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Knowledge, Attitudes and Practices Regarding Avian Influenza Among University Students in Gaza Governorates.

By

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Dedication

To those people who have never stopped
Believing in me …..
Those who are always supporting me……
I dedicated this work to
My parents

My sister
My brother

For their support and encouragement ……..

Fathia El-smairy

Declaration

I certify that this entire thesis submitted for the degree of Master is the result of my own research, except where otherwise acknowledged, and that this thesis or any part of the same has not been submitted for a higher degree to any other university or institution.

Signed:

Fathia Ahmed El- smairy

Date: May\2009

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fathiaEl- smairy

Abstract

Preparing students with sufficient knowledge regarding avian flu is essential because it is difficult to predict when the next influenza pandemic will occur or how severe it will be. This descriptive analytical cross sectional study aimed to evaluate the knowledge, attitudes and practices regarding avian influenza among university students in Gaza Governorates.

A stratified random sample of 500 students from three universities was given a self-administered multiple-choice questionnaire.

The findings revealed that 43.6% of respondent were male and 56.4% were female, approximately 80.6% of students who participated in the study reported they know what avian flu is and 23%wrongly answered that there had been at least one human infection from avian influenza in Gaza. Nearly half of the students (56.7%) reported that they know the history of avian flu. Also, 63% correctly identified the symptoms of avian flu. In addition, 76% of the students believed that the avian influenza is a serious problem .and almost all the study participants believed that they should not touch an ill or dead bird.The media was their main source of information.

Public health educational programs are essential in Gaza strip universities and other educational institutions to confront any potential epidemics.

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List of abbreviations

AI	Avian Influenza
IT	Information technology
Epi-info	Epidemiological information statistical program
KAP	Knowledge, Attitude, Practice
UNRWA	United Notion Relief And Work Agency
WHO	World Health Organization
MOH	Ministry Of Health
SPSS	Statistical Package Of Social Science
PCBS	Palestinian Center Bureau Of Statistics
PHC	Primary health center
ANOVA	Analysis Of Variance
GS	Gaza Strip
PCR	Polymerase chain reaction

Chapter (1)

Introduction

1.1 Background

Avian influenza is an infection caused by avian (bird) influenza viruses of type A strain (WHO, 2006). The first documented case of infection in humans occurred in Hong Kong in nineteen ninety seven when the H5N1 strain caused severe respiratory disease in 18 humans, 6 of them died (Mouts and others, 1997)

Since then, outbreaks of the H5N1, a highly pathogenic avian influenza strain, have been identified in birds, wild and domestic poultry in several countries particularly in Vietnam, Indonesia, China, Thailand, Cambodia and Egypt.

The world health organization (WHO) reported more than 373 confirmed human cases of avian influenza A (H5N1), approximately 230 of them have subsequently died (WHO,2008).

Nearly all of those cases have resulted from contact with domestic birds, but there has not yet been a mutation allowing the H5N1 virus to spread efficiently in humans (katz.2004). In Gaza strip, no human cases have been reported. (WHO, 2006).

1.2. Problem Statement:

If the H5N1 virus mutates to from a strain that allows easy human transmission, a world wide pandemic could occur. Therefore serious threats to humans in Gaza strip may be faster than other areas due to many factors: Gaza strip is one of the most heavily populated areas in the world, the population density in Gaza strip is estimated at 3.567/km^2 of the total area of Gaza strip (365/km^2) with approximately 1.5 million Palestinians living in Gaza strip (PCBS, 2007).

It is will known that Gaza strip has a very low economic status and lead a hard life. In addition to what is mentioned above, Gaza strip has uncontrolled borders. On January 23, 2008, Palestinians had destroyed several parts of the wall dividing Gaza and Egypt in the

town of Rafah and hundreds of thousands of Gazans crossed the border into Egypt seeking food and supplies. They returned to Gaza strip with many birds in spite of the fact that avian influenza has become one of the serious public health threats in Egypt with growing number of infected human cases.

All of above reasons make it difficult to face this problem which might be catastrophic if it happens in the Palestinian territories.

1.3. Justifications:

A key factor to reduce the risk of avian influenza is adequate preparedness, including the increase adequate and accurate information to the public to increase their knowledge about the disease and how they may behave to reduce the possibility of the spread of the disease.

The current level of information should be assessed among the population. Therefore the focus would be on final year university students who are one of the most influential group on their families, and hence their communities.

In addition to this, the students at the university are not only representing their university but also their place of residence because they are from all regions in Gaza strip.

1.4. Aim of the study:

The aim of the study is to evaluate the level of knowledge, attitudes and practices among university students toward avian influenza.

14.1. Objectives of the study:

1. To determine the knowledge, attitudes and practices toward avian flu among university students.

2. To explore the relationship between knowledge, attitudes and practices and the socio-demographic variables.

3. To assess the relationship between knowledge, attitudes and practices, and university, faculty and level of study of the students.

4. To evaluate the relationship between knowledge, attitudes and practices of the university students.

5. To determine the source of information about avian influenza among university students.

6. To suggest recommendations that may help to increase the knowledge about avian influenza.

1.5. Study question:

The main question addressed in this study is:

What is the level of knowledge, attitudes and practices among university students in Gaza Governorates?

This main question is divided into the following sub-questions.

Q 1: What is the level of knowledge, attitudes and practices among university students?

Q2: Is there any relationship between knowledge, attitudes and practices and socio demographic variables.

Q3: Is there any relationship between knowledge, attitudes and practices, and students' university, faculty and level of study.

Q4: Is there any association between knowledge, attitudes and practices of the university students.

Q5: What is the students' source information about avian influenza?

1.6. Study hypothesis:

1. There is a statistically significant difference in the level of knowledge, attitudes and practices among university students attributed to their gender.

2. There is a statistically significant sufferance at ($p < 0.05$) in the level of knowledge, attitudes and practices among university students due to their place of residence.

3. There is a statistically significant difference at ($p < 0.05$) in the level of knowledge, attitudes and practices among university students due to their family monthly income.

4. There is a statistically significant difference at ($p < 0.05$) in the level of knowledge, attitudes and practices among university students due to their university.

5. There is a statistically significant difference at ($p < 0.05$) in the level of knowledge, attitudes and practices among university students due to their faculty.

6. There is a statistically significant difference at ($p <0.05$) in the level of knowledge, attitudes and practices among university students due to their level of study.

7. There is a statistically significant relationship between the level of avian flu knowledge, among university students and their attitudes and practices toward avian flu.

1.7. Context of the study:

1.7.1. Demographic context:

Palestine is situating on the eastern coast of the Mediterranean Sea, in the Middle East. It is border by Lebanon on the north, by Syria and Jordan on the East, the Gulf of Aqaba on the south and by Egypt and the Mediterranean Sea on the west. (MOH, 2006).

The territory of Palestine covers around 10.435 square miles out of this territory; there is about10.163 square miles of land area. The population size of Palestine (west bank and Gaza governorate) estimated about 3.761.646 in 2007, the population size of Gaza governorate estimated about 1.416.539 in 2007 and about 2.345.107 in west bank. (PCBS, 2008).

Gaza strip comprises a narrow zone of land, located on the south of Palestine, constituting the coastal zone of Palestinian territory stretches along the Mediterranean Sea.

According to Palestinian centers, Bureau of statistics (PCBS) Gaza governorates are very crowded place with area 365sq, kg and the population density is 3.881 inhabitants/ km^2

Gaza strip is divided into five governorates, which are North Gaza (270.246) individual with population density 4.430 (person/km^2). Gaza city is 496.411 individual with population density 6708 (person/km^2) mid-zone is 205.535 individual with population density 3511 (person/ km^2), khanyounis is 270.979 individual, with population density is 2.509 individuals, Rafah is 173.372 individual. (PCBS, 2004)

According to united Nation Relief and work Agency (UNRWA) registration statistic the total registered refugees population is Gaza strip was 986.034 in the tear 2005, which constituted 68% of total population (UNRW, 2005)

1.7.2. Economic Context:

Unstable political situation negatively affects the socioeconomic status in Palestine. According to World Bank, 67% of Palestinian households are living below the poverty level. Percentage of people who live in deep poverty had been steadily increase to reach 35% in Gaza strip, and 15% in west bank, also the unemployment rate is increased to reach 28% in west Bank and 39% in Gaza strip.(World, Bank, 2007)

1.7.3. Health System Context:

There are four parties that provide health services in the Palestinian territory, Ministry of Health, United Nation Relief and Works Agency (UNRWA), the Non Governmental organization sectors (NGOs), and Private sector.(PCBS,2008).

The MOH serves as regulatory body for the Palestinian health system. The MOH manages public health services and delivery of primary, secondary and tertiary care in government facilitated. MOH operates 416 primary health centers (PHC) constituted 64.3% from the

total PHC: 56 PHC in Gaza strip and 360 PHC in west Bank, out of them 355 provides mother and child heath services.

MOH responsible for significant portion of the secondary health care operates 22 hospitals (10 in Gaza Strip and 12 in West Bank). (MOH.2006)

UNRWA owned and supervised 53 PHC centers distributed as 35 PHC centers in West Bank and 18 PHC centers in Gaza strip, Regarding to NGOs, have 185.

1.7.4. Education context:

The ministry of education of the Palestinian national Authority (PNA) assumed responsibility for the education of the Palestinian population of the west Bank and Gaza strip in October 1994.

There are three supervisory authorities for the schools in the Palestinian territories. The Palestinian Authority government (PAN), UNRWA, and the Private sector.

The educational system in the west Bank and Gaza strip has five cycles. The first is preprimary education for four and five year olds, which lasts for two years. The second or, basic, cycle consists of 10 years of education for 6 to 15 year olds.

The third or secondary, cycle last for two years to 16 and years old. The fourth, or post secondary, cycle consists of two years in at technical college, and the fifth, or higher education, cycle consists of four or more years of schooling. (MOE, 2007).

Chapter (2)

Literature Review

2.1. Conceptual Frame work:

After reviewing the literature, the researcher described the most common factors that might affect KAP level regarding avian flu among university students.

2.1.1. Dependent Variables:

Knowledge is what is known. Also knowledge acquisition involves complex cognitive processes, perception, learning, communication, association and reasoning. The term knowledge is also used to mean the confident understanding of a subject, potentially with the ability to use it for a specific purpose (Wikipedia, 2007).

Attitude is an emotion that all people got when they have other emotions. Attitudes are positive, negative or neutral views of an object like a person, behavior or an event (Wikipedia, 2007).

Practice is the observation, description, evaluation, interpretation or modification of human behavior by the application of psychological principles and methods (Nebraska DHHS, 2005)

2.1.2. Socio- demographic factors:

Some studies have explored the association of various socio demographic factors with KAP level. These factors include gender, family income and residency place. (Al Shehri, Abdel Fattah and Hifnway, 2006)

2.1.3. Student's University Faculty and level of study:

Level of knowledge attitudes and practices regarding avian flu among university students difference depends on academic courses in each faculty and level of study. (Ghabili, shoja, kamran, 2008)

2.1.4. Source of Information:

Most of studies on the association of KAP level and source of information show that more than 88% of participants reported that mass media are the source of information. (AL-mazrooei, AL nagde, Almohair, 2005)

2.2. Theoretical Diagram of Conceptual Framework:

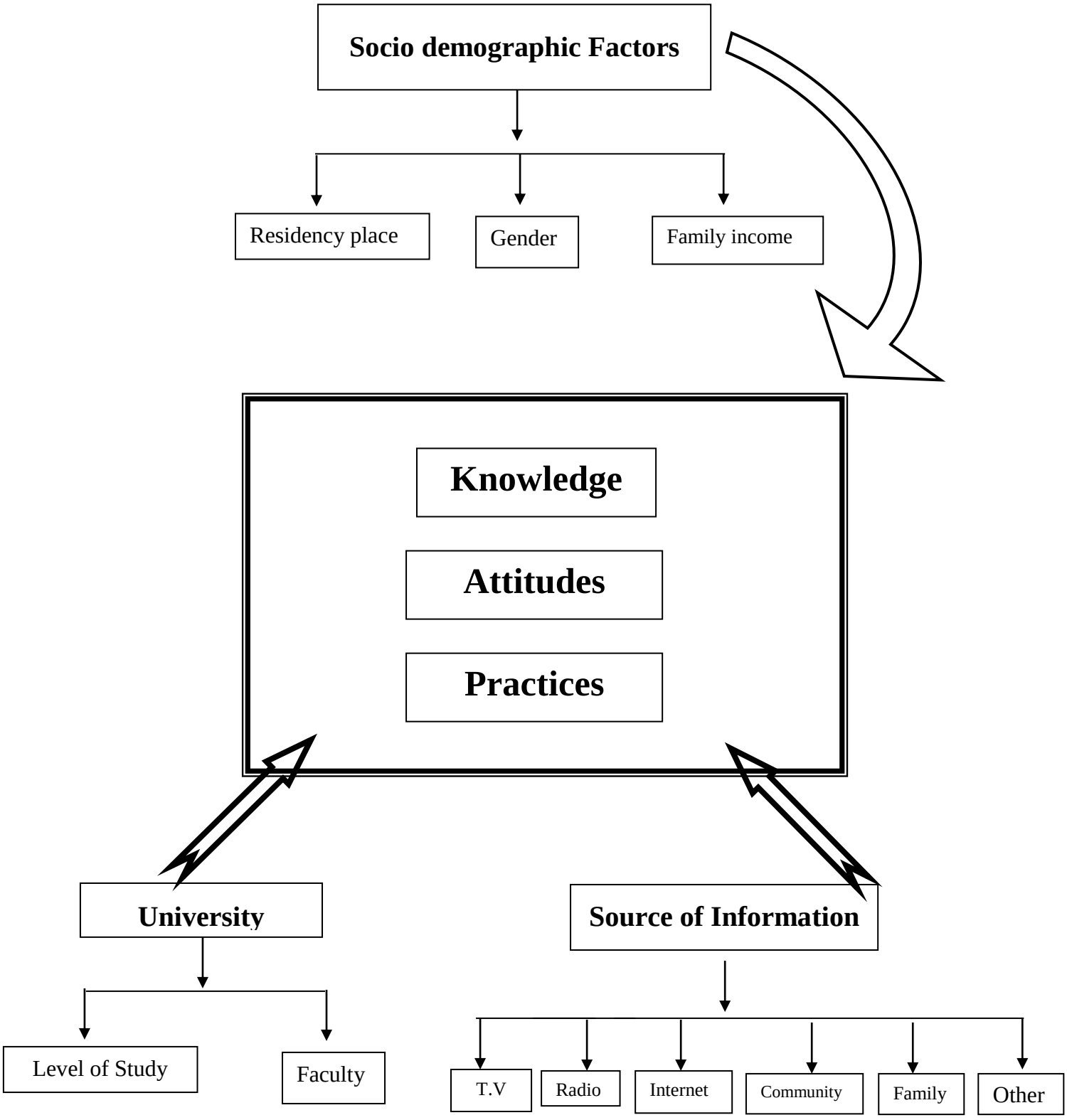

Figure: (2.1): Diagram of Conceptual Framework

2.3. Definition of Avian Influenza:

A potentially fatal infection in birds caused by any virus subtypes of the influenza type A virus, especially the H_5N_1, which is highly contagious among birds and can be transmitted to humans who have been in direct contact with infected birds (Cardona J, 2008).

World wide, wild birds carry avian influenza in their intestines, but usually do not get sick from them. Avian influenza is very contagious among birds and can make some domesticated birds, including chickens, ducks, very sick and kill them. (WHO, 2006)

2.4. Human health risks:

It is difficult to predict when the next influenza pandemic will occur or how severe it will be. Wherever and whenever a pandemic starts, every one around the world would be at risk.

Avian influenza viruses are closely related to type A influenza virus found in humans, horses and dogs. Ordinarily, the influenza viruses found in each species infect only that species but type A influenza viruses can change frequently (PHAC, 2004).

