

Assessing Knowledge, Attitude, and Practice (KAP) towards Monkeypox among Healthcare Workers in JORDAN: A Cross-Sectional Survey

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ABSTRACT

Introduction: The zoonotic features and potential for transmission between animals and humans make the monkeypox (MPX) virus, a member of the orthopoxvirus family, a serious threat. Unfortunately, healthcare staff's lack of knowledge and readiness about MPX has made it harder to implement effective prevention and response plans. Our current understanding of the KAPs (Knowledge, Attitudes, and Practices) among Jordanian clinicians could benefit from additional research.

Methods: This cross-sectional study aimed to evaluate the MPX KAP among 300 healthcare workers (HCWs) in two private hospitals in the Irbid governorate of Jordan. We employed descriptive statistics, such as percentages and frequencies, as well as an independent sample t-test, one-way ANOVA, and multiple linear regression (enter method) for data analysis.

Results: Although differences existed between demographic groups, the study found that participants had an average level of MPX knowledge proficiency. Out of a total of 300 participants, 196 were female and 104 were male, with 52.7% in the 20–30 age bracket. Compared to their female counterparts, male respondents exhibited higher levels of knowledge, attitudes, and practices regarding MPX. Attitudes and practices towards MPX varied by age group and level of education, demonstrating how demographic factors impact these aspects of public health. Additionally, monkeypox attitudes were lower among women, those with a diploma degree, and those aged 31–40.

Conclusions: Healthcare staff require adequate training and continuous education to address their lack of knowledge and attitudes regarding MPX protection. Staying updated about new illnesses like MPX is crucial, as the COVID-19 pandemic demonstrated. To effectively tackle global health concerns, continuous learning and up-to-date knowledge are essential.

Keywords: monkeypox; Knowledge; Attitude; and Practice.

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1. INTRODUCTION

The global public health emergency designation has been assigned to the cross-border epidemic of human monkeypox (HMPX). According to Petersen et al. (2019), the orthopoxvirus group is where the MPX virus belongs. Public health professionals are debating whether the monkeypox virus poses a new threat due to the persistent pandemic it has caused (Centers for Disease Prevention and Control). Monkeypox (MPX) is a pathological condition that arises from infection with the MPX virus. Doty et al. (2017) have identified this ailment as a zoonotic viral illness, capable of transmission from animals to humans. Additionally, according to the World Health Organization (WHO), interpersonal contact can result in the transmission of the MPX virus. Khodakevich et al. (1987) were the first to identify the MPX virus in primates. However, it has also been found to spontaneously infect various other species, including rope squirrels, tree squirrels, Gambian pouched rats, and dormice. Lesions can range in severity from moderate to severe and may cause significant discomfort or irritation (Malik et al., 2023; Guarner et al., 2022). The origin of the animals remains undetermined; nonetheless, rats probably harbor the pathogen (Alshahrani & Algethami, 2022). Hunting involves engaging with both living and deceased animals, as well as consuming meat from wild animals or livestock, both of which have been identified as potential risk factors (Dada et al., 2022). The primary mode of transmission for MPX is through direct contact with nasal secretions, infected melanomas, or contaminated objects (Vaughan et al., 2020). The incubation period of MPX commonly ranges from 6 to 13 days, with a potential variation of 5 to 21 days (Reynolds et al., 2006). The symptoms typically manifest within a timeframe of fourteen to twenty-one days and are commonly self-limiting (Vaughan et al., 2020). The clinical manifestations of the disease resemble those of smallpox, albeit with a lesser degree of severity (Reynolds et al., 2006). According to Brown and Leggat (2016) and Schwartz et al. (2019), lymphadenopathy is a

