

# **Influence of school feeding programmes on provision of child friendly school initiative's on learners' educational outcomes in public pre-primary schools in Mombasa County, Kenya.**

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## **Abstract**

*The main purpose of the school feeding programme is achieving educational outcomes with a view to obtain Kenyan educational goal of free, compulsory and 100% transition basic education. School feeding programme has the ability to increase and reduce access to pre-primary education and to achieve educational; outcomes. The purpose of the study was influence of child friendly school initiative on learners' educational outcomes in public pre-primary schools in Mombasa County, Kenya. The objective of the study was to establish influence of school feeding programme on learners' educational outcomes in public pre-primary schools in Mombasa County, Kenya. Descriptive research design informed the study. The target population had 97 head teachers, 388 teachers and 7 ECE supervisors. A sample of 78 head teachers, 116 teachers and 7 ECE supervisors was obtained based on stratified, purposive and simple random techniques. Questionnaire, interview schedule and observation guide were the three instruments used to collect data. Qualitative data was analysed in thematically in pros and narrative forms. Quantitative data was analyzed using descriptive statistics by means of frequencies, percentages, means and standard deviations. The inferential statistics, t-test was used to indicate the relationship that existed between variables. The study revealed that provision of the school feeding programme improves learners' enrollment, regular attendance, retention, participation in outdoor activities, progression to the next class level, health and nutrition and reduced drop out cases. It was further concluded that there is a statistical difference between school feeding programme and learners educational outcomes. The study recommended the Ministry of education, Mombasa County government, parents and schools to seek for alternative strategies of providing school feeding programmes among pre-primary children.*

**Key words:** school feeding programme, public primary schools, educational outcomes

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## **I. Introduction**

World Food Programme is the single most provider of the school feeding programme (SFP) in developing nations. For instance, in 2013 the WFP fed slightly more than 15 million school children in 69 nations. Provision of SFP is envisaged to improve children school enrollment and retention (World Bank 2012; WFP, 2013).

Promotion of early childhood education is critical and various research studies and policies have focused on its importance. Several foundations and organizations have highlighted on how to improve education among young children. For example, the 1990 Jomtien conference held in Thailand that put emphasis on Education For All (EFA) declared every person to access quality education irrespective of gender, race, colour or region. Still, the World Education Framework held in Dakar (2000), Senegal focused its attention on provision of free and compulsory primary education for the vulnerable and marginalized children by 2015 (UNESCO, 2015). Subsequently, according to the goal number four of 2030 vision agenda for Sustainable Development; it is envisaged that all children will access inclusive, free and compulsory education without discriminative bias (UNESCO, 2017).

Children exposed to hunger cannot concentrate and master the activity content knowledge. According to World Food Programme (2018), school meals aims to increase learner's school attendance and retention, hence access educational outcomes for their full potentials.

Moreover, the third Millennium Development Goal (MDGs) laid emphasis at ensuring that all school going children accomplish primary education of adequate quality (UNESCO, 2010; Republic of Kenya [RoK], 2017). The Government of Kenya in the constitution (2010) emphasize on the right of every child to holistic and cognitive development through acquisition of quality education. This development can only be realized when parents and the state are involved at ensuring elimination of all forms of deficiencies.

The history of SFP dates back in 1930's when it was introduced in United Kingdom (UK) and USA with a view to develop children physical growth (Morley, 2006). In Mali, The World Bank introduced the SFP (Kremer & Vermeersch 2017). However, challenge of financial management and funding are the obstacles to sustainable SFP in Mali (Edoardo & Aulo, 2013). In Kenya, the SFP was introduced in 1966. In 1979, the government introduced the milk programme in all public primary schools that aimed to improve children health and growth, attendance, retention, enrollment and reduced drop-out cases (Bekidusa, 2020). Yet, in 1990's this gain was inevitably abolished due to government initiative of cost-sharing in all learning institutions.

