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KNOWLEDGE, ATTITUDE AND PRACTICES OF FOOD HANDLERS TOWARDS FOOD HYGIENE AT KINAAWA HIGH SCHOOL KAWEMPE CAMPUS, WAKISO DISTRICT. A CROSS-SECTIONAL STUDY.

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Abstract

Background

The study aims to assess the Knowledge, attitude, and practices of food handlers towards food hygiene at Kanagawa High School Kawempe campus, Wakiso District.

Methodology

A descriptive cross-sectional study design which utilized quantitative methods of data collection from 40 respondents.

Results

Respondents were well informed and had the right attitudes and good food handling practices. Respondents had adequate knowledge and recommendable practices but with varying attitudes about food handling. 30(75.0%) knew hand washing as a key food hygiene while 3(7.5%) knew either separating cutting boards and utensils or proper cleaning and sanitizing procedures as the key practices in food hygiene. 30(75%) had never had any training sessions about food handling, whereas only 2(5%) got them always. 34(85%) were conversant with cleaning procedures for kitchen and equipment while 6(15%) were not. 29(72.5%) agreed that food handlers themselves were the ones responsible for maintaining food safety whereas 1(2.5%) agreed that their supervisors were responsible for maintaining food safety 34(85.0%) agreed that continuous learning and improvement is part of their work while the minority 6(15.0%) disagreed.25(63%) of the respondents did not follow proper hand washing procedures while 15(37%) followed the proper hand washing procedures. 27(68%) of the respondents never used personal protective equipment while only 1(2%) used the PPE always. 28(70%) were females whereas 12(30%) were males.

Conclusion

Food handlers in Kanagawa High School have recommendable knowledge and good food handling practices despite having varied but acceptable attitudes concerning specific areas.

Recommendation

Food handlers need to be sensitized about food handling, encouraged, and supervised to apply all the safe handling techniques of food handling to ensure food safety.

School Administrators should provide the food handlers with adequate essential, equipment necessary for food handling hence promoting food hygiene.

Keywords: *Food hygiene, Food handlers, Hand washing procedures, Kinaawa High School.*
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Background

Globally, the World Health Organization (WHO), estimates that over 200 diseases are caused by the consumption of contaminated foods leading to 600 million people becoming ill and resulting in 420,000 deaths annually especially in low and middle-income countries (World Health Organization, 2023). Food Standard Agency estimated that the United Kingdom approximately gets 2.4 million food-borne disease cases per year mainly originating from restaurants 44%, takeaways 85% and schools 32.1% due to poor food hygiene among food handlers and costs the country £9 billion to treat such illnesses (Fleetwood et. al., 2023). Though the American food supply is considered among the safest in the world, the Federal government estimates about **48 million cases of food-borne illnesses annually** equivalent to 1 in 6 Americans getting food-borne illnesses each year resulting in an estimated 128,000 hospitalizations and 3,000 deaths (FDA, 2022). Malyasia's food hygiene knowledge and practice levels among food handlers are still wanting causing most school children to develop foodborne illnesses (FBI) in the form of mainly food poisoning which has led to poor learning among students, hence poor performance, (Dora-Liyana et. al., 2018).

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Foodborne illnesses are more prevalent in Africa due to poor food hygiene practices, making cholera and diarrheal diseases caused by non-typhoid Salmonella and Escherichia coli accounting for more than 70% of the foodborne disease burden in the region leading to the deaths of 137,000 Africans every year with children less than five years of age being the most affected (Onyeaka et. al., 2023). Food hygiene in Ethiopia is still poor leading to around 70% of diarrheal diseases being associated with the consumption of contaminated food with approximately 10–20% of food-borne disease outbreaks being due to contamination from food handlers (Gebre et. al., 2023). A considerable number of Kenyan food handlers (27.5%) exhibited unhygienic food practices including poor washing mechanisms which led to an increased number of food-borne illnesses leading to increased hospital admissions and high expenditure (Murimi & Waweru, 2020). In Somalia, about 45% of the population can access improved water sources to maintain the required hand hygiene, also 5.4% of food handlers had enough knowledge about the hygienic methods of hand washing which caused a high rate of food-borne diseases, hence causing 18% of total death in the country (Mohamud, 2022).

In Uganda, most food handlers have poor food hygiene practices which has led to a considerably high prevalence of food-borne diseases, admissions to hospitals, and complications due to the diseases contracted (Godfrey, 2022). Another study conducted among food handlers in Government-aided schools in Makindye Ssabagabo Municipality indicated that a large portion of food handlers 96.5% had poor food safety and hygiene practices which led to a high rate of food-borne diseases among school-going children, which interrupted their school performance (Nanyonjo, 2021). At Kinaawa High School, for the past three years, diarrhea diseases such as typhoid, stomach upsets and other food poisoning-related diseases have been the most diagnosed diseases in the school sick bay increasing from 30% to 40% then to 48% responsible for 2%, 4% and 5% of the students being referred for admission every term in 2020, 2021 and 2022 respectively hence poor academic performance (School medical records, 2020, 2021 & 2022). The study aims to assess the Knowledge, attitude, and practices of food handlers towards food hygiene at Kanagawa High School Kawempe campus, Wakiso District. A proposed Study.

Methodology

Study design.

In this study, a descriptive cross-sectional study design utilized quantitative methods of data collection. This research study design was preferred because it is less time-consuming and in addition, the researcher collected data at once without following up with respondents.

Study setting.

The study took place at Kinaawa High School Kawempe Campus. Kinaawa High School Kawempe campus is a Muslim-founded school located in Bulabakulu subdivision, Kawanda municipality Wakiso. The school has both “O” and “A” levels with both day and boarding sections and has a total of about 1470 students with approximately 45 food handlers operating in the school.

The study area was chosen because it has many food handlers which will make it an ideal place for the fulfillment of the study objectives.

Study population.

The study targeted all food handlers at Kanagawa High School Kawempe Campus, Wakiso district.

Sample size determination

The study considered a sample size of 40 food handlers at Kanagawa High School Kawempe Campus. This was according to Krejcie & Morgan's table of 1970 because it is an effective method of sample size determination in bigger populations, and it is shown in Table 1.

