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A STUDY ON EVALUATION THE STATE OF SCHOOL FEEDING AT SHARKIA GOVERNORATE

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ABSTRACT: A survey study was carried out on sample of pupils, their families and their teachers about the status of school feeding at Sharkia Governorate. Sample including pupils, their families and their teachers was collected from different schools. The samples included both Rural and Urban schools at Sharkia Governorate. A questionnaire was prepared including demographic information, food pattern and knowledge as well as their remarks about the school diet presented through the school feeding program at Sharkia Governorate. The data was collected using t Questionnaire sheet through personal interviews with pupils, their families and their teachers. The collected data were statistically analyzed. Data indicated that males presented 55% of the sample, while females presented 45%. Concerning age of pupils it could be noticed that 2, 14, 39, 34 and 11% of the pupil's samples aged nine, ten, eleven, twelve and thirteen years old, respectively. According to school class it could be noticed that 10, 34 and 56% of the samples were in fourth, fifth and sixth class, respectively. Data also indicated that 16% of the studied pupils sample were suffering from obesity. However 22% of the studied pupils sample were suffering from Thinnest. Data also indicated that the pupils sample had lower food awareness because higher per cent age of them did not take their breakfast at home before going to school, higher per cent take foods from school canteen including chips and soft drinks, with out make sure of food validity. About the school meal presented to the pupils higher per cent age did not accept the colour, taste, smell and texture of the biscuit meal. Also they suggested that chocolate taste, vanilla smell, light colour and medium texture must be found in the biscuit meal. Also they suggested that the school meal must include milk and dairy products. Regarding to some remarks about school meal provided to pupils sample from their teachers. Their answers included number of workers in meal distribution is suitable, the workers are not qualified, healthy and trained. Meal transportation is unsuitable, warehouse, unsuitability of school meal warehouse ventilation, unsuitability of school meal warehouse hygiene, adaptation and space. Also, the provided meal is not sufficient to pupils need. On the light of the obtained results the following reconditions must be taken into consideration to improve the Egyptian school feeding programs outcomes for the education programs must include nutritional knowledge to improve the nutritive pattern and appearance of pupils. The media programs must include nutritional knowledge to improve the nutritive pattern and awarenace of the families which must be refluxed on their children. The system of school feeding program must be revised to improve the school feeding meal to include different types of foods with particular importance on including the school meal some dairy products. Great attention must be followed by improving the conditions of school meal transportation, suitability of school meal warehouse, suitability of school meal warehouse ventilation and suitability of school meal warehouse hygiene. Also, the provided meal must be sufficient to pupils need. The workers must be qualified, healthy and trained.

Key words: School feeding programs, nutritional status, food pattern, food awareness, school meal warehouse.

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INTRODUCTION

The aims of school feeding differ according to country. School feeding is differed in high-, middle, and low-income countries. For each country, the main aims and objectives of the country-specific school feeding program (SFP), its framework, service delivery, nutritional guidelines (or the lack of it), and the nutritional composition of menus. In high-income countries, SFPs aim to tackle the rising levels of childhood overweight and obesity. In middle- and low-income countries, SFPs have two different branches of aims. In the short-term, it aims to alleviate hunger, exist as a social safety net for households with very low income, and increase enrollment of children into schools (Jomaa *et al.*, 2011). In the longer term, it aims to improve the nutritional status, attendance, cognitive development, and retention of school children (Jomaa *et al.*, 2011). A cochrane review, which contained trials from five continents and spanning eight decades, concluded that “school feeding programs significantly improve growth and cognitive performance of disadvantaged children” (Greenhalgh *et al.*, 2007).

There are two main modalities of school feeding: in-school feeding and take-home rations (Bundy *et al.*, 2009). These are usually complemented with other interventions such as micronutrient supplementation, fortified biscuits, and deworming programs.

There is evidence that school feeding increases enrollment, attendance, retention, and educational achievement and alleviates short term hunger (UNHCR, 2012). However, further research must be conducted in order to determine how much of a significant longer-term benefit school feeding has over other social safety nets.

These positive aspects of school feeding are coupled with the negative aspects or trade-offs. However, this is not the case with the improvement of overall nutritional status of school children (Bundy *et al.*, 2009). It has been observed that in certain cases, SFPs have led to school children being fed less at home as some parents use the SFP as a replacement for feeding at home; whereas, in reality, it is meant to complement the child’s diet in addition to home-feeding (Greenhalgh *et al.*, 2007). These families view the SFP as an income transfer and

tend to spend the food budget of these school children on other household purchases. For a SFP to be successful, it must be ensured that this substitution effect does not take place.

