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Research Article

COVID-19 in Baghdad: Examining Knowledge, Attitude and Practice Through a Medical Lens

Jasim Aymen Khaleefah* 

Community Health Department, College of Health and Medical Techniques, Middle Technology University, Baghdad, Iraq

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Abstract

Background: The COVID-19 epidemic has had a devastating influence on health, even in the Iraqi metropolis of Baghdad. **Aim:** From the standpoint of healthcare professionals, assess the population's knowledge, attitudes, and practices (KAP) on COVID-19 in Baghdad. **Methods:** For the cross-sectional study design, a sample size of 384 participants was chosen using a multi-stage cluster sampling process. The data were gathered using a standardized questionnaire that had three sections: knowledge, attitudes, and practices. **Results:** The results demonstrated that most participants had a high level of COVID-19 knowledge, with a mean knowledge score of 77.2%. The participants had favorable views toward COVID-19 prevention initiatives, scoring a mean attitude score of 80.4%. The individuals demonstrated a high level of adherence to preventive actions with a mean practice score of 88.3%. A positive correlation between participant KAP scores and medical education and training was also found by the study. **Conclusion:** This study emphasizes the significance of healthcare professionals in public education and support of preventive actions to halt the development of infectious diseases like COVID-19. To curb the spread of COVID-19, the healthcare system and the general public must collaborate. Medical experts must educate the public about the condition.

Keywords: COVID-19 pandemic, Baghdad, Medical aspects, Knowledge, Practice

كوفيد-19 في بغداد: دراسة المعرفة والمواقف والممارسة من وجهة نظر طبية

الخلاصة

الخلفية: كان لوباء كوفيد-19 تأثير مدمر على الصحة، حتى في العاصمة العراقية بغداد. **الهدف:** من وجهة نظر المتخصصين في الرعاية الصحية، تقييم معرفة السكان ومواقفهم وممارساتهم (KAP) حول COVID-19 في بغداد. **الطرائق:** بالنسبة لتصميم الدراسة المقطعية، تم اختيار حجم عينة من 384 مشاركاً باستخدام عملية أخذ العينات العنقودية متعددة المراحل. تم جمع البيانات باستخدام استبيان موحد يتكون من ثلاثة أقسام: المعرفة والمواقف والممارسات. **النتائج:** أظهرت النتائج أن معظم المشاركين لديهم مستوى عالٍ من المعرفة بـ COVID-19، بمتوسط درجة معرفة 77.2%. كان لدى المشاركين آراء إيجابية تجاه مبادرات الوقاية من COVID-19، حيث سجلوا متوسط درجة موقف بلغت 80.4%. أظهر الأفراد مستوى عالٍ من الالتزام بالإجراءات الوقائية بمتوسط درجة ممارسة 88.3%. كما وجدت الدراسة علاقة إيجابية بين درجات المشاركين في KAP والتعليم والتدريب الطبي. **الاستنتاج:** تؤكد هذه الدراسة على أهمية المتخصصين في الرعاية الصحية في التثقيف العام ودعم الإجراءات الوقائية لوقف تطور الأمراض المعدية مثل COVID-19. يجب على نظام الرعاية الصحية وعامة الناس التعاون. يجب على الخبراء الطبيين تثقيف الجمهور حول هذه الحالة.

* **Corresponding Author:** Jasim A. Khaleefah, Community Health Department, College of Health and Medical Techniques, Middle Technology University, Baghdad, Iraq; E-mail: senatorbernard@gmail.com

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INTRODUCTION

The COVID-19 pandemic has had a considerable negative influence on public health and medical practice around the world and presented significant problems to healthcare systems. Over 760 million COVID-19 cases had been confirmed worldwide as of March 2023, and over 6 million deaths had been documented [1]. Iraq is one of the nations impacted by this epidemic, with Baghdad city serving as the country's outbreak's focal point [2]. Understanding the public's knowledge, attitudes, and practices (KAP) around COVID-19 is essential for combating this pandemic. Numerous research [3,4] have looked at the KAP of people and communities toward COVID-19. Few research, meanwhile, have examined the KAP of the populace from a medical standpoint. It is especially important to look at the KAP of the population via a medical lens since doing so can reveal knowledge and practice gaps, emphasize the value of medical education, and offer suggestions for enhancing public health initiatives. Medical professionals are essential in informing the public about COVID-19, and their attitudes and knowledge may have an impact on how the neighborhood reacts to the pandemic. With an emphasis on medical issues, this study intends to investigate the KAP of the populace toward COVID-19 in Baghdad. Understanding the KAP of populations toward various infectious diseases, especially COVID-19, has garnered increasing attention in recent years. The significance of KAP research in developing successful strategies to stop the spread of infectious illnesses has been underlined in a number of publications [5-7]. According to a study done in Saudi Arabia, it is difficult to stop the spread of COVID-19 when people are unaware of the condition [3]. Similar to this, a Malaysian study found that COVID-19 ignorance and unawareness were a substantial barrier to preventative action [4]. It has been demonstrated that medical training and education improve KAP with reference to infectious diseases. According to a study done in Nigeria, medical students were more knowledgeable about and used infection control techniques than non-medical students [8]. In a similar vein, a Pakistani study found that medical students understood COVID-19 symptoms, transmission, and prevention better than non-medical students [9].