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Table 1: KREJCIE AND MORGAN'S TABLE OF 1970 FOR SAMPLE SIZE DETERMINATION

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	246
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	351
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	181	1200	291	6000	361
45	40	180	118	400	196	1300	297	7000	364
50	44	190	123	420	201	1400	302	8000	367
55	48	200	127	440	205	1500	306	9000	368
60	52	210	132	460	210	1600	310	10000	373
65	56	220	136	480	214	1700	313	15000	375
70	59	230	140	500	217	1800	317	20000	377
75	63	240	144	550	225	1900	320	30000	379
80	66	250	148	600	234	2000	322	40000	380
85	70	260	152	650	242	2200	327	50000	381
90	73	270	155	700	248	2400	331	75000	382
95	76	270	159	750	256	2600	335	100000	384

Note: N is for population size which is 45 and S is the sample size which is 40

Sampling procedure

A simple random sampling procedure was used. This can be defined as a sampling procedure that gives each person in the study population a chance to be selected. On each day of data collection, papers labeled "YES" or "NO" were put in a box and shaken. The eligible respondents were food handlers at Kanagawa High School, Kawempe campus who picked the paper with a Label "YES" and were enrolled in the study. This procedure was considered because of its ease and accuracy of representation; selecting subjects completely at random from the larger population produces a sample that is representative of the group being studied. This was repeated until the desired sample size of 40 food handlers was reached during the three days of data collection.

Inclusion Criteria

The study included all food handlers at Kinaawa High School, Kawempe Campus, Wakiso district who were available during data collection periods and willing to voluntarily consent to participate in the study.

Exclusion criteria

Teachers, security guards, administrators, and food handlers with reasons for not participating in the study, for example, those who were on leave.

Definition of variables

Variables are challenges or characteristics of interest that a researcher would like to handle in the research, (USC Libraries, 2022).

Independent variables

The independent variables were Knowledge, attitude, and practices of food handlers towards food hygiene.

Dependent variables

The dependent variable of the study was food hygiene among food handlers.

Research Instruments

The data was collected from respondents using a questionnaire with both open and closed-ended questions written in simple English language designed to assess the knowledge, attitude, and practices of food handlers at Kinaawa High School, Kawempe, Wakiso district which were set in sections according to the specific objectives. The instrument was chosen because it was time-saving and respondents were able to read and write.

Data collection procedures

The questionnaires were self-administered by the researcher to each respondent after they had consented and were filled immediately. The questionnaires were then collected and checked there and then for completeness to avoid unanswered questions that may spoil the collected data.

Data management

In the process of data collection, each questionnaire after being filled; was checked for completeness and accuracy before leaving the area of study.

Filled questionnaires were kept properly in a locker for confidentiality and safety.

Data analysis

The data collected was analyzed by entering it into the computer using Microsoft Office word and Microsoft Excel where data was presented in the form of tables, graphs, pie-charts, and figures.

Ethical considerations

A formal letter from the school administration was obtained which was used to obtain permission and consent from the human resource manager of Kinaawa High School, Kawempe Campus who was told the reason for the study and in turn permitted the study to be carried out.

Verbal permission and consent were sought from respondents where the main purpose of the study was clearly explained to them and they were assured of confidentiality as the researcher used serial numbers instead of names, to have their co-operation and trust. They were also told that they were free to withdraw from a study at any moment.

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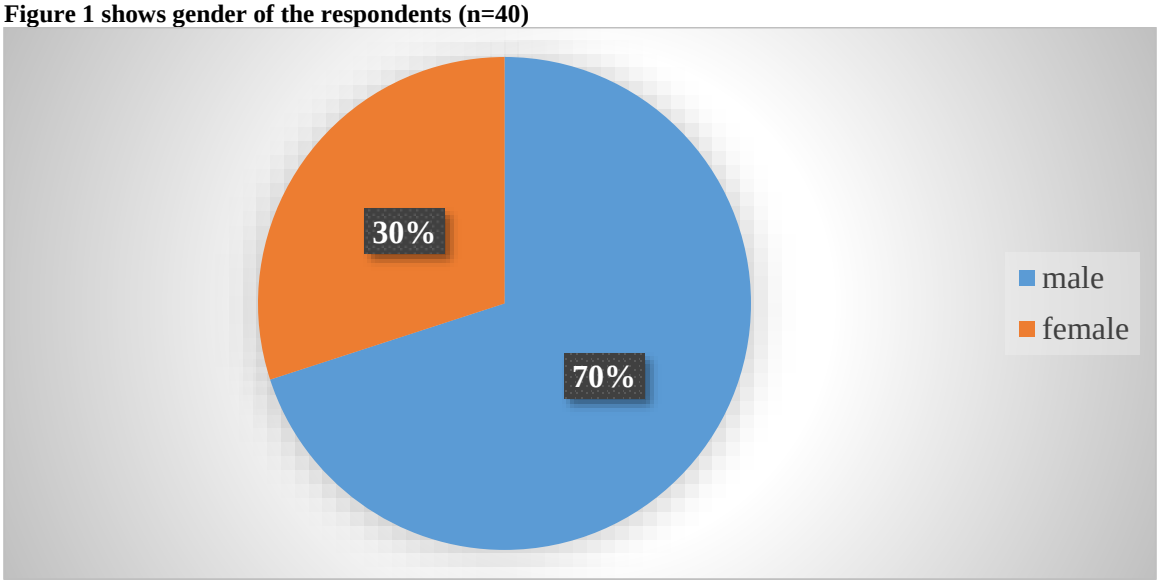
Table 2 shows the age of the resp ondents. (n = 40)

Age (years)	Frequency (f)	Percentage (%)
18-25	10.0	25.0
26-35	25.0	62.5
36-45	3.0	7.5
46 years and above	2.0	5.0
Total	**40.0**	**100.0**

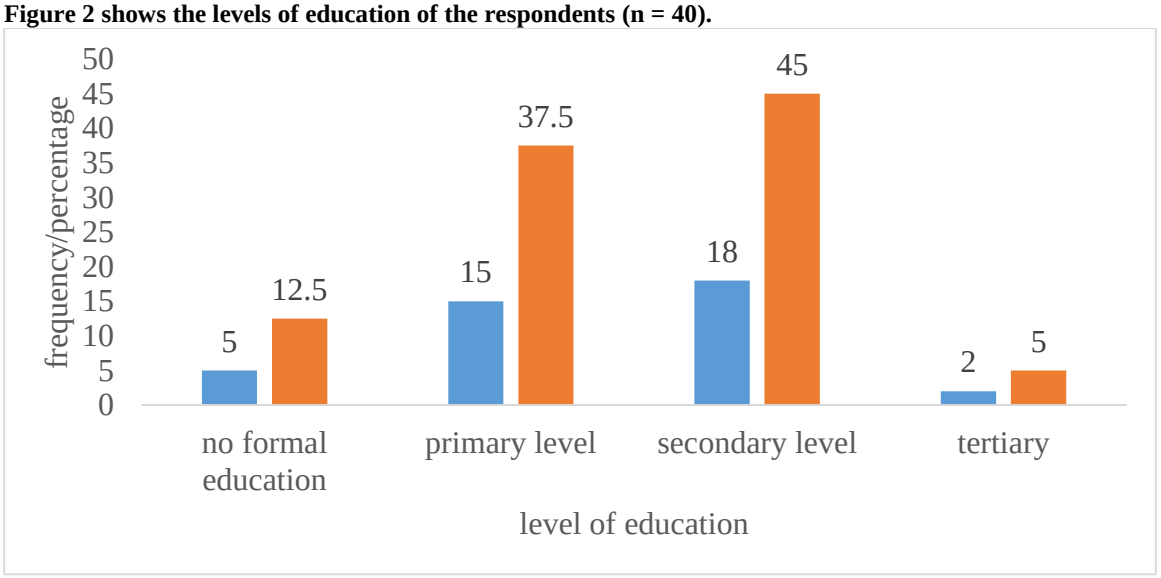
(Source: Primary Data, 2024.)