salient feature that distinguishes smallpox from MPX. Vaughan et al. (2020) stated that symptoms of monkeypox (MPX) include fever, headache, fatigue, swollen lymph nodes, back discomfort, muscle aches, and a rash. The efficacy of the smallpox vaccine in preventing monkeypox (MPX) was found to be 85%, according to studies conducted by Hammarlund et al. (2005) and Fine et al. (1988). The MVA-BN vaccine and tecovirimat, a specific therapeutic intervention for MPX, were granted approval by the Food and Drug Administration (FDA) in 2019 and 2022, respectively. Nevertheless, the accessibility of these preventive measures remains limited, resulting in a lack of widespread availability. Additionally, individuals below the age of 40 or 50 are no longer benefiting from the safeguards previously afforded by smallpox vaccination initiatives. Volkmann et al. (2021) and Borra et al. (2022) provided empirical evidence for the significance of preventive measures, early detection, and prompt management response, which Goyal et al. (2022) highlighted. Nevertheless, the World Health Organization (WHO) has identified a significant barrier to effectively preventing the re-emergence of MPX: the lack of understanding surrounding MPX, particularly among healthcare practitioners (Nadar et al., 2022). As a result, healthcare professionals need to know where monkeypox (MPX) is common, as this can make them more likely to get human MPX (Alshahrani & Algethami, 2022). Hence, the primary objective of this study was to:

1. investigate the knowledge, attitude, and practice (KAP) of healthcare personnel in two private hospitals in Irbid with regards to MPX.
2. assess whether there are statistically significant differences in knowledge, attitudes, and practices (KAP) among the participants based on their socio-demographic factors, namely gender, age, education level, and experience.
3. conduct an empirical investigation to examine the relationship between socio-demographic variables, including gender, age, education level, and

experience, and Knowledge, Attitudes, and Practices (KAP) scores.

2. METHODOLOGY

2.1. Study Design and Setting

A questionnaire was developed to assess the knowledge, attitudes, and practices (KAP) related to monkeypox among healthcare workers (HCWs) in the Irbid governorate of Jordan from April to July 2022. This study utilized a self-administered questionnaire specifically designed for this research objective. The questionnaire was distributed to participants in two well-established private hospitals for data collection.

2.2. Sample and Data Collection

The study included a diverse group of healthcare workers, encompassing physicians, nurses, paramedics, radiologists, and lab technicians, all of whom were employed at the designated facilities. Data collection from the two private hospitals was carried out using a convenience sampling methodology. Regarding the sample size, the study was confined to two privately owned hospitals, with efforts made to include all healthcare personnel employed within these facilities. The questionnaire was disseminated in the English language. A total of 500 questionnaires were distributed among the two hospitals, with a response rate of 300 questionnaires received by the research team.

2.3. Study Tool

The KAP (Knowledge, Attitudes, and Practices) questionnaire utilized in this study was adapted from instruments originally developed by Ahdab (2021) for cross-sectional investigations involving doctors in Syria. It was also derived from a previous study conducted by Zhong et al. (2020) that focused on COVID-19. Additionally, it included elements from H1N1 questionnaires, the severe acute respiratory syndrome (SARS) study by Lau et al. (2003), and theories like the health behavior principles examined by Rubin et al. (2014). The study employed two questionnaires to assess

participants' knowledge and attitudes. The knowledge questionnaire comprised six multiple-choice questions, while the attitude questionnaire consisted of four multiple-choice questions. This survey included a set of seven multiple-choice questions designed for practice.

Two consultants with expertise in preventive medicine reviewed the initial version of the questionnaire, and their recommendations led to updates to the questions. A pilot test involving 18 healthcare workers evaluated the dependability of the questions. Based on the feedback received during the pilot test, the questionnaire was modified. The study questionnaires were subjected to an estimation of Cronbach's alpha, yielding an acceptable result of 0.74 (Taherdoost, 2016). The evaluation included an examination of socio-demographic factors, including age, gender, marital status, educational achievement, and professional experience. The survey required a time commitment of around 5 to 10 minutes for completion and was disseminated in the English language.

