

Research Paper

Impact of COVID-19 pandemic on healthcare providers: save the frontline fighters

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Received October 11, 2020; Accepted April 1, 2021.

Abstract

Objectives The objective of this study was to assess the impact of the COVID-19 pandemic on healthcare providers (HCPs) at personal and professional levels.

Methods This was a cross-sectional descriptive study. It was conducted using an electronic format survey through Qualtrics Survey Software in English. The target participants were HCPs working in any healthcare setting across Iraq. The survey was distributed via two professional Facebook groups between 7 April and 7 May 2020. The survey items were adopted with modifications from three previous studies of Severe Acute Respiratory Syndrome (SARS) and Avian Influenza Outbreak. Kruskal–Wallis test was conducted to determine the difference in the pandemic impact according to the dealing with COVID-19 cases.

Key findings The authors received 430 surveys from HCPs representing 14 provinces. Approximately 60% of the participants were dealing with diagnosis or treatment of COVID-19 cases. More than 80% perceived high risk of infection and stress due to the COVID-19 pandemic. Additionally, 85.9% of the HCPs had concerns of putting family and close friends at risk due to their job during the COVID-19 crisis. HCPs working in a setting dealing with diagnosis/treatment of COVID-19 cases experienced significantly higher concerns about personal and family safety compared with other HCPs.

Conclusions Working during COVID-19 pandemic has several negative impacts on HCPs including mental and physical health and an overwhelming work environment. Thus, social and emotional support is needed to help HCPs to cope with such stressful conditions. Finally, providing adequate PPE can help to minimise concerns of getting infected in the workplace.

Keywords: pandemic; COVID-19; impact; healthcare providers; mental Health

Introduction

Since the World Health Organization (WHO) declared the COVID-19 as a pandemic on 12 March 2020^[1] and after the first case was

detected in Najaf province on 24 February 2020,^[2] there has been dramatic increase in the number of cases in Iraq. On 6 June 2020,

the first thousands of confirmed cases were recorded and since then this number has continued to rise.^[3] As of 11 October 2020, Iraq had 400 000 confirmed cases and 9790 deaths due to COVID-19.^[4]

Healthcare providers (HCPs) are the cornerstone in fighting this contagious infection. They are always at the frontline, saving lives while risking their own. They are involved in the diagnosis, treatment and care of patients with COVID-19 and at risk of experiencing psychological distress. This is related to a variety of factors which include unpredictable increase in the number of suspected and confirmed cases, the lack of personal protection equipment (PPE), uncertainty of finding a curable treatment, fear of being inadequately supported while facing this mysterious virus and fear of losing their beloved ones. Taken together these have a noticeable impact on their mental and social health.^[5,6]

According to the International Council of Nurses, it was identified that at least 90 000 healthcare workers had been infected with COVID-19 by May 2020.^[7] Furthermore, 22 073 cases among HCPs were reported by the WHO from 52 countries as of 8 April 2020,^[8] of which, 1688 cases were in China^[9] and 15 314 in Italy.^[10] In Iraq, 17 098 HCPs had been infected with 199 deaths by 7 October 2020.^[11] Although HCPs are expected to perform their duties and work even when there is a personal risk of becoming ill,^[12] concerns regarding personal and familial safety might make them reluctant to work.^[13] In order to prevent the possible mental strains due to workload, and stress among HCPs, it is highly recommended that support should be provided.^[5]

An efficient public health response to critical situations relies on having healthy and well-prepared HCPs to provide healthcare services. Although there is global concern about HCP health and safety, there is a paucity in the studies describing the pandemic impact on HCPs. The aim of this study was to assess the impact of COVID-19 pandemic on HCPs at personal and professional levels in Iraq.

Methods

This was a cross-sectional descriptive study. It was conducted using an electronic survey through Qualtrics Survey Software (Qualtrics, Inc, Provo, UT) in English. The target participants were HCPs (pharmacists, physicians and dentists) working in any healthcare setting in Iraq. The electronic survey was distributed via two professional Facebook groups (one for pharmacists and another for physicians and dentists) between 7 April and 7 May 2020. The total number of members in these professional Facebook groups could reach up to 35 000 HCPs at the time of the study. The survey link was posted with an introductory message describing the objective of the study, the names of the researchers and their affiliations in addition to information that the survey was optional and anonymous. The survey was reposted every other day to increase the response rate.