Figure 1 shows gender of the respondents (n=40)



(Source: Primary Data, 2024.)

Figure 2 shows the levels of education of the respondents (n = 40).



(Source: Primary Data, 2024.)

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Table 3 shows the working experience of the respondents. **n = 40**

Time (years)	Frequency (f)	Percentage (%)
0-1	9.0	22.5
2-3	21.0	52.5
4-5	6.0	15.0
More than 5	4.0	10.0
Total	**40.0**	**100.0**

(Source: Primary Data, 2024.)

Table 4, shows the respondents' understanding of the term food hygiene (n =40).

Response	Frequency (f)	Percentage (%)
It is a practice of handling, preparing and storing food in a way that prevents food bone illnesses	20.0	50.0
It is a practice of ensuring that food is washed and cooked thoroughly	7.0	17.5
It is a practice of ensuring that food is stored	3.0	7.5
It is a practice of ensuring that food is served on clean and dry utensils	10.0	25.0
Total	**40.0**	**100.0**

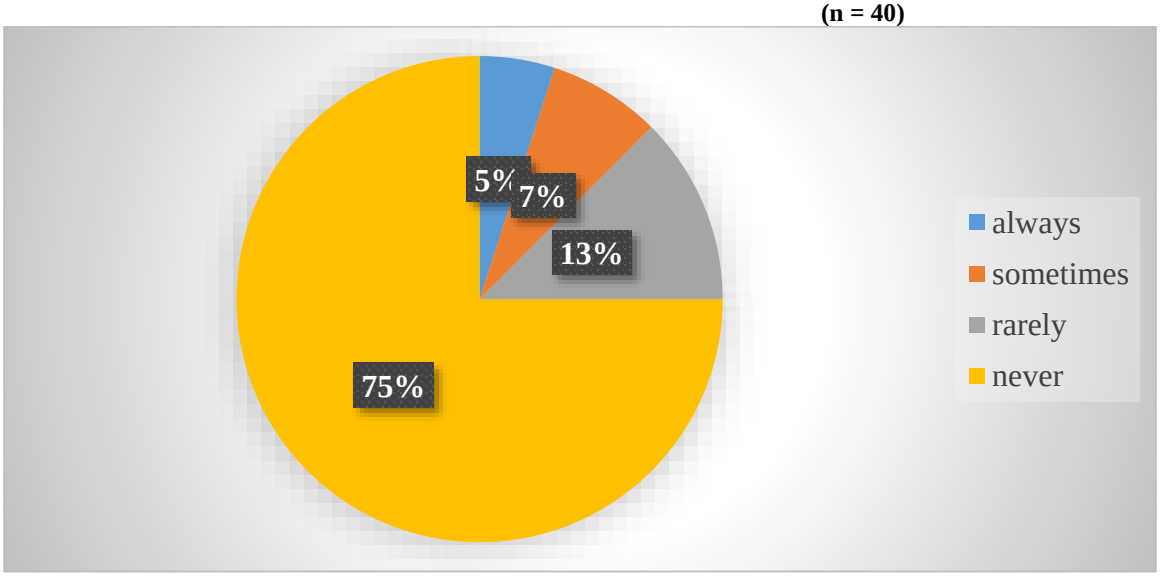
(Source: Primary Data, 2024.)

Table 5 shows some of the key food hygiene practices known by the respondents. **n = 40**

Practice	Frequency (f)	Percentage (%)
Hand washing	30.0	75.0
Separating cutting boards and utensils	3.0	7.5
Proper cleaning and sanitizing procedures	3.0	7.5
All the above	4.0	10.0
Total	**40.0**	**100.0**

(Source: Primary Data, 2024.)

Figure 3 shows how often the respondents had training sessions about food handling.
(n = 40)



(Source: Primary Data, 2024.)

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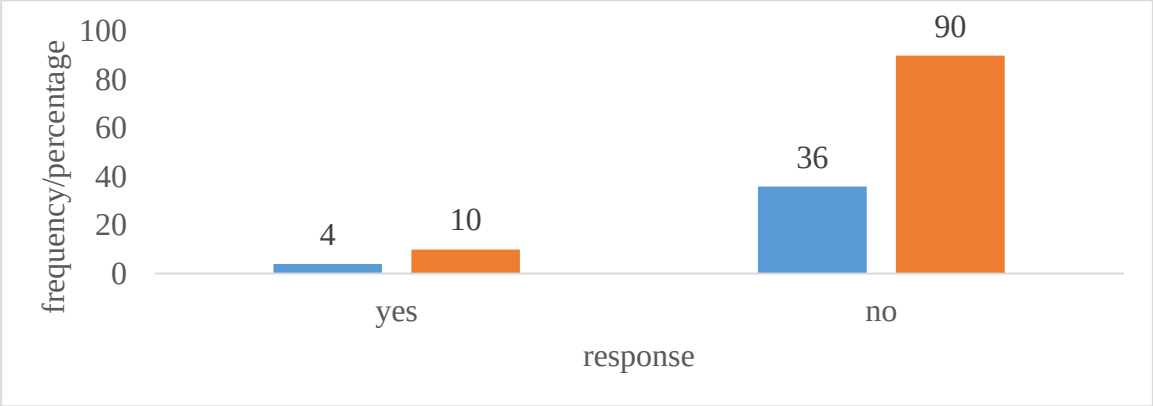
Figure 4 shows responses to the awareness of the right temperatures for cooking.

(n = 40)



(Source: Primary Data, 2024.)

Fig 5 showswhether respondents were conversant with cleaning procedures for kitchen.