In an earlier study in Ghana, Lagbo (2012) asserted that SFP has led to increased school enrollment, attendance, and retention and minimized drop-out instances. In Tanzania, these sentiments were supported by Ramadhani (2014) who echoed that improved school attendance and enrolment has been realized because of the SFP. In South Africa, Sitao (2018) affirmed presence of a statistically difference between the median number of absent days two groups of schools. In Uganda, these views were supported by Haji (2010) who noted that provision of meals at schools is significantly related to improved students regular school attendance and academic performance and its success is further reinforced by parents' participation. Additionally, Mwendwa and Chepkonga (2019) observe that school feeding programme has a positive significant influence on primary school pupils learning effectiveness and performance. However, instances of low school attendance and enrollment are due to negative attitudes towards education, poverty and long distances covered by learners which adversely affect educational attainments.

## **1.2 Statement of the Problem**

Provision of food has been considered as pivotal to effective learning of pre-primary school children. Education is one of the economic development determinants in the world. For that, effective means of for enabling basic education to pre-primary children should be properly be enhanced more so, in pre-primary schools because they lay the learning foundation globally. According to the World Bank (2012) the school feeding programme provides education and health and nutritional gains from, most vulnerable families, and in the process, increase enrolment, retention and regular class attendance and promote food security. Most public pre-primary schools have some form of SFP from donors, County government and Government of Kenya. In Kenya, most Counties host a large number of poverty stricken families whose children cannot afford sufficient homegrown food nutrients to attract and sustain their children daily school attendance. Inadequate provision of meals irreversibly stunts the physical and mental development of young learners, resulting in wasted abilities and inability to cope up with future life.

Empirical studies holds that school feeding programme have a positive influence on students' participation in education (Kiiru, Mange & Otieno, 2020). According to Mombasa County social protection strategy, the annual budgetary allocation for school milk programme increased from 136.2 million in 2020 to 156.6 million in 2021 annual budgets. The allocation was meant to promote children health, retention and reduce dropout cases in pre-schools. Most public pre-primary hosts large number of children from low income families who cannot substantially afford three meals a day. These inevitably affect children educational achievement because a hungry child cannot effectively sustain the long hours of learning hence, high rate of absenteeism and drop-outs. Although different studies have been conducted on influence of SFP on learners' educational achievement (Kiiru, Mange & Otieno, 2020; Bekidusa, 2020; Bekidusa & Kisimbi, 2020), no such study has been done to investigate on influence of school feeding programmes on provision of child friendly school initiative's in public pre- primary schools learners educational outcomes in Mombasa County hence, a knowledge gap that this study investigated.

## **1.3 Objectives of the Study**

The main objective of the study was to examine influence of school feeding programmes on learners' educational outcomes in public pre-primary schools in Mombasa County, Kenya.

## **1.4 Research Hypothesis**

There is no significant relationship between school feeding programme and public pre-primary school learners' educational outcomes in Mombasa County.

## **1.5 Significance of the Study**

The findings of this study might be beneficial to the educational policy makers, World Food Programme, parents and school administration and other stakeholders in making relevant and valid policies concerning school feeding programme and improved learners' educational outcomes. This study intends to identify the benefits of education outcomes arising from school feeding programme.

### 1.6 Limitation of the Study

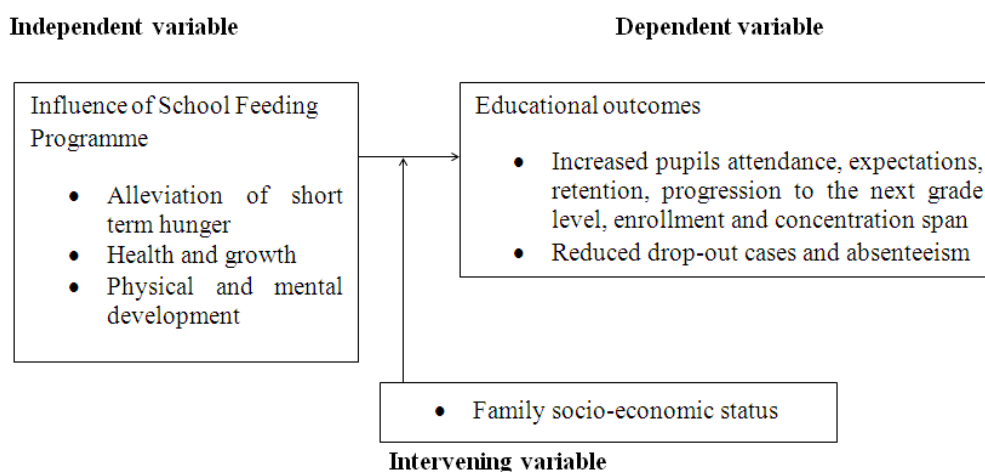
The results of this study may not be generalized to other counties in Kenya because it did not take into cognition the private schools and the geographical and socio-economic status of the Mombasa County.

