

The Applying Degree Of School Cafeteria Supervisors In Jerash Governorate Public Schools For Health And Safety Standards From The School Principals Point Of View

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Article Info	Abstract
Article History Received: July 05 ,2026 Accepted: October 06 ,2026 Keywords : Applying Degree, School Cafeterias, School Cafeterias Supervisors, And Public Health And Safety Standards, School Principals. DOI: 10.5281/zenodo.23192425	<i>The study aimed to find out the applying degree of schools' cafeterias supervisors of public health and safety standards in Jerash governorate from schools principals point of view. The study sample consisted of (160) managers. In order to achieve the study objectives, the researchers developed a questionnaire consisted of (28) statements distributed on three areas: cafeteria infrastructure and operating, food (permissible and prohibited), and cafeteria employees.</i> <i>The study used descriptive methodology. The study results indicated that applying the degree of schools cafeterias supervisors for health and safety standards was (large). No statistically significant differences at significance level $\alpha = 0.05$ between the mean of schools principals' estimates mean of applying a degree of cafeterias supervisors for public health and safety standards according to study variables (gender, years of service) on the instrument as a whole, and in any of its fields were found. Based on, researchers suggested a set of recommendations, including school cafeterias supervisors have to continue in implementing school cafeterias instructions, regulations and legislations because of their positive effects on students' health and safety</i>

Introduction

The importance of the educational process is increasing day by day Such importance is evident in the human ability to live in contemporary societies that are getting more complex due to the increase of modern inventions and rapid changes in all fields. Therefore educational planning's duty is to consider the change that may cause in the future society of today's children will face.

Due to contemporary scientific and technological progress, individuals must have general knowledge in all life areas, health field, and public safety in particular. Therefore, developed societies have decided to include health culture in their educational curricula at various educational stages to achieve comprehensive development, and to provide scientifically and practically qualified technical personnel (Bassam, 2005).

School is one of the important social institutions established by the community to raise its children. It is the institution that implements goals the community wants and plans according to specific plans, specified curricula, interaction processes, and programmed activities inside and outside classrooms at all academic, technical, cultural, social, sports, and other levels., Since education is life, then the school had to be a living developing part and not isolated from society (Nasser and Al-Zaboon, 2015).

Such concern in school public health and safety is due to the fact that it is an entrance to a large part of community children who spend long daily hours inside and for many years. So everyone who has a relationship with this group must take into account the necessity of providing health and safety reasons for medical services and the importance of preserving a healthy environment. Because public safety is a real investment, It has become an important issue for which states set plans and programs for the advancement of the coming generation (Al-Sabool, 2005, 13).

Toukan, Al-Nuaimi, and Udaibat (2006) indicate that providing a healthy and safe learning environment for learners is a major investment for the country's future because students who learn in healthy, supportive environments are more able to contribute to building their societies.

School is also considered as one of the educational institutions that seek to keep pace with health and take care of, so any program that seeks to develop schools, in general, must include development of health aspect, to protect students from diseases, behavioral and psychological risks, which will help them to develop health Physically, psychologically, and mentally, and develop their abilities, educational skills, and educational achievement. Based on Ministry of Education in the Hashemite Kingdom of Jordan has been keen to provide students with attraction elements through providing health programs, and to provide a healthy environment that helps them to grow physically, psychologically, socially, and cognitively and train them in proper habits and behaviors, as well as to identify health conditions of students and discover the same early and present necessary

and appropriate treatment for (Assaad, 2008). Queen Rania Al-Abdullah also launched the "Healthy Schools" initiative, in order to provide students with an appropriate healthy environment that stimulates them and develops their talents. This initiative included a set of criteria represented in: community participation, creating a safe and healthy environment, providing health services, counseling and health Psychological services, physical education, nutrition and education, and health awareness provided to students (Jordanian Ministry of Education, 2010).

The focus must be made on the school cafeteria because the student finds most of his needs. The school cafeteria should have a set of regulations and conditions, including school cafeteria space, availability of safety and cleanliness conditions, means to prevent insects and rodents., Food in the school cafeteria should have the basic elements of a balanced diet for learners that provide him with energy and protect him from various diseases. The cafeteria does not contain expensive foodstuffs that cannot be purchased by everyone, since a good school cafeteria can provide the necessary foodstuffs that take into account all students levels It can keep them away from purchasing unhealthy food from a school outside sources (Al-Jarwani, 2011; Shukr et al., 1999).