If two viruses from different species infect a cell simultaneously, the gene segments can reassert when a new virus particles are assembled. For instance, if a cell is infected by an avian influenza and human influenza viruses, the new viruses' formation might contain some segments from the avian influenza virus and other from the human influenza virus might be able to establish itself in humans (USAHA, 2007).

If a virus develops new mutations that help it replicate and be transmitted in the new host species, although cross- species transmission is a rare event, it may be followed by an epidemic or pandemic as the new host has no immunity to the virus. For an epidemic to occur, three requirements must be met: first, a new influenza virus subtype must emerge in a species with little or no immunity to that subtype; second, the virus must produce a

disease in that species; and three, there must be sustainable transmission in the new species (Abbott, 2003). So the virus one day could be able to infect humans and spread easily from person to another.

2.5. Gaza Strip Avian Flu in 2006:

During last pandemic, avian influenza had spread quickly in the Middle East but fortunately, no human cases were confirmed in Gaza strip in 2006.(MOH, 2006)

Although, only five suspected human cases in Gaza and eight in the west bank, and all tests for PCR were negative many farms were infected in Gaza strip by H5N1 (confirmed in Juhreldeik, Rafah, Beit Lahia, Jabalia area and Deir Elbalhah), (Annex 3).

On the tenth of April 2006, 339,986 birds were sacrificed (Juhradik 231,450, Rafah 84,762, Tal-al Hawa 23,774) in 36 farms (20 farms in Rafah, 1 farm in Tal-al Hawa and 15 farms in Juhreldeik area in Gaza strip (WHO, 2006).

2.6. History of human infection with avian influenza:

Human infections with avian influenza viruses were reported from 1997 to 2004. In 1997, eighteen human infections were reported during a H5N1 outbreak among poultry in Hong Kong, six of them died (CDC, 2007).

In 1999, avian influenza was confirmed in two children in Hong Kong, both of them had died. In 2002, the viruses were found in one person after an outbreak in poultry in Virginia, USA. In 2003, 347 a total of 89 confirmed human infections were associated with an outbreak of avian flu. Most cases occurred in poultry workers (WHO, 2006).

In 2004, two cases were confirmed in poultry workers in Canada. Also, Vietnam had identified H5N1 as the cause of human cases of severe respiratory diseases with high fatality. Also Thailand reports two laboratory confirmed cases of humans infected with H5N1.

In 2005, Vietnam, Cambodia, Thailand, China, and Indonesia confirmed human cases infected with H5N1 (WHO, 2006).

2.7. Cumulative number of confirmed human cases reported to WHO up to 2009:

Total number of humans infected with H5N1 virus in the world was 421 cases, 257 of them died, 23 of them were in Egypt (WHO, 2009). In all confirmed cases, a history of close contact with dead and sick poultry was indicated.

2.8. Level of knowledge attitudes and practice regarding avian flu:

Marinos, etal, (2007), assessed the level of awareness of avian influenza among Greek students. They examined the source of the students' avian flu knowledge, analyzed the relationship between 6 schools who participated in the study. The total sample was two thousands eight hundreds and five children aged between 8 and 15 years. The results of the study indicated that, 87% of the participants reported knowing what the avian influenza is. Also 67.7% were aware that humans have been infect by avian flu; about 46.2% reported there was a vaccine and 72% of the students said that the source of their information about avian influenza was newspapers and television, and their families or teachers informed only 28%.

AL-shehri, Abdel- Fattah, and hifnnawy, (2006), to evaluate the knowledge and concern about avian influenza among secondary school students in Taef, Saudi Arabia, conducted a study. Multiple choice questions tool was developed to measure the level of avian influenza knowledge. The questionnaire contained 23 items, and included socio demographic data, questions about knowledge, source of information and concern about avian influenza.

The results indicated that, the mean rank of score was significantly higher among students with higher maternal education level as compared with those with lower maternal educational level. No statistically significant differences in the knowledge score were found between different sub-groups of age, gender, and maternal work. There was a statistically significant difference between the knowledge score and the source of information; about 70% of students reported that mass media (TV and Radio) was the source of their information regarding avian influenza.

Ghabili, shoja and kamran, (2006), conducted a study to assess the knowledge of a group of Iranian medical students regarding avian influenza and to find out the potential source of their knowledge. The study population was second and third year medical students at the faculty of medicine. Multiple choice questions tool was developed to measure the level of knowledge, The questionnaire included demographic information including age and sex of students, avian influenza history, mode of transmission, clinical symptoms, and prevention, and a multiple choice question regarding the student's source of information about avian influenza was used.

The main results of the study emphasized that a relatively low level of knowledge of avian influenza among a group of Iranian medical students. Most of the students (67.2%) indicated that mass media (radio, television, and news papers) was their major source of information about avian influenza.

Leslie, etal, (2008), assessed the level of knowledge, attitudes and practices regarding avian influenza among people in five governorates in Afghanistan. A structured questionnaire tool was used to collect information on demographic and socio economic factors, and avian influenza information sources. The main results of the study indicated that there was a positive association between socio economic status and KAP score, the

level of concern generated by the government response, media reports, and proximity to the outbreak have all likely contributed to this association.

The study conducted by Abbate, etal, (2006), aimed to determined the knowledge, attitudes, and behaviors relating to avian influenza among an adult population in Italy. The study conducted from December 2005 to February 2006 among 1020 adults. Data were collected by a questionnaire arranged in different sections: about participants, demographic and socio economic characteristics, knowledge of the definition, mode and vehicles of transmission, risk groups, attitudes and practices.

The main results of the study emphasized that half of the survey respondents correctly defined avian influenza, 20.1% to 81.4% knew the different modes of transmission, more than half of the respondents thought that avian influenza was a serious disease (61.9%). Almost all respondents indicated receiving some information about avian influenza (85.9%) mostly through mass media health professionals (26.5%).

CIF, UNICIEF, (2006), study of knowledge, altitudes, practices and behaviors was conducted to inform the avian influenza prevention and containment communication strategy in Georgia. The study was conducted by Georgia government with various donors (UNICEF, the World Bank, USAID, WHO, etc) to adequately prepare the population, and to overcome the threat of avian influenza epidemic and save lives.

The sample size for the survey was defined as 889 interviews, which included 502 house wives, 220 children 6-11 years of age, and 176 children 12-16 years of age, and then data were collected through focus group. Main results of the study indicated that all women declared that they had heard about avian influenza, 89%, from TV which was rated as the main source of information about avian influenza by all respondents. About 56.8% had indicated that they trust TV as a source of information, and 57.2% trust health care

providers. In general the survey clearly showed that knowledge on specific safety precautions is poor among house wives and children.

In their study, Liu, Huang and Hsu, (2007), aimed to identify consumer awareness of the avian influenza in Taiwan a stratified sampling was used in the data collection procedure, two hundred and twenty five questionnaires were distributed to consumers in Taiwan. The main results of the study emphasized that consumers in Taiwan answered correctly that all the poultry in a farm must be destroy immediately if a chicken is contaminated by avian influenza in that farm, 90% of the interviewers answered correctly that humans could catch avian influenza by touching contaminated birds. In addition, television was the most common source of information regarding avian flu.

Euro barometer study, (2006), aimed to understand the level of knowledge of European Union citizens concerning the health risks linked to avian influenza showed that avian influenza knowledge was influenced by whether or not the country was affected by avian influenza out breaks, namely. Of the Consumers in France, Germany, Denmark and Belgium, which experienced avian influenza out breaks, only 20% of the EU consumers declared eating less poultry during spread of avian flu.

Interactive Research Serbia and UNICEF, (2007), study aimed at the estimation of the existing level of knowledge, detection of attitudes and practical behavior of participants. The study sample included 1000 interviewed people of general population in Serbia, 200 medical workers, 200 educators in primary schools, 600 pupils from elementary schools, and 100 people of Roma population. The main results were that one hundred percent of the population in Serbia has heard about avian influenza, 90% of the participants confirmed the possibility of people getting avian influenza. Only one fourth of the participants think that avian influenza is a huge problem and 77% of the participants said that the source of information about avian influenza was television.

In a study by Akinola, etal, (2008), to assessing the knowledge, attitudes and compliance with preventive practices for avian influenza among poultry

Workers in a district in Nigeria, a cross sectional epidemiological design was conducted using a questionnaire to obtain information. The main results of that study indicated that about 92.9% of respondents had heard about avian influenza, only 61.4% correctly defined the avian flu. The majority (78.6%) agreed that avian influenza is a serious and preventable disease, and their main source of information was the mass media.

Chapter (3)

Methodology

Methodology

The aim of this study is to evaluate the level of knowledge, attitudes and practices regarding avian flu among university students in Gaza strip.

To implement this study, the researcher followed the appropriate steps of the methodology mentioned in the thesis preparing guide line for students of high studies in Al Quds university, which includes the study design, the study sample, adscription of the research setting and the ethical consideration .In addition it describes the instrument used in the study, its validity and reliability, piloting, data collection process, data processing and data analysis, the selection criteria and the limitations of the study are given well.

3.1 Study design:

A descriptive analytical cross sectional study was used in this study to assess the level of knowledge, attitudes and practices regarding avian flu among university students in Gaza strip.

This design enabled the researcher to accomplish the study objectives and to examine the association among variables.

3.2 Study population:

The study population included all students in the three traditional universities in Gaza strip. (Al-Aqsa, Al-azhar and the Islamic).

3.3 Sample size:

The sample size was determined form the total number (48069) of the students in the three universities. By using the Epi- info program (epidemiological information statistical program) at confidence level 95%, the sample size was 382 eligible students to be select for the study population. The researcher increased the sample size to be 500 subjects to compensate non-respondent and dropped cases and to include all faculties who have small number of students in the study.

The result of sampling was 500of the total number (48069) of university students.

Table 3.1: Distribution of Students by University.

University	Population	Sample size	Percentage
Islamic	18786	195	39%
ALazhar	15074	157	31.4%
ALaqsa	14209	148	29.6%
Total	48069	500	100%

3.4 Sampling process:

A stratified random sampling was done by dividing population into homogenous sub groups. The total number of students in the traditional universities is 48069, distributed as follows: 18786 in Islamic university, 15074 in Alazhar University, and 14209 in Alaqsa University. The percentage of each university study population of the total population was computing proportionally. Five hundred students were randomly selected form the three different universities, 195 from the Islamic university, 157 form Al azhar university, 148 form Alaqsa university (Table 3.1). Then study population of each university was computed proportionally to the faculty, and gender of the students (Table3.2, 3.3, 3.4).

A proportional random sample of students who study in the traditional universities at the time of the study was taken as the following:

All students who attended the university for Study between 5 November and 30 December 2008 were the target population, then day15 was selecting out of whole month days during which the data was collecting form the university (every other day).

The end result of sampling was 427 collected form the university students.

Table3.2: Distribution of ALaqsa Students by Faculty and Gender.

		Male			Female			Cumulative		
College	**Percentage**	**Population**	**Sample size**	**Percentage**	**Population**	**Sample size**	**Percent**	**Pop**	**Sample**	**Percent**
commerce	2%	206	2	64%	117	1	36%	323	3	100%
media	4%	364	4	63%	217	2	37%	581	6	100%
Arts	4%	180	2	33%	367	4	67%	547	6	100%
Education	86%	3961	41	32%	8258	87	68%	12219	127	100%
Fine art	2%	119	1	37%	199	2	63%	318	3	100%
Science	2%	137	1	62%	84	1	38%	221	2	100%
Total	100%	4967	51		9242	97		14209	148	
			35%		65%					

Table 3.3: Distribution of AL-azhar Students by Faculty and gender

		Male			Female			Cumulative		
College	**Percentage**	**Population**	**Sample size**	**Percentage**	**Population**	**Sample size**	**Percent**	**Pop**	**Sample**	**Percent**
Pharmacy	7%	312	3	30%	736	8	70%	1048	11	100%
Health science	7%	551	6	53%	780	5	471	1031	11	100%
Science	5%	597	6	75%	201	2	25%	798	8	100%
Agriculture	1%	188	2	87%	27	6	13%	215	2	100%
Commerce	19%	2225	24	76%	701	7	24%	2926	31	100%
Literature	17%	1702	18	66%	863	9	34%	2565	27	100%
Education	26%	1642	17	42%	2270	24	58%	3912	41	100%
Law	10%	1282	13	84%	238	3	16%	1820	16	100%
Engineering	6%	610	7	73%	223	2	27%	833	9	100%
medicine	2%	68	5	30%	158	1	70%	226	6	100%
Total	100%	9177	96		5897	61		15074	157	
			61%			39%				

Table 3.4: Distribution of Islamic Students by Faculty and gender

		Male			Female			Cumulative		
college	**Percentage**	**Pop**	**Sample size**	**Percentage**	**Pop**	**Sample size**	**Percent**	**Pop**	**sample**	**Percentage**
Religion principle	6%	180	2	17%	880	9	83%	1060	11	100%
Literature	9%	560	6	34%	1105	11	66%	1665	17	100%
Education	39%	1659	17	23%	5684	59	77%	7343	76	100%
Commerce	11%	1229	13	59%	848	9	41%	2077	22	100%
Science	5%	325	4	36%	680	7	64%	1005	11	100%
Nursing	2%	261	3	61%	168	2	39%	429	5	100%
Engineering	14%	1795	18	68%	844	9	32%	2639	27	100%
Information technology	3%	308	3	59%	210	2	41%	518	5	100%
medicine	1%	53	0	50%	54	1	50%	107	1	100%
Sharea and law	10%	598	6	31%	1354	14	69%	1943	20	100%
Total	100%	6968	72		11818	123		18786	195	
			37%			63%				

3.5. Study place:

The study was applied at the Islamic, Al azhar and AL Aqsa University; these are the traditional universities in the GS.

3.6 Period of the study:

The study was conducted the academic year 2008-2009. After the approval of the proposal by school of public health – Al Quds University, the researcher started with the literature review and at the same time construction of the questionnaire. The pilot study was conducting in October 2008, data were collecting in November and December 2008, dated management was completing during, February and March 2009.

3.7 Ethical consideration:

An official letter of approval to conduct the study was obtained form the Helsinki committee in the GS (Annex6), also an agreement was obtained form each university

administration to facilitate the process of data collection (Annex7,8,9) A cover page was added to each questionnaire to explain the study objectives and purpose (Annex5) .

The participation of students in this study was voluntary, and they were free to withdraw when they decide In addition society values, norms and culture were respected during the whole study.

3.8 Study instrument:

The questionnaire was self constructed by the researcher after reviewing the related literature. The questionnaire was prepared particularly to suit the study objectives and to allow gathering the related information, questions of the questionnaire were formulated using clear and understandable – language to avoid any difficulties for the students.

3.9 Content validity:

The validity of the questionnaire has been examined by sending the constructed questionnaire with enclosed covering letter about the objectives of the study to experts working in the same field in order to give their views on the dimensions of the statements of the questionnaire

According to their suggestions and advice, the researcher changed some of the questions and put another which was more suitable.

3.10 Reliability:

In order to minimize inter- observer and intra –observer variations the researcher conducted a training session for all the assistants who helped the researcher to complete data collection, and to ensure that all the assistants were following the same method in data collection .

3.11 Pilot Study:

A pilot test was carried out prior to the questionnaire distribution to check for any ambiguity or confusion in the question statement, any problem in the design of the research, to evaluate the response of the participants, and to know the time needed to answer the questions. The pilot students were not included in the sample during the formal survey to avoid prior test effects (Neumann, 1997).

3.12 Data collection:

Data collection was accomplished through using a questionnaire which focused on personal information such as: name of university, name of faculty, level of students on their college, residence place, family income and gender of students. The second part of the questionnaire focused on knowledge about avian flu. The response choices for all knowledge questions were given on three – point liker type scale using "Yes", "No", do not know".Third and fourth part focused on student's attitudes and practices, for all statements relating to attitudes and practices towards avian flu to certain level of agreement or disagreement were given on three-point liker- type scale from one to three.

The last part of the questionnaire was about source of information.

3.13 Data entry and analysis:

Data were carefully checked to screen out any incompletely answered questions .Four hundred and twenty-seven questionnaires were processed and entered by the researcher after designing an entry model using the computer soft were statistical package for the social science (SPSS) version 13.