(n = 40)

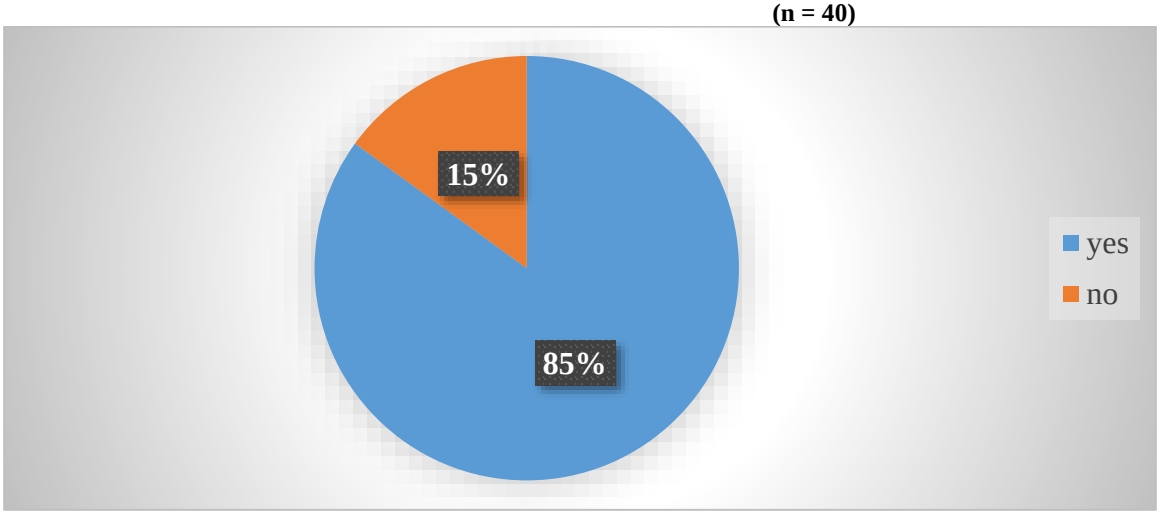


Figure 1 shows if the respondents were conversant with kitchen cleaning procedure. ***(Source: Primary Data, 2024.)***

Table 6 show what should be used in cleaning kitchen equipment and utensils (n = 34).

Item	Frequency (f)	Percentage (%)
Water alone	2.0	5.9
Soap and sponge	32.0	94.1
Jik	00.0	00.0
Total	**34.0**	**100.0**

(Source: Primary Data, 2024.)

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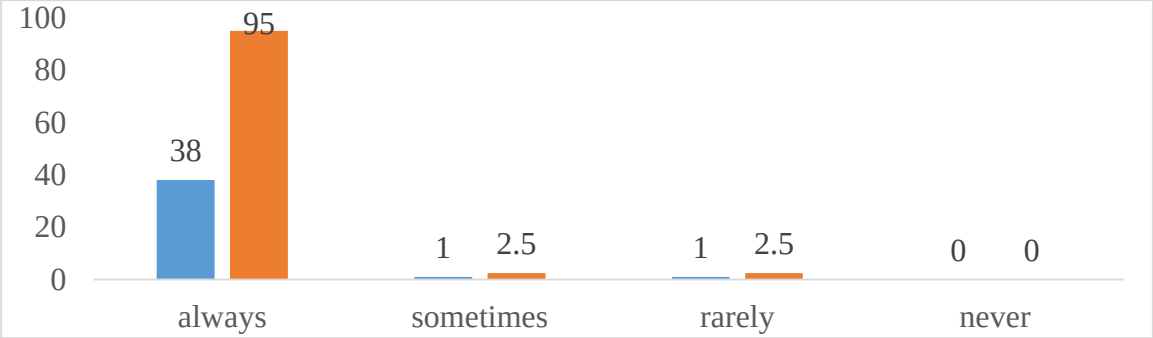
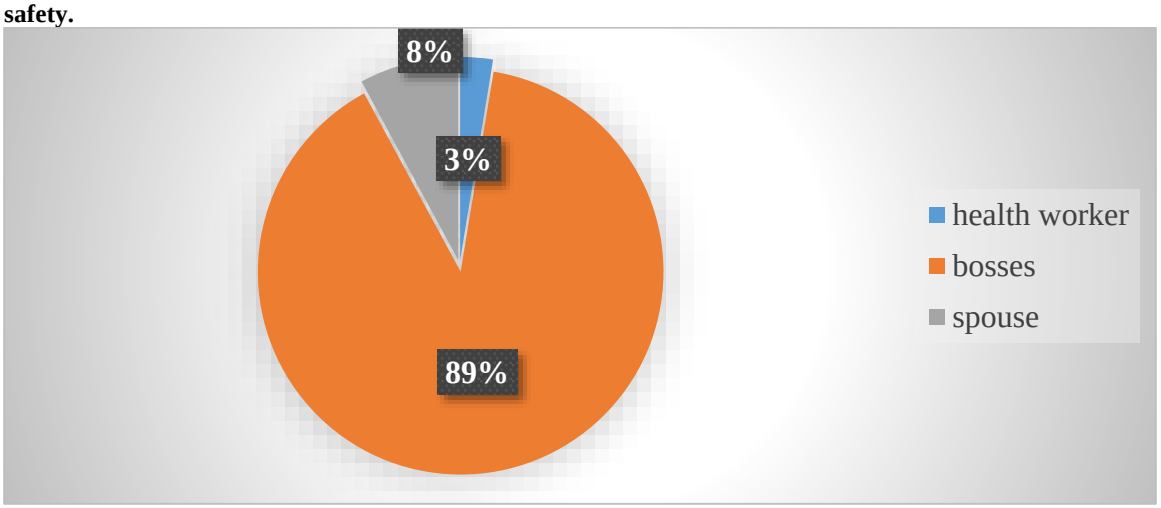
Fig 6 shows responses to how often illness and conditions that compromise food safety should be reported (n=40).



(Source: Primary Data, 2024.)

Figure 7 shows response to where the respondents had to report illnesses and conditions which compromise food safety.



(Source: Primary Data, 2024.)

Results

Demographic characteristics of patients

Results from table 2 show that 25(62.5%) of the respondents were aged between 26-36 years, while only 2(5.0%) were aged 46 years and above.

In figure 1, results show that majority of the respondents 28(70%) were females whereas 12(30%) were males.

From figure 2, majority respondents 18(37.5%) had secondary level while the minority 2(5%) of the respondents had tertiary level of education.

From table 3, results show that majority of the respondents 21(52.5%) had a working experience of 2-3 years whereas only 4(10.0 %) had worked for more than 5 years.

Knowledge of food handlers towards food hygiene at Kinaawa High School Kawempe

Results from table 4, show that half of the respondents 20(50.0%) understood food hygiene as a practice of handling, preparing and storing food in a way that prevents food bone illnesses whereas as minority 3(7.5) knew it as a practice of ensuring that food is stored.

Table 5 above, three quarters of respondents 30(75.0%) knew hand washing as a key food hygiene while 3(7.5%) knew either separating cutting boards and utensils or proper cleaning and sanitizing procedures as the key practices in food hygiene.

As per findings from figure 3 above three quarters of respondents, 30(75%) of the respondents had never got any training session about food handling, whereas only 2(5%) got them always.

According to findings in figure 4 above findings show that 36(90.0%) of the respondents did not know the right temperature for cooking food while 4(10%) knew it.

Figure 5 shows that majority of respondents 34(85%) were conversant with cleaning procedures for kitchen and equipment while 6(15%) were not.

Table 6 results, the highest number of respondents32(94.1) knew that soap and sponge were necessary in cleaning kitchen equipment while 2(5.9%) of the respondents knew water alone as a necessity in utensil cleaning.