The survey items were adopted with modifications from previous studies of Severe Acute Respiratory Syndrome (SARS) and Avian Influenza Outbreak.^[14–17] These previous cross-sectional surveys measured the impact of other viral outbreaks/pandemics on HCPs and the concerns of HCPs during these crises. The authors customized the survey items to fit the COVID-19 pandemic and added more questions about the participants' professional characteristics. Each set of questions measuring one domain was grouped together in one section. Additionally, the impact items were organized to be statements with 5 point-likert scale responses (ranging from strongly disagree^[1] to strongly agree^[5]). Finally, new questions were added about official or societal support, if any, received during COVID-19 crisis.

The authors consulted current practicing HCPs before developing the survey, so it was tailored to the Iraqi public healthcare context. Face validity of the new/modified items was reviewed by three experts in the field. Finally, 10 HCPs were asked to complete the survey and comment on any unclear/irrelevant questions. The final version was then agreed.

The survey included five sections about their experiences during the pandemic: demographic and work (11 items), personal concerns and behaviours of HCPs due to their work (8 items), concerns about people close to them (family members or friends) (6 items), perceived impact of COVID-19 crisis on work (7 items) and the supports that they had received from officials and society (8 items). The survey was voluntary and anonymous, and the study proposal was approved by the Ethical Committee at University of Baghdad College of Pharmacy.

Statistical analysis

The Statistical Package for Social Sciences program (SPSS) version 24 (IBM SPSS Statistics, Armonk, NY, USA) was used for data analyses. Descriptive data including means, standard deviations (SD), percentages and frequencies were calculated. Shapiro–Wilk test was conducted to confirm normal distribution. Kruskal–Wallis independent samples test was conducted to determine significant differences in the impact of the pandemic between HCPs who were dealing with diagnosis/treatment of COVID-19 cases and those less directly involved. A Cronbach's Alpha reliability test was used, and all sections had a good reliability (>0.7) except for the section on HCP personal concerns due to their work during COVID-19 crisis which had acceptable reliability ($\alpha = 0.6$).

Results

Four hundred and thirty HCPs from 14 provinces completed the survey. There was approximately equal representation of males and females (Table 1). More than half of the participants were within the age group between 23 and 31 years, and more than half were pharmacists. Physicians with clinical specialties represented nearly 60% of the total physicians. The mean duration of professional years in practice was 10.3 (± 10.1) and the mean number working days per week was 3.7 (± 1.9). (Table 1).

More than half (57%) of the participants had a bachelor's degree while other qualifications represented $<20\%$ each. Approximately a quarter of participants were from Baghdad. More than half (57.4%) of the participants were working in general hospitals with an emergency room, and around quarter were working inside the emergency room. Approximately 60% of the participants were dealing with diagnosis or treatment of COVID-19 cases in their healthcare settings (Table 1).

More than 86% of HCPs perceived that their job put them at high risk of infection. Additionally, 82% experienced a high level of stress at work during COVID-19 pandemic. In contrast, the highest rate of disagreement was related to the concept (I should not be taking care of COVID-19 patients) with mean of 2.1 (± 1.4) (Table 2). Most HCPs (85.9%) had concerns about putting family and close friends at risk due to their job during COVID-19 crisis (Table 3). On the other hand, the participants were neutral (3.1 ± 1.1) towards the item (people are avoiding me during COVID-19 crisis because of my job) (Table 3). The survey revealed that there was an agreement regarding 'there are more conflicts amongst colleagues at work during COVID-19 crisis' (3.5 ± 1.0). At the same time, some HCPs needed

Table 1 Demographic characteristics

	N	%
Gender (N = 429)		
Female	214	49.9
Male	215	50.1
Age group (years) (N = 430)		
23–30	235	54.7
31–40	99	23.0
41–60	94	21.9
>60	2	0.5
Job title (N = 428)		
General pharmacist	177	41.4
Clinical pharmacist	71	16.6
Senior physician	76	17.8
Rotator physician	39	9.1
Board student	32	7.5
Permanent resident	18	4.2
Dentist	15	3.5
Do you work in emergency? (N = 430)		
No	310	72.1
Yes	120	27.9
Medical specialties (for physicians) (N = 161)		
Clinical specialist	96	59.6
Physician with no specialty	47	29.2
Surgeon	15	9.3
Working in hospital labs	3	1.9
Degree (N = 393)		
BSc	224	57.0
Board degree	75	19.1
High diploma	35	8.9
MS	30	7.6
PhD	29	7.4
Main working place (N = 430)		
Community pharmacy	60	14.0
General hospital with emergency room	247	57.4
Tertiary centre (specialty hospital)	52	12.1
Primary healthcare centre	47	10.9
Neither working in hospital nor in clinic/pharmacy	16	3.7
Private clinic	7	1.6
Private hospital	1	0.2
Is your healthcare setting dealing with the diagnosis/treatment of COVID-19 cases? (N = 430)		
Yes	256	59.5
No	174	40.5