The analysis of data was conducted as:

- Over viewing the filled questionnaires
- Coding of questionnaire
- Designing data entry model
- Frequency table for the study variables

The researcher conducted independent sample T- Test and one- way ANOVA to the relationship between selected dependents and independents variables. Further to this, tables and bar charts were using to present the data in an organized way that makes it easier for readers to understand.

3.14 Limitation of the study:

The researcher faces some limitations during implementing this study such as

Unstable political situation.

Lack of resources including budget and facilities

3.15 Response Rate:

Number of respondent students in the study was 427 of the 500-sample size, the response rate was 86% distributed as depicted in table 3.5.

Table 3.5: Distribution of Subjects Responses According to the University.

University Name	Number of selected students	Number of respondents	Response rate for each university
Islamic	195	156	80%
Al - Azhar	157	138	90%
Al – Aqsa	148	133	88%
Total	500	427	86%

Chapter (4)

Findings and Discussion

4.1. Introduction:

In this chapter, the researcher will present the main study results based on the results of the statistical analysis. The first part of the results relates to the distribution of the study population. Frequency distribution of the items and descriptive statistics were used to present the data. The second part relates to the results of the study questions and hypothesis and comparison with literature review.

Knowledge, attitudes and practices regarding Avian flu were dependant variables, while socio demographic factors such as gender, place of residence, university, faculty, level of study and family monthly income represent the independent variables.

From the total score of knowledge regarding avian flu, the students were classified into two categories: students with low level of knowledge and those with high level of knowledge.

Also, from the total score of avian flu attitudes, students with negative level of avian flu attitudes, and students with positive level of avian flu attitude, and from the total score of avian flu practices, students with low level of avian flu practices and those with high level of avian flu practices.

The researcher conducted an independent sample T- test, and one way ANOVA to test the differences between avian flu knowledge, attitudes and practices as dependant variables, and socio demographic factors as independent variables. Person's correlation was used to explain the relation ship between dependant variables.

4.2. Results of Demographic Data:

4.2.1.Population distribution according to students' gender.

Table (4.1) illustrates that the distribution of study population by the gender, about 43.6% (n = 186) of the students were males and 56.4% (n = 241) were females.

Table 4.1: Sample Distribution According to Gender

Gender	Frequency	Percent
Male	186	43.6
Female	241	56.4
Total	427	100

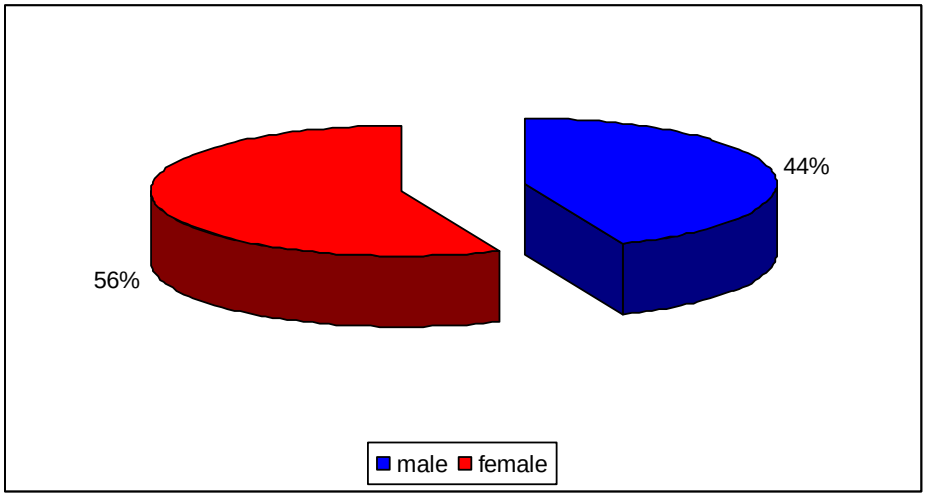

Figure (4.1): Distribution of the Study population by the Gender

4.2.2. Distribution of the study population by university

Table (4.2), illustrates the distribution of study population by the university. The majority of cases were from the Islamic university 36.5 % (n = 156) followed by Al-Azhar university 32.3% (n = 138) where Al-Aqsa university the least percent 31.1% (n = 133).

Table 4.2: Sample Distribution According to University

University	Frequency	Percentage
Islamic	156	36.5
Al-Azhar	138	32.3
AL-Aqsa	133	31.1
Total	427	100

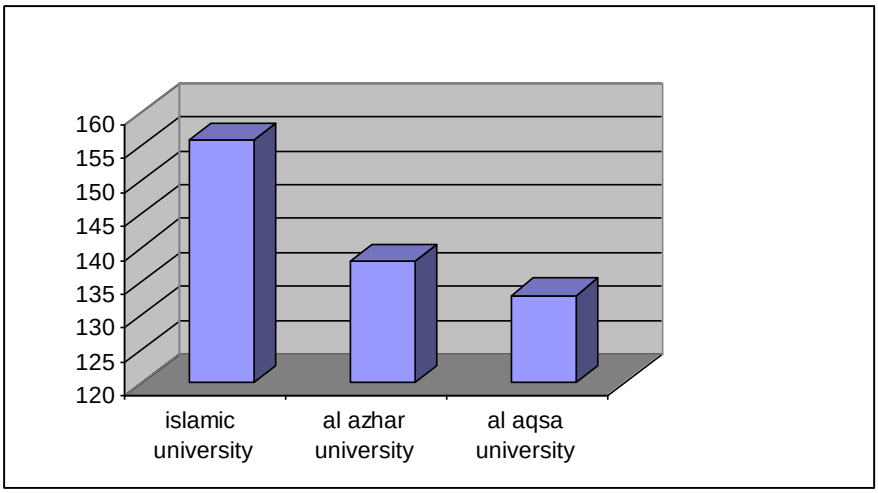

Figure (4.2) Distribution of Study Population by University

4.2.3. Sample Distribution according residency place:

Gaza strip is divided into five governorates, North Gaza, Gaza City, Middle Zone, KhanYounis and Rafah.

The majority of the sample was from Gaza city (122), followed by KhanYounis (90), North Gaza 78, middle zone (74) where Rafah represented the last, (63). These results were according to population density of Gaza Strip.

Table 4.3: Sample Distribution According to Residency Place

Residency Place	Frequency	Percentage
North Gaza	78	18.3
Gaza City	122	28.6
Middle Zone	74	17.3
KhanYounis	90	21.0
Rafah	63	14.8
Total	427	100%

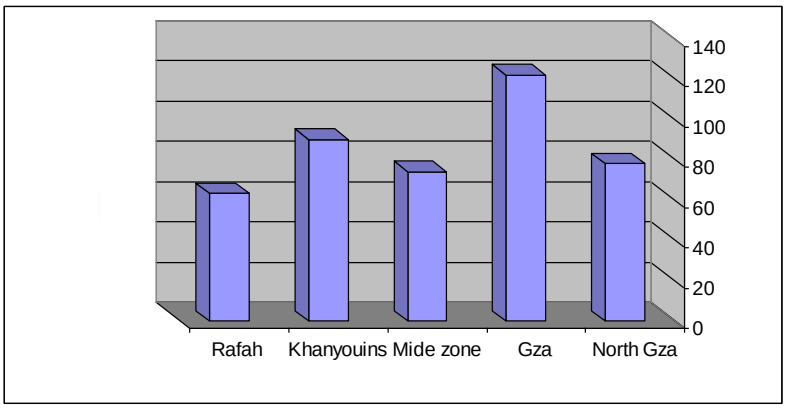

Figure (4.3) Distribution of Study Population by Residency Place

4.2.4. Sample distribution according to monthly income:

The researcher divided monthly income into four categories: First less than 500 shekels, second (500-1000) third (1001-2000), the last more than 2000 shekels.

Table 4.4: Sample Distribution According to Monthly Income.

Monthly income	Frequency	Percentage
Less than 500 shekels	66	15.5
500-1000	142	33.3
1001-2000	153	35.8
More Than 2000	66	15.5
Total	427	100%

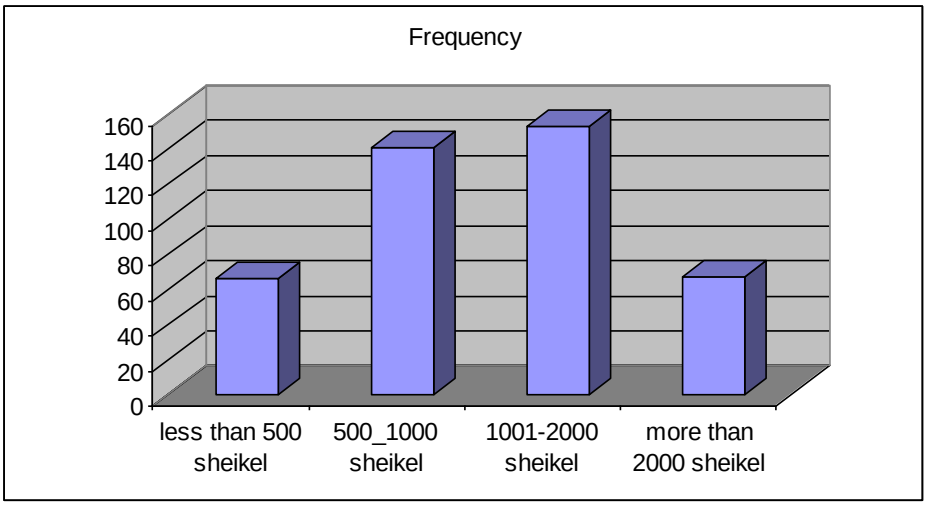

Figure (4.4) Distribution of Study Population by Family Monthly Income

4.2.5. Sample Distribution according to level of study:

Table 4.5, shows the distribution of study population by level of study. The majority of students were from level three 115 students then level four 109 students, level two 107 students, level one 85 students while level five represent the least students 11.

Table 4.5: Sample Distribution According to the Level of Study.

Level of study	Frequency	Percent
Level one	85	19.9
Level two	107	25.1
Level three	115	26.9
Level four	109	25.5
Level five	11	2.6
Total	427	100

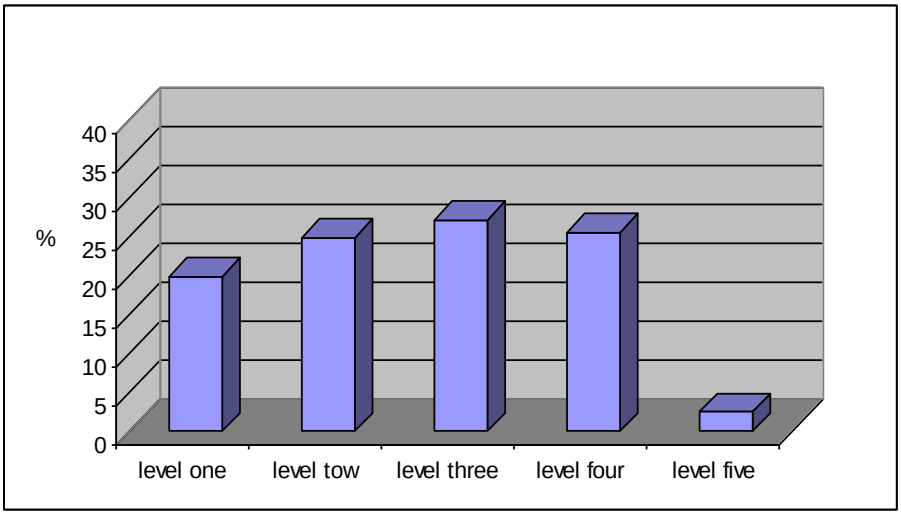

Figure 4.5, Distribution of the Study Population According to Level of Study

4.2.6. Sample Distribution According To Student's Faculty:

Table (4.6) shows the distribution of the study population according the faculty. The majority of students were from the faculty of education (203) because the three universities have this faculty; while the faculty of medicine has the lowest number of student's because it is a newly established faculty.

Table 4.6: Sample Distribution According to Faculty

Faculty	Frequency	Percent
Education	203	475
Science	21	4.9
Arts	43	10.1
Commerce	46	10.8
Engineering	31	3.7
Information technology	5	1.2
Pharmacy	11	2.6
Law	16	3.7
Health science	11	2.6
Agriculture	2	0.5
Media	6	1.4
Fine arts	3	0.7
Religion Principle	11	2.6
Religion and law	11	2.6
Nursing	5	1.2
Medicine	2	0.5
Total	427	100

4.3. Results of study questions and hypothesis:

4.3.1. Level of knowledge:

To determine the level of avian flu knowledge among university students, descriptive statistics including measures of mean, standard deviation and percentage of correct answers score reflecting the level of student's knowledge were calculated to show the current level of knowledge of these students.

Table 4.7: Mean, Standard Deviation and Percentage of the Level of Knowledge

Item	N	Mean	Standard Deviation	%
Knowledge	427	11.65	2.774	68.5

The first part of the questionnaire contained 17 questions on avian flu knowledge. For each correct answer, one mark was awarded and no mark for a wrong answer. As shown in table (4.7), out of the 17 points reflecting the level of student's knowledge, the mean of the score

was 11.65 with standard deviation 2.774 and percentage of student's scores of correct answers was 68.5%.

The study results disagree with the study conducted in Iran in May 2006, which reported that the level of knowledge among medical students was very low, the mean knowledge score was 4.76 of the 18 questions used to measures the level of knowledge. (Ghabili, and Shoja, 2006)

4.3.2. Knowledge Categories:

In this study the students were classified into two categories according to their scores out of the total 17 points which reflect the level of knowledge. Students with relatively low scores are those who have got 11 and less, and students with relatively high scores are those who have got 12 and above.

Table 4.8: Number and Percentage of Students According to the Level of Knowledge Category

Item	Category	Frequency	%
Level of Knowledge category	Low	191	44.7
	High	236	55.3
	Total	427	100

As shown in table (4.8), the number of students who have got 12 and above was about 236 of 427 students with a percentage of 55.3, while there were 191 of 427 students with a percentage of 44.7 have got 11 and below.

These results indicate that the level of avian flu knowledge among university students is generally moderate. In spite of this result, the number of students who have got high scores in the level of knowledge was more than those with low scores.

4.3.3. Level of knowledge about different avian flu items:

The researcher divided the questions into different items. The 17 questions cover eight items which reflect the level of knowledge. The first item is about the definition of avian flu, while the second item consists of three questions reflecting the level of knowledge about the history of disease. Also the third item consists of four questions reflecting the level of knowledge about who is at high risk to disease, while two questions reflecting the level of knowledge about symptoms of avian flu form the fifth item. Also, the sixth item consists of two questions reflecting the level of knowledge about protective measures, and two questions reflecting the level of knowledge about avian flu vaccine. Finally one question reflecting the level of knowledge is about the Arab country that has the highest number of human cases.

Table 4.9: Mean, Standard Deviation and Percentage of the Level of Knowledge Items among University Students

Item	N	No, of item question	Mean	Std Deviation	%
Definition of Avian fl.	427	1	1.22	. 460	80.6
History of avian flu	427	3	1.7	.98	56.7
Mode of transmutation	427	4	1.26	.47	76.1
Symptoms of avian flu	427	2	1.44	.617	63.1
Protective way	427	3	1.29	0.5	74.3
Vaccine of avian flu	427	2	1.8	.59	65.3
Whom the most risk.	427	1	1.27	.489	75.2
Egypt of the most Arab country has human infect	427	1	1.21	.495	83.1
Overall	427	17	11.65	2.774	68.5

According to the results in table (4.9), there is a variation among the study population in the level of knowledge about different knowledge items.

Approximately 80.6% of the students reported knowing what avian flu is, nearly half of the students (56.7%) reported knowing the history of avian flu, and concerning the mode of transmission about 76.1% correctly identified it.

Also 63.1% correctly identified the symptoms of avian flu. In addition 74.3% of students correctly answered the protective way to prevent avian flu, 65.3% of students know about avian flu vaccine, 75.2% of students correctly identified the most risk group to infection by avian flu. Finally about 83.1% of students correctly answered that Egypt is the most Arab country that has humans infected by avian flu.