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Figure 6, majority of respondents 38(95%) always reported illness or health conditions that could compromise food safety whereas only 1(2.5%) either reported it sometimes or rarely reported such cases.

From figure 7, results show that 34(89%) of the respondents knew that cases of illnesses and conditions that could compromise food safety had to be reported to their bosses while only 1(3%) knew that such were to be reported to health workers.

Table 7 shows whether the respondents agreed that food safety regulations should be promptly followed.

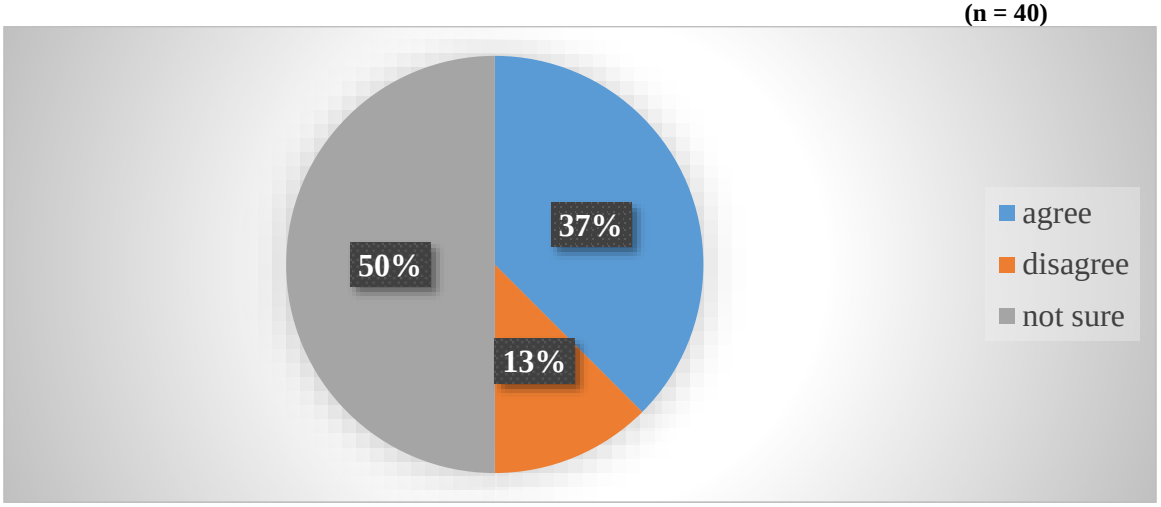
(n = 40)

Response	Frequency (f)	Percentage (%)
Yes	40.0	100.0
No	00.0	0.0
Total	40.0	100.0

(Source: Primary Data, 2024.)

Figure 8 shows whether respondents agreed that hand washing and use of protective gear should be always practiced.

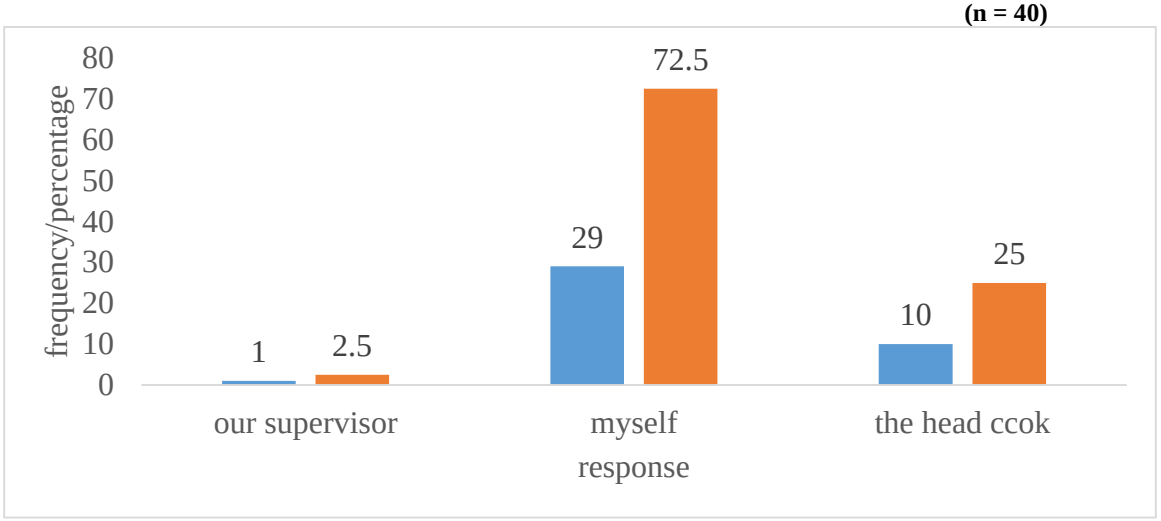
(n = 40)



(Source: Primary Data, 2024.)

Figure 9 shows who is responsible for maintaining food safety according to the respondents.

(n = 40)



(Source: Primary Data, 2024.)

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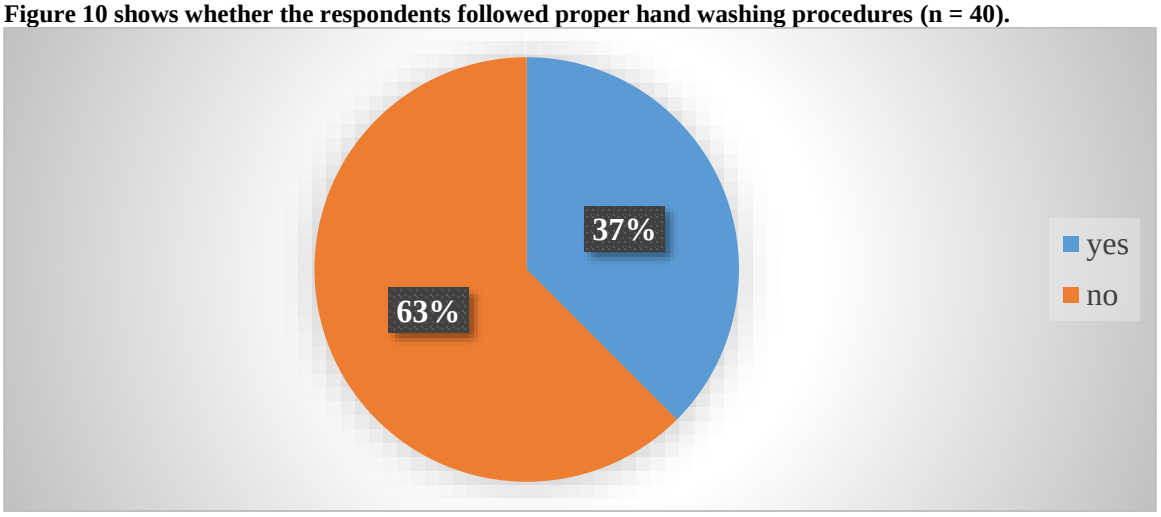
Table 8: shows whether the respondents agreed that continuous learning and improvement should be part of their work.

