

The fear of COVID-19 outbreak among health care professionals in Gaza Strip, Palestine

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Abstract

Introduction: The emergence of the COVID-19 and its consequences has led to fears, worries, and anxiety among individuals, particularly among healthcare professionals. The present study aimed to assess the fear of COVID-19 among different healthcare professionals in the Gaza Strip, Palestine.

Methods: A cross-sectional, snowball sampling technique and an online questionnaire were employed among healthcare professionals. A total of 300 participants completed the questionnaire. The validated fear of COVID-19 Scale Arabic version was used. Statistical analysis was performed using SPSS version 22.

Results: The sample fear mean score was 17.53 ± 5.78 ; more than half of the study participants (54.3%) consider it as low levels of fear and 45.7% of the participants consider it as high levels of fear. Statistically significant differences were found between males and females, and different healthcare professional's disciplines. Females have a higher mean score compared to males. The highest fear mean scores were found among Lab-Technicians (20.19 ± 7.42), followed by X-ray-Technicians (17.95 ± 3.96), Nurses (17.1 ± 5.55), and Physicians (16.25 ± 4.66).

Conclusion: The fear of COVID-19 was high among female healthcare professionals compared to males, as well as, among Lab-Technicians compared to Physicians and Nurses. There is a need to establish a strategy to continue measuring the psychological effect of COVID-19 among healthcare professionals especially females.

Keywords

COVID-19, fear, healthcare professionals, psychological effect

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Introduction

Coronavirus disease 2019 (COVID-19) is a severe acute respiratory infection caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2).¹ On 31 December 2019, the World Health Organization (WHO) was informed of 44 cases of pneumonia of unknown etiology associated with Wuhan City, China; most of the cases reported a relationship to large seafood and live animal markets.² On 11 March 2020, the WHO declared the COVID-19 outbreak as a global pandemic.³ As of 30 August 2020, COVID-19 has spread in 216 countries and territories worldwide, with 24,822,800 confirmed cases and 838,360 confirmed deaths.^{2,3} In Occupied Palestinian Territory (West Bank, Gaza Strip, and East Jerusalem), a total of 33,250 have been reported as confirmed cases and 199 confirmed deaths.^{4,5} A recent study conducted in Palestine in June 2020

demonstrated that the death rate ranges from 6.2 to 6.5/1000 confirmed cases, and the tests for the COVID-19 virus were around 8809 per one million.⁶ Gaza Strip is part of the Occupied Palestinian Territory, a high densely peopled

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territory, with a total number of population around 2 million and more than 70% of them registered as refugees.⁷ Since 2007, Gaza Strip is under siege which influences all aspects of life—more than half of the population is suffering from poverty, majority of the people had received aids,⁸ around 80% of peoples are dependent on food aids.⁹ In March 2020, the Palestinian government in Gaza Strip declared a state of emergency after five COVID-19 cases were discovered in travelers who came through Gaza strip borders; then the authorities decided mandatory quarantine of 21 days for everyone passing the Gaza Strip through the borders.¹⁰ On 25 August 2020, four cases of COVID-19 were discovered inside Gaza Strip in (Al-Maghazi) refugees camp; after 1 day, two cases of death were reported at two governmental hospitals in Gaza Strip (Al-Rantisi and the Indonesian hospital), besides, 13 positive cases were confirmed including healthcare workers in four hospitals in Gaza strip, including AL-Shifa Medical Complex (The largest hospital in Gaza Strip), according to that, the Palestinian local authorities decided to test all medical staff and patients inside the hospitals.¹¹ A preliminary study conducted to measure the availability of personnel protective equipments (PPE) for healthcare professionals in Occupied Palestinian territory demonstrated that there were severe lack of PPE, only 27.5% reported that face masks were always available, and 10.8% reported that isolation gowns were always available in their institutions.¹⁰