These findings are consistent with the study results of Marinas and Vasileiou, 2006, which reported that out of 2805 Greek students who participated in the study, 90% of the students know the definition of avian flu and 46.2% reported that an effective vaccine exists against avian flu.

Gabriella and Giuseppe, 2006, reported that one half of the respondents correctly define avian flu. The different mode of transmission was about 81% of adult population in Italy.

4.3.4. Level of avian flu knowledge and gender:

To measure the difference in the level of avian flu knowledge among students due to their gender (male, female), the mean, standard deviation, independent T- Test, and percentage were used.

Table 4.10: Mean, Standard Deviation, Independent T-Test and Percentage of the Level of Knowledge among University Students According to Their Gender

Item	Gender	N	Mean	Std. Deviation	%
Knowledge	Male	186	11.76	2.713	55.3
	Female	241	11.56	2. 822	55.1

T-Test = 0.715 p= 0.462

Table (4.10), shows that, out of 17 scores reflecting the level of knowledge among students, the mean of avian flu knowledge among males was 11.76, with a percentage of 55.3, while it was among females 11.56 with a percentage of 55.1.

This indicates that the level of knowledge among males and female university students is equal. Independent sample T- Test was used to study the differences in the level of knowledge as dependant variable and gender factor (male, female) as independent variables.

According to the result, T value was 0.715, and there was no statistical significant difference in the level of knowledge among the students attributed to their gender ($p = 0.462$).

So, this result indicates that the null hypothesis is accepted and the researcher hypothesis is rejected.

Similar results which emphasized that no statistically significant difference, in the knowledge score due to gender were reported in a study done in Saudi Arabia by Alshehri and Abdelfathah, 2006.

This may be explained by the fact that the source of information about avian flu among university students is almost the same and that the some courses are given to them during their university education.

4.3.5. Level of knowledge and family monthly income:

The researcher divided monthly income into four categories: less than 500 shekels, from 500-1000 shekels, 1001-2000 shekels and the last more than 2000 shekels.

The mean, standard deviation, percentage and one way analysis of variance (ANOVA) were used to explore if the level of knowledge among university students differ according to their family monthly income.

Table 4.11: Mean and Standard Deviation of the Level of Knowledge among University Students and Their Family Monthly Income.

Family monthly income	N	Mean	Std. Deviation
Less than 500 shekels	66	11.45	2.591
500-1000	142	11.53	2.891
1001-2000	153	11.63	2.603
More than 2000	66	12.15	3.060
Total	427	11.64	2.774

F= 0.923 p = 0.430

In order to study the difference between the level of knowledge among university students as dependant variable and their monthly income as independent variable one way ANOVA was used.

According to the test results (F = 0.923, P= 0.430) there is no statistically significant difference in the level of knowledge due to family monthly income. So the study hypothesis which proposed that there is a statistically significant difference at p (0.05) in the level of knowledge among university students due to their family monthly income is rejected.

The study results disagree with the study conducted by Leslie, etal,2008, which reported that the level of knowledge is higher among persons with higher socio economic status.

4.3.6. Level of knowledge and place of residency:

Gaza strip has five governorates, North Gaza, Gaza city, Middle zone, KhanYounis and Rafah.

The mean, standard deviation, percentage, and One-way ANOVA test were used to explore if the level of knowledge among university students differ due to the place of residence.

Table 4.12: Mean Standard Deviation and Percentage, of the Level of Knowledge among University Students According to Their Place of Residence

Place of residence	N	Mean	Std Deviation
North Gaza	78	12.04	2.441
Gaza City	122	11.43	2.932
Middle Zone	74	10.88	2.923
KhanYounis	90	12.11	2.750
Rafah	63	11.83	2.537
Total	427	11.65	2.774

F= 2.727 p= 0.029

As shown in table (4.12), the result reflects difference in the mean of the level of knowledge among university students according to place of residency.

To study the difference between level of knowledge as dependant variable and place of residence as independent variable, one way ANOVA was used.

According to test results (F= 2.727, and P= .029) there is a statistically significant difference in the level of knowledge among university students due to the place of residence p (0.029). So, the study hypothesis that there is a statistically significant difference at $p < 0.05$ in the level of knowledge among university students due to the place of residence is accepted.

To identify the significant difference Scheffe post test was used and table (4.13) clarifies that.

Table 4.13: Scheffe Post Test For Of Knowledge And Place Of Residency

Dependant variable	(I) residence place	(J) Residency place	Mean difference (I-J)	Sig
Knowledge	North Gaza	Gaza	.604	.754
		Middle Zone	1.160	.093
		KhanYounis	-0.073	1.000
		Rafah	.213	1.000
	Gaza	North Gaza	-0.604	0.754
		Middle Zone	0.556	.847
		KhanYounis	-.677	.553
		Rafah	-.391	.989
	Middle Zone	North Gaza	-1.160	.093
		Gaza	-.556	.847
		KhanYounis	-1.2333(*)	0.044
		Rafah	-.947	.371
	KhanYounis	North Gaza	.073	1.000
		Gaza	0.677	.553
		Middle Zone	1.233(*)	0.044
		Rafah	0.286	.999
	Rafah	North Gaza	-0.213	1.000
		Gaza	0.391	0.989
		KhanYounis	0.947	.371
		Middle Zone	- 0.286	.999

According to table (4.13), scheffe post test clarifies that there is a statistically significant difference at (P <0.05) in the level of knowledge among university students from KhanYounis governorate and middle zone governorate, while there is no any significant difference in the level of knowledge among university students found among other governorates. From the above findings, it's clear that there is a statistically significant difference in the level of knowledge according to place of residency and the difference is positively toward KhanYounis governorate, where the level of knowledge is the highest among other governorates.

4.3.7. Knowledge level categories and place of residence:

Cross tabulation was performed to identify if there were any difference between knowledge categories and residency place.

Table 4.14: Knowledge Categories and Residency Place:

Place of residence	Knowledge category				Chi-square	P
	Low		High			
	N	%	N	%		
North Gaza	31	40%	47	60%	11.642	0.02
Gaza	59	48%	63	52%		
Middle Zone	44	59%	30	41%		
Khanyounis	32	35%	58	65%		
Rafah	25	40%	38	60%		
Total	191	46%	236	54%		

As shown in table (4.14), about 58 of 90 students from KhanYounis with a percentage of 65 have got 12 points and above, and 32 of them with a percentage of 35% have got 11 points and lower, while 63 of 122 students from Gaza governorate with a percentage of 52% have got 12 points and above, and 40% have got 11 point and below, Also, students from Rafah and North Gaza (60%) have got 12 points and above, and 40% have got 11 points and below, and only 41% from middle Zone have got 12 points and above, while 59% of them have got 11 points and below.

These results mean that the level of knowledge among KhanYounis governorate students was the highest the second governorate was North Gaza and Rafah, followed by Gaza students and the lowest was among middle zone governorate students.

Differences among residency place are statistically significant, with chi-square = 11.64, and p= 0.020.

4.3.8. Level of knowledge and university:

Gaza city has three traditional university, Islamic, Al-Azhar and Al-Aqsa university. The mean, standard deviation, percentage, and one way ANOVA test were used to explore if the level of avian flu knowledge among students in Gaza differs due to university.

Table 4.15: Mean Standard Deviation and Percentage, of the Level of Avian Flu Knowledge among Universities

University	N	Mean	Std. Deviation
Islamic	156	12.75	2.338
Al-Azhar	138	11.66	2.837
Al-Aqsa	133	10.35	2.629
Total	427	11.65	2.774

F = 30.735 P= 0.000

As shown in table (4.15), the results reflect a difference in the mean of the level of avian flu knowledge among university students according to their university. One-way analysis of variance (ANOVA) was used.

According to test results (F= 30.735, p = 0.000) and the results indicate that there is a statistically significant difference in the level of avian flu knowledge among university students due to their university ($p < 0.05$). So, the study hypothesis, that there is a statistically significant difference at ($p < 0.05$) in the level of knowledge among university students in Gaza due to their university is accepted.

To identify the significant difference, Scheffe post test was used and table (4.16) clarifies that.

Table 4.16: Scheffe Post Test for Knowledge and University

Dependant Variable	(I) University	(J) University	Mean Differences (I –J)	Sig
Knowledge	Islamic	Al-Azhar	1.091 (*)	.002
		Al-Aqsa	2.404 (*)	.000
	Al-Azhar	Islamic	- 1.091 (*)	.002
		Al-Aqsa	- 1.314 (*)	.000
	Al-Aqsa	Islamic	- 2.404 (*)	.000
		Al-Azhar	- 13.14 (*)	.000

According to table (4.16), scheffe post test clarifies that there is a statistically significant difference at ($p < 0.05$) in the level of avian flu knowledge in Islamic university and other university, Al-Azhar university and Al-Aqsa university. In addition, there is a significant difference between Al-Azhar University and Al-Aqsa University.

From the above findings, it is clear that there is a statistically significant difference in the level of avian flu knowledge according to student's university, and this difference is positively toward the Islamic university which means that the level of knowledge is the highest among the Islamic university students followed by AL-Azhar university and the lowest level of knowledge was among AL-Aqsa students.

4.3.9. Knowledge categories and student's university:

Cross tabulation was performed to identify if there were any differences between knowledge categories and student's university.

Table 4.17: Knowledge Categories and Student's University

University	Knowledge Categories				Total	Chi- square	P
	Low		High				
	N	%	N	%			
Islamic	38	24%	118	76%	156	48.373	0.00
Al-Azhar	67	49%	71	51%	138		
Al-Aqsa	86	65%	47	35%	133		
Total	191	46%	236	54%	427		

As shown in table (4.17), about 118 of 156 of Islamic university students with a percentage of 76 have got 12 points and above, and 38 of them with a percentage of 24 have got 11 and below. While 71of 138 of Al-Azhar university students with a percentage of 51 have got 12 points and above, and 67 of them with a percentage of 49% have got 11 and below. Only 47 of 133 of Al-Aqsa university students with a percentage of 35% have got 12 points, and 86 of them have got 11 points and below.

These results mean that the level of knowledge regarding avian flu among Islamic university students was the highest, the second university was Al-Azhar and the lowest was among Al-Aqsa university students.

The differences among universities are statistically significant, with Chi-square = 48.373, and $p < 0.05$.

4.3.10. Level of knowledge and study level of students:

According to the education system in Palestine, students need to successfully complete four levels of study to graduate from all faculties except engineering (5years) and medicine (6 years).

The mean, standard deviation, percentage, and one-way analysis of variance were used to explore if the level of knowledge among students differ due to their levels.

Table 4.18: Means and Standard Deviation of the Level of Knowledge.

Level of study	N	Mean	Std. Deviation
Level one	85	11.67	2.528
Level two	107	11.63	2.528
Level three	115	11.25	2.697
Level four	109	11.95	2.883
Level five	11	12.82	3.459
Total	427	11.65	2.774

F= 1.415 P = 0.228

As shown in table (4.18), the results reflect the differences in the mean of the level of knowledge among students according to their level of study. To study the differences between the level of knowledge and the student's study levels one way ANOVA was used. According to the test results, F = 1.415, p = 0.228, there is no statistically significant difference in the level of knowledge due to the students study level. So, the study hypothesis, which proposed that there is a statistically significant deference at ($p < 0.05$) in the level of knowledge among university students due to their level, is rejected.

4.3.11. Level of knowledge and student's faculty:

There are sixteen faculties in the three traditional universities in Gaza. The mean, standard deviation, percentage, and one way ANOVA test were used to explore if the level of knowledge among students differ due to their faculties.

Table 4.19: Mean, Standard Deviation and Percentage, of the Level of Knowledge among University Students According to Their Faculties

Faculty	N	Mean	Std. Deviation
Education	203	11.12	2.678
Science	21	15.33	1.197
Arts	43	10.53	2.491
Commerce	46	11.57	2.639
Engineering	31	11.58	2.419
Information technology	5	13.40	2.074
Pharmacy	11	15.45	1.508
Low	16	11.00	2.449
Health science	11	13.09	2.300
Agriculture	2	15.00	1.414
Media	6	11.33	2.422
Fine arts	3	9.33	1.528
Religion principles	11	12.73	1.849
Religion and low	11	11.09	1.973
Nursing	5	16.00	0.707
Medicine	2	13.00	1.414
Total	427	11.65	2.774

F = 8.188 p = 0.000

In order to study the difference between the level of knowledge among university students as the dependant variable and their faculties as the independent variable one- way ANOVA was used.

According to the result, F= 8.188, P = 0.000, there is a statistically significant difference in the level of knowledge among university students due to their faculty. So, the study hypothesis which proposed that there is a statistically significant difference at (0.05) in the level of knowledge among university students due to their faculty is accepted.

To identify the significant differences, scheffe posttest was use and table (4.20), clarifies that.

Table 4.20: Scheffe Post Test for Knowledge Level and Students Faculties.

Dependant Variable	Faculty I	Faculty J	Mean difference (I – J)	Sig
Knowledge	Education	Science	- 4.215 (*)	0.000
		Arts	0.583	1.000
		Commerce	- 0.447	1.000
		Engineering	- 0.462	1.000
		Information technology	- 2.282	.997
		Pharmacy	-4.336 (*)	0.008
		Law	0.118	1.000
		Health science	- 1.973	.966
		Agriculture	-3.882	.993
		Media	-.215	1.000
		Fine arts	1.785	1.000
		Religion principle	-1.609	.996
		Religion an law	0.27	1.000
		Nursing	-4.882	0.223
		Medicine	-1.882	1.000
	Science	Education	4.215 (*)	.000
		Arts	4.798 (*)	.000
		Commerce	3.768 (*)	.005
		Engineering	3.753 (*)	0.026
		I. T	1.933	1.000
		Pharmacy	-1.121	1.000
		Law	4.333 (*)	0.026
		Health Science	2.242	.980
		Agriculture	.333	1.000
		Media	4.000	.666
		Fine arts	6.000	.427
		Religion principle	2.606	.138
		Religion and law	4.242	1.000
		Nursing	-.667	1.000
		Medicine	2.333	1.000
		Education	4.336 (*)	.008
		Science	.121	1.000
		Literature	4.920 (*)	.004

Scheffe post test clarifies that there is a statistically significant difference in knowledge among university students due to their faculties. So this agrees with the study hypothesis which proposed that there is a statistically significant difference in the level of knowledge due to faculty.

As shown in table (4.20), there is a statistically significant difference at (0.05) in the level of knowledge among students of science faculty and the other five faculties (education, arts, commerce, engineering and law), while there is no any significant difference with the other faculties. In addition there is a statistically significant difference in the level of knowledge among students of pharmacy faculty and those in education and arts faculties, while there is no any significant difference between other faculties.

From the above findings it is clear that there are statistically significant differences in the level of knowledge according to faculty of students. The highest level of knowledge is among science students, then students who study in the pharmacy faculty and the lowest level of knowledge is among the arts and fine arts faculties.

This may be explained by the fact that avian flu is an infectious disease where it is studied by the science and microbiology students.

4.3.12. Knowledge categories and student's faculty:

Cross tabulation was performed to identify if there are any differences between knowledge categories and students faculty.

Table 4.21: Cross Tabulation between Level of Knowledge among University Students and Their Faculties

Faculties	Knowledge				Total	Chi – square	P
	Low		High				
	N	%	N	%			
Education	103	51%	100	49%	203	58.384	0.000
Science	0	0%	21	100%	21		
Arts	29	67%	14	33%	43		
Commerce	19	41%	27	59%	46		
Engineering	16	52%	15	48%	31		
I. T	1	20%	4	80%	5		
Pharmacy	0	0%	11	100%	11		
Law	7	44%	9	56%	16		
Health Science	1	9%	10	91%	11		
Agriculture	0	0%	2	100%	2		
Media	3	50%	3	50%	6		
Fine arts	3	100%	0	0%	3		
Religion principle	3	27%	8	73%	11		
Religion and law	6	54%	8	46%	11		
Nursing	0	0%	5	100%	5		
Medicine	0	0%	2	100%	2		
Total	191		236		427		

As shown in table (4.21), 100% of science, pharmacy, agriculture, medicine and nursing students have got 12 points and above, while 100% from fine arts students have got 11 points and below. The mean differences between faculty of students and their knowledge is statistically significant, with chi square = 59.384 and p = 0.000.

