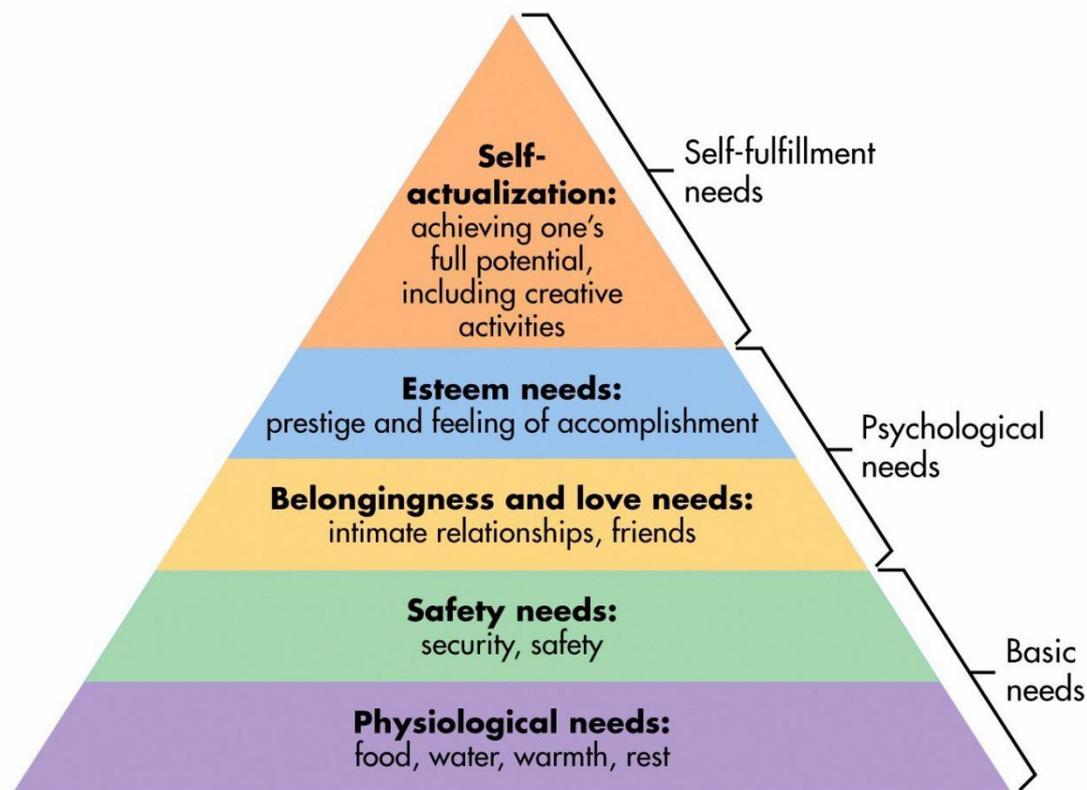


Figure 2. Maslow's Hierarchy of needs

This theory suggests that there are particular requirements that every individual needs to live a decent life known as physiological needs. When these needs are met, other needs arise which dominate the organism. Upon satisfaction of these needs, other needs arise too which are higher and the trend continues as such. Self-actualization was one of the important needs highlighted by Maslow that motivates an individual to behave in a certain way (Maslow, 1943). According to Maslow; the physical needs such as food must be met before moving to higher needs in the hierarchy. Children are happy and contented when their needs are met since the learning environment is conducive for learning. The implication of this theory to the study is that child's need for food

should be met by parents or teachers through provision of a balanced diet to ensure healthy growth. The government should ensure that there is food security especially among the marginalized groups and more so among children who are most vulnerable.

METHODOLOGY

Research Hypothesis

Ho1: There is no statistically significant difference in class participation of pupils in ECDE centres with school feeding programme and those without.

Methodology

The study adopted a descriptive survey research design incorporating both qualitative and quantitative approaches. This design was assumed to be appropriate in relation to the variables of the study because the study investigated the variables in retrospect without being manipulated by the researcher. The study was carried out among ECDE pupils' class in Kenya. Kenya is home to diverse cultures blending people from different religious, ethnic, cultural and social-economic backgrounds and thus presents a good representation of the anthropological and technological context which might have impacted on the variables of the study.