2.4. Data analysis

The data analysis was conducted using the Statistical Package for Social Sciences (SPSS, IBM, Chicago, IL, USA). Various statistical methods were employed, including descriptive statistics such as frequencies and percentages, the independent sample t-test to compare two groups, one-way ANOVA to compare more than two groups, and multiple regression analysis using the Enter technique.

3. RESULT

Three hundred fifty responses to the survey questionnaire were received; however, 50 had to be disregarded due to a high number of missing data. Thus, 300 participants were included in the final analysis. The age group between 20 and 30 comprised 48.7% (146) of the participants, and 64.7% (194) were females. Approximately 50.3% (151) of participants held a bachelor's degree, followed by 25.6% (77) with a diploma, and 24% (72) with a master's degree. Furthermore, the independent sample t-test indicated a significant difference

(P-value = 0.001) between male and female participants, with males demonstrating higher levels of knowledge about MPX (Mean = 3.44) compared to female participants (Mean = 2.97). Using one-way ANOVA,

participants also differed statistically (P-value = 0.001) according to age groups. Participants aged 31-40 scored higher levels of knowledge about MPX compared to other age groups. More information is depicted in Table 1.

Table 1: Demographic characteristics of participants and the score of Monkeypox knowledge by socio-demographic variables

Characteristics		Number of participants (%)		Knowledge score (mean ± standard deviation)		P-value
Gender	Male	104	34.7%	3.44	1.21	0.001
	Female	196	65.3%	2.97	1.17	
Age	20-30	158	52.7%	2.89	1.13	< 0.001
	31-40	105	35.0%	3.72	1.14	
	41-50	37	12.3%	2.51	1.02	
Education	Diploma	116	38.7%	3.13	1.19	> 0.05
	Bachelor's degree	166	55.3%	3.15	1.24	
	Postgraduate	18	6.0%	3.06	1.00	
Experience	One year and less	77	25.7%	3.48	1.20	< 0.05
	One year to 5 years	95	31.7%	2.93	1.14	
	5 years to 10 years	44	14.7%	2.93	0.90	
	More than 10 years	84	28.0%	3.17	1.35	
Knowledge of Monkeypox score		300	100%	3.14	1.20	

No statistical differences (P-value > 0.05) in the level of knowledge about MPX were found among participants according to their education level. However, a statistical difference (P-value < 0.05) was found based on the length of experience. Participants with less than one year of experience had a higher level of knowledge (Mean = 3.48), followed by participants with more than ten years of experience (Mean = 3.17).

According to this questionnaire, healthcare workers have an average knowledge of MPX. The correct response rates for the six MPX knowledge questions ranged from 23.3% to 94% (Table 2). The mean knowledge score was 3.14 (SD: 1.20), indicating a correct answer percentage of 52.3% ($3.14/6 * 100$) on this knowledge test. Knowledge of MPX symptoms was highest (94%), while the

perception of MPX severity was lowest (23.3%).

The overall attitude towards MPX was neutral. Most respondents believed that vaccination effectively controls the spread of MPX, with 71.0% agreeing (Table 2). Only 32.3% of the respondents expected MPX to spread in Jordan, whereas about 59.3% were confident that MPX would be controlled. Furthermore, most participants performed well regarding MPX prevention practices. Over 80% indicated that they avoid crowded places, wash their hands regularly, avoid shaking hands, practice better hygiene than before, and use hand disinfectant. However, wearing facemasks when in contact with someone showing symptoms received the lowest score among the practices performed by the participants.

Table 2: Summary of Questions for Knowledge, Attitudes, and Practices towards Monkeypox. Percentages represent the correct answers of Knowledge and the most common answers by healthcare workers of the attitudes and practices.