Studies conducted in Ghana, Kenya, Mali, and Rwanda have concluded that there is a need for guidelines on nutrition and menu designs to be recommended in countries that have established Home Grown School Feeding (HGFS) programs (USDA, 2009). Currently, there are no nutritional guidelines in these countries and very little guidance on menu design.

School feeding in middle and low-income countries has very different objectives and goals compared to the high-income countries. School meal provision in high-income countries is driven by evidence that the foods in schools are very high in fat and lack adequate amounts of essential nutrients (Jomaa *et al.*, 2011). SFPs in middle- and low-income countries, in the short term, aim to alleviate hunger, act as a social safety net for low-income households, and increase enrollment of children into schools; and in the longer term, it aims to improve the nutritional status, attendance, cognitive development, and retention of school children.

In middle and low-income countries, policy has been mainly driven by the need to reduce poverty, establish social safety nets for financially vulnerable households, and to increase and enhance the educational attainment of its population-specifically the primary schoolchildren. Middle and low-income countries are increasingly incorporating local produce into the SF menus by implementing HGFS programs with the aim of stimulating local markets and economies (Jomaa *et al.*, 2011).

In general, three objectives can be directly associated with school feeding programs (Adelman *et al.*, 2007). First, SFPs can motivate parents to enroll their children and see that they attend school regularly. Second, SFPs can improve the nutritional status of school age children over time, and alleviate short-term hunger in malnourished or otherwise well-nourished school children. Third, SFPs can improve cognitive functions and academic performance *via* reducing absenteeism and

increase attention and concentration due to improved nutritional status and reduced short-term hunger. Indirectly, by increasing the amount of food available to the household, SFP could improve the nutritional status of household members who are not in school, especially when SFPs entail take home rations. Overall, SFPs are appealing because if properly designed and implemented they lead to increased number of children being enrolled with better academic performances.

Aim of Study

The present study aimed to assess and evaluate the statuses of school feeding in Sharkia Governorate. A survey study was carried on sample of pupils, their families and their teachers about the status of school feeding in Sharkia Governorate.

Experimental Design

Assess and evaluate the statuses of school feeding in Sharkia Governorate

A survey study was carried on sample of pupils, their families and their teachers about the status of school feeding at Sharkia Governorate. Sample of pupils including 100 pupils and their families was collected from different schools aging between nine and thirteen years old. Sample of teachers including 50 person from the same schools were also included in this study. The samples included both Rural and Urban schools in Sharkia Governorate.

Data collection

The data was collected using t Questionnaire sheet through personal interviews with pupils, their families and their teachers. The questionnaire was prepared including demographic information, food pattern and knowledge as well as their remarks about the school diet presented through the school feeding program at Sharkia Governorate

Two largest districts were selected in the number of schools: Zagazig and Hehia. A city and village were selected from each district. Random sample Consisting of 100 students distributed as shown in Table 1, villages were selected in a simple random way.

Statistical Analysis

The collected data were coded and entered, after complete data entering the data were transferred to SPSS version program. Then the program outputs were tabulated in frequency and percentages (Sarhan, 2004).

Results

Demographic Information About the Studied Pupil's Sample

Results presented in Table 2 indicate that males presented 55% of the sample, while females presented 45%. Concerning age of pupils it could be noticed that 2, 14, 39, 34 and 11% of the pupils samples aged nine, ten, eleven, twelve and thirteen years respectively. According to school class it could be noticed that 10, 34 and 56% of the samples were in fourth, fifth and sixth class respectively.

Concerning the arrangement of pupils between their brothers first, second, third, fourth, fifths and others were 42, 35, 14, 7, 1 and 1%, respectively.

Data in Table 3 indicate that 16% of the studied pupils sample was suffering from obesity. However 22% of the studied pupils sample was suffering from Thinnest. These results are in agreement with those reported by (Jomaa *et al.*, 2011) who reported that in middle and low-income countries, policy has been mainly driven by the need to reduce poverty, establish social safety nets for financially vulnerable households, and to increase and enhance the educational attainment of its population-specifically the primary school children. Middle and low-income countries are increasingly incorporating local products into the SF menus by implementing HGFSF programs with the aim of stimulating local markets and economies.