(n = 40)

Response	Frequency (f)	Percentage (%)
Agree	34.0	85.0
Disagree	6.0	15.0
Total	40.0	100.0

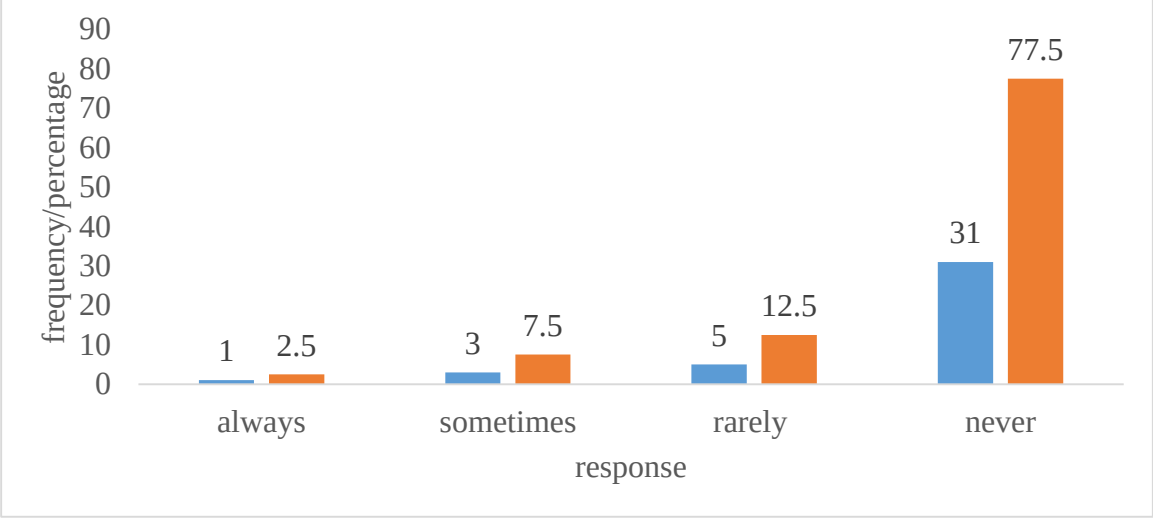
(Source: Primary Data, 2024.)

Figure 10 shows whether the respondents followed proper hand washing procedures (n = 40).



(Source: Primary Data, 2024.)

Figure 11 shows how often the respondents gloved when either handling ready-to-eat foods or engaging in tasks that required direct hand contact with food (n = 40).



(Source: Primary Data, 2024.)

Table 8 shows recommended food handling practices respondents adhered to (n = 40).

Practices	Frequency (f)	Percentage (%)
Separating raw and cooked foods	29.0	72.5
Labelling items with expiry dates	3.0	7.5
Maintaining storage areas at appropriate temperatures	3.0	7.5
All the above	5.0	12.5
Total	40.0	100.0

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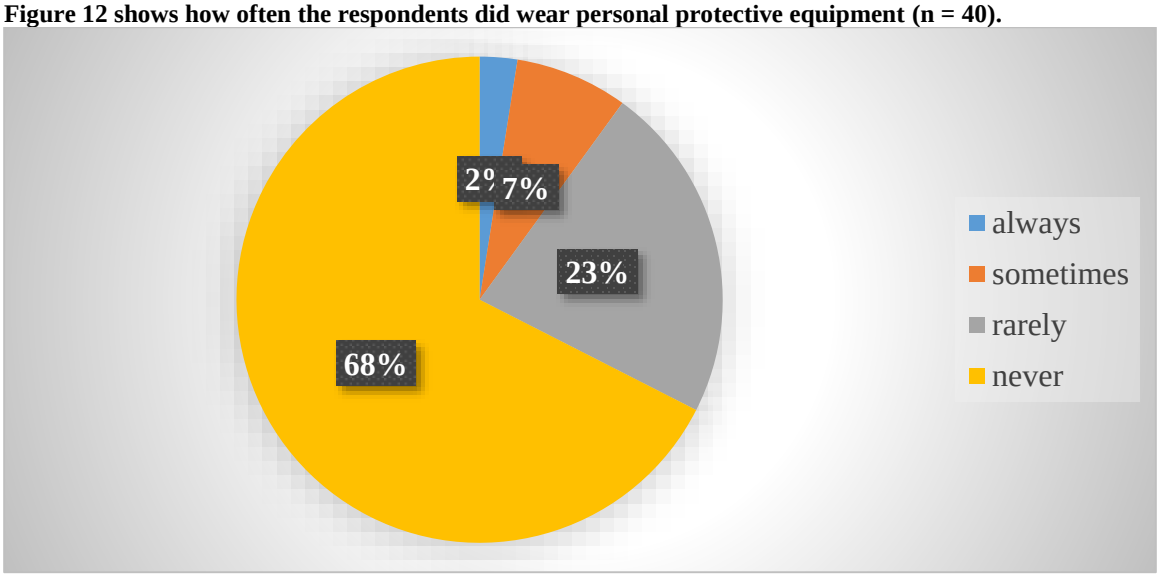
(Source: Primary Data, 2024.)

Figure 12 shows how often the respondents did wear personal protective equipment (n = 40).



(Source: Primary Data, 2024.)

Attitude of food handlers towards food hygiene at Kinaawa High school Kawempe Campus

In table 7, all respondents 40(100.0%) agreed that food safety regulations should be promptly followed.

Results from figure 8 show that half of respondents 20(50.0%) were not sure whether hand washing and the use of protective gear should be practiced always, 15(37%) agreed while 5(13%) disagreed with hand washing and the use of protective gear being practiced always.

Results from figure 9 show that the highest number of respondents 29(72.5%) agreed that food handlers themselves were the ones responsible for maintaining food safety whereas 1(2.5%) agreed that their supervisors were responsible for maintaining food safety.

From table 8, majority of respondents 34(85.0%) agreed that continuous learning and improvement is part of their work while the minority 6(15.0%) disagreed.

Practices of food handlers towards food hygiene at Kinaawa High School Kawempe Campus

Findings in figure 10 show that 25(63%) of the respondents did not follow proper hand washing procedures while 15(37%) followed the proper hand washing procedures.

Figure 11 results indicate that, 31(77.5%) of the respondents never worn gloves when handling ready-to-eat foods or engaging in tasks that required direct hand contact with food, 5(12.5%) rarely, 3(7.5%) used gloves sometimes, and only 1(2.5%) used them always.

According to results from table 8 above majority of respondents 29(72.5%) of the respondents separated raw from cooked food, while 3(7.5%) either labeled items with expiry dates or maintained storage areas at appropriate temperatures.