Knowledge
The main clinical symptoms of monkeypox are fever, headache, rash, and swollen lymph nodes (Yes, 94%)
Symptoms of monkeypox are similar to the common symptoms of smallpox (chickenpox) (Yes, 72.3%)
Monkeypox infection causes severe symptoms in all patients (No, 57.3%)
Persons with monkeypox can infect the virus others when a fever is not present (No, 39.7%)
Monkeypox infection causes serious disease (No, 23.3%)
Although there is no proven cure for monkeypox, the available treatments lead to recovery (No, 26%)
Attitudes
Do you think getting a vaccination is an effective way of preventing the spread of the disease (Yes, 71.0%)
Do you think the curfew is an effective way of preventing the spread of the disease (Yes, 63.0%)
Do you think that monkeypox will spread widely in Jordan (No, 54.7%)
Do you think that monkeypox will be successfully controlled (Yes, 59.3%)
Practices
Avoid crowded places (83.7%)
Avoid sex behaviors (kisses, touching) with someone who has the symptoms (84.3%)
Avoid shaking hands (84.3%)
Practice better hygiene than before (80.3%)
Use disinfectants (ethanol) with you are dealing with someone with symptoms (88.3%)
Wear facemasks when you contact someone with symptoms (72.0%)
Wash hands when you touch regularly (85.7%)

In Table 3, the independent sample t-test indicated a significant difference (P-value < 0.005) between male and female participants, with males scoring higher in attitudes towards MPX (Mean = 2.36) than female participants (Mean = 2.22). Using one-way ANOVA, participants differed statistically (P-value < 0.005) according to age groups. Participants aged 41-50 scored higher in attitudes towards MPX (Mean = 2.34) compared to other age groups. Additionally, statistical differences (P-value < 0.05) in attitudes towards MPX were found among participants according to their education level. Compared to diploma and bachelor's degree holders, participants with postgraduate degrees showed better attitudes towards MPX (Mean = 2.51). Moreover, no statistical difference (P-value > 0.05) was found in participants' attitudes

towards MPX according to their experience. More information is depicted in Table 3.

The mean practice score was 5.80 (SD: 1.65), indicating a correct answer percentage of 82.85% (5.8/7 * 100) on this practice test. The independent sample t-test indicated a significant difference (P-value = 0.001) between male and female participants, with males scoring higher in practices towards MPX (Mean = 6.19) than female participants (Mean = 5.60). The one-way ANOVA test indicated no statistical differences (P-value < 0.005) according to age groups. Additionally, statistical differences (P-value < 0.05) in practices towards MPX were found among participants according to their education level. Compared to diploma and postgraduate holders, participants with bachelor's degrees showed

better practices towards MPX (Mean = 6.19). Furthermore, a significant statistical difference (P-value < 0.05) was found in participants' practices towards MPX

according to their experience. Participants with 5-10 years of experience had a higher level of practice (Mean = 6.45). More information is shown in Table 4.

Table 3: Attitudes towards Monkeypox by socio-demographic variables

Characteristics		Attitudes score (mean ± standard deviation)		P-value
Gender	Male	2.36	0.39	< 0.05
	Female	2.22	0.49	
Age	20-30	2.31	0.41	< 0.05
	31-40	2.18	0.55	
	41-50	2.34	0.37	
Education	Diploma	2.19	0.49	< 0.05
	Bachelor's degree	2.30	0.43	
	Postgraduate	2.51	0.46	
Experience	One year and less	2.22	0.45	> 0.05
	One year to 5 years	2.32	0.44	
	5 years to 10 years	2.33	0.21	
	More than 10 years	2.22	0.57	
Attitudes towards Monkeypox		2.27	0.46	

Table 4: The score of practices towards Monkeypox by socio-demographic variables

Characteristics		Practices score (mean ± standard deviation)		P-value
Gender	Male	6.19	1.15	0.001
	Female	5.60	1.83	
Age	20-30	5.74	1.86	> 0.05
	31-40	5.74	1.44	
	41-50	6.24	1.14	
Education	Diploma	5.28	1.71	< 0.001
	Bachelor's degree	6.19	1.51	
	Postgraduate	5.61	1.61	
Experience	One year and less	5.75	1.66	< 0.05
	One year to 5 years	5.76	1.91	
	5 years to 10 years	6.45	1.07	
	More than 10 years	5.56	1.52	
Practices towards Monkeypox		5.80	1.65	

