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ORIGINAL STUDY

Evaluation the Attitudes Toward Prevention of Communicable Diseases on Health Care Workers at Al-Sadr Hospital in Iraq's Najaf governorate

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ABSTRACT

Background: Communicable diseases are responsible for a heavy burden on human health. Health workers were the front line in preventing these diseases. Wrong or positive attitudes of health workers can reflect negatively or positively on infection control efforts. The primary objective of study evaluating attitudes levels between health care workers towards transferable diseases. The secondary objective, assessing association with social-demographic characteristics of health workers.

Materials and Methods: The data from Al-Sadr Hospital, by use a frequency study started from the 1st of December 2021 to the 30th of May in 2022. The sample from 384 health care workers by using a self-survey administration, the data collected randomly sample, then collected then analyzed via a statistical program.

Results: The current study showed that (58.1%) of health workers had positive attitudes. Also, the result indicated that (66.1%) of the participants are females, half of them were hold a bachelor's degree and married, the majority (51.5%) of them a young age group, (35.9%) of sample receive a training courses, (66.4%) have less than five years of experience, and in relations profession, (27.3) % from sample a nurses. In addition, showed no significant relationship between attitudes and socio-demographic characteristics of health workers.

Conclusion: The study said that half or more half of the health care workers possesses positive attitudes, then these attitudes levels requirement to be raised up through by making a training developments on infection diseases control by health director. Maximum sample are young and have fewer than five years of experience in the profession, educational level a statistically significant with courses.

Keywords: Attitudes, Communicable diseases control, Cross-sectional, Health care workers

1. Introduction

Communicable diseases can define as a disease that spread among people from one person to another directly or without directly lead to bacteria, viruses, parasites, fungus, or their poisonous byproducts that are spread from person to person by contaminated food and surfaces, bites by insects, blood-borne contaminants, or coughing into the air are examples of pathogens that cause illness (Edemekong and Huang,

2021). The prevailing concept around the world about communicable diseases since the past is that they represent a high risk, and still is. Despite the development and progress in technology and techniques in controlling and reducing diseases, in addition to the discovery of treatments and vaccines for infectious diseases, despite this progress and discoveries, they still represent a global threat and a drain on funds, especially in poor countries (Kasper and Fauci, 2013).

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Healthcare workers, such as nurses, physicians, laboratory technicians, pharmacy technicians, and others, are defined by the World Health Organization (WHO) and the ILO (International Labour Organization) as those who strive to promote health (Organization WH, 2010). When working in hospitals or primary care clinics, health professionals have a duty to protect patients and out visitors from infection. They also play a significant role in the prevention, diagnosis, treatment, and care of sick individuals. By maintaining a wholesome, infection-free atmosphere (Organization WH, 2020). As a result, health professionals are exposed to many occupational dangers when working at hospitals, including biological, comfortable, chemical, physical, violence, and pressure (Giardina et al., 2016). Therefore, they should have a good level of knowledge and attitudes regarding infectious illness control and prevention in health care institutions (Chitimwango, 2017).

The WHO anticipated that from the beginning of 2020 to May of the following year, around (One Hundred and Eighty Thousand) health professionals died due to COVID-19 in a short period of time, a catastrophic situation that concerns every healthcare professional (Organization WH, 2021). In addition, it has been estimated that approximately (thirty five million) healthcare providers in all countries of the globe are currently suffering from infections acquired in clinics, and approximately (three million) are contact with viruses transmitted via blood each year (two million HBV, nine hundred thousand hepatitis C, and three hundred thousand HIV). Based on WHO estimates, roughly thirty seven thousand deaths among medical personnel across Europe alone, while in Us health care settings, it amounted to almost ninety nine thousand mortality (Organization WH, 2010). Increasing understanding about infection prevention and illness mode of transmission is a critical first step in planning and executing successful infectious disease prevention programs (AL-Furat, 2020). In addition, improving awareness and enhancing national disease control mechanisms will help to improve the situation and minimize local speed.