On the contrary, the healthcare professionals are most at risk for developing psychological and mental health symptoms, particularly among those who are the first contact and responsible for treatment, diagnosis, and care with COVID-19 cases.¹² The healthcare professionals may face many challenges such as the risk of infecting their family members, shortage of protective materials and equipment, shortage of treatments; these challenges may lead to increased stress, depression, anxiety, suicidal thoughts, insomnia, irritability, loss of appetite, frustrating, and fear.^{13,14}

Fear is a central emotional response to imminent threats.¹⁵ In the extended parallel process model, fear is defined as psychological arousal and negative emotional response stimulated by overestimation of perceived threat, coupled with an underestimation of the perceived benefits from action as well as low self-efficacy.¹⁶ The present study aimed to assess the fear of COVID-19 among different healthcare professionals in the Gaza Strip, Palestine.

Materials and methods

Study designs and settings

This cross-sectional study used a snowball sampling technique, the study was employed among different healthcare professionals after discovered cases in Gaza Strip, Palestine, from 5 August to 5 September 2020. A structured online questionnaire (Supplemental material) was distributed through a social media platform (Facebook), the most

commonly used social media platform in Palestine,¹⁷ to gather information from the study participants.

Eligibility criteria

Inclusion criteria: The target population was the different healthcare professionals (Physicians, Nurses, Lab-Technician, and X-ray-Technician) who work in the governmental primary healthcare centers or hospitals in Gaza Strip, Palestine, with a minimum of 1 year of working experience.

Exclusion criteria: Healthcare professionals working in the primary healthcare centers or hospitals in Gaza Strip, Palestine, with less than 1 year of working experience.

Sample size and sampling

The traditional equation (Cochran) was used to calculate the sample size; the estimated sample size according to the equation is 360 cases, with a margin of error of 5% and confidence level of 95%. A previous study conducted among nurses in China estimate the proportion of severe fear of COVID-19 as 62.3%.¹⁸

Eight healthcare professionals were initially (two physicians, two Nurses, two Lab-Technicians, and two X-ray Technicians) identified to recruit 360 participants from different disciplines, all of them agreed and were willing to participate in the study, and each one was asked to identify more cases from their discipline who were eligible to be including. This process was conducted within 1 month from 5 August to 5 September 2020. Finally, 300 participants completed the questionnaire with a response rate of around 83%.

Study instrument

In the present study, we used the validated Fear of COVID-19 Scale (FCV-19S) that measures fear levels of COVID-19.¹⁹ The Arabic version was used,²⁰ and the necessary permission to use the scale was obtained. The scale consists of seven items and is scored on a 5-point Likert-type scale, the score for each question ranging from 1 (strongly disagree) to 5 (strongly agree). The seven items of the FCV-19S include I am most afraid of Corona; It makes me uncomfortable to think about Corona; my hands become clammy when I think about Corona; I am afraid of losing my life because of Corona; when I watch news and stories about Corona on social media, I become nervous or anxious; I cannot sleep because I am worrying about getting Corona; and my heart races or palpitates when I think about getting Corona.^{19,20} A total score is calculated by summing total item scores and ranging from 7 to 35. The higher participant's scores mean higher levels of fear of COVID-19.^{19,20} Furthermore, the study questionnaire includes eight items to assess the socio-demographic characteristics of the participants. The questionnaire was piloted among 30 of the eligible healthcare professionals, the results of the pilot study showed a good overall Cronbach's alpha of 0.84.

Table 1. Characteristics of the study participants.

| Variables | Participants (n = 300) | Percentage (%) |
|--------------------------------------|------------------------|----------------|
| Gender | | |
| Male | 176.0 | 58.7 |
| Female | 124.0 | 41.3 |
| Age (Mean \pm SD: 30.3 \pm 7.75) | | |
| \leq 30 years | 184.0 | 61.3 |
| 31–50 years | 110.0 | 36.7 |
| >50 years | 6.0 | 2.0 |
| Marital status | | |
| Single | 105.0 | 35.0 |
| Married | 183.0 | 61.0 |
| Widowed or divorced | 12.0 | 4.0 |
| Education level | | |
| Diploma | 64.0 | 21.3 |
| Bachelor | 189.0 | 63.0 |
| Postgraduate | 47.0 | 15.7 |
| Specialization | | |
| Medicine | 60.0 | 20.0 |
| Nursing | 167.0 | 55.7 |
| Lab-Technician | 51.0 | 17.0 |
| X-ray-Technician | 22.0 | 7.3 |
| Workplace | | |
| Hospital | 252.0 | 84.0 |
| Primary healthcare center | 48.0 | 16.0 |
| Years of experience | | |
| \leq 5 years | 164.0 | 54.7 |
| 6–15 years | 117.0 | 39.0 |
| >15 years | 19.0 | 6.3 |
| Previous work with Covid-19 patients | | |
| Yes | 29.0 | 9.7 |
| No | 271.0 | 90.3 |