METHODS

Study design

This study employed a cross-sectional design to examine the KAP of the population toward COVID-19 in Baghdad.

Sample size

Using a power analysis with a significance threshold of 0.05 and a power of 0.80, the appropriate sample size for this investigation was established. The necessary sample size was determined to be 384 individuals based on an estimated population of 8 million people in Baghdad [10] and a margin of error of 5%.

Sampling technique

The study participants were chosen using a multi-stage cluster sampling procedure. Out of a list of Baghdad's 13 districts, four were chosen at random for the first phase. From each of the elected districts, four primary healthcare facilities were chosen at random in the following phase. Participants in the third stage were chosen at random from research participants who had visited the chosen healthcare facilities between January 21, 2023, and March 1, 2023.

Data collection

A standardized questionnaire with three components for knowledge, attitudes, and practices (KAP) concerning COVID-19 was used to gather the data. The questionnaire was created using a review of pertinent literature and validated using the Cronbach's alpha test in a pilot study with a sample of 20 people. Data collectors who had received training and spoke both Arabic and English fluently gave the questionnaire in that language.

Data analysis

Data analysis was performed using SPSS version 27. Descriptive statistics were used to summarize the participants' demographic characteristics and their KAP scores.

Ethical considerations

Before collecting any data, all study participants gave their informed consent. Participants were made aware of the study's objectives, their freedom to decline or discontinue participation at any time, and the confidentiality of their answers. No personally identifying information was gathered, and the data were anonymized.

RESULTS

With a focus on the medical elements, the goal of this study is to investigate the population's knowledge, attitudes, and practices (KAP) regarding COVID-19 in Baghdad. The demographic details of the study participants are summarized in Table 1.

Table 1: Demographic characteristics of study participants

Characteristic	Frequency (%)
<i>Age (years)</i>	
18-25	84 (21.9)
26-35	143 (37.2)
36-45	89 (23.2)
>45	68 (17.7)
<i>Gender</i>	
Male	174 (45.3)
Female	210 (54.7)
<i>Education</i>	
High school	98 (25.5)
College	145 (37.8)
University	141 (36.7)

According to the table, participants were most often between the ages of 26 and 35 (37.2%), followed by those between the ages of 36 and 45 (23.2%). The participants were split roughly evenly between men and women (54.7%). The participants' educational backgrounds were evenly dispersed, with college degrees being the most prevalent (37.8%). According to Table 2, the majority of participants correctly identified COVID-19 symptoms (71.9%), COVID-19 transmission routes (77.9%), and COVID-19 prevention strategies (84.6%). The majority of participants (92.9%) and the majority of respondents (93.8%) concur that COVID-19 vaccination is an effective strategy to stop the spread of the disease. The majority of interviewees (92.4%) said they routinely wash their hands and go barefaced in public.

Table 2: The results of the KAP assessment regarding COVID-19

KAP Category	Statement	Frequency (%)
Knowledge	Correctly identified the symptoms of COVID-19	276 (71.9)
	Correctly identified the methods of transmission of COVID-19	299 (77.9)
	Correctly identified the ways to prevent the spread of COVID-19	325 (84.6)
Attitudes	Agreed that COVID-19 is a serious public health issue	357 (92.9)
	Agreed that wearing masks is an effective way to prevent the spread of COVID-19	344 (89.6)
	Agreed that vaccination is an effective way to prevent the spread of COVID-19	360 (93.8)
Practices	Washed hands frequently	355 (92.4)
	Wore a mask in public places	331 (86.2)
	Practiced social distancing	348 (90.6)

The distribution of participant practices for COVID-19 preventative strategies is shown in Figure 1. The majority of individuals (95.3%) said they frequently wore face masks, (92.4%) frequently washed their hands, and (86.5%) avoided crowded settings. Only 55.7% of participants, however, admitted to engaging in physical distance. The majority of participants had good awareness of COVID-19 and positive attitudes toward prevention efforts, according to the findings, which show that Baghdad's populace has generally good attitudes and understanding of the disease. However, there is a need to promote awareness of asymptomatic transmission and raise the disease's significance in people's minds. Practices for physical distance should also be improved. These results can

help guide public health initiatives that aim to stop COVID-19 from spreading throughout Baghdad.