Participants

The target population consisted of two directors of education (Murang'a and Kiambu Counties) 54,629 pupils and 1,163 head teachers from 1,163 ECDE centers attached to public primary schools in the two counties. The comprised of both purposive and simple random sampling techniques. Purposive sampling was used to select 20 ECDE centres and from each of the sampled schools, the head teacher was automatically selected and included in the study. In addition, the two county directors of education were also purposively included in the sample. In order to determine the number of pupils to include in the study, sampling formula by Krejcie and Morgan (1970) was used. According to this formula a population of 54,629 pupils, is adequately represented by a sample of 382 pupils. Since the sample was distributed in 20 schools, simple random sampling was used to select 19 pupils from each of the sampled schools. Consequently, the sample comprised of 20 pre-school head teachers, two county directors of education and 380 pupils, thus making a total of 402 respondents. [Table 1](#) provides a summary of the sample size.

Table 1. Sample Size

	No. in each school	No. of schools	Total
1. Head teacher	1	20	20
2. Pupils	19	20	380
3. Director			2
Total			402

Data Collection Tools

Data for this study was collected by means of three types of instruments, questionnaires administered to the head teachers, an interview guide for the county directors of education and an observation checklist for the pupils.

Data Analysis

This research adopted quantitative and qualitative data analysis techniques. Quantitative data was keyed into a computer and the computer software Statistical Package for Social Science (SPSS) version 20.0 aided in the analysis using both descriptive and inferential statistics. The t-test was used to compare the mean scores of pupils in schools with a feeding programme and those without. The findings are presented in tables, means, frequencies and narrations.

RESULTS AND DISCUSSIONS

The researcher observed the pupils classroom behaviour in a number of academic tasks, namely; picture reading, colours, sorting and grouping objects by size, sorting and grouping objects by shape, number recognition and alphabets measurement of length by pacing. Their performance was measured in a three point likert scale ranging from; totally unable (0), able with assistance (1) and able without assistance (2). The maximum score was 16 and the minimum score was zero. The findings are presented in [Figure 3](#).