Cafeterias vary in their capacity and activity. School cafeterias are classified into three types according to food activities they serve as follows: selling and distributing packed foodstuffs cafeteria, preparing sandwiches cafeteria, and cafeteria that has a kitchen (a restaurant). Despite this difference, the Ministry of Education in Jordan has been keen to set some conditions that should be taken into account when using the cafeteria, including cafeteria room should be well ventilated and lighting, . Emphasizing food validity before purchasing and distributing. Clean floors, walls and windows, clean refrigerator and the rest of available furniture and tools .. providing sandwiches from the licensed restaurant, Sandwiches should be wrapped with clean hygienic paper and prepared in the same day, All foodstuffs should be wrapped to avoid any touch by hands ., Collecting cafeteria waste and transporting the same to the main container in the school, to provide light nets on the windows to prevent the entry of insects., Cafeteria windows should have to provide an insect killer (Al-Akour et al. , 2016).

The importance of school principals' role in achieving health goals emerges in order to be educational institutions capable of enhancing students' health in the school. A school that enhances health is a global concept for achieving health and education. The goals of the World Health Organization and UNESCO expressed this in the two slogans: "Health for all" and "Education for All" (William and Angela, 2010)).

Previous studies

Panchal, et al,(2013) carried out a study in Switzerland aimed at identifying the knowledge level of school cafeterias employees with safety standards and to find out their food safety behaviors. The study sample consisted of (100) employees in school cafeterias. To achieve the study aim of the study a questionnaire was used as an instrument after verifying its validity and reliability. A descriptive survey approach was used. The study concluded that employees' knowledge level in school cafeterias regarding food safety and security standards was low. And school cafeterias employees do have no knowledge regarding necessary information related to how to store food and the appropriate temperatures to preserve food. The results showed that the knowledge gap in how food is preserved is one of the most important risk factors that can cause food poisoning. Al-Sarhi (2014) study aimed to assess the reality of school canteens of Gaza schools in light of the Guidelines for School Environment Health Standards (2003) in terms of construction, health and environmental status of the school canteen, commitment of its employees, and appropriateness' of solid food. The study sample consisted of 93,066 students from public schools and UNRWA schools for East and West of Gaza for basic and secondary stages. To achieve the study purpose a questionnaire was used as study instrument. Questionnaire validity and reliability were calculated, the study used a descriptive and analytical approach...The study concluded that school canteens comply with guidelines to a moderate degree. The results did not show a statistically significant difference between means of study sample responses regarding the evaluation of school canteens for Gaza schools in light of guidelines for school environmental health standards attributable to the directorate variable (East Gaza and West Gaza) Except for food specifications provided in the cafeteria and for the favor of male's schools.

The results showed that there is a statistically significant difference between means of study sample respondents due to cafeteria supervising authority (government and agency) in cafeteria specifications in terms of construction, cafeteria supervisory work specifications, cafeteria employees specifications, the total degree, and the differences were in favor of the government,

The results show that there is no statistically significant difference between sample subjects' responses means due to educational stage (primary and secondary) except in employee's specifications in the cafeteria and the total degree. Cafeteria, internal and external specifications of the cafeteria. Likewise, the study did not show a statistically significant difference due to the school sex variable (male, female, and mixed) except in specifications of cafeteria's interior equipment and the overall score, and the differences were in favor of male schools compared to female schools.

Kwon et al. (2014) study was carried out in the United States of America. The study aimed to find out employees' perceptions in food safety and security regarding public health and safety standards in school canteens and restaurants. The study sample consisted of (2624) specialists in the food security and safety field, to achieve study objectives; a questionnaire was used for data collection. Questionnaire validity and reliability were computed. A descriptive survey approach was used. The study results indicated that the safety and security level associated with school canteens was higher compared to regular restaurants, according to employees' perceptions in food safety and security. The study results indicated that school canteens are subject to high standards of safety

Radke et al. (2016) carried out a study in the United States of America that aimed to reveal students' knowledge level in school cafeterias regarding safety standards and different types of food allergies among students. The study also aimed to identify their food safety behaviors. The study sample consisted of (278) employees in school cafeterias. To achieve the study aim, a questionnaire and a personal interview were used. The study results showed that school cafeterias' employees' knowledge level regarding safety and security standards related to food ranged from medium to high. The results did not show that there were statistically significant differences in the knowledge level of school canteens employees with food safety and security standards related to job position school cafeteria manager, employees, and administrators

The study, conducted by the Food and Nutrition Service of the United States Department of Agriculture (Food and Nutrition Service, 2016), aimed to identify the extent to which national schools in the United States of America adhere to nutritional standards for foods sold in school canteens. The study sample consisted of (206) employees in government schools. To achieve the aim of the study, a questionnaire was used as an instrument for collecting the necessary data. The study results showed that the level of adherence to nutritional standards for foods sold in school canteens was medium, and the results showed that there were no differences in the perceptions of the study sample members due to the gender variable.

Halabi and Lin (2017) study in the United States of America aimed to identify the evaluation of public health standards used in deciding the food and beverages quality served in public schools. The study used case study methodology, (5) public schools were selected intentionally. To achieve the study objective, two developed standards were used to assess public health in schools and government institutions. The study results showed that the criteria used to decide foods and drinks quality served in public schools were not sufficiently applied. The results showed that most of the standards developed do not consider the views of relevant educators in the development process.