Data are expressed as means \pm SD for continuous variables and as percentage for different categorical variables. SD: standard deviation.

Ethical approval

The study protocol was approved by the Helsinki Ethical Committee in the Gaza Strip, Palestine (Code: PHRC/HC/742/20). The participants were asked to approve their participation to proceed with the online survey. Informed consent for an Internet survey was also obtained from each participant, and the method of obtaining informed consent was approved by the Helsinki Ethical Committee in the Gaza Strip, Palestine. No monetary rewards were given for completing the questionnaire.

Data analysis

The SPSS software, version 22, was used for the statistical analysis. Characteristics of the sample were described using descriptive statistics. Frequencies and percentages were used to describe different categorical variables, whereas means and standard deviations (SDs) were used to represent continuous variables. The chi-square test, independent-sample t test, and one-way ANOVA test were used for analysis. Mean scores were taken as a cutoff as it was used in a similar

previous study,²⁰ the score less than or equal to the mean is considered as low levels of fear and the score higher than mean is considered as high levels of fear. The p values less than 0.05 were considered significant.

Results

Characteristics of the study participants

The FCV-19S items showed a good Cronbach's alpha: $\alpha = 0.878$. Table 1 displays the characteristics of the study participants, the age of 300 participants Mean \pm SD was 30.3 \pm 7.75; more than half of the respondents (58.7%) were male, (55.7%) are Nurses, (63.0%), and had a bachelor's degree; most of the study respondents (61.0%) were married, and (84.0%) working in hospitals; and only 9.7% of the participants have previously worked with COVID-19 patients.

The FCV-19S items score

The overall mean score of FCV-19S items is displayed in Table 2, which shows that for item 2 and item 5 around half

Table 2. The FCV-19S items scores.

| Items | Strongly disagree n (%) | Disagree n (%) | Neutral n (%) | Agree n (%) | Strongly agree n (%) |
|--|----------------------------|-------------------|------------------|----------------|-------------------------|
| Item 1. I am most afraid of coronavirus 19 Mean \pm SD: 3.06 \pm 1.13 | 26.0 (8.7) | 74.0 (24.7) | 84.0 (28.0) | 86.0 (28.7) | 30.0 (10.0) |
| Item 2. It makes me uncomfortable to think about coronavirus-19 Mean \pm SD: 3.14 \pm 1.15 | 28.0 (9.3) | 70.0 (23.3) | 61.0 (20.3) | 114.0 (38.0) | 27.0 (9.0) |
| Item 3. My hands become clammy when I think about coronavirus-19 Mean \pm SD: 1.86 \pm 0.88 | 120.0 (40.0) | 120.0 (40.0) | 45.0 (15.0) | 12.0 (4.0) | 3.0 (1.0) |
| Item 4. I am afraid of losing my life because of coronavirus-19 Mean \pm SD: 2.39 \pm 1.13 | 78.0 (26.0) | 95.0 (31.7) | 66.0 (22.0) | 52.0 (17.3) | 9.0 (3.0) |
| Item 5. When watching news and stories about coronavirus-19 on social media, I become nervous or anxious Mean \pm SD: 3.16 \pm 1.22 | 39.0 (13.0) | 54.0 (18.0) | 61.0 (20.3) | 112.0 (37.3) | 34.0 (11.3) |
| Item 6. I cannot sleep because I'm worrying about getting coronavirus-19 Mean \pm SD: 1.75 \pm 0.86 | 141.0 (47.0) | 106.0 (35.3) | 41.0 (13.7) | 10.0 (3.3) | 2.0 (0.7) |
| Item 7. My heart races or palpitates when I think about getting coronavirus-19 Mean \pm SD: 2.14 \pm 1.13 | 108.0 (36.0) | 96.0 (32.0) | 51.0 (17.0) | 34.0 (11.3) | 11.0 (3.7) |