### 1.7 Delimitation of the Study

The study participants were head teachers, teachers and ECE supervisors in Mombasa County. The study only aimed to investigate on influence of school feeding programme on learners' educational outcomes in public pre-primary schools in Mombasa County, Kenya.

### 1.8 Conceptual Framework

The study embraced the following conceptual framework.



### 1.9 Review of related literature

Most countries have embraced some child friendly school initiatives intervention at ensuring children retention and school attendance through provision of School Feeding Programme (SFP), inclusion of methodological strategies, improvement of school infrastructural development, training and re-training of teachers among other Multilevel interventions (World Bank, 2018). Child's health and nutrition has a vital role in its development. The SFP aims to increase children retention, enrollment and attendance, decrease drop out cases and low educational achievement.

Many countries have embraced the SFP as a social impetus for provision of child friendly school imitative to provide children nutrition, learning and educational outcomes (Bundy, Burbano, Grosh, Gelli, Jukes and Drake, 2009). World Food Programme support by noting that the SFP increased children enrollment rate from three-fifth in 2002 to ninth-tenth in 2007.

Yunusa (2014) state that School Feeding Programme has the ability to improve performance due to enhanced regular school attendance and effective learning. In Jamaica, children in Grade two classes in Arithmetic performance drastically improved with provision of School Feeding Programme. However, the impacts of SFP have raised mixed reactions. For example, Uduku (2011) argues that a children educational outcome is dependent on teacher motivation, infrastructural facilities and instructional materials.

According to UNESCO (2017) provision of school feeding programme is considered important in enabling children to access nutritional food supplements in order to improve school attendance and educational outcomes. Ecker (2012) noted that malnutrition is the single most barriers to human physical growth and health and economic development to developing countries. Moreover, Aila (2012) note that a malnourished child has stunted growth, emaciated and limited cognitive and physical ability. Still, World Food Programme (2006) avers that to mitigate the hunger crisis, provision of meals to school-going children should be encouraged to promote human resources and effective learning process. Thus, SFP is pivotal for short-term hunger elimination in children. It therefore enhances children concentration and attention (Aila, 2012).

The influence of the school feeding programme can never be under-estimated. Reviewed studies show that a school meal plays a pivotal role in school participation (Bundy, et al. 2009). A study done Aila (2012) indicate that provision of school meals result to improved participation among primary school children. Additionally, the World Food Programme [WFP] (2006) asserts that SFP assist the vulnerable families to send their children to school. This notion is corroborated by Bутtenheim et al. (2011) who note that SFP is closely linked with children's improved attendance, retention, cognitive abilities, class concentration and reduced malnutrition diseases that hampers school educational outcomes. A study conducted by Adekunle and Ogbogu (2016) in Nigeria on effect of SFP on children educational performance and enrollment affirmed that it increased learning opportunities such as attendance, enrollment, punctuality, retention and performance in

outdoor activities. In Bangladesh, a study by The International Food Policy Research Institute on influence of school feeding programme established that school drop-out cases reduced by 7.5, enrollment increased by 14.2 percent and school attendance improved by 1.3 days in a month. Furthermore, Dheressa (2011) concur by noting that SFP is potentially efficient in increasing school attendance due to children access to a school meal. However, He (2006) in Sri Lanka found a contrary finding that assistance of school feeding programme from the World Food Programmes had minimal impact on school attendance and enrollment.