4.3.13. Level of attitudes:

To answer the question, what is the level of attitudes toward avian flu among university students? The researcher used descriptive statistics including measuring mean, standard deviation and percentage of students' scores to show the current level of the attitudes of those students towards avian flu.

Table4.22: Mean, Standard Deviation and Percentage of the Level of Attitudes among University Students

Item	N	Mean	Std- Deviation	%
Attitudes	427	11.51	2.720	71.9%

The second part of the questionnaire includes 16 questions that reflect the avian flu attitudes among the students.

For each answer that reflects a positive attitude towards the avian flu, one mark was given, and two marks were given for the answer reflecting a negative attitude. The mean of scores was 11.51, with standard deviation of 2.720 and the percentage of student's scores reflecting the level of their positive attitudes toward avian flu was 71.9%. These results indicate that the level of positive attitude, among the university students was relatively moderate.

4.3.14. Attitudes categories:

The students were classified into two categories according to their scores which reflect their attitudes toward avian flu from the total of 16 scores. Students with negative scores are those who have got 11 and below, and those with positive scores are those who have got 12 and above. Cross tabulation was made among attitudes and university students.

Table 4.23: Number and Percentage of Students According to the Level of Attitudes Categories

Item	Categories	Frequency	%
Level of attitude	Negative	184	43%
	Positive	243	57%
	Total	427	100%

As shown in table (4.22), the number of students who have got 11 points and less was about 184 of 427 university students with a percentage of 43, while there were 243 of 427

university students with a percentage of 57 who have got 12 points and above. On the level of attitudes, these results indicate that according to the above mentioned categorization, the number of students who have got positive scores was more than those have got negative scores.

4.3.15. Level of attitudes and gender:

To measure the difference in the level of attitudes toward avian flu among university students due to their gender (male, female), the mean, standard deviation, T- Test and percentage were used.

Table 4.24: Mean, Standard Deviation and Percentage of the Level of Attitudes among University Students According to Their Gender

Item	Gender	N	Mean	Std- Deviation
Attitudes	Male	186	11.58	2.565
	Female	241	11.46	2.839

T- Test = – 0.467 P= 0.741

According to independent T- test results, T = 0.467, P= 0.741, there was no a statistically significant difference in the level of attitudes among the university students attributed to their gender toward avian flu.

So, these results reject the study alternative hypothesis that there is a statistically significant difference at $p < 0.05$ in the level of avian flu attitudes among university students due to their gender.

4.3.16. Level of attitudes and family monthly income:

As mentioned before, the researcher divided monthly income into four categories.

The mean, standard deviation, percentage and one way ANOVA were used to explore if the level of attitudes among university students differ due to their family monthly income.

Table 4.25: Mean and Standard Deviation of the Level of Attitudes among University Students and Their Family Monthly Income.

Family monthly income	N	Mean	Std. Deviation
Less than 500 shekels	66	11.15	2.696
500-1000 shekels	142	11.55	2.822
1001-2000 shekels	153	11.51	2.722
More than 2000	66	11.79	2.533
Total	427	11.51	2.720

F= 0.620 P = 0.603

In order to study the difference between the level of knowledge among university students as a dependant variable and their family monthly income as an independent variable one-way ANOVA was used.

According to the results (F= 0.620, P = 0.603) there is no statistically significant difference in the level of attitudes due to family monthly income. So, the study hypothesis, which proposed that there is a statistically significant difference at p (0.05) in the level of attitudes among university students due to their family monthly income, is rejecting.

4.3.17. Level of attitudes and place of residency:

The mean, standard deviation, percentage, and one way ANOVA test were used to explore if the level of attitudes among university students differs due to the place of residency.

Table 4.26: Mean Standard Deviation and Percentage of the Level of Attitudes among University Students According to Their Place of Residence

Place of Residency	N	Mean	Std. Deviation
North Gaza	78	11.96	2.344
Gaza	122	11.26	2.628
Middle Zone	74	10.81	2.9.7
Khanyouins	90	12.08	2.736
Rafah	63	11.44	2.878
Total	427	11.51	2.720

F = 3.059 P = 0.017

As shown in table (4.26), the results reflect a difference in the mean of the level of attitudes among university students according to place of residency.

To study the difference between level of attitudes as dependant variable and place of residence as an independent variable, one way ANOVA was use.

According to test result, $F= 3.059$, $p = 0.017$, there is a statistically significant difference in the level of attitudes among university students due to the place of residence ($p <0.029$). So, the study hypothesis that there is a statistically significant difference at $p < 0.05$ in the level of attitudes among university students due to the place of residency is accepted.

To identify the significant difference scheffe post test was used and table (4.26) clarifies that.

Table 4.27: Scheffe Post Test for Level of Attitudes and Place of Residency

Dependant variable	(I) Residence place	Residency	Mean Difference (I-J)	Sig
Attitudes	North Gaza	Gaza	.699	.537
		Middle Zone	1.151	.085
		KhanYounis	-.116	1.000
		Rafah	.517	.949
	Gaza	North Gaza	-.699	.537
		Middle Zone	.451	.948
		KhanYounis	-.815	.262
		Rafah	-.182	1.000
	Middle zone	North Gaza	-1.151	.085
		Gaza	-.451	.948
		KhanYounis	-1.267(*)	.029
		Rafah	-.634	.846
	KhanYounis	North Gaza	.116	1.000
		Gaza	.815	.262
		Middle Zone	1.267(*)	0.029
		Rafah	.633	.810
	Rafah	North Gaza	-.517	.949
		Gaza	.182	1.000
		Middle Zone	.634	.846
		KhanYounis	-.633	.810

According to table (4.27), scheffe post test clarifies that there is a statistically significant difference at ($P<0.05$) in the level of attitudes among university students from KhanYounis governorate and middle zone governorate, while no significant difference in the level of attitudes among university students was found among other governorates. Form the above findings it is clear that there is a statistically significant difference in the level of attitudes according to place of residency and the difference is positively toward KhanYounis governorate.

4.3.18. Attitudes level categories and place of residence:

Crosse tabulation was performed to identify if there are any differences between attitudes categories and residence place.

Table 4.28: Attitudes Categories and Residency Place

Place of residence	Attitudes Categories				Total	Chi square	P
	Negative		Positive				
	N	%	N	%			
North Gaza	27	35%	51	65%	78	10.139	.038
Gaza	60	49%	62	51%	122		
Middle zone	40	54%	34	46%	74		
KhanYounis	32	35%	58	64%	90		
Rafah	25	40%	38	60%	63		
Total	184	43%	243	57%	427		

As shown in table (4.28), about 58% of 90 students from KhanYounis with a percentage of 64 have 12 points and above, and 32 of them with percentage 36% have 11 points and lower. While 62 of 122 from Gaza with a percentage of 51 have got 12 points and above, and 60 of them with a percentage of 49 have got 11 points and lower.

Also, about 51 of 78 students from North Gaza with a percentage of 65 have got 12 points and above, and 27of them with a percentage of 35 have got 11 points and lower. In Rafah 38 of 63 students with a percentage of 60 have got 12 points and above and 25 of them have got 11 points and lower. And only 36% form middle zone have got 12 points and above while 54% of them have got 11 points and below.

These results mean that the level of attitudes among KhanYounis governorate students was the highest. The second governorate was North Gaza followed by Rafah, then Gaza governorate and the lowest was among students from middle zone governorate.

Differences due to residence place are statistically significant with chi-square = 10.139, and p = 0.038.

4.3.19. Level of attitudes and University:

As mentioned previously in this chapter, there are three traditional universities in Gaza strip (Islamic, Al-Azhar and Al-Aqsa).

The mean, standard deviation, one way ANOVA, and percentage were used to explore if the levels of attitudes among the university students differ due to the university.

Table4.29: Mean, Standard Deviation and Percentage of the Level of Attitudes among University Students According to Their University

University	N	Mean	Std. Deviation
Islamic	156	12.85	2.423
Al-Azhar	138	10.96	2.488
Al-Aqsa	133	10.52	2.673
Total	427	11.51	2.720

F = 35.431 P = .000

As shown in table (4.29), the results show the differences in the mean out of 16 points, which reflect the level of attitudes among the study population according to their university.

One way analysis of variance (ANOVA) was used to study the differences between level of attitudes among university students as dependant variable and student's university as independent variable.

There is a statistically significant difference at the level of attitudes among students due to their university with $p = 0.00$. So this agrees with the study hypothesis that there is a statistically significant difference at $p < 0.05$ in the level of attitudes.

To identify the significant difference in the total attitude scheffe post test was used.

Table 4.30: Scheffe Post Test for Attitudes Level and Student's University.

Dependant	University (I)	University (J)	Mean Difference (I . J)	Sig
Attitudes	Islamic	Al-Azhar	1.890 (*)	.000
		Al-Aqsa	2.327 (*)	.000
	Al-Azhar	Islamic	- 1.890 (*)	.000
		Al-Aqsa	.438	.362
	Al-Aqsa	Islamic	- 2.327 (*)	.000
		Al-Azhar	- .438	.362

As shown in table (4.30), scheffe post test clarifies that there is a statistically significant difference at ($p < 0.05$) in the level of attitudes among Islamic university students and the other university (Al-Azhar, Al-Aqsa) while there is no any significant differences in the level of attitudes between Al-Azhar students and Al-Aqsa university.

From the above findings, it's clear that there is a statistically significant difference in the level of attitudes according to students' university, and this difference was the highest in the Islamic university followed by Al-Azhar university, and the lowest level of attitudes was among students of Al-Aqsa University.

4.3.20. Attitudes Categorization and Students University

Cross tabulation was performed to determine if there is a difference between attitudes categories and university.

Table 4.31: Attitudes Categories and University.

University	Attitudes Categories				Total	Chi square	P
	Negative		Positive				
	N	%	N	%			
Islamic	31	20%	125	80%	156	55.429	0.000
Al-Azhar	73	53%	65	47%	138		
Al-Aqsa	80	60%	53	40%	133		
Total	184	43%	243	57%	427		

As shown in table (4.31), about 31 of 156 Islamic university students with a percentage of 20 have got below 11 points and 73 of 138 of Al-Azhar university students with percentage 53 have got 11 points and less, and 65 of 138 with a percentage of 47 have got 12 points or above. Also, 80 of 133 of Al-Aqsa students with a percentage of 60 have 11 points and less and 40% have 12 points and above.

These results mean that the level of attitudes among Islamic university students was the highest among all the university, the second university in the level of attitudes was Al-Azhar; the lowest level was among Al-Aqsa students.

Differences between students university in their attitudes show a statistically significant difference (chi square = 55.492, and $p < 0.000$).

4.3.21. Levels of attitudes and student's level of study:

The mean standard deviation, percentage and one-way analysis of variance were used to explore if the level of attitudes among university students differ due to their study levels.

Table 4.32: Mean and Standard Deviation of the Level of Attitudes And Their Study Level

Level of study	N	Mean	Std . Deviation
Level one	85	11.35	2.836
Level two	107	11.49	2.717
Level three	115	11.43	2.555
Level four	109	1.55	2.639
Level five	11	13.36	2.693
Total	427	11.51	2.720

F = 1.383 p = 0.239

As shown in table (4.32), the results reflect some difference in the mean. One-way ANOVA was used to study the difference between the level of attitudes and level of students study.

According to the result, F = 1.383, p = 0.239, there is no statistically significant difference in the level of attitudes due to the students study level. So, the study hypothesis, which proposed that there is a statistically significant difference at (P < 0.05) in the level of attitudes among university students due to their level, is rejected.

4.3.22. Level of attitudes and students faculty:

The mean, standard deviation and one-way ANOVA test were used to explore if the level of attitudes among students differ due to their faculties.

Table 4.33: Mean, Standard Deviation of the Level of Attitudes among University Students According to Their Faculty

Faculty	N	Mean	Std Deviation
Education	203	11.13	2.682
Science	21	13.57	2.226
Arts	43	10.40	2.518
Commerce	46	11.59	2.409
Engineering	31	12.87	2.907
I. T	5	14.60	.548
Pharmacy	11	13.73	1.555
Law	16	9.56	3.265
Health science	11	11.36	1.804
Agriculture	2	13.00	1.414
Media	6	10.33	2.503
Fine arts	3	10.33	1.528
Religion principle	11	11.45	2.162
Religion and law	11	13.18	1.328
Nursing	5	14.40	.894
Medicine	2	14.00	1.414
Total	427	11.51	2.720

F = 5.098 p = 0.000

In order to study the differences between the level of attitudes among university students as a dependant variable and their faculty as an independent variable one-way ANOVA was used.

According to the test results, F = 5.098, P = 0.000, there is a statistically significant difference in the level of attitudes among university students due to their faculties. So the

study hypothesis which proposed that there is a statistically significant difference at (0.05) in the level of attitudes is accepted. To identify the significant difference, scheffe post test was used and table (4.34) clarifies that.

Table4.34a: Scheffe Post Test for Attitudes Level and Students Faculties

Dependant	Faculty I	Faculty J	Mean difference (I – J)	Sig
Attitudes	Education	Science	-2.443 (*)	.004
		Arts	.733	1.000
		Commerce	-454	1.000
		Engineering	-1.743 (*)	0.050
		I. T	-3.472	.279
		Pharmacy	-2.599	.118
		Law	1.566	.890
		Health science	-.236	1.000
		Agriculture	-1.872	1.000
		Media	.795	1.000
		Fine arts	.745	1.000
		Religion principle	- .326	1.000
		Religion an law	- 2.654	.679
		Nursing	- 3.272	.432
		Medicine	- 2.872	1.000

Table 4.34b: Scheffe Post Test for Attitudes Level and Students Faculty

Dependant	Faculty I	Faculty J	Mean difference (I – J)	Sig
Attitudes	Science	Education	2.443 (*)	.004
		Arts	3.176 (*)	.006
		Commerce	1.984	.321
		Engineering	-700	1.000
		I. T	-1.029	1.000
		Pharmacy	-.156	1.000
		Law	4.009 (*)	.000
		Health Science	2.208	.913
		Agriculture	.571	1.000
		Media	3.238	.527
		Fine arts	3.238	.992
		Religion principle	2.117	.957
		Religion and law	.390	1.000
		Nursing	-.829	1.000
		Medicine	-.429	1.000
	Law	Education	-1.566	.890
		Science	-4.009 (*)	0.000
		Commerce	-2.024	.535
		Engineering	-3.308 (*)	.004
		I. T	-5.038 (*)	.015
		Pharmacy	-4.165 (*)	.004
		Health Science	-1.801	1.000
		Agriculture	-3.438	1.000
		Media	-.771	1.000
		Fine arts	-.771	1.000
		Religion principle	1.892	.999
		Religion and law	-3.619 (*)	0.037
		Arts	-.833	1.00
		Nursing	-4.838 (*)	0.028
		Medicine	-4.438	.916

According to table (4.34a, b), scheffe posttest clarifies that there is a statistically significant difference at ($p < 0.05$) in the level of avian flu attitudes between education faculty students, science and engineering faculties. Also, there is a statistically significant difference between science faculty students education, arts and law faculties students, In addition there is a significant difference in the level of avian flu attitudes between law faculty students and science, engineering, I T, pharmacy, religion principle and religion and law, while there is no significant differences between other faculties.

From the above findings, it is clear that there is a statistically significant difference in the level of avian flu attitudes according to students' faculties, the highest level was among the

students who study in science faculty than students who study pharmacy and the lowest level of avian flu attitude was among those who study in law faculty.

3.4.23. Attitudes categorization and students faculty:

Cross tab was performed to determine if there was a difference between attitude categories and faculty.