Data are expressed as means \pm SD for continuous variables and as percentage for different categorical variables. FCV-19S: Fear of COVID-19 Scale; SD: standard deviation.

of the participants replied agree and strongly agree, respectively. The mean score of FCV-19S for item 2 and item 5 were 3.14 \pm 1.15 and 3.16 \pm 1.22, respectively. Differently, for items 3, 4, 6, and 7, most of the participants replied strongly disagree and disagree, and for item 1, 38.7% of participants replied that they are most afraid of COVID-19.

Characteristics of the study participants in relation to FCV-19S items mean scores

Table 3 shows there are statistically significant differences in item 5 between gender (item 5: 3.01 \pm 1.28 vs 3.37 \pm 1.10) for male and female, respectively; item 7 between different age groups; item 3 between different marital status; item 2 between different workplaces (item 2: 3.07 \pm 1.16 vs 3.45 \pm 1.07); and (item 5: 3.08 \pm 1.26 vs 3.56 \pm 0.92) for healthcare professionals, who work in the hospitals and the primary healthcare centers, respectively. All scale items are statistically significant between different healthcare professional disciplines.

Characteristics of the study participants in relation to levels of fear and the FCV-19S items mean scores

The sample mean scores was 17.53 \pm 5.78, which was taken as a cutoff; the score less than or equal the mean is considered as low levels of fear, and the score higher than mean is

considered as high levels of fear; according to that, more than half of the study participants (54.3%) are considered as low levels of fear and 45.7% of the participants are considered as high levels of fear. Table 4 shows a statistically significant difference in the level of fear between healthcare professionals based on previous work with COVID-19 patients, approximately half (47.6%) of the healthcare professionals who not worked with COVID-19 patients until now consider as high levels of fear compared with 27.6% of the healthcare professionals who previously worked with COVID-19 patients. Statistically significant differences were found between male and female; and between the different healthcare professionals' disciplines, females have a higher mean score compared to males, with mean scores (18.28 \pm 5.54 vs 16.89 \pm 5.83) for females and males respectively. The highest fear mean scores were found among Lab-Technicians (20.19 \pm 7.42), followed by X-ray-Technicians (17.95 \pm 3.96), Nurses (17.1 \pm 5.55), and the lowest was among Physicians (16.25 \pm 4.66). Moreover, the Post hoc comparisons using Bonferroni demonstrated that the statistically significant difference only between the mean of Lab-Technicians and Physicians, as well as between Lab-Technicians and Nurses.

Discussion

Globally, the fear of the COVID-19 pandemic became widespread; as a result, understanding the effect of the pandemic on psychological health is necessary to determine the mental

Table 3. Characteristics of the study participants in relation to FCV-19S items mean scores.