According to Figure 12, findings indicate that 27(68%) of the respondents never used personal protective equipment while only 1(2%) used the PPE always.

DISCUSSION

Socio-demographic characteristics of the respondents

The study findings showed that 25(62.5%) of the respondents were 26-36 years old, while 2(5.0%) of the respondents were aged 46 years and above. This might be because younger in the range of 26-36 age groups are considered to be strong and energetic to work in food preparation in schools as compared to the older ones.

The study findings revealed that 28(70%) of the respondents were females and 12(30%) were males. This could be attributed to the prevalence of traditional gender roles and societal norms that placed females at a higher preference for food preparation and handling and discouraged males from such types of work.

The study further revealed that half of the respondents 20(50%) had completed the primary level of education while only 2(5%) had tertiary education, this might be because most food handling businesses in the country do not prioritize academic credentials while giving job opportunities thus recruiting more primary leavers as they are easy to pay. This affected practices in food hygiene due to diminished knowledge concerning the practice.

Furthermore, the study discovered that the majority of the respondents21(52.5%) had a working experience of 2-

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3 years whereas only 4(10.0 %) had worked for more than 5 years. This could be because an experience of two years or more was always considered while offering job opportunities in food businesses.

Knowledge of food handlers towards food hygiene at Kinaawa High School Kawempe Campus

The study findings revealed that 20(50.0%) understood food hygiene as a practice of handling, preparing, and storing food in a way that prevents foodborne illnesses, and 3(7.5%) understood food hygiene as a practice of ensuring that food is stored. This could be attributed to the knowledge of the respondents towards food handling, probably due to the experience gained in the work and accessibility to information from various sources hence increasing knowledge in the field. Regarding awareness of the key food practices, three-quarters of respondents 30(75.0%) knew hand washing while 3(7.5%) knew either separating cutting boards and utensils or proper cleaning and sanitizing procedures as the key practices in food hygiene. This could be due to prioritizing hand washing and considering it a pillar in food handling reducing food-borne diseases.

The study findings revealed that 30(75%) of the respondents never had training sessions about food handling, and 2(5%) said they had them always. This could be due to administrative reasons not prioritizing food safety at the institution, this acted as a hindrance to the acquisition of knowledge about food handling.

In addition, study findings showed that 36(90.0%) of the respondents did not know the temperature to which food should be cooked while 4(10%) of the respondents knew it. This could have been due to loopholes in the knowledge base of the respondents as many lacked a catering education background and due to lack of job training.

Findings showed that more than three-quarters of respondents 34(85%) were conversant with cleaning procedures for kitchen and equipment with 32(94.1) of these reporting that soap and sponge were necessary in the practice while only 2(5.9%) reporting that water alone can be that used to clean the utensils. This, on the other hand, could signify the awareness of the respondents towards food handling practices and knowledge of the protocol for preventing food-borne illnesses.

Furthermore, findings of the study revealed that the highest number of respondents 38(95%) knew that they had always reported illness or health conditions that could compromise food safety and 34(89%) of them reported the cases to their bosses whereas only 1(3%) reported them to health workers. This could be due to the awareness of the effects of diseases on their health, the need to get sick leave, and also the protocol to be followed in such incidences.

These findings about Knowledge concerning food handling are similar to those of Alemayehu in Northwest Ethiopia which revealed that 34.1% of food handlers had good food safety knowledge (Alemayehu et al, 2021). This was also reflected by the outcomes of a study in which one-quarter of food handlers had good knowledge of food safety and Hygiene (Enas et al, 2021).

The attitude of food handlers towards food hygiene at Kinaawa High School Kawempe Campus

The study findings revealed that all of the respondents 40(100.0%) agreed that food safety regulations should be promptly followed. This could have been due to the good levels of attitude of the respondents towards food safety and knowledge about the practice,

Furthermore, study findings revealed that 20(50.0%) were not sure if hand washing and the use of protective gear should be practiced always in the food handling process, while 5(13%) disagreed with always washing hands and using protective gear when handling food. This indicated the low levels of attitudes of respondents towards regular hand washing and wearing of protective gear used in food handling.

On who is responsible for maintaining food safety, findings of the study noted that the majority of respondents 29(72.5%) agreed that they were responsible for maintaining food safety whereas 1(2.5%) agreed that their supervisors were responsible for maintaining food safety. This could be attributed to their good attitude towards food safety and acknowledging that it is their focal duty to maintain food safety as they are the main food contact.

More so, study findings revealed that the majority of respondents 34(85.0%) agreed that continuous learning and improvement should be part of their work while 6(15.0%) of the respondents disagreed with the suggestion. This showed a good attitude of the respondents towards food hygiene and the belief that continuous learning imparts respondents with new knowledge and skills hence improving food hygiene.

The findings on Attitude towards food handling are similar to those by Fekadu Y et al, 2024 in Addis Ababa where 65.3% of the food handlers had good attitudes towards food safety and 55.3% of food handlers had good food handling practices (Fekadu Y et al, 2024).

Practices of food handlers towards food hygiene

The study findings revealed that 25(63%) of the respondents did not follow proper hand washing procedures while 15(37%) followed the proper hand washing procedures. This might be due to limited time and heavy workload but also intentional defaulting to adhere to learned skills hence poor food hygiene practices. Findings showed that 31(77.5%) of the respondents never wore gloves when handling ready-to-eat foods or engaging in tasks that required direct hand contact with food, and only 1(2.5%) used them always. This might be due to the lack of gloves

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used in food handling at the place of work, heavy workload, and negative attitude towards gloves, this showed a default of food hygiene practices hence increased risks for food-borne diseases.

More so concerning recommended food handling practices respondents adhered to, study findings revealed that the majority of respondents 29(72.5%) separated raw from cooked food, while only 3(7.5%) either labeled items with expiry dates or maintained storage areas at appropriate temperatures. This could be due to respondents that respondents naturally knowing that raw food should never be mixed with cooked food as it can cause contamination hence a good food hygiene practice. Study findings revealed 27(68%) of the respondents never used personal protective equipment, while only 1(2%) used the PPE always. This was because the equipment was not always available at the workplace hence working with what was around hence poor food hygiene practices of the respondents, which could lead to contamination of the food.

The findings are similar to those by Nkhebenyane JS in central South African hospices where 62% of the respondents reported that they always use gloves when they touch or distribute unwrapped foods, while 71% reported washing hands before using gloves. The majority (79%) of the respondents reported washing their hands after using gloves, while 73% reported that they use protective clothing when touching or distributing unwrapped foods (Nkhebenyane JS et al, 2020). They are also similar to those of a study by Phyu et al, 2019 in the canteens of Khon Kaen University in Thailand which revealed that 55.37% and 68.50% of food handlers were revealed on average levels of knowledge and personal hygiene and handling practices, respectively (Phyu et al, 2020).