to be quarantined due to contact with COVID-19 patients (46.4%) or if they were confirmed to have COVID-19 (41.1%). (Table 4).

The final part of the survey dealt with the support HCPs received. There was an agreement among HCPs that they had received support from national media during COVID-19 crisis (3.5 ± 1.4) and with less extent from the society (3.0 ± 1.1) (Table 5). In contrast, the HCPs disagreed regarding the financial incentives provided from MOH/health directorate for HCPs dealing with COVID-9 cases (2.9 ± 1.1). The last item in this part showed that more than half of the participants denied that hospitals were providing them with adequate PPEs during COVID-19 crisis (56.6%) (Table 5). In conclusion, the HCPs did not receive adequate support in terms of providing preventive gears to protect them from the infection.

There were significant differences ($P < 0.05$) between HCPs working in a setting dealing with diagnosis or treatment of COVID-19 cases and those who did not. These significant differences were

observed in 14 items related to the concerns about personal and family safety in addition to perceiving impact on work (Table 6). The results showed five out of nine personal health concerns were significantly higher in frontline HCPs. The HCPs who worked in settings dealing with COVID-19 were significantly ($P < 0.05$) more concerned about their health, perceived higher risk of infection and felt more stressed compared with those not working in frontline healthcare settings. The three negative thoughts of fabricated reasons for absences (3.3 ± 1.3), changing work site (2.5 ± 1.1) and not taking care of patients (2.2 ± 1.1) were low in general and did not differ between the two groups of HCPs.

Three out of five items measuring COVID-19 impact on HCP work were significantly ($P < 0.05$) higher in HCPs dealing with COVID-19 cases. In other words, HCPs working in settings dealing with COVID-19 patients experienced significantly higher level of workload compared with HCPs not dealing with COVID-19 patients (Table 6). All six items of HCP perception of concerns about their families were significantly ($P < 0.05$) higher in HCPs who worked in settings dealing with COVID-19 cases compared with other HCPs. For instance, HCPs dealing with COVID-19 faced significantly ($P < 0.05$) higher stigmatized perception ('people are avoiding me during COVID-19 crisis because of my job'). Thus, frontline fighters avoided telling people and families about their risky profession (Table 6).

Discussion

This cross-sectional study has revealed the stressful circumstances that Iraqi HCPs are facing during this serious pandemic. In general, most respondents believed they had a high risk of infection, were stressed and had concerns of putting family and close friends at risk due to their job during the COVID-19 crisis. Just under half confirmed that their colleagues had been quarantined as a suspected or confirmed case of COVID-19. HCPs working in a setting dealing with diagnosis/treatment of COVID-19 cases experienced significantly higher concerns about personal and family safety and perceived higher impact on work compared with other HCPs. The findings of this study can help healthcare settings to understand the seriousness of HCPs' mental and physical risks and subsequently provide adequate coping and preventive measures. The study limitations included the convenience sampling, limited sample size and not representing number of dentists.

The current study highlighted several issues that impact the HCPs performance during the outbreak (Table 2). Some public hospitals were converted to centres to diagnose and treat COVID-19 patients, so 60% of HCPs were working in COVID-19 centres to diagnose, monitor and treat COVID-19 patients. Additionally, our survey indicated that 21.3% of the HCPs thought about changing their workplace. A recent survey found some Iraqi HCPs have inadequate awareness of preventive measures to deal with COVID-19.^[18] Similarly, a recent systematic review indicated pharmacists have poor to moderate preparedness to respond to a disaster.^[19]

In line with other studies,^[16] most HCPs felt that their work put them at a high risk of COVID-19 infection (Table 2). However, those concerns did not affect their willingness to take care of the COVID-19 patients and they were able to provide them with all the necessary medical care.