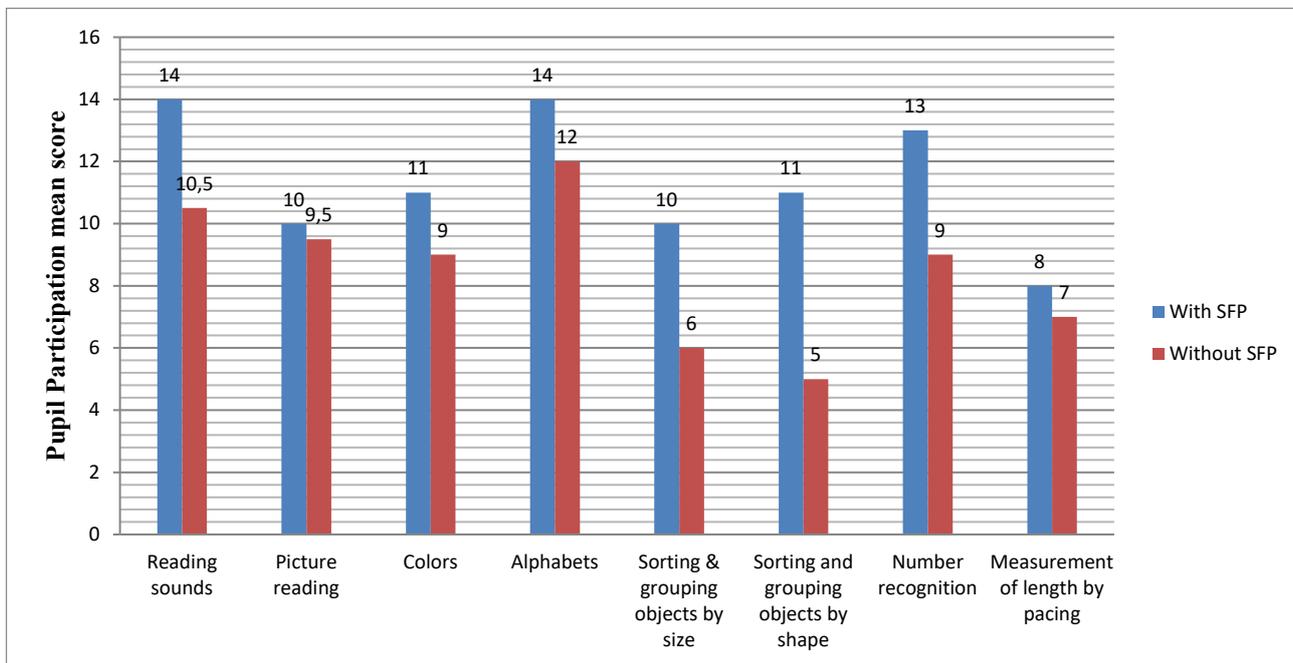


Figure 3. Mean Score of Pupils Learning Participation in ECDE Centres

Analyzed data presented in [Figure 3](#) clearly shows that pupils in ECDE centres with a SFP scored higher in all the parameters under investigation compared to the centres without a school feeding programme. The mean scores of the parameters under investigation included for schools with and without a feeding programme respectively were; reading sounds (14, 10.5), picture reading (10, 9.5), colours (11, 9.5), alphabets (14, 12), sorting and grouping by size (10, 6), sorting and grouping by shape (11, 5) number recognition (13, 9) and measurement of length by pacing (8, 7). These findings indicate that the pupils in schools with a feeding programme were performing much better compared to those without. These study findings affirm existing documentation on the effect of SFPs on learner class participation by (Werner 1982) study established SFPs increase the benefits of school participation, thereby posing positive impact on learners' academic performance. The increased school participation due to SFPs also lead to learner attentiveness, motivation, physiological comfort, and an increased readiness to learn hence positively impacting learning. Health, nutrition and psychological development of a child are all linked which influences the consumption of food and absorption. In addition, a hungry child is dull and less active reducing their interaction with the environment. It is therefore important to understand how the class participation can be improved through offering some basic needs of the children particularly food. The analysis of the head teachers' responses indicated that out of the 20 pre-schools under review, only 6 schools representing a paltry 30% had established a functional SFP for the pupils. All (100%) of the head teachers acknowledged the necessity of the school feeding programmes, but added that parents especially in the rural areas had a reluctance to finance the SFP due to their weak financial base. In addition, 13 (65%) of the head teachers noted that their schools did not have the prerequisite infrastructure such as; kitchen, utensils and personnel to roll out a SFP. The findings are consistent with WFP report (2010) which points that in regions where the social economic status is low, SFP is mainly introduced to improve academic performance rather than to increase enrolment. The study was based on Maslow's theory of the hierarchy of needs which states that the physical needs such as food ought to be met before moving to higher needs in the hierarchy. This implies that those children whose needs are met through SFP are contented and happy since the learning environment is conducive.

The head teachers observed that though ECDE centres fell under the County government, they experience meager and delayed budgetary allocation which failed to cater for the personal emoluments and instructional resources. The county directors of education on the other hand argued that it was often expensive to implement SFP programmes in schools which explain why there is no SFP in most schools. This is contrary to the aspirations of EFA goals as well as Sessional paper No.1 (2005).

Independent Sample t- test of Critical Thinking Skills among Male and Female Learners

It had been hypothesized that there were no statistically significant differences in class participation of pupils in ECDE centres with school feeding programme and those without.

Ho1: There is no statistically significant difference in class participation of pupils in ECDE centres with school feeding programme and those without.

Table 2. Pupils’ participation. Independent Sample t-test on Link between participation and SFP

	Levene’s Test for Equality of Variances		t-test for Equality of Means						
	F	P	T	Df	p	Mean Difference	Std.Error	95% Confidence Interval of the Difference	
								Lower	Upper
Performance	.45	.52	-552	14	.02	-.750	1.36	-3.67	2.17

To test this hypothesis, independent sample t- test was computed for the pupil participation mean scores for ECDE centres with school feeding programme and those without. The findings are presented in **Table 2**.