Data presented in Table 4 summarizes some remarks about school meals from the studied pupil's sample. There is no diversity of meals daily. But one meal only including biscuit provided

Table 1. Distribution of selected sample

District	City / Village	Sample
Zagazig	City	20
	Village	30
Hehaya	City	20
	Village	30
Total		100

Table 2. Some demographic properties of the studied pupil's sample

Demographic properties	Frequency	(%)
Rural	60	60
Urban	40	40
Gender		
Males	55	55
Females	45	45
Total	100	100
Age: years		
Nine	2	2
Ten	14	14
Eleven	39	39
Twelve	34	34
Thirteen	11	11
Total	100	100
School class		
Fourth	10	10
Fifth	34	34
Sixth	56	56
Total	100	100
Arrangement between brothers		
First	42	42
Second	35	35
Third	14	14
Fourth	7	7
Fifth	1	1
Others	1	1
Total	100	100

Table 3. Prevalence of obesity and thinnest among the studied pupils

Properties	Frequency	(%)
Prevalence of obesity		
Yes	16	16
No	84	84
Prevalence of thinnest		
Yes	22	22
No	78	78

Table 4. Some remarks about school meals from the studied pupil's sample

Meals properties	Frequency	(%)
Diversity of meals daily		
Yes	0.0	0.0
No	100	100
Type of meals provided		
Biscuit	100	100
Milk	0.0	0.0
Others	0.0	0.0
Provision of school meal		
Good	17	17
Acceptable	61	61
Poor	22	22
Surplus of school meal		
Yes	33	33
No	67	67
Control constituents of meals materials		
I don't Know	74	74
No	15	15
Yes	11	11
Does the school meal provided needs of pupils		
Yes	33	33
No	67	67
Presence of unaccepted foods in school meal		
Yes	20	20
No	80	80

to pupils every day. Concerning the provision of school meal, 17, 61 and 22% of the pupils sample said good, acceptable and poor, respectively. About surplus of school meal 33 and 67% of sample said yes and no, respectively. When the pupils sample was asked did the school meal provided their needs, 33% said yes and 67% said no. When the pupils sample were asked about the presence of unaccepted foods in school meal, 20% of the sample said yes while 80% said no.

Table 5 summarizes some remarks on the pupils opinion about biscuit provided to pupils during school mail. Concerning pupils impress about biscuit diet 28% said yes, 19% said no and 53% said sometimes. About the acceptability of biscuit shap box 75% yes and 25% said no. Moreover when the pupil's samples were asked about place of biscuit diet eaten 57% said at school, 24% at home and 19% not eaten the biscuit diet. When the pupil's sample was asked their opinion about biscuit smell, 80% said good, while 20% said poor. Concerning their opinion about biscuit taste 74% said good, while 26% said poor. Concerning their opinion about biscuit general appearance 24% said good, 53% said tolerable while 23% said poor. Concerning their opinion about biscuit fragile 52% said Suffused, 19% said soft and 29% said fragile. When the pupil's sample was asked about their opinion about pieces of biscuit number 41% said appropriate, 35% said good while 24% said inappropriate.

Also Table 6 summarizes pupils suggestions about the different properties which must be founded in biscuit provided in the school mail. Concerning pupils suggestions about colour of biscuit cover, 9% suggested single colour, 32% suggested with different colours while 59% suggested it graphics. Pupil's suggestions about taste were 23% coconut, 48% chocolate and 29% fruit. Pupils suggestions about biscuit colour were 82% light, 11% dark and 7% others. Pupil's suggestions about biscuit texture were 37% coarse, 22% soft and 41% medium. Pupils suggestions about biscuit smell were 8% as presented, 56% vanilla and 36% fruits

Food Pattern and Awareness of the Studied Pupils Sample

Table 7 shows some remarks on food pattern of the studied pupil's sample. Concerning

number of meals eaten daily it could be noticed that 7% of the sample eat one meal daily, 21% eat tow meals, 64 eat three meals daily while 8% eat more than three meals daily. When the pupils sample were asked if they eat some foods from school canteen, 26% said yes , 32% said no while 42% said sometimes. When they were asked if they eat salads within meals, 55% said yes, 25 said no and 20% said sometimes. Concerning their eaten ready sandwiches from school canteen, 26% said yes, 46% said no and 28% said sometimes. However when they were asked about eaten homemade prepared sandwiches 64% said yes, 12% said no and 24% said sometimes. Moreover, when the pupils sample were asked about the main meal which the pupil is keen to eat, 7% answered breakfast, 69% lunch and 24% dinner.