A fear of exposing close friends and families to Covid-19 infection was common (Table 3). A number of studies in China, Singapore and the USA (New York) which were conducted during devastating events found that most commonly reported concerns that impact

Table 2 The personal concerns of and potential reflecting behaviours of HCP due to their work during COVID-19 crisis

Item	Strongly disagree, N (%)	Disagree, N (%)	Neither agree nor disagree, N (%)	Agree, N (%)	Strongly agree, N (%)	Mean (St. dev.)
My job would put me at a great exposure risk.	17 (3.9)	11 (2.6)	31 (7.2)	214 (49.7)	157 (36.7)	4.12 (0.93)
I am afraid of becoming ill with COVID-19 because of my job.	20 (4.6)	27 (6.3)	29 (6.7)	200 (46.4)	155 (36.0)	4.02 (1.04)
The risk I am exposed to at work is not acceptable.	22 (5.1)	94 (21.8)	108 (25.1)	160 (37.4)	46 (10.7)	3.26 (1.04)
I accept the risk of contact with COVID-19 patients as part of my job.	23 (5.3)	44 (10.2)	70 (16.5)	210 (48.7)	83 (19.3)	3.66 (1.06)
I am feeling more stressed at work during COVID-19 crisis.	9 (2.1)	30 (7.0)	35 (8.1)	196 (45.7)	160 (37.1)	4.08 (0.95)
I should not be taking care of COVID-19 patients.	141 (32.7)	180 (41.8)	60 (14.2)	34 (7.9)	15 (3.5)	2.07 (1.04)
I might try to change my current ward/department to minimize contact with COVID-19 patients.	82 (19.0)	185 (42.9)	69 (16.2)	71 (16.5)	23 (5.3)	2.46 (1.13)
Some colleagues try to miss workdays (ask for excused absence) because of their fear	42 (9.7)	100 (23.3)	68 (16.0)	148 (34.3)	72 (16.7)	3.25 (1.25)

Table 3 HCP concerns about their close people during COVID-19 crisis

Item	Strongly disagree, N (%)	Disagree, N (%)	Neither agree nor disagree, N (%)	Agree, N (%)	Strongly agree, N (%)	Mean (St. dev.)
People close to me are at high risk of getting COVID-19 because of my job	11 (2.7)	14 (3.4)	32 (7.9)	176 (43.3)	173 (42.6)	4.19 (0.92)
I am concerned about my family and close friends because of my job during COVID-19 crisis	5 (1.2)	8 (2.0)	11 (2.7)	171 (42.1)	211 (52.0)	4.41 (0.75)
People close to me are worried about my health	7 (1.7)	13 (3.2)	22 (5.4)	194 (47.9)	169 (41.7)	4.24 (0.83)
People close to me are worried as they may get infected by me	5 (1.2)	27 (6.7)	43 (10.6)	203 (50.0)	128 (31.5)	4.03 (0.89)
I am afraid of telling my family about the risk I am exposed to	33 (8.1)	96 (23.6)	47 (11.6)	141 (34.7)	89 (21.9)	3.38 (1.28)
People are avoiding me during COVID-19 crisis because of my job	25 (6.1)	112 (27.5)	106 (26.0)	112 (27.5)	52 (12.8)	3.13 (1.13)

Table 4 HCP perceived impact of COVID-19 on work

Item	Strongly Disagree, N (%)	Disagree, N (%)	Neither agree nor disagree, N (%)	Agree, N (%)	Strongly Agree, N (%)	Mean (St Dev)
I have an increase in workload during COVID-19 crisis	14 (3.2)	102 (23.9)	93 (21.6)	148 (34.3)	73 (16.9)	3.38 (1.11)
I have to work overtime during COVID-19 crisis	35 (8.1)	183 (42.7)	78 (18.1)	87 (20.2)	47 (10.9)	2.83 (1.16)
I have to do work not in my regular duties or specialties during COVID-19 crisis	24 (5.6)	145 (33.9)	82 (19.0)	133 (30.9)	46 (10.7)	3.07 (1.13)
There is adequate staff at my workplace to handle the increased demand during COVID-19 crisis	42 (9.7)	121 (28.3)	80 (18.6)	163 (37.8)	24 (5.6)	3.01 (1.13)
There are more conflicts amongst colleagues at work during COVID-19 crisis	14 (3.2)	80 (18.6)	82 (19.0)	199 (46.4)	55 (12.8)	3.46 (1.03)
In your work setting, did any health care provider need to be quarantined due to contact with COVID-19 patients?				Yes 193 (46.4)	No 85 (20.3)	I do not know 139 (33.3)
In your work setting, was there any COVID-19 confirmed case among healthcare workers?				172 (41.1)	165 (39.2)	83 (19.7)