From **Table 2**, the levene’s test significant value was .52 which was larger than .05; hence, we use the values of the first line of the table (equal variances assumed). The computed value of sig. (two tailed) was .020 which was less than .05 indicating that there was a significant difference in the mean scores of the pupils from schools with SFP and those without a SFP. In this regard, we reject the null hypothesis and maintain that there is a significant distinction in students' participation in learning between schools that offer and those which don't offer school feeding programmes in Kiambu and Murang’a Counties. Therefore we conclude that the SFP had a statistically significant influence on the language and mathematics performance of pupils in ECDE centres. Similar significant findings have been reported by Adroque and Orlicki (2010) on relationship between effect of school feeding programmes and academic performance in Argentina. WFP (2010) supports SFPs are strategic to improving quality of education due to perceived relationship to academic performance. The findings are consistent with the observation of Aila (2012) in his study on SFP programmes in Kibera constituency in which he points out that SFP is yet to fully take route in all basic education learning institutions. The established that there is a major variance in participation of pupils in schools with SFP and those without. Pupils in schools that offer school feeding programmes have essentially higher mean score than students in schools where school feeding programmes are not offered. In this manner, it can be inferred that school feeding programmes drive the rate of students' investment in learning. This is supported by Kubik (2003) who contends that food is a noteworthy feature of education and that school feeding programmes benefit students candidly and improves their performance in academics. Effective food provision programmes in schools, in this manner, leads not only to healthier children, but also, to enhanced fulfillment in their studies. He additionally included that hunger influences concentration but well-nourished children perform better at schools. Finally, he recommended that wherever conceivable, free school meals ought to be provided to all grade school youngsters, beginning with the most deprived areas. There is a noteworthy positive connection between participation and school feeding programmes. Since this relationship is certain, it suggests that the more viable school feeding programmes happen, the more the students take part in learning. This finding is supported by Worsley (2002) who guaranteed that sound meals support schools' center mission of education, particularly with regards to boosting the concentration of students. This demonstrates that enhanced and successful school feeding programmes in schools increase students’ investment in learning.

CONCLUSION

The research established that the programme has been able to meet its objective which was to increase class participation. Moreover, the success of the programme was emphasized by most teachers who argued that the class participation and enrollment increased when the feeding programme was introduced. The research also established that the feeding programme increase the participation of students since the students can have access to a balanced diet that keeps them active in the classrooms. The study also established that most of the failing schools’ feeding programmes are in the regions with low social economic status. The rationale behind this is that most parents who enroll their children in public schools have low incomes. They therefore enroll their children in schools with feeding programmes so that they can have access to food while at school. They can however not afford to contribute towards buying food supplies due to their economic status. Therefore, effective implementation of the feeding programme is dependent on the support by the government. As a result of the lack of strong government support, there is slow implementation of SFP programme since the programme is largely an initiative of the parents. The county governments are yet to effectively fund SFP and the greatest challenge facing SFP is inadequate finances. The study established that there is a positive link between SFP and class participation.

By focusing on the technicality of different subjects that pupils study, there was a positive link between SFP and pupils’ performance in technical studies. For instance, the findings of the study show that schools with SFP have high performance in picture reading, alphabets and number recognition. This implies that having access to food within the school compound improves the ability of pupils to understand complicated concepts and learn fast. The study further established that having a SFP programme improves the contentment of pupils which further improves their participation. This is because children are healthier following the balanced diet provided in the school and pupils are more fulfilled in their studies. Moreover, the study established that the reason for improved

performance in schools with the feeding programmes is because concentration in the classroom improves when children are well-fed. The findings of the current research agreed with findings by other researchers. For instance the findings on improved performance in schools offering the feeding programmes was similar to the findings of the study conducted by Worsley (2002) who argued that school feeding programmes improve concentration which translates to improved participation. The findings of the study on the link between student's performance and school feeding programmes is similar to the findings of the research conducted by Kubik (2003) who concluded that effective food provisions in schools improves the performance of students since healthier children are more fulfilled in their studies and have improved concentration, hence boosting performance.