The results of multiple linear regression analyses of variables that scored significantly on KAP are depicted in Table 5. The results show that being female and having more than one year of experience are predictors of lower knowledge of Monkeypox compared to the reference groups (β : -0.303, $P < 0.05$; β : -0.494 to -1.024, $P < 0.05$, respectively). Furthermore, the results indicated that being female, being aged between 31-

40, and having a diploma are predictors of a lower attitude towards Monkeypox compared to the reference groups (β : -0.171, $P < 0.05$; β : -0.202, $P < 0.05$; β : -0.249, $P < 0.05$, respectively). For practices towards Monkeypox, the results indicated that being female and having a diploma are predictors of lower practice compared to the reference groups (β : -0.171, $P < 0.05$; β : -0.202, $P < 0.05$).

Table 5: Results of multiple linear regression (Enter method) of sociodemographic factors associated with Monkeypox knowledge, attitude, and practice.

Variable	Coefficient (β)	Standard error	P-value	95.0% Confidence Interval for B	
				Lower Bound	Upper Bound
Knowledge					
Gender (Male, reference)	1.000	1.000	1.000	1.000	1.000
Female	-0.303	0.138	< 0.05	-0.574	-0.032
Experience (1 year or less, reference)	1.000	1.000	1.000	1.000	1.000
One year to 5 years	-0.722	0.174	< 0.001	-1.065	-0.380
5 years to 10 years	-1.024	0.225	< 0.001	-1.466	-.582
More than 10 years	-0.494	0.241	< 0.05	-0.968	-0.020
Attitude					
Gender Male (reference)	1.000	1.000	1.000	1.000	1.000
Female	-0.171	0.058	< 0.05	-0.285	-0.057
Age (20-30, reference)	1.000	1.000	1.000	1.000	1.000
31-40	-0.202	0.073	< 0.05	-0.346	-0.058
Education Postgraduate(reference)	1.000	1.000	1.000	1.000	1.000
Diploma	-0.249	0.117	< 0.05	-0.480	-0.018
Practices					
Gender (Male, reference)	1.000	1.000	1.000	1.000	1.000
Female	-0.089	0.042	< 0.05	-0.172	-0.007
Education (Postgraduate, reference)	1.000	1.000	1.000	1.000	1.000
Diploma	-0.067	0.085	< 0.05	-0.234	0.100

4. DISCUSSION

It is noteworthy to acknowledge that there is a significant lack of awareness regarding monkeypox (MPX) infection among the general public, medical practitioners, and policymakers in low-income countries (Khan et al., 2022). The issue of conspiracy theories surrounding new virus infections has garnered attention due to the ongoing outbreaks in multiple nations globally

(Sallam et al., 2022).

In the final analysis, a total of 300 participants were included in the study. The largest demographic group consisted of individuals aged 20 to 30, representing 48.7% (146 individuals) of the overall sample. Within this age bracket, females comprised 64.7% (194 individuals) of the participants. The study findings revealed that male participants demonstrated a higher

level of expertise in MPX, with a mean score of 3.44, compared to female participants, who had a mean score of 2.97. These findings were consistent with previous studies conducted by Youssef et al. (2023) and Sallam et al. (2022).

However, the study did not identify significant disparities in awareness levels of MPX across individuals with different educational backgrounds. The survey findings indicated that healthcare practitioners possess a moderate level of understanding regarding monkeypox, confirming the results presented in Youssef et al. (2023). An inverse relationship was found between advanced age and high levels of knowledge about the subject matter. The findings suggest no significant disparities in MPX knowledge among participants based on their education level. This contradicts the conclusions drawn by previous studies (Youssef et al., 2023; Malaeb et al., 2023; Kumar et al., 2022), which suggested that individuals with a postgraduate degree tend to possess greater knowledge of MPX.