HCPs were fear and worry about their and their families lives.^[13,15,16] Fear and concern for personal and family safety has been mentioned in a previous study as an important impact on HCPs' unwillingness to work in similar crises.^[13] Our study also found that substandard mental health may impact HCP willingness to approach COVID-19

patients and subsequently half (51%) of the HCPs were asking for excused leaves to avoid direct contact with COVID-19 cases.

Our finding that HCPs in our study experienced physical and mental health concerns reflects a large cross-sectional survey of Chinese HCP.^[6] Furthermore, in a previous study during the acute SARS

Table 5 The supports HCPs received from officials and society during COVID-19 crisis

Item	Strongly Disagree, N (%)	Disagree, N (%)	Neither agree nor disagree, N (%)	Agree, N (%)	Strongly Agree, N (%)	Mean (St Dev)
I am confident that my employer will take care of my needs if I become ill with COVID-19	64 (14.8)	91 (21.1)	62 (14.6)	165 (38.3)	48 (11.1)	3.09 (1.27)
I can easily reach my healthcare setting during the COVID-19 crisis	76 (19.1)	99 (24.9)	45 (11.3)	135 (34.0)	42 (10.6)	2.91 (1.33)
The security forces are facilitating our reaching to the healthcare settings during the curfew.	34 (8.6)	64 (16.1)	84 (21.2)	166 (41.8)	49 (12.3)	3.33 (1.14)
Iraqi people appreciate the efforts of healthcare providers to fight COVID-19 pandemic	43 (10.9)	98 (24.8)	102 (25.8)	122 (30.9)	30 (7.6)	2.99 (1.13)
National media are supporting healthcare providers during COVID-19 crisis	19 (4.8)	60 (15.1)	74 (18.6)	194 (48.9)	50 (12.6)	3.49 (1.04)
Currently, the MOH/ health directorate provides financial incentives for healthcare practitioners dealing with COVID-19 cases.	76 (22.4)	85 (25.0)	96 (28.2)	71 (20.9)	12 (3.5)	2.58 (1.15)
The health officials appreciate our efforts to fight COVID-19 crisis with acknowledgement letters	58 (16.4)	70 (19.8)	81 (22.9)	121 (34.3)	23 (6.5)	2.94 (1.21)
The hospitals are providing us with adequate personal protection equipment during COVID-19 crisis				Yes 120 (30.3)	No 224 (56.6)	Not applicable 52 (13.1)

Table 6 Difference in perceived impact according to the setting role in diagnosis/treatment of COVID-19 cases

Item	Is your healthcare setting dealing with the diagnosis or treatment of COVID-19 cases?		P-value (Kruskal–Wallis test)
	Mean (St. dev.), yes	Mean (St. dev.), no	
My job would put me at a great exposure risk	4.25 (0.93)	3.96 (0.89)	0.000*
I am afraid of becoming ill with COVID-19 because of my job	4.11 (1.03)	3.93 (0.95)	0.010*
The risk I am exposed to at work is not acceptable	3.40 (1.07)	3.07 (1.03)	0.003*
I should not be taking care of COVID-19 patients	1.97 (1.03)	2.23 (1.14)	0.429
I accept the risk of contact with COVID-19 patients as part of my job	3.81 (0.99)	3.47 (1.13)	0.009*
I might try to change my current ward/department to minimize contact with COVID-19 patients	2.32 (1.09)	2.50 (1.10)	0.312
Some colleagues try to miss workdays (ask for excused absence) because of their fear	3.29 (1.28)	3.09 (1.20)	0.074
I am feeling more stressed at work during COVID-19 crisis	4.19 (0.83)	3.88 (1.04)	0.011*
I have an increase in workload during COVID-19 crisis	3.46 (1.11)	3.11 (1.13)	0.002*
I have to work overtime during COVID-19 crisis	2.93 (1.17)	2.66 (1.15)	0.085
I have to do work not in my regular duties or specialties during COVID-19 crisis	3.22 (1.15)	2.97 (1.08)	0.57
There is adequate staff at my workplace to handle the increased demand during COVID-19 crisis	2.81 (1.15)	3.16 (1.11)	0.023*
There are more conflicts (problems) amongst colleagues at work during COVID-19 crisis	3.49 (1.03)	3.33 (1.07)	0.047*
People close to me are at high risk of getting COVID-19 because of my job	4.40 (0.76)	3.98 (1.03)	0.000*
I am concerned about my family and close friends because of my job during COVID-19 crisis	4.51 (0.70)	4.28 (0.80)	0.001*
People close to me are worried about my health	4.40 (0.71)	4.02 (0.91)	0.000*
People close to me are worried as they may get infected by me	4.21 (0.78)	3.80 (0.96)	0.000*
I am afraid of telling my family about the risk I am exposed to	3.41 (1.32)	3.28 (1.22)	0.017*
People are avoiding me during COVID-19 crisis because of my job	3.23 (1.14)	2.89 (1.13)	0.000*