Buscemi et al. (2018) study in the United States of America aimed at investigating standards using the level of healthy nutrition in public schools. The study sample consisted of (18) previous studies. The study used a critical descriptive study based on a review of relevant previous studies that dealt with the application of criteria for assessing the quality of breakfast and lunch meals in public schools. On increasing the level of fruit and vegetable content in breakfast and lunch meals, reducing the level of elimination of dishes and reducing the level of sodium and carbohydrate consumption in the diets provided.

The study is distinguished by its population and its subject since it focused on teachers and supervisors applying degree who supervise schools cafeterias in Jerash governorate of health and safety standards for cafeterias. Upon the best knowledge of the researchers, the study is considered as one of few Arab studies that deal with applying a degree of schools cafeterias supervisors of public health and safety standards in Jerash Governorate

Problem Statement and its questions

School cafeterias are important places in the school environment since it care should be taken to maintain students' health and safety, and to protect them from being subject to disease and infection by adhering to implementing public health and safety standards related to cafeterias.

Through researchers work in the educational field, they have noticed clear violations and negligence by school cafeterias supervisors, and their failure to prepare them in a manner that conforms to those standards, as well as the occurrence of some poisoning cases among students from time to time, and damage caused by behaviors dangerous to students health is also evidence of these excesses and this shortcoming. Therefore, this study aims to identify the applying degree to which school cafeteria supervisors use public health and safety standards for cafeterias in the Directorate of Education in Jerash Governorate from school principal's point of view, by answering the following questions:

- 1- To what degree do school cafeteria supervisors apply public health and safety standards for cafeterias from their manager's point of view?
- 2- Do school principals 'evaluations of school cafeteria supervisors applying degree in Jerash governorate implement public health and safety standards differ due to (gender, and years of service)?

Study Objectives

This study aimed to achieve the following:

- To know school cafeteria supervisors in Jerash governorate applying degree in public health and safety standards in their schools from school principal's point of view.

- To find out the impact of variables (gender, and years of service) on estimates of school principals in Jerash governorate of the degree to which school cafeteria supervisors apply public health and safety standards for the cafeterias in their schools.

Study importance

The study importance stems from the following:

- It is hoped that it will help governmental schools principals through the information it will provide about the concept of public health and safety for the school environment and the extent to which school cafeteria supervisors apply public health and safety standards.

-The study may contribute to directing decision-makers in the Ministry of Education attention to the necessity of providing all means for successful implementation of public health and safety standards for cafeterias in government schools.

-The study may open doors for researchers to carry out more studies similar to this study and in light of some other demographic variables.

Operational and Idiomatic Definitions

The study included the following operational and idiomatic definition

Applying Degree: operationally it is defined as what school cafeterias supervisors in government schools in Jerash governorate implementing public health and safety standards to improve health services level provided to students. It is measured by the total score that respondents will obtain on the questionnaire statement that researchers will prepare in this study.

School cafeteria: it is “the favorite place for students because it provides them with foodstuffs, various foods and multiple beverages, and at the same time it is a dangerous place and susceptible to contamination and disease infection if conditions of hygiene and safety are neglected” (Al-Akour et al., 2016, 22). Operationally, it is defined as the place that school administration allocates to sell food and beverages of various kinds during the break period in public schools in Jerash governorate

General health and safety standards for school cafeterias: operationally they are defined as a set of conditions that should be met in school cafeteria which school cafeterias supervisors in Jerash Governorate should apply to achieve health and safety for learners in accordance with Law No. (47) Issued by Ministry of Health for the year 2008 and the instructions for school cafeterias issued by the Ministry of Education No. 5 of 2001.

School Cafeterias Supervisors: they are defines as all male and female teachers who supervise school cafeterias in governmental primary and secondary schools in Jerash Governorate Directorate of Education for the academic year 2019/2020.

Study limitations

Objective Limitations: school cafeterias and their supervisors 'implementation degree of public health and safety standards from school principals' point of view.

Time limitations: This study was carried out in the first semester of 2019/2020 academic year.

Place Limitations: This study was carried out on government schools cafeterias of the Education Directorate in Jerash Governorate.

Human Limitations: This study is restricted on government schools principals in Education Directorate in Jerash Governorate for the academic year 2019/2020.

Study delimitations: The study results generalization depends on the study sample and the extent of its representation of the original population and on the instrument used, and its acceptable psychometric properties (validity, and reliability)

Method and procedures

This part deals with the methodology the study used, its population description, sample, method of sample selection, in addition to study instrument, procedures that were followed to find out its validity and reliability, application procedures, the statistical methods used in data processing and analysis.

Study methodology: The study used a survey descriptive methodology since it is proper for study purposes...