Additionally, it was observed that healthcare workers with less than one year of experience demonstrated a higher level of proficiency in knowledge compared to their counterparts with greater experience. Importantly, the study found a high level of knowledge regarding MPX symptoms, reported at 94%. Interestingly, those with less than one year of experience had a higher level of knowledge in this regard.

A comprehensive understanding of the MPX virus and its associated ailments is crucial in helping communities enhance their preparedness and effectively manage a potential MPX epidemic. The study investigated the knowledge, attitudes, and practices (KAP) related to MPX, with a specific focus on identifying demographic factors associated with these attributes. These findings have the potential to inform public health officials and healthcare workers in targeting interventions aimed at preventing and educating about MPX during potential future outbreaks, consistent with

Youssef et al. (2023), Maqableh et al. (2024), and Kumar et al. (2022).

Participants noted that a significant portion of respondents had a reasonable level of general knowledge about monkeypox (MPX). This finding contradicts the results of Bates and Grijalva (2022), who reported very low levels of MPX knowledge among participants. The study's findings on attitudes and practices surrounding MPX among healthcare workers (HCWs) indicate a diverse landscape. Generally, attitudes towards MPX were characterized by a moderate level of neutrality. The study found that a majority of participants (71.0%) believed in the effectiveness of vaccination to prevent the spread of MPX. However, this percentage is slightly lower than that reported by Alshahrani et al. (2022), who found a confidence level of 78.6% in the Saudi Ministry of Health's ability to manage MPX locally.

Furthermore, 46% of participants believed that MPX could spread in Jordan. In contrast, Alshahrani et al. (2022) reported that 64.6% of their study sample believed MPX could easily spread to Saudi Arabia. Regarding variations among healthcare workers based on socio-demographic characteristics, there are projections of a third wave of MPX transmission in Jordan. Nonetheless, a substantial proportion of individuals (59.3%) expressed confidence in their ability to manage MPX.

Attitudes among healthcare workers varied based on socio-demographic factors such as gender, age, and education level. While Malaeb et al. (2023) partially contradicted these findings by suggesting that attitudes do not differ based on gender (consistent with Kumar et al., 2022 and Al-Taani et al., 2023), they observed significant variations in attitudes based on education level.

The majority of participants demonstrated positive behaviors towards preventive measures, with over 80% adhering to guidelines such as avoiding crowded areas, regular handwashing, and maintaining improved hygiene. Notably, the least commonly implemented

measure was the use of face masks when in contact with symptomatic individuals. Individuals with postgraduate degrees tended to hold more positive attitudes, while those with bachelor's degrees tended to exhibit more favorable habits (Bates et al., 2022).

According to Lulli et al. (2022), there was a negative correlation observed between being female, having over one year of experience, and lower levels of MPX knowledge. Similarly, being female, aged 31–40, or holding a certificate degree was associated with weaker sentiments towards MPX. Likewise, females with a diploma tended to engage less in MPX-related practices.

The study's results underscore the importance of tailored interventions focusing on specific demographic groups to enhance healthcare workers' understanding, attitudes, and practices related to MPX. Considering gender differences, levels of experience, and educational backgrounds can significantly influence the knowledge and implementation of MPX management techniques within this professional group.

5. CONCLUSION

Cross-sectional studies consistently indicate that healthcare workers have insufficient knowledge, attitudes, and practices (KAP) regarding protection from monkeypox virus (MPXV). Proper training and continuous, thorough education on emerging diseases are imperative. Evaluating information assumes critical importance, especially in light of previous epidemics and pandemics like COVID-19, which underscore the need for interconnected and specialized knowledge. As global interconnectedness increases, it becomes crucial for individuals to remain informed and educated about emerging diseases such as MERS-CoV, including understanding necessary precautions and best practices to

prevent their spread. Lessons learned from past outbreaks like COVID-19 highlight the necessity of continuous learning and updated knowledge to effectively combat global health threats.