*Significant ($P < 0.05$) according to Kruskal–Wallis test.

outbreak, more than three quarters of healthcare workers who were in high-risk situations have experienced psychological symptoms.^[17]

Approximately half of the HCPs emphasized increased workload, and longer working hours (Table 4). On the other hand, when healthcare system is overwhelmed due to unpredictable increase in the number of suspected and confirmed cases, and staff availability is reduced due to related absences difficult choices may be required

on the prioritization of hospital bed allocation, ICU care and priority of invasive ventilation. Altogether, these add extra burden on the HCPs.^[20] COVID Iraqi public healthcare settings may need to have balance between the number of admitted cases and their providers' mental and physical health.

During the challenging time of this current pandemic, HCPs who directly care for COVID-19 patients need to feel supported

appreciated by their employers and society. In this study, only half of the participating HCPs felt appreciated by health officials and under half by society, yet slightly over half felt national media was playing an important role in supporting them.

This study found more than half (56.6%) of HCPs did not receive adequate support in terms of providing preventive personal gear to protect them from the infection. A recent Iraqi article reported a shortage in PPE and hygiene preparations in public hospitals.^[2] Thus, providing adequate PPE and training is essential to protect HCPs in their battle against COVID-19.

The regulatory bodies in any country should stand by the HCPs in their fighting during the outbreak. This can be achieved through providing all the available physical and mental support.^[21] However, nearly 50% demonstrated lower financial incentives provided from the healthcare system while dealing with coronavirus patients. Healthcare institutions should offer incentives for the HCPs to encourage them and ensure that they will comply with the preventive measures.^[22]

Previous studies have summarized some strategies that could minimize the rate of infection and mortality among HCPs such as: decreasing hours of exposure to infected patients, supplying adequate PPEs and related protective measures, continuous education and training sessions and providing mental health support to alleviate anxiety and depression among HCPs.^[5, 15, 23, 24] HCPs should receive adequate emotional and social support in the form of regular counselling sessions.^[25] Finally, the planning for outbreaks is an important tool to ensure that HCPs are fully prepared and have all the necessary support.^[15]

Conclusion

Working during COVID-19 pandemic has had a negative impact on HCPs' mental and physical health and on their work environment. Due to their high probability of infection, HCPs experience high level of stress and concern about their personal and family health. These high stressful work conditions may impact HCP willingness to manage COVID-19 patients. Better social and emotional support is needed as well as the provision of adequate PPE. Solution must be found to address these challenges and maintain the ability of front-line HCPs to continue to do their work.

Disclaimer

The survey was voluntary and anonymous, and the study proposal was approved by the Ethical Committee at University of Baghdad College of Pharmacy.

Authors' contributions

Ali Al-Jumaili designed and conceptualized the study, customized/developed the survey items, conducted data analyses and revised the whole manuscript. Bashar Al-Fatlawi wrote the first draft of the method and result sections, helped in data collection, arrange references and approved the final draft. Ahmad Al-Jalehawi wrote the first draft of the introduction, help in data collection and conducting result tables and approved the final draft. Fadya Yaqoob Al-Hamadani wrote the first draft of the discussion and helped in revising the introduction section and review the final manuscript. Oday Sajjad helped in data collection and revising the final manuscript.

Conflict of Interest

There are no conflicts of interest to disclose.

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