Study population: The study population consisted of all school principals in public schools in the Directorate of Education in Jerash Governorate for the year 2019/2020 academic year, amounting (181) principals.

Study sample: The study sample was selected from study population using comprehensive survey method, and Table (1) shows that.

Table 1
Study sample distribution according to demographic variables

Variable	Option	Frequency	Percent
Gender	Male	72	45
	Female	88	55
	Total	160	100
Years of Experience	Less than 5 years	36	22.5

	5 to less than 10 years	79	49.4
	10Years +	45	28.1
	Total	160	100.0

Study Instrument

To achieve study objectives Ministry of Public Health Law No. 47 of 2008 (Al-Akour et al. 2016, 23-25) was used, and schools cafeterias instructions No. 5 of 2001 issued by Jordanian Ministry of Education in order to design the questionnaire related to measuring the applying degree of School cafeterias supervisors in Jerash governorate for public health and safety standards. The questionnaire consisted of 28 statements distributed into three domains; the first dimensions were the infrastructure and operation of cafeteria and it has 13 statements, the second dimension: is the food and it has 9 statements, and the third dimension is cafeteria employees and it has 6 statements.

In order to find out the validity and reliability of study instrument; the following procedures were followed

Study instrument validity and reliability

1- **Content Validity:** the study instrument was presented in its initial form to a group of experts and specialists in educational management, pedagogy, measurement and evaluation, curricula and teaching at Yarmouk University, Irbid National University, and a number of experts, specialists, and educational supervisors working in the educational field, to express their views regarding questionnaire statements in terms of meaning clarity, linguistic wording, any amendments and notes they deem appropriate 80% of all referees observations were taken into account, which was limited to making an amendment to the language wording, thus the questionnaire statements remained (28) in its final form. Likert's scale was adapted to questionnaire statements responses as follows: (very large = 5 scores, large = 4 scores, medium = 3 scores, few =2 scores, very few = one score).

B. Construct Validity

The study instrument was applied to a pilot sample consisting of 21 managers of governmental schools in the Education Directorate in Jerash Governorate from the study population, outside the targeted study sample, in order to calculate Pearson correlation coefficients values for statements related to the instrument, and its domains as in table (2).

Table 2)

Pearson correlation coefficients values for statements related to the scale and application domains of cafeterias public health and safety standards

(Table 2)

Pearson correlation coefficients values for statements relationship to the scale and application dominos of cafeterias public health and safety standards

No	Correlation with		No	Correlation with		No	Correlation with		No	Correlation with	
	Field	Tool		Field	Tool		Field	Tool		Field	Field
1	0.67	0.70	8	0.68	0.69	15	0.56	0.50	22	0.60	0.59
2	0.67	0.72	9	0.73	0.76	16	0.62	0.69	23	0.57	0.75
3	0.73	0.74	10	0.61	0.62	17	0.63	0.70	24	0.68	0.81
4	0.61	0.59	11	0.71	0.74	18	0.63	0.73	25	0.68	0.76
5	0.73	0.77	12	0.75	0.77	19	0.73	0.75	26	0.68	0.73
6	0.68	0.70	13	0.61	0.67	20	0.71	0.75	27	0.59	0.75
7	0.75	0.79	14	0.61	0.64	21	0.75	0.74	28	0.55	0.62

Results in Table 2 indicated the Pearson correlation coefficient values for the relation of statements to the instrument and the field. It belongs to is not less than the standard (0.20); This indicates that instruments statements construct quality (Al-Kilani and Al-Sharfin, 2011)

In addition to the above mentioned; Pearson correlation coefficients for domains relationship were computed, in addition to computing Pearson correlation coefficient values for inter-correlation of fields between each other, as in Table 3.

Table 3)

Table (3)
Pearson correlation coefficients Values for the relationship of fields to the tool, and interconnection coefficients for the field

Relation	Statistical	Infrastructure	Food and Meals (rejected and allowed	Cafeteria's Staff
Food and Meals (rejected and allowed	Correlation Coefficient	0.54		
Laborers in School Cafeteria	Sig.	0.00		
Total	Correlation Coefficient	0.42	0.56	
For the scale	Sig.	0.00	0.00	
Total of the scale	Correlation Coefficient	0.84	0.65	0.85
	Sig.	0.00	0.00	0.00

Table 3 indicated that values of Pearson correlation coefficients for the relationship of fields with the tool ranged from 0.65 to 0.85, and that the values of Pearson correlation coefficients for the relationship of fields between each other ranged from 0.42 to 0.56. These values are considered acceptable for the purposes of this study (Al-Kilani and Al-Sharifin, 2011).

Study Instrument Reliability

For the purposes of checking the instrument internal consistency, the instrument internal consistency values were computed by using Cronbach's α equation based on the first application data of the study tool on the pilot sample, as indicated in Table 4.