Table 4.35: Attitudes Categories and Students Faculty

Faculties	Knowledge				Total	Chi – square	P
	Low		High				
	N	%	N	%			
Education	98	48%	105	52%	203	46.994	0.000
Science	5	24%	16	76%	21		
Arts	26	60%	17	40%	43		
Commerce	17	37%	29	63%	46		
Engineering	7	23%	24	77%	31		
I . T	0	0%	5	100%	5		
Pharmacy	1	9%	10	91%	11		
Law	12	75%	4	25%	16		
Health Science	5	45%	6	55%	11		
Agriculture	0	0%	2	100%	2		
Media	4	67%	2	33%	6		
Fine arts	2	67%	1	33%	3		
Religion principle	6	55%	5	45%	11		
Religion and law	1	9%	10	91%	11		
Nursing	0	0%	5	100%	5		
Medicine	0	0%	2	100%	2		
Total	184		243		427		

As shown in table (4.35), about 16 of 21 science faculty students with a percentage of 76 have got 12 points and above and 5 of them with a percentage of 24 have got 11 points and less. While four of 16 law faculty students have 12 points and above, and 12 of them with a percentage of 75 have 11 points and less.

These results mean, that the level of attitudes among law faculty students was the lowest among other faculties, while the scientific faculties like, science, pharmacy, nursing and medicine have the highest level of attitudes difference among faculties which is statistically significant with chi square = 46.994 and p = 0.000.

4.3.24. Level of avian flu practices:

In this part the researcher tries to answer the question: What is the level of practices toward avian flu among university students?

To answer this question, descriptive statistics including measuring mean, standard deviation and percentage of student's scores were developed to show the current level of avian flu practices of those students.

Table 4.36: Mean Standard Deviation and Percentage of The Level of Avian Flu Practices among University Students

Item	N	Mean	Std Deviation	%
Avian flu practices	427	6.26	1349	78.2

The third part of question includes 8 questions that reflect the avian flu practices among the students. For each answer that reflects a right answer 1 mark was giver, and 2 marks were given for the answer reflecting a wrong answer. As shown in table (4.36). The mean of the scores was 6.26 with standard deviation of 1.349 and the percentage of students scores reflecting the level of students' practices was 78.2.

This result indicates that the level of avian flu practice among university students was relatively moderate.

4.3.25 Practices categories:

In this study the student's were classified into two categories according to their scores. From the total 8 scores reflecting the level of practice there were students with relatively low scores who have got 6 and less, in addition to students with relatively high scores who have got 7 and above.

Table 4.37: Number and Percentage of Students According to The Level of Practice Categories

Item	Categories	Frequency	%
Level of practice categories	Low	224	52.5
	High	203	47.5
	Total	427	100

As shown in table (4.37), the number of students who have 6 points and less was about 224 of 427 students with a percentage of 52.5 while there were 203 of 427 university students with a percentage of 47.5.

This result indicates that according to the above mentioned categorization, the number of students who have got low scores in the level of avian flu practices was more than that for those who have got high scores.

4.3.26. Level of avian flu practice and gender:

To measure the difference in the level of avian flu practices of students due to their gender (male, female) the mean, standard deviation, independent T- test and percentage were used.

Table4.38: Mean Standard Derivation Independent T- Test and Percentage of the Level of Practice among University Students According to Their Gender

Item	Gender	N	Mean	Std. Deviation	%
practices	Male	186	6.24	1.324	78%
	Female	241	6.28	1.371	78.5

T – Test = -.305 P = 0.858

According to the results, T value = 0.305, there is no statistically significant difference in the level of practice among the students attributed to their gender p = (0.858).

So, these results indicate that the study hypothesis is accepted and the researcher hypothesis was rejected.

4.3.27. Level of practice and place of residency:

The mean, standard deviation, percentage and one way ANOVA test were used to explore if the level of practice among university students differs due to the place of residency.

Table 4.39: Mean Standard Deviation and Percentage of the Level Practices among University Students According to Their Place of Residency

Place of residency	N	Mean	Std. Deviation
North Gaza	78	6.41	1.427
Gaza	122	6.29	1.269
Middle Zone	74	6.15	1.430
KhanYounis	90	6.29	1.432
Rafah	63	6.14	1.189
Total	427	6.26	1.344

F = 0.506 p = 0.732

As shown in table (4.39) the results reflect a difference in the mean of the level of practices among university students according to place of residency.

To study the difference between level of practices as dependant variable and place of residency as independent variables one-way analysis of variance (ANOVA) was used.

According to the test results ($F = 0.506$ and $p = 0.732$) there is no statistically significant difference in the level of practices among university students due to the place of residency at $p < 0.05$. So the study alternative hypothesis is accepted.

4.3.28. Level of practice and student's level study:

The mean standard deviation percentage and one way analysis of variance were used to explore if the level of practices among students differ due to their levels of study.

Table 4.40: Means and Standard Deviation of the Level of Practice

And Their Level of Study

Level Stud	N	Mean	Std. Deviation
Level one	85	6.07	1.387
Level two	107	6.46	1.283
Level three	115	6.36	1.339
Level four	109	6.6	1.369
Level five	11	6.91	1.221
Total	427	6.26	1.349

F = 2.382 P = 0.53

To study the differences between the level of practices as a dependant variable and the student's level of study one-way ANOVA was used. According to the results, F= 2.382 and P = 0.053, there is no statistically significant difference in the level of practices due to student's level of study.

So, the study hypothesis which proposed that there is a statistically significant difference at $p < 0.05$ in the level of practice among university student's due to their level of study is rejected.

4.3.29. Level of practice and monthly family income:

As mentioned before, monthly family income was divided into four categories.

The mean, standard deviation, percentage and one way ANOVA were used to explore if the level of practice among university students to differs due to their family income.

Table 4.41: Mean and Standard of the Level of Practice among University Student's and Their Family Monthly Income.

Family monthly income	N	Mean	Std. Deviation
Less than 500 shekels	66	6.11	1.458
500-1000	142	6.30	1.294
1001-2000	153	6.24	1.385
More then 2000	66	6.41	1.277
Total	427	6.26	1.349

F = 0.617 P = 0.604

In order to study the difference between the level of practices among university students as a dependant variable and their family monthly income as an independent variable one way ANOVA was used.

According to the result (F = 0.617, P = 0.640) there is no statistically significant difference in the level of practices due to family monthly income. So, the study hypothesis which proposed that there is a statistically significant difference at (p < 0.05) in the level at practice among university students due to their family monthly income is rejected.

4.3.30. Level of practice and student's university:

The mean standard deviation, percentage and one way ANOVA test were used to explore if the level of avian flu practice differs due to the university.

Table 4.42: Mean Standard Deviation and Percentage of the Level of Avian Flu Practices among University Students According to Their University

University	N	Mean	Std. Deviation
Islamic	156	6.04	1.407
Alazhar	138	6.36	1.254
Alaqsa	133	6.43	1.350
Total	427	6.26	1.349

F= 3.401 P = 0.034

As shown in table (1.42), the results reflect a difference in the mean of the level of avian flu practices among university students according to the students, one-way analysis of variance (ANOVA) was used.

According to test results, F = 3.401 and p = 0.034, the results indicate that there is a statistically significant difference in the level of avian flu practices among university students due to their university (p < 0.05).

So, the study hypothesis that there is a statistically significant difference (0.05) in the level of practices among university students in Gaza due to their university is accepted.

To identify the significant difference Scheffe post test was used and table (4.42), clarifies that.

Table 4.43: Schaffer Post Test for Practices Level and Students University

Dependant	University I	University J	Mean Deference	Sig
Knowledge	Islamic	Al-Azhar	- .310	.142
		Al-Aqsa	- .384 (*)	0.05
	Al-Azhar	Islamic	.310	.142
		Al-Aqsa	-.073	.903
	Al-Aqsa	Islamic	.384 (*)	.0554
		Al-Azhar	.073	.903

According to table (4.43), Scheffe Post test clarifies that there is a statistically significant difference at ($p < 0.05$) in the level of avian flu practice between Al-Aqsa university and Islamic university, while there is no statistically significant difference between Al-Azhar university and Al-Aqsa university.

Form the above findings, its clear that there is a statistically significant difference in the level of avian flu practices according to students' university and this difference is high toward Al-Aqsa university which means that the level of practices is the highest among Al-Aqsa university followed by Islamic university and the lowest level of practice is among Al-Azhar university.

These results mean that the level of practices regarding avian flu among Al-Aqsa university students was the highest, the second university was Al-Azhar, and the lowest was among Islamic university students. Differences among universities are statistically significant, with chi square = 7.187, and $p < 0.05$.

4.3.31 Practice categories and student's university:

Cross tabulation was performed to identify if there were any difference between practice categories and student's university.

Table 4.44: Practices Categories and Students University

University	Practice Categories				Total	Chi – square	P
	Low		High				
	N	%	N	%			
Islamic	95	61%	61	39%	156	7.187	0.027
Al-Azhar	64	46%	74	54%	138		
Al-Aqsa	65	49%	68	51%	133		
Total	224	52.2	203	427%	427		

As shown in table (4.44), about 95 of 156 of the Islamic university students with a percentage of 61 have low practices and 61 of 156 with a percentage of 39 have got high practices.

While 64 of 138 of Al-Azhar university students with a percentage of 46 have got low practice and 74 of 138 have got high practices and 65 of 133 of Al-Aqsa university students with a percentage of 49 and 68 of 133 with a percentage of 51 have got high practices.

4.3.32. Level of practice and students faculty:

The mean, standard deviation, percentage and one way ANOVA test were used to explore if the level of practices among student differ due to their faculties

Table 4.45: Mean Standard Deviation and Percentage of the Level of practice among University Students According to Their Faculties

Faculty	N	Mean	Std Deviation
Education	203	6.27	1.327
Science	21	5.95	1.396
Arts	43	6.16	1.308
Commerce	46	6.17	1.495
Engineering	31	6.48	1.151
I . T	5	6.80	1.304
Pharmacy	11	7.00	.775
Law	16	6.75	1.065
Health science	11	5.73	1.679
Agriculture	2	7.50	.707
Media	6	4.17	2.041
Fine art	3	6.33	2.082
Religion principle	11	5.91	.944
Religion and law	11	6.82	.874
Nursing	5	7.00	1.225
Medicine	2	6.00	1.414
Total		6.26	1.349

F= 2.124 P = .008

In order to study the difference between the level of practice among university students as the dependant variable one-way ANOVA was used.

According to the test results, F = 2.124, P = 0.008, there is a statistically significant difference in the level of practice among university students due to their faculty.

So the study hypothesis which proposed that there is a statistically significant difference at p = 0.05 in the level of practices among university students due to their faculty is accepted.

To identify the significant difference Schaffer post test was used and table (4.46) clarifies that.

Table 4.46: Scheffe post Test for Practices and Students Faculties

Dependant	Faculty I	Faculty J	Mean difference (I – J)	Sig
Practice	Media	Education	-2.099 (*)	.014
		Science	-1.786	.212
		Arts	-1.996 (*)	.048
		Commerce	-2.007(*)	.043
		Engineering	-2.317 (*)	.010
		I. T	-2.633	.081
		Pharmacy	-2.833(*)	.003
		Law	-2.853 (*)	..005
		Health Science	-1.561	.606
		Agriculture	-3.333	.140
		Fine arts	-2.167	.612
		Religion principle	1.742	.405
		Religion and law	-2.652 (*)	.009
		Nursing	-2.833 (*)	.038
		Medicine	-1.833	.947

According to table (4.46), Scheffe posttest clarifies that there is a statistically significant difference at ($p < 0.05$) in the level of avian flu practice only in media faculty and other faculty. Also there is no any significant difference among the other faculties.

From the above findings, it is clear that there is a statistically significant difference in the level of avian flu practices according to students' faculty and this difference is negatively toward the media faculty. This means that the level of practice is the lowest among the media students.

4.3.33. Practice categories and students' faculty:

Cross tabulation was performed to identify if there were any differences between practices categories and students' faculty.

Table 4.47: Practices Categories and Students' Faculty

Faculties	Knowledge Categories				Total	Chi – square	P
	Low		High				
	N	%	N	%			
Education	110	54%	93	46%	203	18.013	0.0262
Science	13	62%	8	38%	21		
Arts	27	63%	16	37%	43		
Commerce	24	52%	22	48%	46		
Engineering	15	48%	16	52%	31		
I. T	2	40%	3	60%	5		
Pharmacy	3	27%	8	73%	11		
Law	6	37%	10	63%	16		
Health Science	6	55%	5	45%	11		
Agriculture	0	0%	2	100%	2		
Media	5	83%	1	17%	6		
Fine arts	1	33%	2	67%	3		
Religion principle	7	64%	4	36%	11		
Religion and law	3	27%	8	73%	11		
Nursing	1	20%	4	80%	5		
Medicine	1	50%	1	50%	2		
Total	224	52.5%	203	47.5%	427		

These results mean that the level of practices regarding avian flu among media students was the lowest and for the students who study in agriculture faculty was the highest.

The difference among faculties is statistically significant with chi square = 18.013, p = 0.0262 $p < 0.05$.

4.3.34. Correlation between dependant variables among the study population:

The purpose of this part of the study is to determine whether there is a correlation between the dependant variables among universities.

Table 4.48: Correlation Table between Dependant Variables.

		Knowledge	Attitudes	Practices
Knowledge	Pearson correlation	1	0.563 (**)	-.112 (*)
	Sig (2 – toiled)	0	.000	0.021
	N	427	427	427
Attitudes	Pearson correlation	0.563	1	0.008
	Sig (2-toiled)	0.000	-	0.871
	N	427	427	427
Practices	Pearson correlation	-0.112 (*)	0.008	1
	Sit) 2-tailed)	0.021	.871	-
	N	427	427	427

**Correlation is significant at the level 0.05.

As shown in table (4.48), Pearson correlation coefficient results between knowledge and attitudes indicated that, there was a positive correlation between knowledge and attitudes among the study population (r = 0.563)

The correlation between level of knowledge and attitudes reached a strong statistically significant level with $p < 0.05$, which means that students with higher knowledge are significantly more likely to have higher attitudes.

The correlation between level of knowledge and practices indicated that, there was a negative correlation among the study population (r = -.112).

This means that students with higher knowledge are significantly more likely to have lower practices. There is no correlation between attitudes and practices.

4.3.35. Source of information:

In this part the researcher tries to determine the major source of information about avian flu.

Table4.49: Source of Information about Avian Flu

Source of information	Frequency	Percent
Television	202	47.3
Radio	18	4.2
University	46	10.8
Internet	48	11.2
Community	69	16.2
Family	43	10.1
Other	1	0.2
Total	427	100%

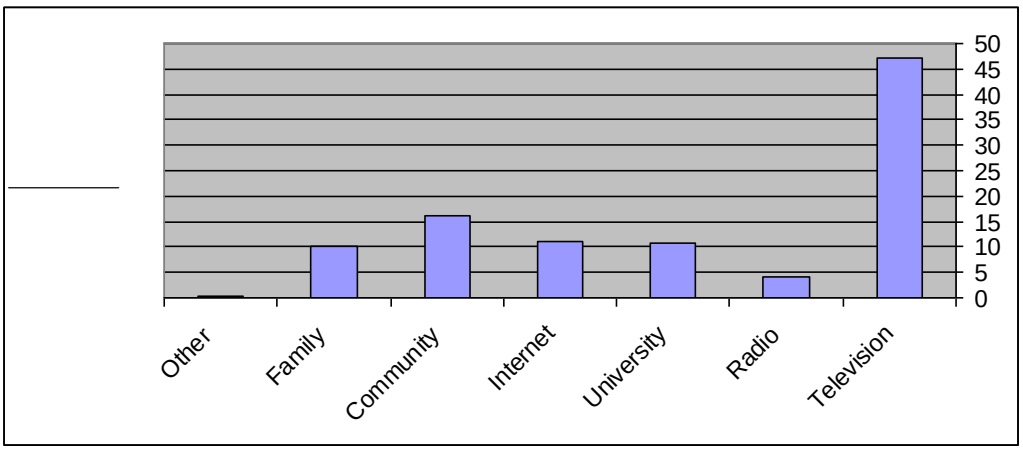

Figure 4.6: Distribution Source Information

As table (4.49), shows, about half of the students (47.3%) indicated that television is the major source of their information, followed by community 16.2%. Similar results were found with several studies in different countries which had reported that a major source of information among participants was the media.