2. Materials and methods

A frequency study conducted on sample 384 (sample size) of health care workers by using a questionnaire that participants administered themselves, were randomly collected (the Arabic language model) on the title of research by health care workers in region. From the 1st of December 2021 to the 30th of

May in 2022, Sample size estimation by calculation is based on a high level of accuracy, resulting in the most important and accurate sample in estimating the population. This appropriate equation has been used below; The following formula was used to calculate sample sizes Lemeshow (n.d.) Cross-sectional (One group)

$$n = \frac{z_{1-\alpha/2}^2 p(1-p)}{d^2}$$

The questionnaire was based on World Health Organization recommendations, and after being modified based on the supervisors' feedback, it was distributed to fifteen experts in various specialties to assess the study's accuracy and suitability, as well as a number of study-related questions. If the questions were effective in achieving the study's purpose, they should have covered all components of the investigation and been clear. The questionnaire was broken into two sections. The first section comprises social and demographic information, which are divided into seven paragraphs: age, gender, occupation, marriage status, duration of experience, taking part in infectious disease prevention training courses, and number. The second section, questionnaire was about attitudes of health workers about communicable diseases, which contained 20 items. Likert scale 5 points was used to evaluate the participants' responses; the responses were scored as Strongly agree 5 points, agree 4 points, neutral 3 points, disagree 2 points and strongly disagree 0 points. After that, the overall score was calculated depending on the mean scores, and they were classified into three classes (good, neutral and bad); questionnaire based on the pilot test results. It has been found through the pilot questionnaire that the answer to the questionnaire takes about 30-40 minutes to complete, Cronbach Alfa result were Health workers knowledge (0.918) and Health workers attitude (0.750).

The current study's data were analyzed using the (SPSS), version 27. The sample response to part two of the questionnaire items about health workers' attitudes toward diseases that are infectious was evaluated using a five degree-point Likert scale with the options of first strongly agree, 2nd agree, 3rd neutral, 4th disagree, and 5th strongly disagree. The frequencies, percentages, standard deviation then mean were obtained via descriptive statistics, also used *p* value (probability value). The *p*-value estimates how likely it is that you would see the difference described by the test statistic if the null hypothesis of no relationship were true. Note. *P*-value ≤ 0.05 is considered significant.

Table 1. Distribution of participants according to socio-demographic characteristics.

Socio-demographic characteristics		N	%
Age (years)	20-26	198	51.6
	27-33	109	28.4
	34-41	52	13.5
	42-48	17	4.4
	≥49	8	2.1
Gender	male	130	33.9
	Female	254	66.1
Marital status	Single	177	46.1
	Married	192	50.0
	Divorced	10	2.6
	Widowed	5	1.3
Educational level	Secondary	18	4.7
	Diploma	146	38.0
	Bachelors	192	50
	Graduate Studies	28	7.3
Professional level	Physician	28	7.3
	Pharmacist	68	17.7
	Lab. Technician	91	23.7
	Medical Assistant	69	18.0
	Nurses	105	27.3
	X-ray Technician	3	0.8
	Others	20	5.2
Total		384	(100%)

3. Results and discussion

The socio-demographic features of the participants showed in [Table 1.](#); according to the age group, the highest percentage (51.6%) was in the age group (20y-26y), The smallest percentage (2.1%) was in an age group of forty-nine or older, Degree of Freedom (d. f)=4, and $F=160.5$).

The findings of the present study agree with a different research that happened in Turkey ([Korkmaz et al., 2016](#)), where the maximum percentage of members was equal to (52.5%) in the (age group $\leq 30Y$), although the lowermost percentage was (7.2%) of the (age group $\geq 41Y$).

Furthermore, the discoveries of this study are dependable with a different study conducted in Iraq ([Fadiel, Chiad, and Kadhum, 2021](#)), where the chief age group (20Y-29Y) equal (63.8%), also with a study conducted in Palestinian ([Ayed, 2015](#)), where the greatest age group was identified (64.2%) in the group (20Y-29Y).