It should however be noted that 80% of Kenyan population is rural based with challenges of poor land quality and frequent shortage of water hence, perennial food insecurity (UNESCO, 2005). Although Kenya is an agricultural country, only 20% of its land is vital for food production. The rest, 80% of the land is arid and semi-arid land with a population of 30% of the entire Kenyan population (MOA, 2010). The ASAL regions experience prolonged drought and food shortage. The school-going children are a group that is compounded within these areas. To mitigate on these cases of drought, low enrollment and retention, the Government of Kenya implemented the SFP in 1980 (Regnault De La Mothe 2008).

Kiilu and Mugambi (2019) opined that school feeding programme is a precursor to children's' attendance, reduced dropouts cases, improved school enrollment and enhanced educational performance. Furthermore, Aila (2012) study on impact of school feeding programme in Kibera Sub County holds that the SFP is lacking in most basic learning institutions. The study established a variance in learners participation in schools activities between those and without the SFP. The author concluded that learners in schools with SFP have a high test scores unlike those without.

A study was conducted by Karaba, Gitumu and Mwaruvie (2019) on influence of school feeding programme on learner's class involvement in Kenya. The target population had 1163 head teachers, 2 directors of education and 54629 learners in all the 1163 pre-school centres hosted in public primary schools in the two Counties of Murang'a and Kiambu. The sample consisted of 2 directors of education, 20 head teachers and 380 learners. Purposive and simple random techniques were adapted for the choice of the 402 sample participants. Head teachers questionnaire, County director's interview guide and observation guide on pupils' participants informed the instruments of the study. The study embraced t-test to indicate the relationship between school feeding programme and learner's participation. The study established the link between schools feeding programme and learners' motivation, class concentration, physiological stability, and readiness to learn language and mathematics activities hence, influencing positive learning activities. Although the reviewed study had a strong methodology, it however, did not look at influence of schools feeding programme as a child friendly school initiative and how it influence earners educational outcomes.

### **1.10 Justification of the Study**

This study is worth investigating because of varied problems and challenges about public pre-school learners attendance, drop-outs and low educational performance in Mombasa County. After pupils' admission, most of them seem to drop out of school before completion of the primary level. According to World Food Programme 2008, school feeding programme aim to assist vulnerable families to retain and improve educational outcomes in school. Thus, this study is valid and timely because of detrimental education performance and fluctuating school enrollment and retention. Therefore, the study intended to investigate on school feeding programmes on provision of child friendly school initiative's on learners' educational outcomes in public pre-primary schools in Mombasa County. A high educational outcome is considered pivotal to economic and social development of any country.

### **1.11 Methodology**

The study was done in Mombasa County, found on the coastal strip of Kenya. Descriptive research design informed the study because of its ability to test appropriate theories and provide detailed information from the respondents (Tashakkori & Teddlie, 2003). A sample of 154 participants that comprised 53 head teachers, 98 teachers and 3 ECE supervisors was used to provide information from a target population of 97 head teachers, 7 ECE supervisors and 388 ECE teachers. The sample was selected by using stratified, simple random and purposive sampling techniques. This is represented in Table 1.1.

<b>Participants</b>	<b>Target population</b>	<b>Sample</b>	<b>Sampling technique</b>	<b>Percentage</b>
Head teachers	97	78	Stratified and simple random	80
Teachers	388	116	Simple random	30
ECE Supervisors	7	7	Purposive	100
Total	492	201		

Questionnaire, interview guide and observation guide were the tools used to gather data. Instruments validity and reliability was strengthened by the supervisors and expert opinions to identify and adjust the limitations of the study tools. Quantitative data was analyzed using descriptive statistics; frequencies,

percentages, means and standard deviations and findings presented using tables by aid of Statistical Package for Social Science (SPSS). T-tests and Pearson correlation coefficient were used to analyze the relationship between variables. Qualitative data was analyzed thematically in narrative and verbatim form based on the emerging themes of the study.