Table 8 summarizes some remarks on food awareness of the studied pupil's sample. About washing hands before eating 75% answered yes, 3% no and 22% sometimes. About the type of foods which pupils buy at school, 51% answered chips, 19% soft drinks, 10% sandwiches and 20% other foods. When the sample was asked about dairy products which they preferred, 34% answered milk, 29% yoghurt, 30% cheese, 5% cream and 2% butter. Concerning if they make sure of food validity, 36% answered yes, 20% no and 44% sometimes.

Some Demographic Properties and Family Remarks About Food Pattern and Awareness of the Studied Pupil's Sample

Data presented in Table 9 summarize some demographic properties of the studied pupil's family sample. Concerning the level of education of both fathers and mothers of pupil's samples, it could be noticed that higher per cent of the sample got higher education level to be 54 and 45% for pupil's fathers and mothers, respectively. The second level was medium education being 26% and 41% for pupil's father and mothers respectively. About the source of family income the father salary and mother salary gained the highest level.

Table 10 shows some family remarks about food pattern and awareness of the studied pupil's sample. When the family sample were asked do pupils take breakfast at home their

Table 5. Some remarks on the pupils opinion about biscuit provided to pupils during school mail

Remarks	Frequency	(%)
Pupils impress about biscuit diet		
Yes	28	28
No	19	19
Sometimes	53	53
Acceptability of shape of biscuit box		
Yes	75	75
No	25	25
Place of biscuit diet eaten		
At school	57	57
At home	24	24
Not eat	19	19
Opinion about biscuit smell		
Good	80	80
poor	20	20
Opinion about biscuit taste		
Good	74	74
Poor	26	26
Opinion about biscuit fragile		
Suffused	52	52
Soft	19	19
fragile	29	29
Opinion about biscuit general appearance		
Good	24	24
Tolerable	53	53
poor	23	23
Opinion about biscuit number		
Appropriate	41	41
Good	35	35
inappropriate	24	24

Table 6. Pupils suggestions about the different properties which must be found in biscuit provided in the school mail

Biscuit properties	Frequency	(%)
Pupils suggestions about colour of biscuit cover		
Single colour	9	9
With different colours	32	32
It graphics	59	59
Pupils suggestions about taste of biscuit		
Coconut	23	23
Chocolate	48	48
Fruit	29	29
Pupils suggestions about biscuit colour		
Light	82	82
Dark	11	11
Others	7	7
Pupils suggestions about biscuit texture		
Coarse	37	37
Soft	22	22
Medium	41	41
Pupils suggestions about biscuit smell		
As presented	8	8
Vanilla	56	56
Fruits	36	36

Table 7. Some remarks on food pattern of the studied pupils sample

Food pattern properties	Frequency	(%)
Number of meals eaten daily		
One	7	7
Two	21	21
Three	64	64
More than three	8	8
Eat some foods from school canteen		
Yes	26	26
No	32	32
Sometimes	42	42
Eat salads within meals		
Yes	55	55
No	25	25
Sometimes	20	20
Eat ready sandwiches from school canteen		
Yes	26	26
No	46	46
Sometimes	28	28
Eat home made sandwiches		
Yes	64	64
No	12	12
Sometimes	24	24
The main meal which the pupil is keen to eat.		
Breakfast	7	7
Lunch	69	69
Dinner	24	24

Table 8. Some remarks on food awareness of the studied pupil's sample

Food awareness properties	Frequency	(%)
Washing hands before eating		
Yes	75	75
No	3	3
Sometimes	22	22
Type of foods which pupils buy at school		
Chips	51	51
Soft drinks	19	19
Sandwiches	10	10
Another foods	20	20
Dairy products which pupils preferred		
Milk	34	34
Yoghurt	29	29
Cheese	30	30
Cream	5	5
Butter	2	2
Make sure of food validity		
Yes	36	36
No	20	20
Sometimes	44	44

Table 9. Some demographic properties of the studied pupil's family sample

Family properties	Frequency	(%)
Father education		
Illiterate	7	7
Basic education	5	5
Medium education	26	26
Higher education	54	54
Advanced Studies	8	8
Mother education		
Illiterate	11	11
Basic education	2	2
Medium education	41	41
Higher education	45	45
Advanced Studies	1	1
Source of income*		
Father salary	95	95
Mother salary	39	39
Pensions	2	2
Ownership	8	8
Other sources	21	21

* Repetitions More than 100 to choose the most source of income.

