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Assessment of the implementation of preventive measures by Iraqis people to reduce the spread of COVID-19 pandemic

Valoración de la implementación de medidas preventivas por parte del pueblo iraquí para reducir la propagación de la pandemia de COVID-19

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ABSTRACT

Background and aim The new outbreak "Coronavirus disease 2019 (COVID-19)" happened in china is caused by severe acute respiratory distress syndrome coronavirus 2 (SARS-CoV-2). Consequently, it spreads across the globe and is affecting wellbeing frameworks and the global economy. This pandemic disease places a heavy burden on governments in general, so individuals must adhere to WHO's instructions to limit its spread. The current study was applied to find out the extent of commitment among the Iraqi people to the standards of prevention measures against the coronavirus.
Materials and Methods A cross sectional study was conducted with 1 153 respondents widely in all governorates of Iraq to identify the commitment of the Iraqis to the preventive measures against COVID-19 in Iraq. This study covered the Iraqis in three main regions (Southern, middle, and Northern) for data collection. It was conducted between the 17th and 25th of March 2020, and Iraqis were administered with a structured questionnaire comprising of three domains.
Results The results showed that the majority of the respondents (52%) were female, and most of them (42.3%) were observed between the age group of 31-40 years. About 82% of the respondents were residents of urban areas.
Conclusion This study reveals the excellent implementation of preventive measures by the population. It is observed that the application of prevention standards in the countryside is less than in the city.

Key Words: Covid-19; coronavirus; preventive measures; sterilization; implementation *(source: MeSH, NLM).*

RESUMEN

Antecedentes y objetivo El nuevo brote "Enfermedad del coronavirus 2019 (COVID-19)" que sufrió en China es el problema del coronavirus 2 del síndrome de dificultad respiratoria aguda grave (SARS-CoV-2). En consecuencia, se extiende por todo el mundo y está afectando los marcos de bienestar y la economía global. Esta enfermedad pandémica supone una gran carga para los gobiernos en general, por lo que las personas deben cumplir con las instrucciones de la OMS para limitar su propagación. El estudio actual se aplicó para determinar el grado de compromiso entre el pueblo iraquí con los parámetros de medidas de prevención contra el coronavirus.
Materiales y Métodos Se realizó un estudio transversal con 1 153 encuestados en todas las provincias de Iraq para identificar el compromiso de los iraquíes con las medidas preventivas contra COVID-19 en Iraq. Este estudio cubrió a los iraquíes en tres regiones principales (sur, medio y norte) para la recopilación de datos. Se realizó entre el 17 y el 25 de marzo de 2020, y los iraquíes fueron administrados con un cuestionario estructurado que consta de tres dominios.

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Resultados Los resultados mostraron que la mayoría de los encuestados (52%) eran mujeres, y la mayoría de ellos (42,3%) se observaron entre el grupo de edad de 31-40 años. Alrededor del 82% de los encuestados eran residentes de áreas urbanas.
Conclusión Este estudio revela la excelente implementación de medidas preventivas por parte de la población. Se observa que la aplicación de normas de prevención en el campo es menor que en la ciudad.

Palabras Clave: COVID-19; coronavirus; medidas preventivas; esterilización; implementación *(fuente: DeCS, BIREME)*.

Coronaviruses are a group of wrapped non-fragmented with positive-sense RNA belonging to the family "Coronaviridae order Nidovirales" and comprehensively infect human and other different mammals (1). Even though the majority of infections of human coronavirus are mild, the epidemics that happened by the two beta coronaviruses such as severe acute respiratory syndrome coronavirus (SARS-CoV), and Middle East respiratory syndrome coronavirus (MERS-CoV). These conditions give rise to the excessive 10, 000 accumulative cases in the previous two decades, with mortality rates of 10% for SARS-CoV and 37% for MERS-CoV, respectively (2-4). At the beginning of December 2019, various pneumonia cases of obscure starting points have been developed in Wuhan, Hubei territory, China.1,2 Most of these patients were reported with exposure to the Huanan seafood wholesale market, selling numerous types of live animals. The sickness has quickly spread locally to different parts of China, and then worldwide to numerous nations across six continents(5). The rise of a novel human coronavirus (SARS-CoV-2) has become a worldwide health problem causing acute respiratory tract diseases in humans. The transmissions from human-to-human have been portrayed with the incubation period between 2-10 days, encouraging its spread through droplets, debased hands, or surfaces that were well characterized on 3rd of January 2020 (6). According to WHO (COVID-19) situation report-62, it is globally observed that there were 292 142 confirmed cases and 12 784 deaths. Notably, 23 669 confirmed (1 314) and 1 596 deaths (130) were reported in the Eastern Mediterranean Region. In Iraq, the total confirmed cases were (214). While the total confirmed new cases (21), total deaths (17), and total new deaths (3), all of them were transmitted locally (7). Hygiene of hands and materials is one of the most significant measures to prevent healthcare- and outbreak-related viral infection since it plays a vital role in diminishing the spread of diseases (8). The arrangement of safe water, sanitation, and clean conditions are fundamental to ensuring human health during all irresistible infection episodes, including the COVID-19 flare-up. ensure proper and reliably applied wash and waste administration rehearses in communities, homes, schools, commercial centers, and medicinal services offices will additionally assist with forestalling human-to-human transmission of the COVID-19 infection(9). The current study was applied to find out the extent of commitment among the Iraqi people to the standards of prevention measures against the coronavirus.