### 1.12 Findings of the Study

**Table 1.2: Head teacher's (N=53) and teacher's (N=98) response on influence of school feeding programme and pre-school children educational outcome**

Statement	Respondent	SA		A		D		SD		mean	Std dev.
		f	%	f	%	f	%	f	%		
There is constant SFP in the school	Head teacher	15	28.3	11	20.8	25	47.2	2	3.7	2.7	.9
	Teacher	31	31.6	24	24.5	33	33.7	10	10.2	2.7	1.0
SFP is provided by the County government	Head teacher	17	32.1	13	24.5	20	37.7	3	5.7	2.8	.9
	Teacher	21	21.4	26	26.5	32	32.6	19	19.5	2.5	1.0
Family is the major provider and funding of the SFP	Head teacher	28	52.8	12	22.6	9	16.9	4	7.5	3.2	.9
	Teacher	52	53.1	25	47.1	14	26.4	7	13.2	3.2	.9
Education partners provide the SFP	Head teacher	14	26.4	7	13.2	27	50.9	5	9.4	2.5	.9
	Teacher	21	21.4	23	43.3	40	40.8	14	26.4	2.5	.9
SFP improves children regular school attendance	Head teacher	32	60.4	21	21.4	0	0.0	0	0.0	3.6	.4
	Teacher	57	58.1	41	77.3	0	0.0	0	0.0	3.5	.4
SFP improves pre-school children enrolment	Head teacher	21	39.6	16	30.1	10	18.8	6	11.3	2.9	1.0
	Teacher	47	47.9	31	58.4	12	22.6	8	15.1	3.1	.9
SFP improves children retention rates	Head teacher	28	52.8	16	30.1	7	13.2	2	3.7	3.3	.8
	Teacher	62	63.3	28	52.8	5	9.4	3	5.6	3.5	.7
SFP improves children nutrition and health	Head teacher	34	64.2	11	20.7	4	7.5	4	7.5	3.4	.9
	Teacher	56	57.1	27	50.9	14	26.4	1	1.8	3.4	.7
SFP improves children active participation during outdoor activities	Head teacher	41	77.4	10	18.8	1	1.8	1	1.8	3.7	.6
	Teacher	56	57.1	30	56.6	10	18.8	2	3.7	3.4	.7
SFP improves children transition rate to the next level of primary education	Head teacher	15	28.3	8	15.1	24	39.6	6	11.3	2.6	1.0
	Teacher	14	26.4	19	35.8	38	38.8	27	50.9	2.2	1.0
SFP improves children classroom concentration	Head teacher	35	66.0	15	28.3	3	5.6	0	0.0	3.5	.7
	Teacher	54	55.1	34	64.1	7	13.2	3	5.6	3.4	.7

It can be noted that almost half of head teachers and one third of teacher's response opine that the school feeding programme in pre-primary schools is not constant. Further observation indicated unavailability of the school feeding programme in most schools except for isolated cases. The finding was also supported by most pre-school supervisors who affirmed that full implementation of the school feeding programme has a long way to be realized. Though there was a budgetary allocation for the school feeding programme, the programme was yet to fully be implemented in public pre-primary schools. This explains why most pre-school children from privileged families prefer privately owned schools that have constant SFP. The finding is supported by Aila (2012) whose study on impact of school feeding programme in Kibera Sub County affirmed that the SFP is lacking in most basic learning institutions that affect children educational achievement.

Still, 37.7 percent of head teachers and 32.6 percent of teachers assert that the County government does not provide the school feeding programme to pre-school learners. However, the study established non-provision of the school feeding programme by the Mombasa County government and limited parental intervention in most public pre-primary schools. The ECE supervisors attributed non-provision of school feeding programme in pre-primary schools to budgetary constraints. According to the ECE supervisors, the education budgetary is mainly spent on teachers' salaries, teacher professional growth and infrastructural development. According to the Kenyan constitution of 2010, the pre-primary school education is managed by the County governments. The finding is contrary to Ecker (2012) who note that malnutrition is the single most barriers to human physical growth and health and economic development to developing countries.