Such as, a study conducted on 514 secondary school students in Saudi Arabia, it was reported that 70% of the participants reported that mass media (T. v. or radio) was the source of their information (Al-Shhri and Adbdel Fattah, 2006).

In the study of Ghabilik and Shojam (2007), in Iran, it was also reported that most of the participants 67.2% indicated that mass media (T. v and radio) was their major source, of information, the internet 13% and family 10.4%.

Chapter (5)

Conclusion and Recommendations

5.1. Introduction

The main aim of this study is to measure the level of knowledge, attitudes and practices regarding avian flu among university students.

This chapter includes the major findings of the present study and gives answers to the research questions, recommendations and suggestion for future researches.

The main questions of the study are:

Q 1: what is the level of knowledge, attitudes and practice among university students in Gaza strip concerning avian flu?

Q2: Is there any relationship between the gender, residency place monthly family income, university faculty and level of study students?

Q 3: what is the source of information about avian flu among university students?

5.2. Conclusion:

According to the study results discussed in chapter 4, the following conclusion can be drawn.

5.2.1. Avian flu knowledge:

In general, the study showed that university students have a moderate level of knowledge. About 55.3% (N = 236) of these students were found to have high level of knowledge, while 44.7% (N = 191) of them have low level of knowledge. This means that the number of students who have got high scores in the level of knowledge was more than those who have got low scores. This finding revealed that the students' knowledge was moderate.

5.2.2. Avian flu attitudes:

About 57% of university students have positive avian flu attitudes, and 43% have a negative attitude which means that the number of students who have got positive attitude in the level of attitudes was more than those who have got negative attitudes.

5.2. 3. Avian flu practices:

In general, university students have low level of avian flu practices. About 47.5% (N = 203) of these students were found to have high level of practices, while 52.5% (N = 224) of them have low level of practices. This means that the number of students who have got low scores in the level of avian flu practices was more than those who have got high scores. This indicates that the students' practices are low.

5.2.4. Relationship between knowledge, attitudes and practices regarding avian flu with other variables (gender, residence place, monthly family income, university, faculty and level of study):

There were significant differences in the level of knowledge attitudes and practice based on students' university and faculty.

In addition to this, significant differences were found in the level of knowledge and attitudes based on residency place, while there was no significant difference between knowledge attitudes and practices regarding gender, family monthly income and students' level of study.

5.2.5. Correlation between knowledge attitudes and practices:

There is a positive significant relationship between avian flu knowledge and attitudes among students of the study population.

There is a negative significant relationship between avian flu knowledge and practices, but no significant relationship between avian flu attitudes and practices.

5.2.6. Source of information:

Most of the students (47.3%) indicated that television was their major source of information about avian flu, followed by community 16.2%, the internet 11.2%, university 10.8%, family 10.1%, and only 4.2% of students mentioned the radio as the source of information.

5.3. Recommendations:

Local heath authorities, centers and educational institutions concerned with communicable diseases, should seriously consider the findings of this study.

Preparing students with sufficient knowledge is essential to confronting potential epidemics.

1. The low level of knowledge about infectious diseases is primarily a reflection of insufficient academic courses in the university curriculum. So, the researcher recommends improving the quality of education on this topic through specific courses.
2. Public health educational programs are essential in Gaza Strip universities and other educational institutions.
3. Providing the students with accurate information and keeping them updated may greatly contribute to preventing any future avian flu epidemics.

5.4. Further recommended researches:

According to study results and limitations, the researcher recommends the following suggested further researches.

1. Further research is necessary to measure the level of avian flu, attitudes and practices of students from all different educational institutions as secondary schools and community colleges.
2. Evaluation of the university curriculum about infectious disease to insure its efficacy in improving the students' infectious disease awareness and attitude.

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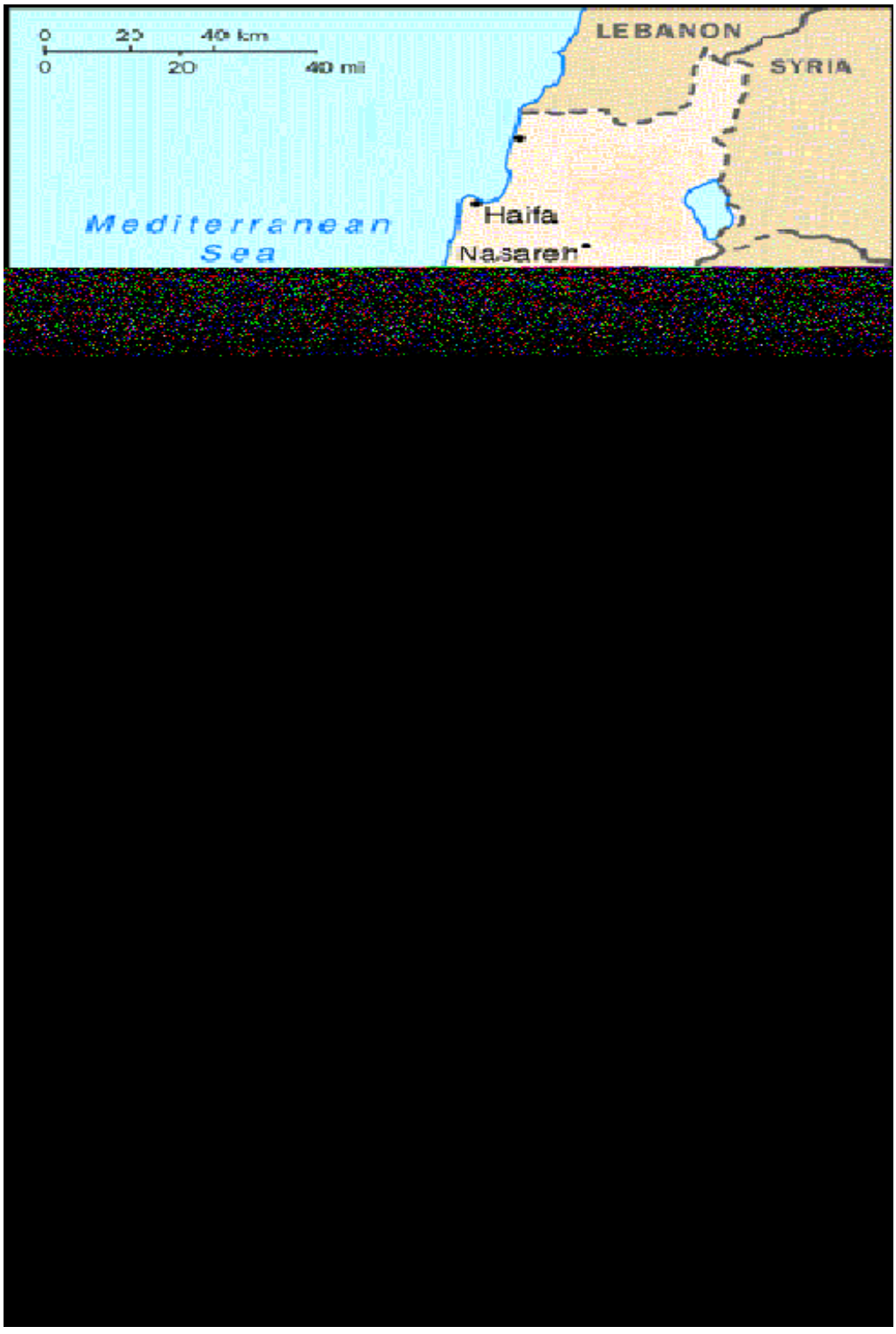
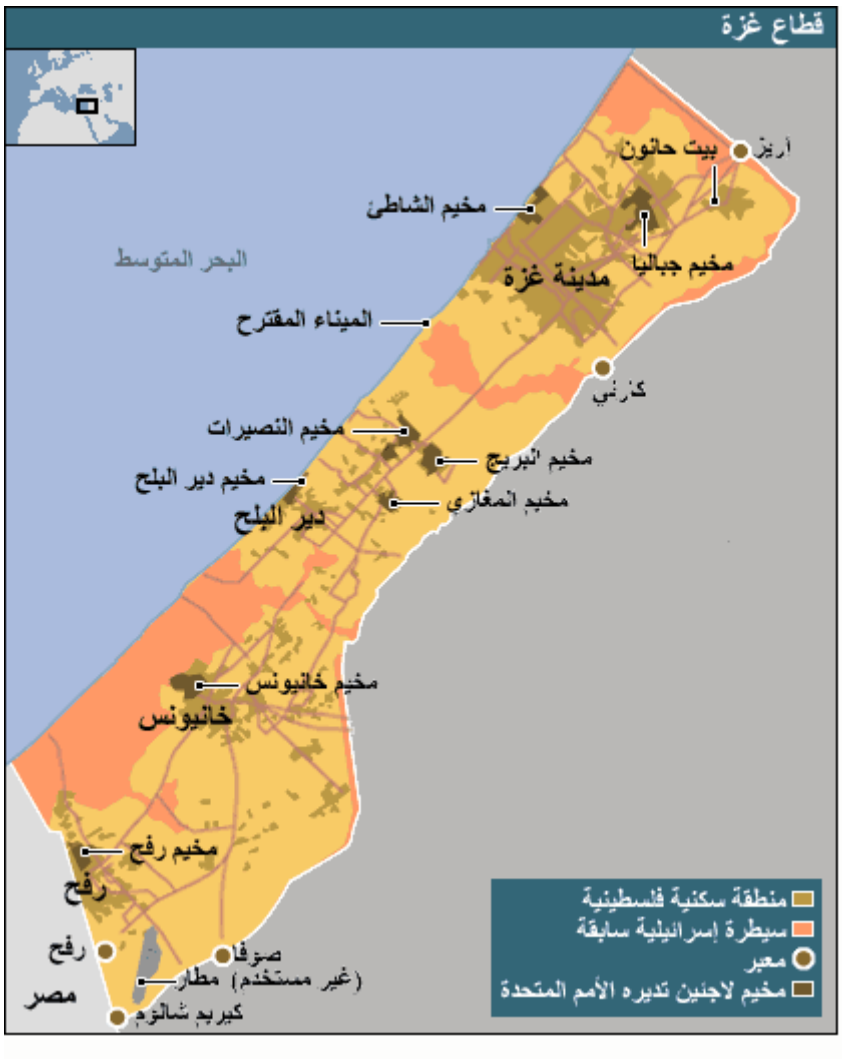
Annexes

Annex 1
Map of Palestine



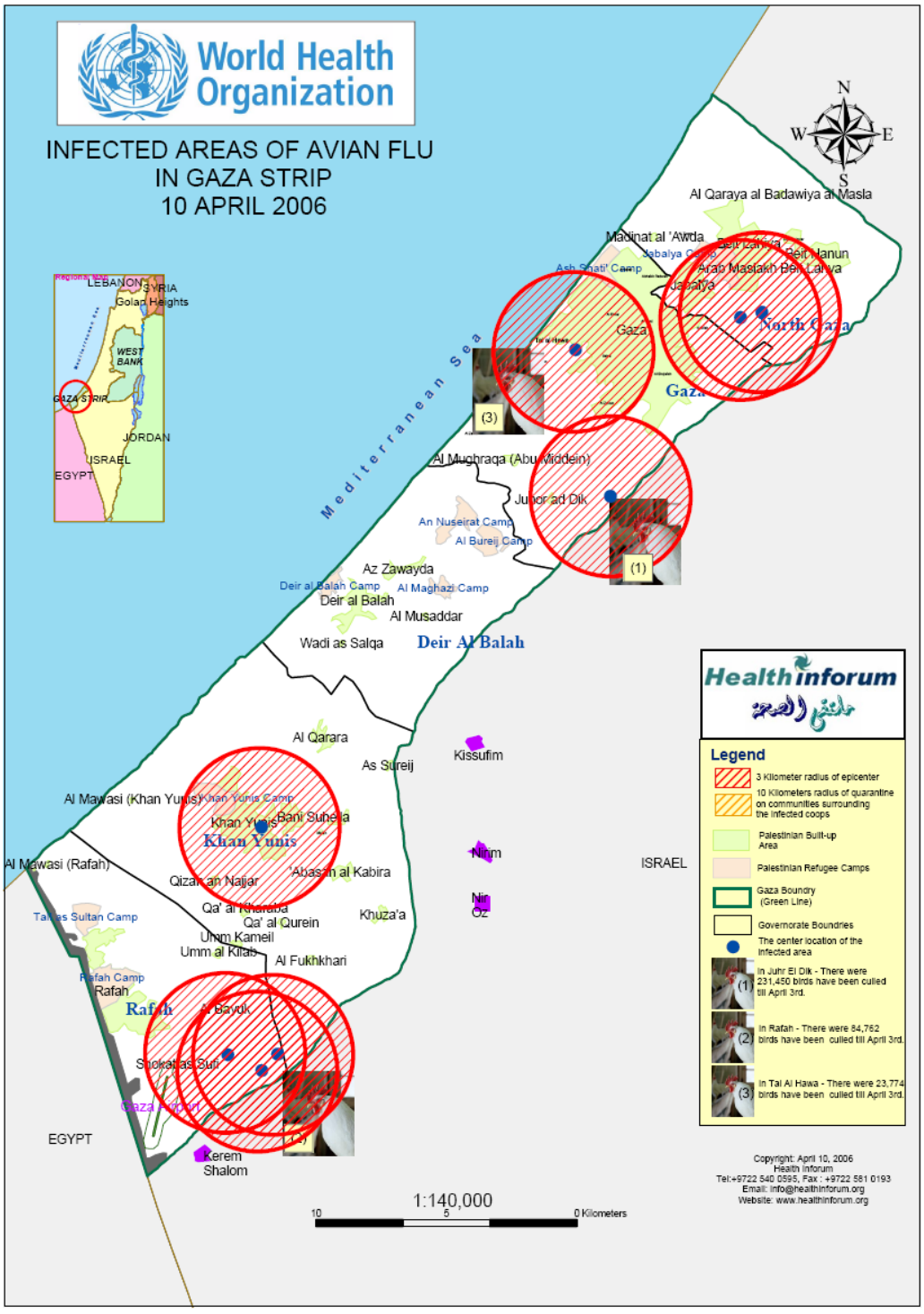
Source: MOH, 2000

Annex 2
Map of Gaza strip



Source :BBC Arabic
http://news.bbc.co.uk/hi/arabic/middle_east_news/newsid_5125000/5125266.stm

Annex 3
Map of
Infected Area of avian flu in Gaza strip



Annex 4

Questionnaire

1. Gender ☐ Male ☐ Female
2. University ☐ Islamic ☐ Al-Azher ☐ Al-Aqsa
3. Level of study: ☐ level one ☐ level two ☐ level three

   ☐ Level four ☐ level five
4. Faculty .....
5. Residency place: ☐ North Gaza ☐ Gaza ☐ Mide zone ☐ Kanuyoius ☐ Rafah
6. Monthly Family income :-

   ☐ Less than 500 Shekel

   ☐ 500-1000 Shekel

   ☐ 1001-2000 Shekel

   ☐ More than 2000 Shekel

Student, Knowledge toward avian flu

No	Clause	Yes	No	I don't know
7	Avian flu is a contagious infection caused by virus that can affect all species of birds			
8	The first case of human infection with bird flu accrued in Hong Kong 1997			
9	The first case of bird infection with bird flu in Gaza strip accrued in 2006			
10	There is no human infection with avian flu in Gaza strip during lat out break.			
11	Common vehicle of avian influenza is poultry and wild birds.			
12	The most risk group to infected by avian flu is poultry workers			
13	Avian influenza can be transmitted from migratory birds.			
14	Transmission of the disease from person to person is possible.			
15	Humans can catch avian influenza by eating and touching uncooked poultry and eggs.			
16	The avian influenza virus contained in an egg or present on its shell can be eliminated by prolonged cooking.			
17	Even when poultry is contaminated by avian influenza is not a health risk If it is thoroughly cooked			
18	A symptom of avian influenza on poultry is red spot on the leg, Excessive mucus and swollen eye led.			
19	Symptoms of birds flu in humans are similar to seasonal influenza			
20	The vaccination against seasonal influenza is not effective against avian influenza.			
21	It is not dangerous to eat the meat of a chicken vaccinated against avian influenza.			
22	If a chicken is contaminated by avian influenza on a farm, all the poultry on that farm must be destroyed immediately.			
23	The most Arab country have humans infected by avian influenza is Egypt.			