(Table 4)
Instrument internal consistency coefficients values and its dimensions

Scale and its fields	Internal inconsistency	No. of Statements
Infrastructure	0.91	13
Food and Meals(Rejected and allowed)	0.88	9
Laborers in school cafeteria`	0.85	6
Total for scale	0.87	28

Table 4 indicates internal consistency value of the scale of applying degree of schools cafeterias supervisors of health and safety standards was 0.87, and for its dimensions ranged from 0.85 to 0.91. These values indicate the questionnaire construction quality and its validity for the purposes of this study.

The approved criterion for deciding the evaluation degree: Statistical model with relative ranking has been adopted. With the aim of issuing decisions regarding instruments means and its domains and statements by dividing (1-5) to five groups for the purpose obtain the extent of each level, i.e. $(5-1 / 3 = 1.33)$ and accordingly, the levels will be as follows: means that are (less than 2.34) refer to low applying degree means ranged (from 2.34 to 3.66) refer to medium applying degree, and means that (more than 3.66) refer to large applying degree.

Study variables

First: the independent variables include:

Sex: it has two categories (male and female).

-Years of service in management: it has three levels (less than 5 years, 5- to less than 10 years, 10+ years)

Second: the dependent variables, which include

- School principal's estimates for applying a degree of school cafeteria supervisors for public health and safety standards.

Study procedures: The researchers perform the following procedures:

- Reviewing the educational literature and previous studies related to current study subject, as well as referring to Ministry of Public Health Law No. (47) For the year 2008 AD, and school cafeterias instructions No. (5) For the year 2001 for study tool building related to applying degree measurement of health standards by school cafeteria supervisors and public safety.

. Population and sample size was determined, since the study sample was selected from the school of Jerash Governorate Education Directorate of the 2019/2020 academic year using the simple random method, in a way that ensures that the study sample represents the total study population.

- The study tool was prepared in its initial form after reviewing educational literature and studies related to the study subject and by reference to the practical guide to health and hygiene within the school. Validity and reliability were verified.

- Application of the study instrument in its final form to targeted study sample on the specified date.

- Questionnaires were collected, checked, and statistically processed to answer study questions, to conclude appropriate recommendations in light of study findings.

Statistical Techniques

To answer study questions, the following statistical treatments were used: To answer the study first question: means and standard deviations for study sample responses were calculated.

To answer study second question; Two-way analysis and multiple variance analysis (without interaction) were used to find out study sample subjects' responses differences in scale of applying the degree of school canteen supervisors to public health and safety standards.

Results and discussion

First. Results related to first study question, which states: "What is the applying degree of which school canteen supervisors in Jerash Governorate apply public health and safety standards for canteens from point of view of their managers?" To answer this question; The means and standard deviations of applying degree of school canteen supervisors in Jerash Governorate were calculated for general health and safety standards for the canteen from the manager's point of view, taking into account the order of fields descending according to their means, as shown in Table 5.

Table (5)

Means and standard deviations values of sample subject's estimates of applying degree of school canteens supervisors of public health and safety standards for infrastructure field statements arranged in descending order according to their means

Rank	Field No.	Scale and its fields	Mean	Standard Deviation	Applying Degree
1	2	Food and Meals(Prohibited and allowed)	3.98	0.83	Large
2	3	Laborers in school cafeteria	3.91	0.84	Large
3	1	Infrastructure`	3.86	0.82	Large
		Total for scale	3.88	0.70	large

Table 5 indicates that applying a degree of school canteens supervisors in Jerash governorate for health and safety standards for canteens was (large), with a mean (3.88) and standard deviation (0.70). Food and meals (prohibited and allowed) dimension ranked the first, with a mean (3.98) and standard deviation (0.83) this means that the applying degree is large .followed by the field of (workers in the school canteen) in the rank The second, Laborers in school cafeteria ranked the second with a mean (3.91) and standard deviation (0.84), and large applying degree, Finally infrastructure dimension ranked the third, with a mean (3.65) and standard deviation (0.87), and large applying degree

Such result is due to the great role played by school principal, which is to disseminate information and data related to public health and safety standards in general and in particular health and safety standards related to school canteen, by circulating the official books related to school canteens issued by the Ministry of Education to workers in the canteen. The school canteen discusses proposals and opinions presented by school canteen supervisors on an ongoing basis and in public during official meetings, as well as school director's clarification of laws, regulations, legislation, and instructions in force for teachers supervising school canteen, asking them to implement these instructions to avoid legal accountability, which prompts school canteen supervisors to apply instructions and legislation of school canteen related to infrastructure, foods quality that are allowed to be sold or eaten inside the school canteen, as well as instructions for their employees in the school canteen, which were reflected on study sample subjects responses, which showed that school canteens supervisors apply instructions, regulations and legislation related to school canteen during their work with a large degree.