Table 10. Some family remarks about Food pattern and awareness of the studied pupil's sample

Food awareness properties	Frequency	(%)
Pupils take breakfast at home		
Yes	28	28
No	24	24
Sometimes	48	48
Pupils take foods from home to school		
Yes	60	60
No	6	6
Sometimes	34	34
Types of foods taken from home to school		
Sandwiches	84	84
Cake	4	4
Others	12	12
The family careful about pupils drinking milk and dairy products daily		
Yes	82	82
No	18	18

answers included 28% yes, 24% no and 48% sometimes. Moreover when they were asked do pupils take foods from home to school, their answers included 60% yes, 6% no and 34% sometimes. Concerning types of foods taken from home to school, they answered 84% sandwiches, 4% cake and 12% take other foods. When they were asked do the family careful about pupils drinking milk and dairy products daily, their answers included 82% yes and 18% no.

From the foregoing data it could be noticed that the majority of pupils did not take their breakfast meal at home, whereas 28% only take their breakfast meal at home. This indicates that family must be increase their attention about the food pattern and awareness of their pupils. Also this must be confirmed the importance of school feeding program to improve the impacts on children's health and educational outcomes (Jomaa *et al.*, 2011).

Some Remarks of Sample of Teachers About School Meal Provided to Pupils

Results presented in Table 11 illustrate some remarks about school meal provided to pupils sample distribution and storing conditions from their teachers. With regard to the ability of pupils to understand the majority of pupils sample were medium and good with per cent of

54% and 38% respectively. When the teachers sample were asked about suitability of the number of workers in meal distribution. The answers including 30% yes and 70% no. When they were asked if the workers is qualified, healthy and trained. Answers included 20% yes, 32% no and 48% sometimes. Concerning the extent of food provided quality as nutritional school meal the sample answers including 76% good and 24% poor. With regard to time of arrival of the school meal, the sample answers including 82% on time and 18% lately. About suitability of meal transport only 8% said suitable, however 92% said unsuitable. Regarding suitability of school meal warehouse answers including 58% suitable and 42% unsuitable. About suitability of school meal warehouse ventilation the sample answers including 72% suitable and 28% unsuitable. Concerning suitability of school meal warehouse hygiene the sample answers including 74% suitable and 26% unsuitable. About adaptation of school meal warehouse, the sample answers including 56% poor, 22% good and 22% acceptable. With regard to space of school meal the sample answers including 30% poor, 44% good and 26% acceptable. Moreover, when the teachers sample were asked if the provided meal sufficient to pupils need, answers included 58% sufficient and 42% not enough.

Table 11. Some remarks about school meal provided to pupils sample from their teachers

Food awareness properties	Frequency	(%)
Ability of pupils to understand		
Weak	4	4
Medium	54	54
Good	38	38
Very good	4	4
Does the number of workers in meal distribution is suitable		
Yes	30	30
No	70	70
Does the workers is qualified , healthy and trained		
Yes	20	20
No	32	32
Sometimes	48	48
The extent of food provided quality as nutritional school meal		
Good	76	76
Poor	24	24
Time of arrival of the school meal		
On time	82	82
Lately	18	18
Suitability of meal transport		
Suitable	8	8
Unsuitable	92	92
Suitability of school meal warehouse		
Suitable	58	58
Unsuitable	42	42
Suitability of school meal warehouse ventilation		
Suitable	72	72
Unsuitable	28	28
Suitability of school meal warehouse hygiene		
Suitable	74	74
Unsuitable	26	26
Adaptation of school meal warehouse.		
Wretched	56	56
Good	22	22
Acceptable	22	22
Space of school meal warehouse.		
Poor	30	30
Good	44	44
Acceptable	26	26
Sufficient of provided meal to pupils need		
Sufficient	58	58
Not enough	42	42

DISCUSSIONS

Referring to forgoing results it could be noticed that about 22% of pupils samples were suffering from thinnest, while 16% were suffering from obesity. This indicates that the importance of correcting the nutritive pattern of the pupils and the importance of school feeding programs to overcome these nutritional problems.