The explanation for this finding is the big number of students graduating from Medical colleges and institutes, both public and private, where the number of graduate students increased by (47.2%) between 2019 compared to 2014 ([Central Statistical Organization \(CSO\), 2020](#)). Since the Iraq Ministry Government of Health is obligated to employ them annually to find employment in the field of healthcare, this leads to an rise in the young age group of new employees.

In terms of gender, the results showed that the majority of healthcare providers in this survey were female (66.1%) and the remaining part represented men. In addition, this is a substantial gender difference. This finding was consistent with the findings of another study carried out in Saudi Arabia ([Aledeilah et al., 2018](#)), and this found that the majority of participants were women (68.1%).

In addition, the findings of this study are confirmed by the findings of a different investigation carried out in Vietnam ([Huynh et al., 2020](#)), which found that almost all of the subjects were females (74.0%). Moreover, our study corresponds with a research in Malaysia ([Hamid et al., 2010](#)) which discovered an elevated percentage of females among health workers (77.7%).

The researcher attributed the reason for females being more than males was due to random selection and the lack of female's refusal to participate in filling out the questionnaire. Also, the graduate students for the year 2018/2019 were females than males ([Central Statistical Organization \(CSO\), 2020](#)).

In terms of marital status, fifty percent of the health personnel were married, 46.1 percent were single, and the fewest percent (3.9%) experienced divorce or widowed ([Fadiel, Chiad, and Kadhum, 2021](#)), The survey found that 62.8 percent of the participants were married, 35.3 percent were single, and 1.9% were widowed or divorced. It also refers to a research conducted in Iraq, ([Daham, Jasim, and Zakair, 2020](#)), According to the findings, 52.3% of healthcare workers are married. Also, research in Egypt discovered that (67.5%) of married support our research results.

But, the current study is not similar to another number of studies, the first in Debre Markos City Hospital located in northwest of country Ethiopia ([Desta et al., 2018](#)), where married health workers represented (43.3%), and the second study in Kuwait ([Alnoumas et al., 2012](#)) and the third study in Vietnam ([Tien et al., 2021](#)) that found a high percentage of married health workers, where it was (86.7%, 84.0%, respectively). The research sees this difference between studies as a result of the social customs, possibilities, and requirements for marriage differ from one country to another

According to the levels of education of health care workers, this research appears to comprise fifty percent bachelor's degree holders and (38.0%) diploma degree holders, and it also included (7.3%) Graduate studies, as well as (4.7%) secondary degree holders. Furthermore, there is significant variation across educational levels. The educational level outcomes are consistent with a research carried out in one hospital in Basra ([Mousa, 2019](#)), at which 46 percent of participants held a bachelor's degree. It contrasts with

a study carried out in Egypt (Abdel Wahed et al., 2020), Where it was discovered that (27.8%) of the participants held a bachelor's degree.

The researcher attributed the reason for the high percentage of health workers with a bachelor's degree is due to a large number of private and public health and medical group faculties. In Najaf only, there are 4 private and 3 public, in addition to a not small number in other governorates, and thus the increase in the number of bachelor's graduates each year (Ministry of Higher Education and Scientific Research, 2019, Ministry of Higher Education and Scientific Research, 2019). In addition, the Ministry of Health allows employees who have diploma degrees from institutes to complete their studies for a bachelor's degree in the same specialty as those who obtained the diploma.

In terms of professional levels, largest percentage (27.3 percent) belongs to nurses, followed by lab technicians (23.7%), medical assistants (18.0%), pharmacists (17.7%), physicians (7.3%), an x-ray technicians (0.8%), and other professionals (5.2%) Our results are consistent with a research in Egypt (Abdel Wahed et al., 2020), which only found that the proportion of nurses (25.1%) but contrasted in the percentage of Doctor of medicine (31.2%) in the same study. While another study in a regional hospital in Ghana (Ocran and Tagoe, 2014) found an agreement with our result among physicians only (7.0%) and a difference in the percentage of nurses(42.3%).