RECOMMENDATIONS

The SFP has contributed to higher scores among pupils in ECDE centres. SFP increases pupils' participation in class activities and is therefore a very important factor towards improved performance. It is therefore important for all schools to have a SFP. The provision of food should be made compulsory in all ECDE centres in Kenya to ensure healthy growth and better performance of pupils. The government should ensure that there is food security especially among marginalized groups and more so among children who are most vulnerable. Adoption of SFP should be fast tracked with the support of county and national governments. The ministry of education and county governments should work in collaboration to ensure that SFP is implemented. Donor support should be solicited to reduce the burden of parents in standing for SFP. It is important to strengthen the community participation in organizing and implementing SFPs. The administration expert, schools, guardians and other school partners ought to endeavor to continue viable school feeding programmes in schools so as to raise the dimension of pupils' interest in learning.

REFERENCES

- Adelman, S., Gilligan, D. and Lehrer, K. (2007). How Effective are Food for Education Programs? A Critical Assessment of the Evidence from Developing Countries. *International Food Policy Research Institute*, 1-3.
- Adroque, C. and Orlicki, M. E. (2013). Do In-School Feeding Programs Have an Impact on Academic Performance and Dropouts? The Case of Public Schools in Argentina. *Education policy analysis archives*, 21, 50. <https://doi.org/10.14507/epaa.v21n50.2013>
- Aila, B. (2012). The Impact and Challenges of School Feeding Programme in Enhancing Access to Primary Education in the unplanned settlements of Kibera in Nairobi. *Unpublished Master's Thesis: University of Nairobi*.
- Bundy, D., Burbano, C., Grosh, M. E., Gelli, A., Juke, M. and Lesley, D. (2009). Rethinking School Feeding. *Human Development*. <https://doi.org/10.1596/978-0-8213-7974-5>
- Del Rosso, J. M. (1999). School feeding programs: improving effectiveness and increasing the benefit to education - a guide for program managers. Available at: The Partnership for Child Development, PCD Language <http://socialprotection.org/discover/publications/school-feeding-programs-improving-effectiveness-and-increasing-benefit>
- Emanikor, J. (2014, Feb 20). School Feeding Programme is an obvious pull factor in Education sector. *Daily Nation* [Nairobi].
- Government of Kenya. (2005). Kenya Education Sector Support Programme. *Nairobi: Government Press*.
- Kazianga, H., De Walque, D. and Alderman, H. (2009). Educational and Health Impacts of Two School Feeding Schemes: Evidence From A Randomized Trial in Rural Burkina Faso. *Policy Research Working Papers*. <https://doi.org/10.1596/1813-9450-4976>
- Krejcie, R. V. and Morgan, D. W. (1970). Determining Sample Size for Research Activities. *Educational and Psychological Measurement*, 30(3), 607-610. <https://doi.org/10.1177/001316447003000308>
- Kubik M. (2003). The association of the school food environment with dietary behaviors of young adolescents. *American Journal of Public Health*, 93(7), 1168-1173. <https://doi.org/10.2105/AJPH.93.7.1168>
- Lewis, J. and Graham, J. (2007). Research Participants' Views on Ethics in Social Research: Issues for Research Ethics Committees. *Research Ethics*, 3(3), 73-79. <https://doi.org/10.1177/174701610700300303>
- UNESCO. (2000). The Dakar Framework for Action: Education for All: Meeting our collective commitments. Available at: <https://unesdoc.unesco.org/ark:/48223/pf0000121147>
- United Nations Millennium Development Goals (2008). Department of Public Information, United Nations. Available at: <http://www.un.org/millenniumgoals/index.shtml>
- Werner, D. and Bower, B. (1982). *Helping Health Workers learn*. Palo Alto, Chicago: The University of Chicago Press.

- WFP. (2010). *Kenya School Impact Evaluation of WFP School Feeding Programme in Kenya (1999-2008): A mixed-Methods Approach*. Nairobi.
- Worsley, A. (2002). Nutrition knowledge and food consumption: can nutrition knowledge change food behaviour? *Asia Pacific Journal of Clinical Nutrition*, 11(s3), S579-S585. <https://doi.org/10.1046/j.1440-6047.11.supp3.7.x>