For more information, means and standard deviations of study sample subjects estimates were calculated for all statements of each dimension separately, as they were as follows:

First: Food and meals (allowed and prohibited)

Food items (allowed and prohibited) means and standard deviations were calculated from school principals' point of view in Jerash Governorate, in descending order according to their total means, as shown in Table (6).

Rank	Statement No.	Statements	Mean	Standard Deviation	Applying Degree
1	22	The canteen supervisor permits the sale of natural potato chips and corn chips that are automatically packed and do not contain artificial dyes or colorings	4.04	1.01	Large
2	14	The canteen supervisor is keen on food offered validity in the canteen.	3.91	0.96	Large
3	16	The canteen supervisor checks the verity of food offered to students in the canteen.	3.86	1.07	Large
4	18	The canteen supervisor strictly forbids eating foods that are not allowed, such as: chips that are not made from potato chips and natural corn.	3.79	1.00	Large
5	17	.The canteen supervisor strictly forbids selling non allowed food such as soft drinks of all kinds	3.77	0.98	Large
6	19	The canteen supervisor strictly forbids selling (obsolete) foods, which are discarded daily	3.66	0.97	Medium
7	20	The canteen supervisor is strictly prohibited from selling or eating foods with low nutritional value of all kinds	3.64	1.01	Medium
8	21	The canteen supervisor allows the sale of (sandwiches and fresh pastries) and packaged from licensed restaurants according to health conditions and instructions.	3.59	0.93	Medium
9	15	The canteen supervisor checks that food conforms to general health and safety requirements	3.28	1.13	Medium
		General Mean	3.98	0.83	Large

Table (6) indicates that means of school principals' estimates in Jerash Governorate of applying a degree of canteen supervisors to public health and safety standards to statements of the third dimension (infrastructure) ranged between mean (3.28) and (4.04). Table (6) indicated that and five paragraphs within the degree of application (high), and (4) statement applying degree was (medium); Statement (22), which states, "The canteen supervisor permits the sale of potato chips and natural corn chips that are automatically packed and do not contain artificial dyes or colorings" ranked the first place, with a mean (4.04), with a standard deviation of (1.01).) with large applying degree Statement no. (14), which states that "the supervisor of the canteen is keen on the validity of the food offered in the canteen" ranked the second with a mean (3.91) and standard deviation (0.69) and large applying degree. Statement no (15) which states, "The canteen supervisor checks that foods

conform to conditions of public health and safety,” with a mean (3.28), and standard deviation of (1.13) with medium applying degree ranked the last estimate

The researchers attribute the result to the great role played by school canteens supervisors since they are keen on validity of food offered in the canteen and the offered is varied, meets students’ desires, and canteen supervisors strictly forbid the sale or consumption of foods that are not allowed, such as: unauthorized chips that is made of natural potato and corn chips, and soft drinks of all kinds. They also strictly forbid the sale of (non-fresh) foods and dispose of them daily, while canteen supervisors allow the sale of natural potato chips and corn chips that are automatically packed and not containing artificial dyes or colorings. This may be due to the supervisory role played by school principals, as well as school health supervisors, whether working in the Directorate of Health or supervisors working in the Directorate of Education, who are keen to follow up applying a degree of teachers who supervise the school canteen to instructions, regulations, and legislation related to foods and foods that are allowed to be sold or trade-in the canteen.

Second: The employees in school canteen

Means and standard deviations for school canteen employees statements were calculated from school principals point of view in Jerash Governorate in descending order according to their total means, as shown in Table (7)

Table (7)

Means and standard deviations values of sample subjects estimates of applying degree of school canteens supervisors of public health and safety standards for school canteen’s laborers field arranged in descending order according to their means

Rank	Statement No.	Statements	Mean	Standard Deviation	Applying Degree
1	26	The canteen supervisor excludes any employee who has any disease symptoms, whatever they may be, until is eliminated according to a medical report issued by the Health Directorate.	4.14	0.91	Large
2	28	The canteen supervisor follows up his employees wearing the uniform of the canteen during sales process.	3.97	0.97	Large
3	25	The canteen supervisor trains canteen’s staff in on public health and safety rules.	3.93	1.04	Large
4	24	The canteen supervisor monitors disease-free certificates validity of his employees in the canteen.	3.89	0.99	Large
5	23	The supervisor of the canteen checks that canteen employees have periodic health checks to guarantee that they are safe and free of diseases.	3.84	1.04	Large
6	27	The canteen supervisor prohibits presence of any individual in the school canteen has no health certificate.	3.81	1.05	Large
		Total	3.91	0.84	Large

Table (7) indicated that means of school principals’ estimates in Jerash Governorate of applying degree of canteen supervisors of public health and safety standards for a statement of the second dimension (school canteen employees) ranged between (3.81) and (4.14). All concerned statements have a large applying degree for the six statements. Statement no. (26) which states that “ the canteen supervisor excludes any employee who exhibits symptoms, whatever they may be, until its termination according to a medical report issued by the Health Directorate” ranked the first, with a mean (4.14), and standard deviation (0.91) with large applying degree. Statement no. (28), which states that “the supervisor of the canteen continues to wear the uniform of his employees during the sales process” with a mean (3.97) and standard deviation (0.97) and large applying degree ranked the second

Statement no. (27), which states that “canteen supervisor prohibits the presence of any person inside the school canteen who has no health certificate,” with a mean value (3.81), and a standard deviation of (1.05) with large applying degree.