Concerning to the food awareness of the studied pupil's sample, it could be observed the weak food awareness of the studied pupil's. Only 7% of the sample was keen to eat breakfast meal at home before going to school. This may affect the ability of pupils to understand their lessons. Also higher per cent of pupils sample buy chips and soft drinks at school being 51 and 19% of the sample, which may cause obesity. Moreover, lower per cent being 36% who make sure of food validity.

Concerning remarks on the pupils opinion about biscuit provided to pupils during school mail. Regarding the opinion of pupils sample biscuit general appearance good lower percent being 24% says good, but the higher percent answers tolerable 53% and poor 23%). With regard to pupils suggestions about the different properties which must be found in biscuit provided in the school mail. Pupils wanted different colours of biscuit cover, with chocolate taste, light colour, medium texture and vanilla smell. Concerning some family remarks about food pattern and awareness of the studied pupil's sample. Lower per cent being 28% were keen about their children take breakfast at home before going to school High per cent of family are careful about pupils drinking milk and dairy products daily was observed being 82% of the sample.

With regard about some remarks about school meal provided to pupils sample from their teachers. Their answers included number of workers in meal distribution is suitable (70% of the sample), the workers is not qualified, healthy and trained (80% of the sample). Meal transportation is unsuitable (92% of sample), Unsuitability of school meal warehouse, unsuitability of school meal warehouse ventilation. Unsuitability of school meal warehouse hygiene, adaptation and space. Also

the provided meal is not sufficient to pupils need. These results are in agreement with those reported by (Bundy *et al.*, 2009) who observed that school feeding programs must be improve the nutritive states of pupils and this is of great importance for the low income countries. Also (Jomaa *et al.*, 2011) reported that school feeding programs in developing countries had many impacts on children's health and educational outcomes. Also, (Grantham *et al.*, 1998) found the positive impacts of school feeding program. (Hall *et al.*, 2007) evaluated the health impacts of a school nutrition programme in Vietnam on health and educational outcomes for pupils.

Moreover researchers at the International Food Policy Research Institute have critically assessed evidence from developing countries to define preliminary results of school feeding programs (Gilligan, 2013). These assessments found that the timing of meals is not a critical factor in the positive effects on learning and cognition, and thus take-home rations can perform as well as in-school meals, and that in-school meals may even disrupt learning (Partrick, 2013). In some settings, take-home rations are more cost-effective than in-school meals, and the study argued that some country programs may be optimized by focusing resources on take-home rations. Additionally, it was found that in the study setting, school attendance improved learning more significantly than nutrition status improvements, but that school feeding programs encouraged attendance and still have a positive net result on education levels. In a study done by Partrick (2013), it was shown that there is no evidence that higher-calorie meals positively impact school enrollment and attendance, first-grade enrollment age and grade repetition, and fourth-grade test scores over average-calorie school feeding meals in Chile's national program (Adelman *et al.*, 2007). Thus, McEwan's study suggested that Chilean policy, to produce significant positive results, should focus more on the nutritional composition of school meals, rather than caloric content alone.

Recommendations

On the light of the forgoing results the following recommendations must be taken into

consideration to improve the Egyptian school feeding programs outcomes for pupils:

1. The education programmes must include nutritional knowledge to improve the nutritive pattern and awareness of pupils.
2. The media programs must include nutritional knowledge to improve the nutritive pattern and awareness of the families which must be reflected on their children.
3. The system of school feeding program must be revised to improve the school feeding meal to include different types of foods with particular importance on including the school meal some dairy products.
4. Great attention must be followed for improving the conditions of school meal transportation, suitability of school meal warehouse, suitability of school meal warehouse ventilation. Suitability of school meal warehouse hygiene, adaptation and space. Also the provided meal must be sufficient to pupils need.
5. Also the number of workers in meal distribution must be suitable. The workers must be qualified, healthy and trained.

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دراسة لتقييم حالة التغذية المدرسية في محافظة الشرقية