Conclusion

The study found that food handlers had good knowledge concerning food hygiene as20(50.0% understood the term food hygiene,30(75.0%) knew hand washing as a key food hygiene practice and 34(85%) were conversant with cleaning procedures for kitchen and equipment with and 32(94.1) knew that soap and sponge were necessary for cleaning kitchen equipment. food.

Concerning respondents' attitudes toward food handlers towards food hygiene, the study unveiled varying attitudes, as40(100.0%) agreed that food safety regulations should be promptly followed29(72.5%) agreed that food handlers themselves were the ones responsible for maintaining food safety,34(85.0%) agreed that continuous learning and improvement is part of their work. However, 20(50.0%) were not sure whether hand washing and the use of protective gear should be practiced always.

Regarding respondent's practices, respondents had poor practices as 25(63%) of the respondents did not follow proper hand washing procedures it came to the practices of food handlers towards food hygiene, 31(77.5%) of the respondents never wore gloves when handling ready-to-eat foods or engaging in tasks that required direct hand contact with food and 27(68%) of the respondents never used personal protective equipment. Therefore, measures like sensitization and training for food handlers should be put in place to improve the knowledge of respondents about food hygiene. Also, equipment such as aprons, gloves, and head gears should be purchased for food handlers for use.

Recommendations

To the government of Uganda: The government of Uganda through the Ministry of Health should encourage all schools to continue to carry sensitizations concerning food handling among food handlers to increase their awareness and knowledge skills and practices hence preventing gastrointestinal diseases, food poisoning that might develop from poor food hygiene.

To the Food Handlers: The food handlers need to be sensitized about food handling, encouraged, and supervised to apply all the safe handling techniques of food handling to ensure food safety.

To School Administrators: The School Administrators should provide the food handlers with adequate essential, equipment necessary for food handling hence promoting food hygiene. They should also consider allocating them regular training about proper food handling techniques.

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List of Abbreviations

FBI: Food Borne Illness.

FDA: Food and Drug Agency.

MoH: Ministry of Health.

PPE: Personal Protective Equipment.

WHO: World Health Organization.

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References

1. A, Al-Wehedy & S, Faisal & N, Omar & Elsherbeny, Enas. (2021). KNOWLEDGE, ATTITUDE AND PRACTICE OF FOOD HANDLERS TOWARDS FOOD SAFETY. Egyptian Journal of Occupational Medicine. 45. 69-84. 10.21608/ejom.2021.170564.
2. Alemayehu T, Aderaw Z, Giza M, Diress G. Food Safety Knowledge, Handling Practices and Associated Factors Among Food Handlers Working in Food Establishments in Debre Markos Town, Northwest Ethiopia, 2020: Institution-Based Cross-Sectional Study. Risk Manag Healthc Policy. 2021 Mar 17;14:1155-1163. doi: 10.2147/RMHP.S295974. PMID: 33762858; PMCID: PMC7982701.
3. Dora-Liyana, A. L., Mahyudin, N. A., Ismail-Fitry, M. R., Ahmad-Zaki, A., & Rasiyuddin, H. (2018). Food Safety and Hygiene Knowledge, Attitude and Practices among Food Handlers at Boarding Schools in the Northern Region of Malaysia. International Journal of Academic Research in Business and Social Sciences, 8(17).
4. FDA.(2022). Foodborne Illness-Causing Organisms in the U.S.
5. Fekadu Y, Kinde MZ, Dagnaw GG, Dessalegn B, Dejene H, Gessese AT. Knowledge, Attitude, and Practices on Food Safety among Food Handlers Working in Public Food Service Establishments in Lemi Kura Subcity, Addis Ababa, Ethiopia. Biomed Res Int. 2024 Jan 23;2024:2675894. doi: 10.1155/2024/2675894. PMID: 38292064; PMCID: PMC10827374.
6. Fleetwood, J., Holland, D., Shackleton, J., & Mahmoudzadeh, N. (2023). Foodborne illness, hygiene scores, and the "switch effect." Food and Humanity, 1, 940–950. https://doi.org/10.1016/j.foohum.2023.08.008
7. Gebre, G. G., Legesse, T., & Fikadu, A. A. (2023). Food safety knowledge, attitude, and practice among male and female food handlers: Evidence from fruit and vegetable producers in Ethiopia. Heliyon, 9(6), e17301. https://doi.org/10.1016/j.heliyon.2023.e17301
8. Godfrey, M. (2022). knowledge, attitude and practices towards food hygiene among food handlers in nakawa trading centre villa maria-kalungu district, uganda. 01, 1/54.
9. MoH. (2022). It is not food if it is not safe: Advocating for food safety and quality assurance to improve Uganda's economy and people's health | FAO in Uganda | Food and Agriculture Organization of the United Nations. https://www.fao.org/uganda/news/detail-events/en/c/1628194/
10. Mohamud, A. M. (2022). Assessment of Knowledge, Attitudes and Practices (KAP) Among Food Handlers regarding Hand Hygiene in Galkayo District Somalia.International Journal of Scientific Research and Management (IJSRM), 10(07), Article 07. https://doi.org/10.18535/ijsrm/v10i07.ft01
11. Murimi, M., & Waweru, G. (2020).Food Hygiene Knowledge, Attitudes and Practices amongst Food Handlers in Selected Hotels and Restaurants In Thika Town, Kenya. https://repository.maseno.ac.ke/handle/123456789/3226
12. Nanyonjo, G. (2021). Knowledge, attitude and practices on food safety and hygiene among food handlers in Government-aided schools in Makindye Ssabagabo Municipality, Wakiso District [Thesis, Makerere University]. http://dissertations.mak.ac.ug/handle/20.500.12281/10778
13. Nkhebenyane JS, Lues R. The knowledge, attitude, and practices of food handlers in central South African hospices. Food Sci Nutr. 2020 May 12;8(6):2598-2607. doi: 10.1002/fsn3.1499. PMID: 32566177; PMCID: PMC7300036.
14. Onyeaka, H., Mazi, I. M., Oladunjoye, I. O., Njoagwuani, E. I., Akegbe, H., Dolapo, O. A., Nwaiwu, O., Tamasiga, P., & Ochulor, C. E. (2023). Impact of COVID-19 on foodborne illness in Africa – A perspective piece.Journal of Infection and Public Health, 16(5), 651–659. https://doi.org/10.1016/j.jiph.2023.02.018
15. Phyu, Thwe & Klaiprasitti, Patimakorn & Chaoruangrit, Araya. (2020). Asia-Pacific Journal of Science and Technology https://www.tci-thaijo.org/index.php/APST/index Food safety assessment of food handlers in the canteens of Khon Kaen University. Vol. 24 No. 2 (2019): APR-JUN. 1-10. 10.14456/apst.2019.16.
16. World Health Organisation.(2023). Foodborne diseases. https://www.who.int/health-topics/foodborne-diseases

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