The reason behind (school canteen’s workers) in the second rank and within large applying degree such degree can due to school principals supervision, and their exclusion any employee who shows any symptoms of illness, whatever they may be, until their removal according to employee medical report issued by Directorate of Health, their follow-up to their employees and monitoring their compliance of wearing canteen uniform during sale process, as well as the validity of their disease-free certificates, and ensuring that employees in the canteen pursue periodic health checks to ensure their safety and free from diseases, and preventing the presence of anyone inside canteen who has no health certificate. In addition, canteens supervisors train employees on health and safety rules.

Third: Infrastructure

Means and standard deviations of infrastructure dimension statements were calculated from school principals' point of view in Jerash Governorate, taking into account their descending order according to their total means, as shown in Table (8).

Table (8)

Means and standard deviations values of sample subject’s estimates of applying degree of school canteens supervisors of public health and safety standards for infrastructure field statements arranged in descending order according to their means

Rank	Statement No.	Statements	Mean	Standard Deviation	Applying Degree
1	7	The canteen supervisor provides waste containers that are emptied daily and placed in multiple locations for easy cleaning.	3.97	0.89	Large
2	1	The canteen supervisor is keen to choose suitable location for the canteen.	3.93	0.88	Large
3	11	. Canteen supervisor ensures that all food is preserved according to preservation conditions recommended by manufacturers written on food samples.	3.93	0.99	Large
4	3	Supervisor checks that there are tight cabinets used to keep used tools and dishes so shelves are easy to clean	3.91	0.98	Large
5	12	. Canteen supervisor checks that all food are valid	3.91	1.03	Large
6	2	. Canteen supervisor checks that canteen’s room has adequate ventilation and lighting.	3.89	1.09	Large
7	5	. Canteen supervisor provides safe and sound water source from water authority's public network.	3.86	1.01	Large
8	6	Canteen’s supervisor provides sink and cleaning material for employees to wash their hands	3.86	1.01	Large
9	9	Canteen’s supervisor cleans canteen daily and when needed	3.83	1.08	Large
10	8	Canteen’s supervisor checks that food storage area is cool and clean	3.82	0.99	Large
11	13	Canteen’s supervisor places pesticides, disinfectants and detergents with cleaning tools away	3.79	1.11	Large

		from food storage area			
12	4	The canteen supervisor is keen that there are enough refrigerators for canteen's needs...	3.75	1.17	Large
13	10	Canteen's supervisor recommends using diluted disinfectants to kill germs and bacteria on surfaces that come into contact with fresh food.	3.51	1.21	Medium
		Total	3.86	0.82	Large

Table (8) results show that school principals' estimates means in Jerash Governorate for applying a degree of canteen supervisor's standards of public health and safety regarding the statement of the third field (infrastructure) ranged between (3.51) and (3.97). Statement no. (12) a paragraph within the degree of application (high), and (one paragraph) within the degree of application (medium); Where the highest estimate for Paragraph (7), which states, "The canteen supervisor provides waste bins that are emptied daily so that they are placed in multiple places for ease of cleaning" came in the first place, with the arithmetic mean value of (3.97), with a standard deviation (0.89) and a degree of application (Large), followed by Paragraph (1), which states that "the supervisor of the canteen is keen to choose a suitable place for the canteen" with an arithmetic mean (3.93) and a standard deviation (0.88) and a degree of application (large), and the lowest estimate of Paragraph (10), which states " The canteen supervisor recommends the use of diluted disinfectants to eliminate germs and bacteria on surfaces that come into contact with fresh food, as its mean value was (3.51), with a standard deviation of (1.21) and a degree of application (medium).

Researchers attribute this result to the canteen supervisors choosing the appropriate place for the canteen, taking into account that the canteen room has adequate ventilation and lighting, and their keenness to provide all necessary materials and supplies related to the school canteen, including, for example, refrigerators, and tight lockers for preserving food, foods, utensils, and tools. used, and wastebaskets emptied daily so that they are placed in multiple places for easy cleaning, and the researcher may attribute this result to the supervisors of canteens making sure that all food is preserved according to the preservation conditions recommended by the manufacturers and written on the food samples so that all food has a valid validity. In addition, canteen supervisors use diluted disinfectants to eliminate germs and bacteria on surfaces that come into contact with fresh food; Canteen supervisors are keen to provide insecticides, disinfectants, and detergents with hygiene tools and recommend keeping them away from food storage places, which was reflected in the responses of the study sample members, which showed that school canteen supervisors apply the instructions, regulations, and legislation related to the infrastructure of the school canteen during their work to a (large) degree. The study result differed from (Santosa, et al, 2008); study results. and US Department of Agriculture Food and Nutrition Service (Food and Nutrition Service, 2016), which concluded that school canteen supervisors are applying degree of public health and safety standards is medium; Such difference may be due to community nature and the used tool.