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أجريت هذه الدراسة بهدف تقييم التغذية المدرسية في محافظة الشرقية، حيث تم إعداد استبيان وتوزيعه على عينة من التلاميذ والتلميذات وأولياء أمورهم ومدرسيهم في بعض المدارس والمعاهد الأزهرية في ريف وحضر محافظة الشرقية، وقد تضمنت الاستبانة بعض البيانات الديموغرافية لعينة الدراسة كما تضمنت معلومات عن النظام الغذائي والوعي الغذائي للعينة بالإضافة إلى معلومات عن رأي عينة الدراسة في الوجبة المقدمة للتلاميذ خلال برنامج التغذية المدرسية ورأي التلاميذ في مقترحاتهم حول رغبتهم في تلك الوجبة، كما تضمنت الاستبانة مدي اهتمام أولياء الأمور بالنظام الغذائي لأطفالهم ورأي المدرسين في برنامج التغذية المدرسية من حيث كفاية عدد العاملين في توزيع الوجبة المدرسية ومدي الاهتمام بحالتهم الصحية وتدريبهم، بالإضافة إلى رأي عينة المدرسين في طريقة نقل وتوزيع الوجبة المدرسية وحالة المستودعات التي تخزن فيها الوجبة المدرسية من حيث ترتيبها وتهويتها ومساحتها والاهتمام بنظافتها ودرجة حرارتها ورأي المدرسين في مدي كفاية الوجبة للمتطلبات الغذائية للتلاميذ وتم جمع البيانات وتحليلها إحصائياً، وتشير النتائج إلى أن ٥٥% من العينة كانت من التلاميذ و٤٥% من التلميذات كما كانت غالبية العينة في سن بين ١١ إلى ١٢ سنة وفي الفرقة الخامسة والسادسة من التعليم الأساسي، كما لوحظ عدم الاهتمام بالنظام الغذائي لعينة الدراسة حيث بلغت نسبة الإصابة بالسمنة ١٦% في العينة ونسبة الإصابة بالانحفاة ٢٢% من العينة، كما انخفضت نسبة التلاميذ الذين يتناولون وجبة الإفطار في المنزل قبل الذهاب للمدرسة وارتفعت نسبة الذين يشتررون الأطعمة من مقصف المدرسة وكانت غالبية العينة تركز علي شراء الشيبسي والمشروبات الغازية، كما انخفضت نسبة الذين يتأكدون من تاريخ صلاحية الأغذية قبل تناولها، أما عن رأي التلاميذ في الوجبة الغذائية المدرسية المقدمة لهم أظهرت غالبية العينة عدم رضائها عن الوجبة نظراً لعدم تنوعها واشتمالها علي البسكويت فقط كما أظهرت الغالبية من العينة على عدم رضائها عن البسكويت المقدم في الوجبة من حيث اللون والطعم والرائحة والصلابة، وظهر الطلاب رغبتهم في أن يكون البسكويت المقدم لهم يتميز بطعم الشيكولاتة ورائحة الفانياليا ويكون قوامه هشاً ولونه فاتحاً، كما ابدى الطلاب وأولياء الأمور رغبتهم في تنوع الوجبة الغذائية المدرسية وان تحتوي علي الألبان ومنتجاتها لما لها من أهمية غذائية للتلاميذ في تلك المرحلة العمرية، أما بالنسبة لرأي عينة المدرسين في برنامج التغذية المقدمة للتلاميذ فان غالبية العينة أشارت إلى عدم مناسبة طريقة نقل الوجبات للمدارس وعدم كفاية العاملين الذين يقومون بتوزيع الوجبة وعدم الاهتمام بحالتهم الصحية وتدريبهم، كما أظهرت عينة المدرسين عدم مناسبة مستودعات التخزين للوجبة المدرسية في المدارس من حيث المساحة والتهوية ودرجة الحرارة وترتيب المستودعات ومدي الاهتمام بنظافتها وحالتها الصحية كما أشارت عينة المدرسين إلى عدم كفاية الوجبة المقدمة للاحتياجات الغذائية للتلاميذ، وقد أوصت الدراسة بضرورة تضمين البرامج الدراسية والإعلامية وخاصة وسائل الإعلام المرئية للمعلومات عن التغذية السليمة لتحسين النظام الغذائي للتلاميذ ورفع مستوي وعيهم الغذائي، ومراجعة برنامج التغذية المدرسية المتبع لتحسينه بحيث يتم تنوع الوجبات المقدمة للتلاميذ وضرورة اشتمالها علي الألبان ومنتجاتها لتحسين الحالة الغذائية والصحية للتلاميذ، كما يجب الاهتمام بتطوير النظام المتبع في نقل وتخزين الوجبات بالمدارس والاهتمام بجودة مستودعات التخزين من حيث المساحة والتهوية والتبريد والترتيب والنظافة والاحتياجات الصحية في المستودعات وتوفير العمالة المدربة لتوزيع الوجبات علي التلاميذ وضرورة الاهتمام بحالتهم الصحية.

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