On the other hand, a study conducted in Iraq Baquba Hospital (Al-Salihiy and Enad, 2017) found that the percentage of Medical assistants and Lab. Technician were (10.5,16.0 percent, respectively); these results are dependable with what we found. At the same time, the profession of pharmacist(11.0%) and X-ray Technician(2.2%) was founded in a research conducted at Ethiopia (Jemal et al., 2019).

The researcher thinks that the discrepancy between the research studies is attributable to the distribution of healthcare workers, which varies by hospital, the size of the samples, and the randomly chosen group of health care workers.

Regarding years of experience from Table 2, the majority of study members have ($\leq$ five years) (66.4%), while the health workers had the most experience (< 5 years) represented (33.6%). Our results are in line with studies conducted in Iraq (Daham, Jasim, and Zakair, 2020) and Al Hilla Teaching Hospitals/ Iraq (Sekab and Abd, 2021), the two studies found that the majority of healthy workers (56.0%, 57%, respectively) have (≤ 5) years of experience.

The interpretation of the few years of experience of health workers may be due to the employment of a lot of young staff and the entry of a large number of graduates from the health and medical group univer-

Table 2. Distribution of health workers according to experience years and Training Courses.

Variable	Groups	N	%
Years of experience	≤ 5 (Years)	255	66.4
	< 5 (Years)	129	33.6
Training Courses	Non	246	64.1
	1-5	130	33.8
	6-10	8	2.1
Total		384	(100%)

sities in the year 2021 to work in health institutions, especially in hospitals.

On the other hand, training courses on the topic of communicable disease prevention. The responses of health workers showed that (64.1%) did not enter or participate in training courses, while those who answered yes or who were entering training courses represented (35.9%). The participants indicated that (33.8 percent) of them had taken one to five training courses, while (2.1%) had taken six to ten. The findings of our investigation concur with those of a research study carried out in West Saudi Arabia (Al-Ghamdi and Kabbash, 2011), It revealed that 72.3 percent of healthcare professionals did not take part in preventative infectious disease course (Sekab and Abd, 2021), research discovered that the majority (57.5%) did not take part in the training sessions. However, the research conducted in Iraq differs (Al-Jubouri, 2014) found that (62.0%) participated in infection control training.

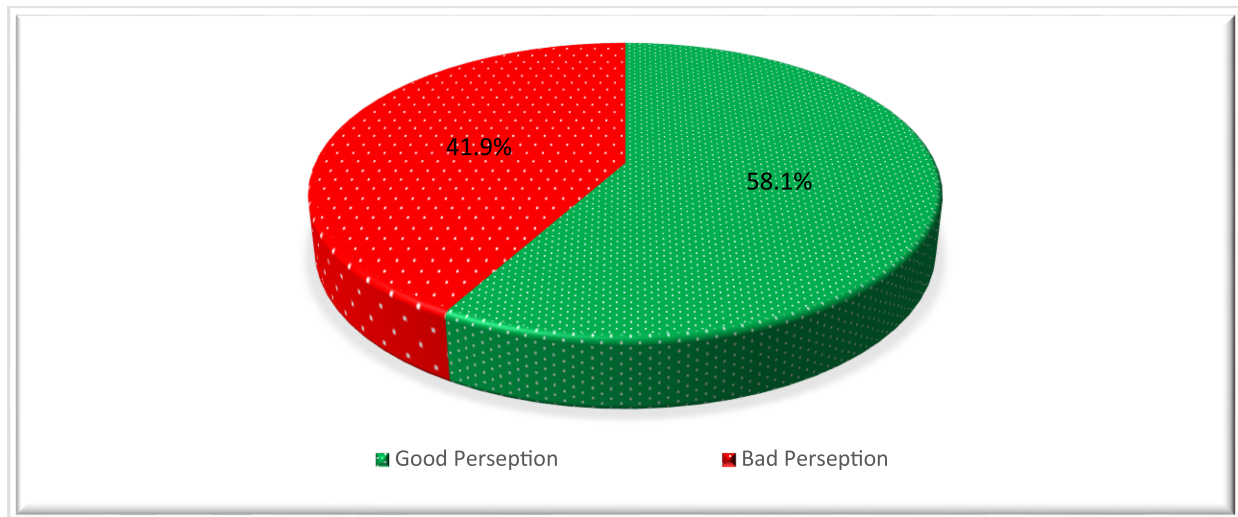
In terms of the location of the training courses, All of the training programs took place within the country based on the responses of the health personnel. Due participation in training programs outside Country need financial sponsorship from Country's health ministry, Or due to the lack of an alternative staff, another reason is the refusal of health workers to go to participate in courses outside Iraq because of their obligations to work after the end of the official working hours.