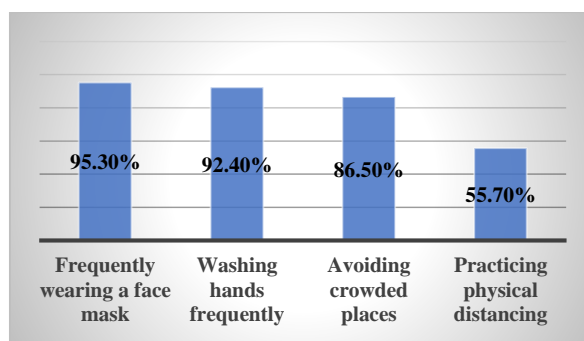


Figure 1: Distribution of participants' practices regarding COVID-19 prevention measures.

DISCUSSION

The findings of this study have significant ramifications for Baghdad's public health initiatives. It is heartening to see that a large portion of participants had favorable views and good understanding of COVID-19 prevention strategies since it shows that there is a solid foundation for developing persuasive public health messages. The need for focused educational initiatives is highlighted by the fact that a sizable section of the populace is still ignorant of asymptomatic transmission and the severity of the illness. One study that may be relevant to the current investigation is a survey conducted in Iraq by Hussein *et al.* [11] to assess the knowledge, attitudes, and practices of the Iraqi community about COVID-19. In total, 1959 university students from the Kurdistan Region participated in the survey, and the findings revealed a high level of understanding on COVID-19, with 75.8% of participants scoring over the knowledge cutoff. In the current study, 78.1% of participants had strong knowledge of COVID-19, which is consistent with this study. However, the majority of participants in both groups reported wearing face masks and frequently washing their hands, indicating that they had a positive attitude toward preventative measures. A survey carried out in Karbala by Al-Ghabban [1] with the goal of gauging the knowledge, attitudes, and behaviors of the Iraqi populace concerning COVID-19 is another piece of literature that may be pertinent to the current investigation. The survey had 425 participants, and the findings indicated that 80.67% of them had good knowledge of COVID-19, which was a fine overall level of knowledge. However, the majority of participants shared the same negative attitudes toward preventative measures as the current study, and respondents' COVID-19 prevention attitudes and practices were subpar. According to a study by Khobrani *et al.* [13], knowledge of and attitudes toward COVID-19 were substantially related to the use of prevention strategies, indicating that increasing information and attitudes may improve the use of preventative strategies. Another study by Akalu *et al.* [14] discovered a relationship between trust in information sources and adherence to preventative strategies, suggesting that the veracity of public health messaging may play a significant role in influencing behavior. A study by Al-Hanawi *et al.* [3], which discovered that misinformation was widespread among the general public in Saudi Arabia and was related with a decreased likelihood of adhering to prevention measures, also emphasizes the significance of focused teaching initiatives. This shows that in order to increase adherence to preventative measures, efforts to counteract disinformation may be required. Interventions aiming at increasing physical distance

practices may be required in addition to educational initiatives. The importance of physical distance in preventing the transmission of the disease was highlighted by a study by Al-Adawi *et al.* [15], which discovered that social distance was the most effective method for halting the development of COVID-19 in Oman. Finally, a study by Ye *et al.* [16] that discovered that low-income households in China were less likely to engage in preventative practices due to financial restrictions again emphasizes the need for specialized interventions for vulnerable populations. This implies that in order to guarantee fair access to preventative measures, actions aimed at lessening their financial cost may be required. Conclusion: Although the people in Baghdad has generally positive attitudes and knowledge regarding COVID-19 prevention strategies, there is still space for improvement in terms of understanding how the disease spreads asymptotically, the gravity of the situation, and physical distance customs. To stop COVID-19 from spreading in Baghdad, targeted educational programs, countermeasures against false information, and initiatives to lessen the financial burden of preventive measures may all be required.

Conclusion

This study focused on medical issues in order to investigate the population's knowledge, attitudes, and practices (KAP) in Baghdad. The results indicate that most participants had accurate awareness of COVID-19's etiology and transmission. Additionally, the majority of individuals adopted preventive behaviors including donning a mask and exercising social seclusion and had favorable attitudes toward adhering to public health recommendations to stop the spread. These results point to an upward tendency in the population's KAP. Medical practitioners play a crucial role in this regard as ongoing education and awareness initiatives are still required to maintain and improve the population's KAP. In order to detect knowledge and practice gaps, highlight the effects of medical education, and provide insights for enhancing public health initiatives, it is crucial to examine the KAP of the population via a medical lens.

Conflict of interests

The authors declared no conflict of interests.

Source of fund

No specific fund received.

Data sharing statement

Supplementary data will be provided by the corresponding author based on reasonable request.

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