On flip-flop, majority of head teachers 52.8 percent and teachers 53.1 percent agree that most of the SFP is provided by the families. The finding was supported by one ECE supervisor who reiterated that *"Children families are the major provider of successful school feeding programme. The County government school feeding programme is nor constant due to financial constraints and the need for infrastructural*

*development (Supervisor, 3).*” This implies that most public pre-primary institutions do not access SFP. Therefore, most children from low socio-economic families experience learning difficulties arising from low retention rate, frequent absenteeism, dropout cases and detrimental educational performance.

The study further established that a larger percentage of head teacher 50.9 and teachers 40.8 were in tandem that education partners do not assist in provision of pre-primary school feeding programme. The ECE supervisors noted the barriers facing development partners as a result of bureaucratic channels involved in enabling schools to access school feeding programme. The study noticed parents as the main provider of the school feeding programme. This implies the inability of non-governmental organizations to fully assist schools with SFP. This is supported by UNESCO (2017) that provision of school feeding programme is considered important in enabling children to access nutritional food supplements in order to improve school attendance and educational outcomes.

Consequently, a large percentage of head teachers 60.4 and teachers 58.1 noted that school feeding programme enhances regular children attendance at school. On the same note, one of the ECE supervisor supported by noting the importance of the school feeding programme in attracting a large percentage of children to school regularly in view to have at least a meal more so from low income families. Further, the study noticed high attendance of children in schools that offered school feeding programme. School feeding programme is ostensibly effective with high daily attendance because children only access a meal when they attend school. It can therefore be interpreted that the regular school attendance is attributed to school feeding programme. This is line with Dheressa (2011) who alluded by noting that school feeding programme is potentially efficient in increasing school attendance due to children access to a school meal.

Additionally, most head teachers 39.6% and teachers 47.9% opined that school feeding programme enhances high enrollment in public pre-primary schools. The was echoed by ECE supervisor who asserted “*Enrollment of children in schools is increased as a result of low income families sending their children to school that provides at least a meal to their poverty stricken children*”. With current free, compulsory and 100% transition, most public pre-primary schools are overcrowded especially children whose families experience poverty. This is in contrast to privately owned schools that attracts few children but with adequate teacher staffing, instructional and physical facilities that embrace better educational outcomes. This concurs with Uduku (2011) study who argues that children educational outcomes depend on teachers’ motivation and commitment, availability of infrastructural facilities and instructional materials.

In the same vein, more than half the percentage of head teachers 52.8 and teachers 63.3 were in support that SFP result in improved children retention rate. A further follow-up insight from one of the ECE supervisor affirmed that a school meal attracts children to school by increased attendance and retention rate. An observation revealed high school attendance in with SFP and low attendance in schools without the school feeding programme. This indicates that provision of school feeding programme allows children to constantly attend school and therefore minimize cases of dropout cases and absenteeism. The finding corroborates that of Adekunle and Ogbogu (2016) in Nigeria who established that the school feeding programme increased learning opportunities such as attendance, enrollment, punctuality, retention and performance in outdoor activities.

The finding further established that school feeding programme enhance improved pre-primary children nutrition and health as shown by head teacher’s percentage of 64.2 and teacher’s percentage of 57.1. An improved nutritional status leads to better health care and protect children from malnutrition effects that would otherwise keep them away from school. Better health and nutritional status improves children’s educational outcomes through regular school attendance. Likewise, the school feeding programme reduces hunger and starvation hence, improved nutrition and education achievement. The finding corroborates those of Aila (2012) who note that a malnourished child has stunted growth, is emaciated and has limited cognitive and physical abilities.

Similarly, the finding established the role played by school feeding programme in enhancing active participation of children during outdoor activities as indicated by a large percentage of head teachers 77.4 and teacher’s 57.1 responses. Outdoor activities can only be done by children when they are satisfied. Active participation of children in play activities enhance social and emotional competence that contribute to children development on the domains of physical, cognitive and communication. These domains are attributes to holistic development of children.