This difference in training courses between studies may be due to the policies and instructions of health authorities in disease control programs, as well as the recent spread of the Corona pandemic, the restrictions and strict procedures imposed, and the increase in the total number of patients, that hampered the construction of education programs to avoid infectious diseases.

Table 3 illustrates the correlation between health workers' educational attainment and years of expertise. The largest percentage (60.8%) of hospital staff with a bachelor's degree have (≤ 5) years of expertise, while 47.3% have a diploma and (> 5) years of experience. This suggests that the hospital's adminis-

Table 3. Association between Experience years for health workers with education Levels.

Variable		Experience years		p-value
		≤5	> 5	
Educational level	Academic	11 (4.3)	7(5.4)	0.001
	Institute	85 (33.3)	61 (47.3)	
	Bachelor	155 (60.8)	37 (28.7)	
	High Degree	4(1.6)	24(18.6)	
Total		255(100.0)	129(100.0)	

**Fig. 1.** Shows overall attitudes.

trative and planning staff are acting appropriately by striking a balance between education and experience.

The overall number of years of research is in disagreement to years of expertise, with more years of research (higher educational degree) translating into less time working in the healthcare industry. The distinction between years of experience and education degree is also significant, as indicated by the p-value (0.001).

Regarding the main axis of the study, the attitudes of health workers, more than half of the participants (health workers) (58.1%) had positive attitudes, while (41.9%) of them had negative attitudes. In addition, there were statistically significant differences between them (0.002). Table 4 shows the response to the questions about prevention and control of communicable diseases using a Likert scale. For more clarification, see Fig. 1.

This result is in line with a previous study conducted in a teaching hospital at the University of Sierra Leone (Sulaiman Kanu et al., 2021) found results similar to ours (58.3%). In addition, there is a significant difference at the p-value (<0.001).

The level of positive attitudes in our current study was better than in many studies conducted on health

workers, the first in Bahirdar City Hospital in Ethiopia (Gulilat and Tiruneh, 2014) and the second in Gondar Hospital, located in northwestern Ethiopia (Abate and Mekonnen, 2020), and found (55.6% and 35.5% respectively) to have positive attitudes.

On the contrary, other studies conducted on health workers found a better and higher percentage than our current study, in Nepal conducted in Kathmandu Valley Hospital (Shrestha et al., 2017), in Vietnam (Tien et al., 2021) conducted on Vietnamese health workers with positive attitudes and other conducted in Saint Kitts (Francis et al., 2021). These studies found that (73.2%, 71.5% and 64.7 respectively) of health workers have positive attitudes. As for Iraq, a study conducted in the hospitals of the city of Mosul (Taqi, Al-Sarray, and Al-Hafidh, 2021) found a high percentage of good attitudes among health workers (84%).

The reason for this difference in the attitudes of health workers may be related to the difference in the academic background of the participants in the studies, the country's policy in combating and controlling communicable diseases, the method of sampling, and the sample size between studies. Or, it may be attributed to the high levels of motivation

Table 4. Responses to attitudinal statements and overall attitudes of health workers about communicable disease prevention by Likert type.