MATERIALS AND METHODS

Before commencing this study, informed consent was taken from all participants. A cross sectional study design was adopted to assess the extent of commitment among the Iraqi people to the standards of prevention measures against the coronavirus. The people in three main regions (Southern, Middle, and Northern) of Iraq were considered as the population of this study and for data collection. The southern region consists of (Basra, Thi-qar, Maysan, Al-Qadisiyyah, and Muthanna) while the middle region was (Baghdad, Wasit, Najaf, Al- Anbar, Babil, Karbala, and Diyala) and finally the northern area (Duhok, Erbil, Kirkuk, Saladin, Sulaymaniyah, and Ninevah). Before the start of the study, a pilot study was conducted on a sample of 30 respondents. Then, the data were analyzed to find out the reliability and validity of the questionnaire and the internal consistency by using the Cronbach alpha test. The value of the alpha test was 82.

This study was conducted during the period from 17th to 25th of March 2020. A structured questionnaire was administered to the participants. This questionnaire was designed by the researcher in such way to explore the implementation of preventive measures among them. A total of 1 153 persons from both sex who responded to the questionnaire were included. This study excluded those who did not complete the questionnaire sheet. The questionnaire used in this study consists of three parts; the first one contains demographic characteristics covered age, gender, residence, governorate, and educational level. Second, concerns with implementation of personal preventive measures (finally declined kissing and shaking hands, Staying at home as much as possible, etc.) The third part was about sterilization and disinfection of tools and surfaces such as (use antiseptics and disinfectants to clean hand-touch surfaces, wear gloves before starting the cleaning, wash reusable tools such as brooms and mops

with hot water at a temperature of 60-90D after cleaning, etc.). The preventive measures used in the questionnaire were based on the World Health Organization (WHO) and Coronavirus disease (COVID-19): Awareness resources from the Canadian government.

The data analysis was carried out using the statistical package of social science (SPSS) IBM version 20 software. The descriptive statistics frequency and percentile are used to identify the characteristics of our study population. A Chi-square test is used to analyze the association between demographic features and preventive measures with a level of significance of 5% ($p<0.05$, two-tailed).

RESULTS

Most of the respondents (52%) were female, and most of them (42.3%) were observed between the age group of 31-40 years. About 82% of the respondents were residents of urban areas. Concerning the educational level, the distribution of the respondents was observed at 88% at the university level, 9.1% at the secondary level, and 2.8% at the primary level. According to Iraq regions, the distribution of the respondents at middle, northern and southern regions was observed 49.5, 10.2, and 40.3% respectively. Finally, in respect to preventive measures, most of the respondents have adhered to these protective measures to protect themselves (Table 1).

Table 1. Distribution of the respondents according to demographic characteristics

Variables		Frequency	Percent %
Age	10-20	143	12.4
	21-30	488	42.3
	31-40	285	24.7
	41-50	144	12.5
	51	93	8.1
Gender	male	554	48.0
	female	599	52.0
Residence	rural	17.7	17.7
	urban	82.3	82.3
Educational level	primary	32	2.8
	secondary	105	9.1
	university	1016	88.1
Governorate	southern	465	40.3
	middle	571	49.5
	northern	117	10.2
Apply of personal preventive measures	Yes always	575	49.9
	Sometimes	451	39.1
	No	127	11.0
Apply of surfaces &tools sterilization and disinfection	Yes always	741	64.3
	Sometimes	283	24.5
	No	129	11.2
Total		1 153	100%

Further, this study revealed that most respondents always applied personal preventive measures. The implementation of personal preventive measures showed a significant association with the demographic characteristic of respondents ($p=0.000$) and gender ($p=0.013$). However, no significant association was found between educational level and personal preventive measure (Table 2).

Table 2. Association between personal preventive measures and demographic characteristics

Variables		Personal preventive measures			d.f	P- value*
		Yes always	Sometimes	No		
Age	10-20	49	64	30	8	0.000
	21-30	236	202	50		
	31-40	158	92	35		
	41-50	75	62	7		
	51	57	31	5		
gender	male	258	221	75	2	0.013
	female	317	230	52		
Residence	rural	58	67	79	2	0.000
	urban	517	384	48		
Educational level	primary	17	11	4	4	0.174
	secondary	49	37	19		
	university	509	403	104		
Governorate	southern	199	211	55	4	0.000
	middle	321	184	66		
	northern	55	56	6		
Total				1153		