6. LIMITATION

Limitations of the study include potential sampling bias due to limited hospital representation, missing data affecting sample inclusivity, and reliance on self-reported responses susceptible to social desirability bias. The study's scope focused on specific questions about monkeypox (MPX), potentially overlooking broader aspects and requiring more longitudinal insights. It did not consider potential confounding factors, which limits comprehensive understanding. Additionally, the study did not account for regional variations in monkeypox prevalence, thereby potentially limiting its generalizability to other geographic areas.

The cross-sectional design of the study prevents establishing causal relationships between variables and only offers a snapshot of the situation at a specific point in time. Furthermore, the findings may not be applicable to other populations or settings due to the specific context in which the data were collected. Additionally, reliance on self-reported responses may introduce recall bias, as participants may not accurately remember or report their experiences with monkeypox.

7. DECLARATIONS

The authors provide no declaration of a conflict of interest

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تقييم المعرفة والمواقف والممارسات تجاه جدري القروء بين العاملين في مجال الرعاية الصحية في الأردن: مسح مقطعي

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ملخص

مقدمة: إن الخصائص الحيوانية المنشأ وإمكانية انتقالها بين الحيوانات والبشر تجعل من فيروس جدري القروء ، وهو عضو في عائلة فيروسات الجدري الأورثوبوكس، تهديدًا خطيرًا. ولسوء الحظ، فإن افتقار موظفي الرعاية الصحية إلى المعرفة والاستعداد بشأن فيروس جدري القروء جعل من الصعب وضع خطط فعالة للوقاية والاستجابة. إن فهمنا الحالي لـ فيروس جدري القروء في مجموعات الأطباء الأردنيين يمكن أن يستفيد من الأبحاث الإضافية.

الطرق: كان الغرض من هذه الدراسة المقطعية هو تقييم المعرفة، المواقف والممارسة لفيروس جدري القروء، بين 300 من العاملين في مجال الرعاية الصحية الذين يعملون في مستشفيات خاصين في محافظة إربد في الأردن. بالنسبة لهذه البيانات، استخدمنا إحصائيات وصفية مثل النسب المئوية والتكرارات، بالإضافة إلى اختبار t لعينة مستقلة، وANOVA أحادي الاتجاه، والانحدار الخطي المتعدد (طريقة الإدخال).

النتائج: على الرغم من وجود اختلافات بين المجموعات الديموغرافية، فقد وجدت الدراسة أن المشاركين لديهم مستوى متوسط من إتقان المعرفة بفيروس جدري القروء. ومن بين إجمالي 300 مشارك، كان 196 من الإناث و104 من الذكور. وكان 52.7% منهم في الفئة العمرية 20-30 عامًا. بالمقارنة مع نظرائهم من الإناث، أظهر المشاركون الذكور مستويات أعلى من المعرفة والمواقف والممارسات فيما يتعلق بفيروس جدري القروء. تختلف المواقف والممارسات تجاه فيروس جدري القروء حسب الفئة العمرية ومستوى التعليم، مما يوضح كيفية تأثير العوامل الديموغرافية على هذه الجوانب من الصحة العامة. بالإضافة إلى ذلك، كانت المواقف تجاه جدري القروء أقل بين النساء، والحاصلات على درجة الدبلوم، وأولئك الذين تتراوح أعمارهم بين 31 و40 عامًا.

الاستنتاجات: من الواضح أن موظفي الرعاية الصحية يحتاجون إلى تدريب مناسب وتعليم مستمر لمعالجة افتقارهم إلى المعرفة والمواقف فيما يتعلق بحماية فيروس جدري القروء. يعد البقاء على اطلاع بشأن الأمراض الجديدة مثل فيروس جدري القروء أمرًا بالغ الأهمية، كما أظهر جائحة كوفيد-19. ومن أجل معالجة المخاوف الصحية العالمية بشكل فعال، يجب على المرء أن يتعلم باستمرار وأن يكون لديه أحدث المعرفة.

الكلمات الدالة: جدري القروء، المعرفة، الموقف، والممارسة.

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