Second. Results related to first question, which states: "Do school principals' estimates of applying degree of school canteen supervisors in Jerash Governorate apply public health and safety standards differ according to (gender, years of service). To answer this question; Means and standard deviations of school principals' estimates of school canteen supervisors applying degree of public health and safety standards, in Jerash Governorate according to study variables (gender, years of service), as shown in Table (9).

Table (9)

Means and standard Deviations of schools canteens supervisors applying degree of health and general safety according to study variables

Variable	Variable Levels	Statistical	School Standards of implementation field			
			Infrastructure	Food	Cafeteria Laborers	Total Scale
Gender	Male	Mean	3.76	3.99	3.95	3.86
		Standard Deviation	0.90	0.79	0.83	0.74
	Female	Mean	3.94	3.96	3.87	3.90
		Standard Deviation	0.75	0.86	0.85	0.66

Years of Experience in Management	Less than 5 years	Mean	3.63	3.81	3.81	3.72
		Standard Deviation	0.74	0.76	0.77	0.62
	5 to less than 10	Mean	3.90	4.03	3.91	3.91
		Standard Deviation	0.86	0.82	0.87	0.74
	10 +	Mean	3.98	4.01	3.98	3.98
		Standard Deviation	0.79	0.90	0.84	0.67

Table (9) indicates that there are evident differences between school principals' estimates means in Jerash Governorate of applying degree of canteen supervisors applying standards of public health and safety and its related fields due to different levels of study variables. In order to verify the significance of these differences, three-ANOVA analysis was performed for applying a degree of school principals' estimates in Jerash Governorate of canteen supervisors applying degree of public health and safety standards due to study variables (gender, years of experience in management), as shown in Table (10).

Table (10)

Three way ANOVA analysis results of sample subjects' estimates of applying a degree of canteens supervisors in Jerash Governorate of public health and safety standards due to gender and years of experience

Variance Source	Sum of Squares	df	Mean Square	F	Sig.
Gender	0.111	1	0.111	0.228	0.634
Years of Experience	1.483	2	0.742	1.521	0.222
Error	76.049	156	0.487		
Total	77.615	159			

Table (10) indicates that there is no statistically significant difference at significance level $\alpha = 0.05$ between school principals' estimates means of applying degree of canteen supervisors in Jerash Governorate to public health and safety standards due (gender, years of service)..

This may be due to the fact that school canteens supervisors are subject to the same instructions, regulations, and legislation issued by the Jordanian Ministry of Education. Therefore, school directors are very keen to implement these instructions, regulations, and legislation, regardless of their gender or years of service, in order to avoid any administrative accountability that may occur.

This may be due to circumstances similar in business and administrative practices that are performed by school principals, regardless of their gender or years of service. Since all follow clear policies and programs in accordance with circulars and decisions issued by Ministry of Education in Jordan.

This may be due to the fact that school principals have sufficient scientific and professional knowledge regarding instructions, regulations and legislation implementation related to school canteens supervisors. This in its turn positively reflected on study sample subjects responses regarding the applying degree evaluation of these instructions by canteen supervisors, regardless of their gender or years of experience.

Work environment similarity and exposing teachers who supervise school canteens to same management conditions, same working conditions and pressures. Since the requirement is the same from female/male canteen supervising teacher

This may be due to the fact that school canteens supervisors, regardless of their years of experience, are subject to the same regulations, laws, and legislation issued by the Jordanian Ministry of Education, and schools principals are very keen to implement such laws, regulations and legislations.

The current study result is consistent with Food and Nutrition Service Center of US Department of Agriculture (Food and Nutrition Service, 2016), which indicated that there are no statistically significant differences due to sex variables. It is also consistent with Al-Sarhi study (2014), which indicated that there are no differences statistically significant differences due to school type (males, females, and mixed) except in the canteen's interior equipment specifications, .The differences were in favor of male schools

Recommendations

Based on findings, researchers recommend the following:

- Teachers who are supervising schools canteens are requested to continue in applying instructions, regulations and legislation related to schools canteens due to their positive effects on student's health and safety.
- Directing schools canteens supervisors to assure constantly that allowed and prohibited foods conform to public health and safety conditions

-Inviting researchers to carry out more studies on the same subject and other aspects different from the current study by reviewing its results and recommendations, on different samples, and in light of other demographic variables.

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