N	Variables	Response of health workers				
		Strongly Agree N (%)	Agree N (%)	Neutral N (%)	Disagree N (%)	Strongly Disagree N (%)
1	Do you think it is necessary to wear a mask when caring for patient	293(76.3)	77(20.1)	11(2.9)	0(0.0)	3(0.8)
2	It is necessary avoid contact with blood and fluids without gloves	293(76.3)	60(15.6)	11(2.9)	9(2.3)	11(2.9)
3	Do you think the necessary staying 1.5-2 meter away provides adequate protection from communicable diseases	241(62.8)	81(21.1)	40(10.4)	11(2.9)	11(2.9)
4	There is caution for travelers coming from endemic countries	62(16.1)	38(9.9)	47(12.2)	103(26.8)	134(34.9)
5	Do you think the needle cap should be returned after use and before disposal of	264(68.8)	76(19.8)	25(6.5)	11(2.9)	8(2.1)
6	Do you refuse to shake hands with the patient?	39(10.2)	6(1.6)	21(5.5)	88(22.9)	230(59.9)
7	Do you believe the necessary to avoiding mosquito bites to prevent blood-borne diseases	178(46.4)	113(29.4)	59(15.4)	20(5.2)	14(3.6)
8	Do you think the obligation to taking the vaccine can protect against infection	211(54.9)	9(24.5)	45(11.7)	21(5.5)	13(3.4)
9	Do you think the necessary to dispose of the bed linen and clothes of the dead patient	232(60.4)	73(19.0)	28(7.3)	34(8.9)	17(4.4)
10	Do you think isolating the patient is one of the important ways to break the chain of infection	267(69.5)	67(17.4)	22(5.7)	16(4.2)	12(3.1)
11	It's necessary to wear gloves when examining the patient and doing lab test	70(18.2)	16(4.2)	30(7.8)	88(22.9)	180(46.9)
12	Do you think wears the person protective equipment decrease the ability to infected with disease	245(63.8)	105(27.3)	24(6.3)	8(2.1)	2(0.5)
13	Do you think wear gloves to protect from infectious diseases with hand washing	60(15.6)	52(13.5)	59(15.4)	135(35.2)	78(20.3)
14	Do you think the caution from Prick by needle is important to prevent transmission of diseases	278(72.4)	75(19.5)	19(4.9)	6(1.6)	6(1.6)
15	Do you think sterilization is very important procedure before and after surgery	323(84.1)	41(10.7)	11(2.9)	4(1.0)	5(1.3)
16	Do you think it is necessary to use an N95 mask when taking sample from the patient's mouth with infectious respiratory disease	256(66.7)	71(18.5)	44(11.5)	7(1.8)	6(1.6)
17	Agree to don't allow visitors to enter the isolation room	19(4.9)	9(2.3)	38(9.9)	70(18.2)	248(64.6)
18	It is necessary to caution from close contact between health workers and patient in isolation room	275(71.6)	75(19.5)	15(3.9)	10(2.6)	9(2.3)
19	Do you think it is necessary not to wear a mask that has been used by someone?	24(6.3)	6(1.6)	22(5.7)	84(21.9)	248(64.6)
20	Do you prefer to taking a total all dose to treated from diseases	24(6.3)	18(4.7)	60(15.6)	131(34.1)	151(39.3)
	overall attitudes	Rating		No.	%	p-value
		Positive		223	58.1	
		Negative		161	41.9	0.002
		Total		384	100.0	

and appropriate administrative support for health workers and the establishment of courses supported by policymakers in countries with a positive attitude level. On the other hand, positive attitudes are associated with good knowledge, which was found in the results of our current study on our health workers.

Concerning the association between the attitude and the social and demographic characteristics of the health workers, it was found that each item in the lower Table 5 had no significant association where the p-value was (>0.05).

These results correspond to a study conducted in Henan Province, China (Zhang et al., 2020). It was got as no significant association p-value (>0.05), and (Parajuli et al., 2020) also found no significant association between attitudes with gender and profession p-value = (0.06, 0.29 respectively) in their study

conducted in Seti Hospital Provincial Nepal. (Huynh et al., 2020) also found no significant association between attitudes and age groups p-value = (0.151) in a study conducted in Ho Chi Minh Hospital, Vietnam.