Another large representative of head teachers 24 (39.6%) and teachers 38 (38.8%) disagreed that SFP results to effective children transition to the next level of primary education. This might be attributed to children cognitive ability, effective teacher staffing and use appropriate use instructional materials, facilities and methodology. It should be noted that children positive attitude to learning, teachers and family encouragement and individual discipline plays a vital role in children educational achievement rather than dependence on school feeding programme. This is in contrast to Aila (2012) who noted a disparity of learners’ educational achievement between those schools with SFP and those without.

School feeding programme result to improved children improved classroom concentration as noted by head teachers 35 (66.0%) and teachers 54 (55.1%). A further insight from one of the ECE supervisor noted that a hungry child cannot sustain the whole learning process. Still, some children were seen to be dull, unhappy and had low concentration ability during the teaching and learning process. These were indicators of a hungry child. The finding was echoed by Karaba, Gitumu and Mwaruvie (2019) that schools feeding programme had an influence on learners' motivation, class concentration, physiological stability, and readiness to learn language and mathematics activities hence, influenced positive learning activities.

### Descriptive statistics

The study also established the descriptive statistics from teachers and head teacher. The findings are shown below.

**Table 1.3: Descriptive representation**

Variable	N	Mean	Std. Deviation
Consistence of School Feeding Programme	151	2.7	.9
County government provides the SFP	151	2.6	1.0
Family is the main funding of SFP	151	3.2	.9
Education partners assist with SFP	151	2.5	.9
SFP improves attendance	151	3.1	.9
SFP improves children enrollment	151	3.1	.9
SFP increase pupils retention in schools	151	3.4	.7
SFP improves pupils health and nutrition	151	3.4	.8
SFP assist with pupils active participation in outdoor activities	151	3.5	.7
SFP improves pupils transition to the net level of learning	151	2.3	1.0
SFP increase pupils class concentration	151	3.4	.7

It is observed from the finding in Table 1.3 that provision of SFP by the family (mean = 3.2317, std. dev. = .96225), learners; class attendance (mean= 3.1788, std. dev.98716), enrollment (mean= 3.1192, std. dev. = .97930), retention (mean=3.4503, std. dev. = .78050), health and nutrition (mean= 3.4106, std. dev. = .82681), engagement in outdoor activities (mean= 3.5298, std. dev. = .71933) and class concentration (mean= 3.4834, std. dev. = .71044) are highly dependent on school feeding programme.

The study also tested for the relation between SFP and pupils educational outcomes using t-test inferential statistics. This is illustrated in Table 1.4.

**Table 1.4: T-test**

Item					95% Confidence interval of the Difference	
	t	df	Sig. (2 tailed)	Mean Difference	Lower	Upper
Consistence of SFP	34.705	150	.000	2.76159	2.6044	2.9188
County government provide SFP	31.549	150	.000	2.61589	2.4521	2.7797
Family funding	41.271	150	.000	3.23179	3.0771	3.3865
Partners assistance	31.641	150	.000	2.53642	2.3780	2.6948
Attendance	39.570	150	.000	3.17881	3.0201	3.3375
Enrollment	39.140	150	.000	3.11921	2.9617	3.2767
Retention	54.322	150	.000	3.45033	3.3248	3.5758
Health and nutrition	50.689	150	.000	3.41060	3.2776	3.5435
Outdoor play	60.299	150	.000	3.52980	3.4141	3.6455
Transition	28.061	150	.000	2.34437	2.1793	2.5094
Concentration	60.252	150	.000	3.48344	3.3692	3.5977

Test value = 0.05

From Table 1.4, it is notable that there is a significant statistical difference between school feeding programme and learner's educational outcomes. This is because the indicated t-test for all the items has a p value of 0.000 that was far below the 0.05 alpha values for the result to have statistical difference. This is in line with Bittenheim et al. (2011) who note that school feeding programme is closely linked with children's improved attendance, retention, cognitive abilities, class concentration and reduced malnutrition diseases that hamper school educational outcomes.

### 1.13 Conclusion

### 1.14 Recommendations

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