Student attitude to ward avian influenza

No	Clause	Agree	Uncertain	Disagree
24	I think that avian influenza is a serious and dangerous problem for our Palestinian community.			
25	I think that avian influenza is one of the diseases of chicken and it can easily transmit to any avian.			
26	I see that avian influenza become serious when transmits to human.			
27	I see that human can die due to avian influenza.			
28	Out break of avian influenza may happen again.			
29	To protect our country from avian influenza we must read more about it.			
30	I think that authority must control the border between us and Egypt.			
31	I think that we are not able to do any things when there is an out break of avian influenza.			
32	I see that it is necessary of student. Participation in protect community during avian influenza out break.			
33	I think that the best way to prevent avian influenza out break keep environment clean.			
34	I think it is necessary to keep poultry separate from other animals			
35	Prevent breeding birds at home help in community protection from avian flu.			
36	We can not prevent out break of avian flu among birds but we can prevent it between humans			
37	I think that avian influenza is not only big problem for our country but also a serious for all world.			
38	When avian flu out break I will advice my family stay at home and avoid contact with others.			
39	I prefer close the university if avian influenza break out.			
40	I think that more than one hundred thousands humans are going to die if a serious influenza breaks out.			
41	I think that avian flu vaccine must be available to every body in Gaza strip.			

Student's behaviors to word avian flu

No	Clause	Agree	Uncertain	Disagree
42	Avoid eating poultry not thoroughly cooked.			
43	Avoid eating eggs not thoroughly cooked.			
44	Wash my hands before and after deals with raw chicken.			
45	Avoid going to crowded public areas.			
46	Avoid traveling to areas with avian influenza out breaks.			
47	Avoid touching line birds and their dropping with bare hands.			
48	Wear mask in public area.			
49	When chickens die or show symptoms of healthiest, notify the authority.			

50- From what sources have you received information about influenza? (Please tick one or more options)

- ☐ TV
- ☐ Radio
- ☐ University
- ☐ Internet
- ☐ Community
- ☐ Family
- ☐ Other

بسم الله الرحمن الرحيم

جامعة القدس– أبو ديس
كلية الصحة العامة

عزيزي الطالب/ عزيزتي الطالبة

يسعدني مشاركتك الفعالة في بحث بعنوان "**قياس مدى معرفة واتجاهات وسلوكيات طلبة الجامعات في قطعا غزة اتجاه أنفلونزا الطيور**".

وهي جزء من متطلبات نيل درجة ماجستير الصحة العامة بجامعة القدس أبو ديس– فلسطين
ولقد تم اختيارك لانطباق معايير المشاركة عليك، الرجاء الإجابة على أسئلة الاستبانة التي قد تستغرق من وقتك الثمين 15 دقيقة.

مشاركتك اختيارية ومن حقك رفض المشاركة أو عدم الإجابة عليها.
السرية التامة مكفولة، لا حاجة لذكر اسمك، الاستبيان سيستعمل لأغراض علمية فقط.
يرجى الإجابة على جميع الأسئلة وقت ما تراه مناسباً.

أشكرك على مشاركتك والتي ستكون فعالة للغاية.

الباحثة/ فتحية أحمد السميري

استبانة

رقم مسلسل.....

أولاً: البيانات العامة:

1. الجنس ☐ ذكر ☐ أنثى

2. الجامعة التي تدرس بها: ☐ الجامعة الإسلامية ☐ جامعة الأزهر ☐ جامعة الأقصى

3. الكلية التي تدرس بها .....

4. مستوى الدراسة: ☐ أول ☐ الثاني ☐ الثالث ☐ الرابع ☐ الخامس

5. مكان السكن: ☐ الشمال ☐ غزة ☐ الوسطى ☐ خانيونس ☐ رفح

6. دخل الأسرى الشهري (شيقل): ☐ أقل من 500ش ☐ 500- 1000

☐ 1000-2000 ☐ أكثر من2000

ثانياً: اختبار قياس المعرفة:

أخي الطالب/ أختي الطالبة

اقرأ/ي كل عبارة بعناية ثم حدد/ي معرفتك باختيارك إجابة واحد "نعم" أو "لا" أو "لا أعرف":

م	الجملة	نعم	لا	لا أعرف
8	أنفلونزا الطيور هو مرض فيروسي يصيب أغلب أنواع الطيور الدجنة منها والبرية			
9	أول إصابة بشرية بأنفلونزا الطيور كانت في هونج كونج 1997م.			
10	أول إصابة بأنفلونزا الطيور في قطاع غزة كانت في 2006م.			
11	لم تثبت أي إصابة بشرية في قطاع غزة خلال انتشار المرض.			
12	ينتقل فيروس أنفلونزا الطيور إلى الإنسان عن طريق الاحتكاك بالطيور المصابة بصفة مباشرة أو غير مباشرة.			
13	أكثر الناس عرضة للإصابة بهذا المرض هم الأشخاص الأكثر اتصالاً مع الطيور			
14	إن الطيور المهاجرة ستهم مباشرة في نقل المرض.			
15	لا يمكن أن ينتقل المرض من إنسان مصاب إلى آخر سليم			
16	ينتقل فيروس أنفلونزا الطيور إلى الإنسان عن طريق أكل أو لمس اللحوم أو البيض غير المطهي جيداً			

17	يمكن التخلص من فيروس أنفلونزا الطيور الموجود على قشرة وداخل البيض بالغلي الطويل.			
18	أكل اللحوم الملوثة بفيروس أنفلونزا الطيور لا يشكل خطراً على الصحة إذا تم طهيه جيداً.			
19	أعراض أنفلونزا الطيور على الطيور تورم في الأجفان وإفرازات مخاطية من الأنف، بقع حمراء على الأرجل.			
20	أعراض أنفلونزا الطيور على الإنسان تشبه الأنفلونزا العادية			
21	اللقاحات المستخدمة ضد الأنفلونزا العادية لا توفر الحماية ضد أنفلونزا الطيور.			
22	ليس من الخطير تناول لحم الدواجن التي تم تلقيحها ضد أنفلونزا الطيور.			
23	إذا تم اكتشاف حالة مصابة بأنفلونزا الطيور في مزرعة يجب القضاء على الطيور في تلك المزرعة.			
24	مصر هي أكثر الدول العربية التي تم فيها اكتشاف إصابات بشرية.			

ثالثاً: مقياس اتجاه الفرد وسلوكه مع أنفلونزا الطيور:

يرجى قراءة كل عبارة قراءة متأنية وتحديد مدى موافقتك عليها أو رفضك لها ثم ضع/ي علامة (√) في المربع المقابل لها الذي يمثل إجابتك:

الرقم	الجملة	أوافق	لست متأكداً	لا أوافق
.25	اعتقد أن أنفلونزا الطيور مشكلة خطيرة يواجهها مجتمعنا الفلسطيني.			
.26	أرى أن أنفلونزا الطيور يصبح مشكلة خطيرة عندما ينتقل إلى الإنسان.			
.27	يمكن للإنسان المصاب بأنفلونزا الطيور أن يموت.			
.28	اعتقد أن أنفلونزا الطيور قد تنتشر مدة أخرى.			
.29	أفضل طريقة لحماية بلدنا من أنفلونزا الطيور قراءة كل شي عنها.			
.30	أعتقد أنه أفضل وسيلة لمنع وصول أنفلونزا الطيور إلى القطاع هو السيطرة على الحدود بين غزة ومصر.			
.31	أرى أننا في غزة غير قادرين على السيطرة على أنفلونزا الطيور إذا انتشر مدة أخرى.			
.32	أفضل إشراك الطلاب في حماية المجتمع أثناء انتشار مرض أنفلونزا الطيور.			
.33	أجد أن أفضل وسيلة لمنع انتشار أنفلونزا الطيور هو المحافظة على نظافة البيئة.			
.34	أعتقد أنه من المهم عزل الطيور عن الحيوانات الأخرى.			
.35	أرى أنه لا بد من منع تربية الطيور في المنازل لحماية المجتمع منها.			
.36	أجد أنه لا يمكن منع انتشار أنفلونزا الطيور بين الطيور ولكن تستطيع منع انتشارها بين السكان.			
.37	أرى أن أنفلونزا الطيور مشكلة كبيرة على العالم كما أنها على المجتمع الفلسطيني.			

.38	سأنصح أهلي بالبقاء في البيت وعدم الاحتكاك مع الآخرين في حال انتشار أنفلونزا الطيور.			
.39	أفضل إغلاق الجامعة عند انتشار أنفلونزا الطيور.			
.40	أعتقد أنه لا بد من توفير لقاح لأنفلونزا الطيور لكل فرد في غزة.			

رابعاً: مقياس سلوك الفرد مع أنفلونزا الطيور:

الرقم	الجملة	أوافق	لست متأكداً	لا أوافق
.41	أمتنع تماماً عن تناول لحوم الدواجن غير المطهي جيداً.			
.42	أمتنع تماماً عن تناول البيض غير المطهي جيداً.			
.43	اغسل يدي قبل وبعد التعامل مع الدواجن النيئة.			
.44	تجنب الوجود في الأماكن المزدحمة.			
.45	لا أسافر إلى الأماكن الموبوءة بأنفلونزا الطيور.			
.46	أمتنع عن لمس الطيور أو مكشوفة.			
.47	أرتدي الكمامة في الأماكن العامة.			
.48	سأبلغ السلطات المختصة عندما تموت دجاجة أو يظهر عليها أعراض غير صحية.			

خامساً: مصدر المعلومات:

من أين حصلت على معلوماتك عن أنفلونزا الطيور:

يمكن أن يكون هناك أكثر من إجابة:

☐ التلفزيون ☐ الراديو ☐ الجامعة ☐ الإنترنت ☐ المجتمع ☐ العائلة ☐ أخرى

Palestinian National Authority
Ministry of Health
Helsinki Committee

السلطة الوطنية الفلسطينية
وزارة الصحة
لجنة هلسنكي

Date: 15/8/2008

Name: Fathia El-Smary

I would like to inform you that the committee has discussed your application about:

Knowledge, Atitudes, and Practices Regarding Avian Influenza Among University Students in Gaza Governorates.

In its meeting on August 2008
and decided the Following:-
To approve the above mention research study.

التاريخ: ٢٠٠٨/٨/١٥

الاسم: فتحية السميري

نفيدكم علماً بأن اللجنة قد ناقشت مقترح دراستكم حول:-

و ذلك في جلستها المنعقدة لشهر أغسطس ٢٠٠٨

و قد قررت ما يلي:-

الموافقة على البحث المذكور عاليه.

Signature
توقيع

Member
عضو

Member
عضو

Chairperson

Conditions:-

- Valid for 2 years from the date of approval to start.
- It is necessary to notify the committee in any change in the admitted study protocol.
- The committee appreciate receiving one copy of your final research when it is completed.

Gaza Etwam – Telefax 972-7-2878166

Al-Quds University
Jerusalem
School of Public Health

جامعة القدس
القدس
كلية الصحة العامة

2008/11/22

حضرة الأستاذ الدكتور /علي أبو زهري المحترم
رئيس جامعة الأقصى
تحية طيبة وبعد،،،

الموضوع: مساعدة الطالبة فتحية السميري

تقوم الطالبة المذكورة أعلاه بإجراء بحث بعنوان:

"Knowledge attitudes and practices regarding Avian influenza among "university in Gaza Governorates".

كمتطلب للحصول على درجة الماجستير في الصحة العامة-مسار صحة البيئة و عليه نرجو التكرم للإيعاز لمن ترونه مناسب لتسهيل مهمة الطالبة في جمع البيانات اللازمة

شاكرين لكم حسن تعاونكم ودعمكم للمسيرة التعليمية ،،،

و اقبلوا فائق التحية و الاحترام،،،

د. بسام أبو جمل
منسق عام برامج الصحة العامة

نسخة:
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Al-Quds University
Jerusalem
School of Public Health

جامعة القدس
القدس
كلية الصحة العامة

2008/11/22

حضرة الأستاذ الدكتور /جواد وادي المحترم
رئيس جامعة الأزهر
تحية طيبة وبعد،،،

الموضوع: مساعدة الطالبة فتحية السميري

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ملخص الدراسة

الهدف من هذه الدراسة هو تقييم معرفة واعتقادات وممارسة طلبة الجامعات في قطاع غزة تجاه أنفلونزا الطيور.

الأهداف الفرعية للدارسة:

1. تحديد مستوى معرفة واعتقادات وممارسة طلبة الجامعات تجاه أنفلونزا الطيور.
2. اكتشاف العلاقة بين معرفة وتوجهات وممارسة الطلاب تجاه أنفلونزا الطيور وبعض الخصائص الاجتماعية والاقتصادية، الجنس، مكان السكن، ودخل الأسرة الشهري.
3. تحديد العلاقة بين معرفة وتوجهات وممارسة الطلبة تجاه أنفلونزا الطيور من ناحية وجامعة وكلية ومستوى الدراسة لديهم من ناحية أخرى.
4. تقييم العلاقة بين معرفة الطلاب وتوجهاتهم وممارستهم تجاه أنفلونزا الطيور.
5. تحديد مصادر المعلومات لدى الطلبة.
6. استخلاص التوصيات المناسبة لزيادة معرفة وتوجهات وممارسة الطلبة لأنفلونزا الطيور.

منهجية وعينة الدراسة:

هذه الدراسة وصفية تحليلية مقطعية، وتكونت عينة الدراسة من 427 طالب وطالبة تم اعتماد الطريقة الطبقية النسبية المتكررة لاختيارهم من ثلاث جامعات تقليدية موجودة في قطاع غزة وهي الجامعة الإسلامية، جامعة الأزهر، جامعة الأقصى، وكانت نسبة الاستجابة بين الطلبة 86%.

جمع المعلومات:

تم جمع المعلومات بواسطة استبانه تم تصميمها من قبل الباحثة في ضوء المعلومات الواردة من منظمة الصحة العالمية، وقد تم فحص صدقها وثباتها من الناحية العلمية من قبل محكمين، بالإضافة لتطبيق الاستبانة على عينة استطلاعية قبل بدء البحث.

النتائج:

لقد كانت معرفة نسبة الطلاب المشاركين في الدراسة لتعريف أنفلونزا الطيور عالية حيث أنها حوالي 80.6%، وحوالي 56.7% يعرف التاريخ المرضي و 63% يعرفون أعراض أنفلونزا الطيور.

ولقد أظهرت الدراسة أن الوعي لدى الطلبة كانت 57% والممارسات حوالي 47%.

ولقد كانت هناك علاقة ذو دلالة إحصائية موجبة بين مستوى المعرفة والتوجيهات والممارسات والجامعة والكلية التي يدرس بها الطلبة، حيث أن كلية العلوم هي أكثر معرفة كما أن هناك علاقة ذو دلالة إحصائية بين مستوى المعرفة والتوجهات والممارسات ومكان السكن.

وقد أظهرت الدراسة أنه لا يوجد علاقة ذو دلالة إحصائية بين مستوى المعرفة والتوجهات والممارسات من ناحية وجنس والمستوى الدراسي لدى الطلاب من ناحية أخرى.

أوصت الدراسة أن هناك حاجة إلى تطبيق برامج فعالة للتوعية والتثقيف الصحي في الجامعات والمؤسسات الدراسية الأخرى، لدفع مستوى المعرفة وتهيئة المجتمع للتعاطي مع هذه القضية المهمة.