As for Iraq, (Fadiel, Chiad, and Kadhum, 2021) found in their study that was conducted in Najaf governorate that there is no significant association between attitudes and socio-demographic characteristics p-value (>0.05), which supports our results, This explains why health workers' attitudes toward the prevention of communicable diseases are universal and do not target specific groups based on age, gender, occupation, or any other demographic characteristics. The problem or need to improve attitudes may be equally present across all groups, so any interventions or programs aimed at improving attitudes must target everyone equally.

Table 5. Association between Attitudes and socio-demographic characteristics.

Socio-demographic characteristics		good N (%)	bad N (%)	p-value
Age (years)	20-26	120(53.8)	78(48.4)	0.763
	27-33	59(26.5)	50(31.1)	
	34-41	29(13.0)	23(14.3)	
	42-48	11(4.9)	6(3.7)	
	≥ 49	4(1.8)	4(2.5)	
Gender	Male	71(31.8)	59(36.6)	0.326
	Female	152(68.2)	102(63.4)	
Profession	Physician	19(8.5)	9(5.6)	0.234
	Pharmacist	34(15.2)	34(21.1)	
	Lab. Technician	55(24.7)	36(22.4)	
	Medical Assistant	39(17.5)	30(18.6)	
	Nurses	59(26.5)	46(28.6)	
	X-ray Technician	1(0.4)	2(1.2)	
	Others	16(7.2)	4(2.5)	
	Graduate Studies	18(8.1)	10(2.6)	
Educational level	Secondary	8(3.6)	10(6.2)	0.610
	Diploma	85(38.1)	61(37.9)	
	Bachelors	112(50.2)	80(49.7)	
	Graduate Studies	18(8.1)	10(2.6)	
Marital status	Single	105(47.1)	72(44.7)	0.786
	Married	110(49.3)	82(50.9)	
	Divorced	5(2.4)	5(3.1)	
	Widowed	4(1.8)	1(0.6)	
Training Courses	Yes	74(53.6)	64(46.4)	0.320
	No	149(60.6)	97(39.4)	
Experience years	≤5 (Years)	150(58.8)	105(41.2)	0.675
	< 5 (Years)	73(56.6)	56(43.4)	
Total		223	161	384

As for each of the training courses and years of experience, also shown in [Table 5](#), it was found in our study that there was no significant correlation between health workers' attitudes with training courses in the control and prevention of communicable diseases p-value(0.320). Our study result was in line with the other study conducted in Turkey, Kutahya Hospital ([Korkmaz et al., 2016](#)), which found a p-value (0.90). In Iraq, a study conducted on Najaf hospitals ([Fadiel, Chiad, and Kadhum, 2021](#)) found no significant association p-value (0.371), This finding suggests that simply providing training may not be sufficient to improve attitudes. There may be deficiencies in several areas, including the course content—is it relevant, practical, and responsive to the needs of healthcare workers? The training method, the application of knowledge, motivation, and the gap between knowledge, practice, and attitude. Workers may acquire knowledge, but it may not necessarily translate into a change in attitudes due to other factors (such as burnout, work pressure, lack of resources, and organizational culture).

In terms of the association between years of experience and attitudes of health workers. The table number ([Giardina et al., 2016](#)) also shows that there

is no significant association p-value(0.675)., and this result is consistent with a study conducted in Vietnam ([Huynh et al., 2020](#)) p-value (0.453) no association, This explains why experience in itself does not necessarily guarantee positive attitudes, as there may be other factors (such as the type of training they have received, level of knowledge, access to resources, organizational culture, management support) that are more influential on attitudes than just the number of years of experience.

4. Conclusion

The study showed that more than half of healthcare workers have a positive attitude. A strong correlation was also found between these attitudes and training courses. Furthermore, the majority of healthcare workers are young, have less than five years of professional experience, and are associated with a high educational level. The majority of these individuals are young healthcare providers who do not participate in educational programs offered outside of Iraq. Attitudes toward infectious diseases are not affected by sociodemographic factors, such as marital status,

gender, age, place of residence, profession, educational programs, and length of experience.

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Conflict of interest

None.

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