*P- value<0.05

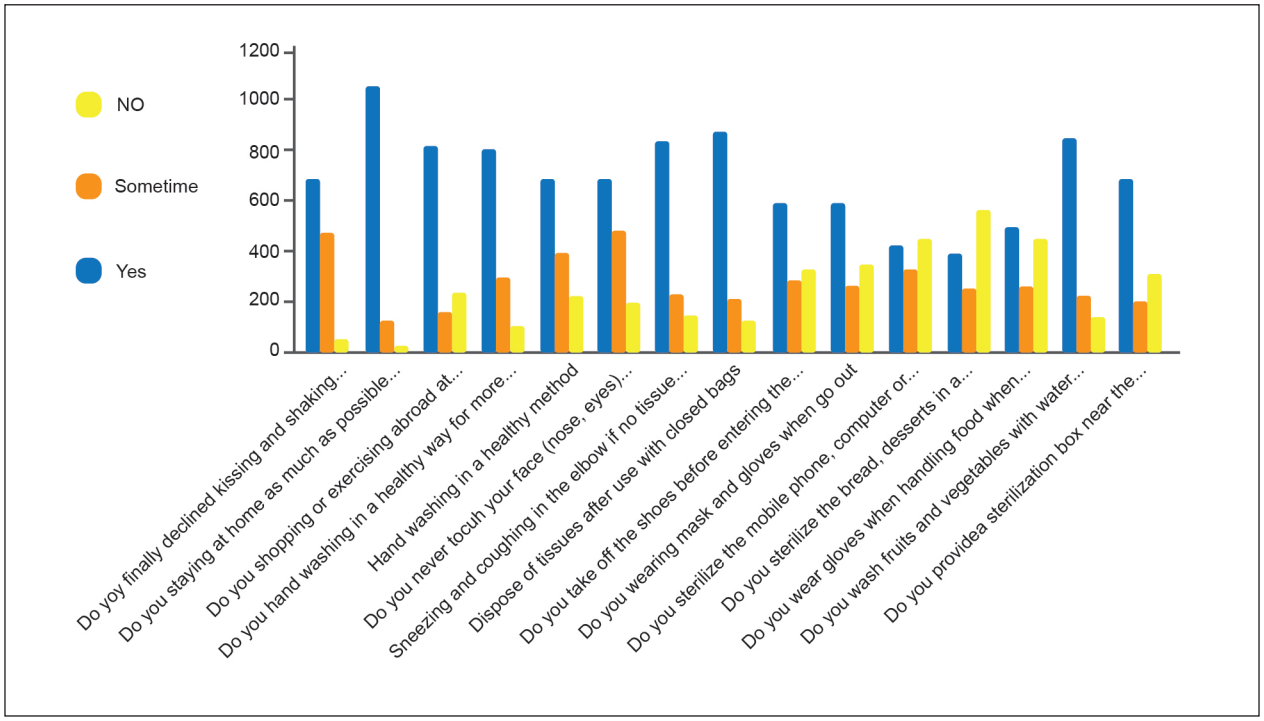
The association between the sterilization and disinfection of tools, surfaces, and demographic characteristics was represented in Table 3. This study showed that most of the respondents followed sterilization methods for tools and surfaces. A significant association was observed among sterilization measures and age, residence, and educational level, whereas no significant association was found in relation to gender and governorate.

Table 3. Association between Sterilization and disinfection of tools, surfaces, and demographic characteristics

Variables		Sterilization and disinfection of tools and surfaces			d.f	P- value*
		Yes always	Sometimes	No		
Age	10-20	77	44	22	8	0.004
	21-30	297	127	64		
	31-40	207	56	22		
	41-50	92	38	14		
	51	68	18	7		
Gender	male	354	139	61	2	0.913
	female	387	144	68		
Residence	rural	129	34	41	2	0.000
	urban	612	249	88		
Educational level	primary	16	6	10	4	0.007
	secondary	64	29	12		
	university	661	248	107		
Governorate	southern	281	123	61	4	0.191
	middle	383	130	58		
	northern	77	30	10		
Total				1153		

*P- value<0.05

Figure 1. Respondents' responses to personal preventive items



DISCUSSION

Currently, COVID-19 is treated as a significant global health problem affecting all ages and both genders. It is also placing a significant economic encumbrance on public health systems. WHO and European Centre for Disease Prevention and Control has recommended guidelines in hand hygiene, personal protective equipment, and health care as it plays an essential role in preventing the spread of the COVID-19. This study observed that most Iraqis adopted personal protective measures as hand hygiene, social distancing, implementation of quarantine. Such measures are considered as the main route to decrease the virus transmission (10). For this reason, only a few cases in Iraq was observed according to the WHO report as of 21st March 2020. It is noteworthy that the deaths that occurred mostly were due to heart diseases and other chronic diseases (7).

This study illustrated that most of the respondents applied sterilization method by antiseptics and disinfectants to clean hand-touch surfaces like cans, tables, power presses, televisions to reduce the infection becau-

se the virus can remain infectious on inanimate for nine days at room temperature, these disinfectants reduce virus infectivity (6).

This study reveals that there is a proper implementation of preventive measures by the Iraq government against COVID-19. It is observed that the application of prevention standards in the countryside is less than in the city. This finding requires the attention of the Ministry of Health by developing health teams consisting of workers in the field of public health and epidemiology to educate the population in rural areas. Therefore, this study identified adequate adherence among Iraqis to preventive measures against COVID-19. There is a need for the effective implementation of preventive measures against COVID-19 in rural areas to control the spread of coronavirus infection ♦

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