| Variables | Item 1 | Item 2 | Item 3 | Item 4 | Item 5 | Item 6 | Item 7 |
|--------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Gender | | | | | | | |
| Male | 3.02 ± 1.11 | 3.03 ± 1.18 | 1.80 ± 0.86 | 2.33 ± 1.14 | 3.01 ± 1.28 | 1.68 ± 0.85 | 2.09 ± 1.17 |
| Female | 3.12 ± 1.15 | 3.28 ± 1.10 | 1.94 ± 0.90 | 2.48 ± 1.11 | 3.37 ± 1.10 | 1.85 ± 0.86 | 2.22 ± 1.08 |
| p value | 0.486 | 0.073 | 0.170 | 0.265 | 0.010 | 0.087 | 0.313 |
| Age | | | | | | | |
| ≤30years | 3.08 ± 1.48 | 3.16 ± 1.10 | 1.81 ± 0.85 | 2.41 ± 1.10 | 3.25 ± 1.19 | 1.70 ± 0.85 | 2.14 ± 1.07 |
| 31–50years | 3.07 ± 1.28 | 3.14 ± 1.22 | 1.94 ± 0.94 | 2.37 ± 1.20 | 3.05 ± 1.27 | 1.86 ± 0.88 | 2.20 ± 1.24 |
| >50years | 2.50 ± 0.54 | 2.33 ± 1.03 | 1.66 ± 0.51 | 2.16 ± 0.75 | 2.33 ± 0.81 | 1.33 ± 0.51 | 1.21 ± 0.49 |
| p value | 0.264 | 0.233 | 0.411 | 0.835 | 0.104 | 0.142 | 0.040 |
| Marital status | | | | | | | |
| Single | 3.00 ± 1.05 | 3.05 ± 1.09 | 1.65 ± 0.78 | 2.33 ± 1.11 | 3.19 ± 1.23 | 1.63 ± 0.82 | 2.03 ± 1.00 |
| Married | 3.08 ± 1.16 | 3.17 ± 1.18 | 1.95 ± 0.90 | 2.42 ± 1.15 | 3.11 ± 1.24 | 1.81 ± 0.88 | 2.19 ± 1.20 |
| Widowed or divorced | 3.25 ± 1.35 | 3.33 ± 1.30 | 2.16 ± 1.11 | 2.58 ± 0.99 | 3.58 ± 0.99 | 1.83 ± 0.71 | 2.33 ± 1.15 |
| p value | 0.726 | 0.594 | 0.010 | 0.695 | 0.420 | 0.235 | 0.444 |
| Education level | | | | | | | |
| Diploma | 3.35 ± 1.26 | 3.28 ± 1.20 | 1.98 ± 1.06 | 2.69 ± 1.24 | 3.10 ± 1.27 | 1.85 ± 1.00 | 2.21 ± 1.30 |
| Bachelor | 2.97 ± 1.01 | 3.12 ± 1.11 | 1.80 ± 0.79 | 2.35 ± 1.07 | 3.19 ± 1.17 | 1.71 ± 0.78 | 2.12 ± 1.05 |
| Postgraduate | 3.04 ± 1.33 | 3.00 ± 1.23 | 1.91 ± 0.97 | 2.25 ± 1.22 | 3.10 ± 1.37 | 1.74 ± 0.94 | 2.14 ± 1.25 |
| p value | 0.061 | 0.434 | 0.335 | 0.205 | 0.855 | 0.553 | 0.841 |
| Specialization | | | | | | | |
| Medicine | 2.86 ± 1.08 | 2.91 ± 1.04 | 1.73 ± 0.66 | 2.16 ± 1.04 | 2.96 ± 1.20 | 1.65 ± 0.70 | 1.95 ± 0.90 |
| Nursing | 3.08 ± 1.15 | 3.06 ± 1.13 | 1.77 ± 0.85 | 2.41 ± 1.10 | 3.05 ± 1.20 | 1.68 ± 0.85 | 2.04 ± 1.11 |
| Lab-Technician | 3.37 ± 1.14 | 3.50 ± 1.31 | 2.25 ± 1.14 | 2.68 ± 1.33 | 3.52 ± 1.37 | 2.07 ± 1.03 | 2.68 ± 1.34 |
| X-ray-Technician | 2.72 ± 0.88 | 3.45 ± 0.96 | 1.95 ± 0.72 | 2.22 ± 1.02 | 3.63 ± 0.78 | 1.77 ± 0.68 | 2.18 ± 0.85 |
| p value | 0.053 | 0.020 | 0.004 | 0.097 | 0.013 | 0.027 | 0.002 |
| Workplace | | | | | | | |
| Hospital | 3.03 ± 1.14 | 3.07 ± 1.16 | 1.87 ± 0.87 | 2.36 ± 1.14 | 3.08 ± 1.26 | 1.78 ± 0.88 | 2.14 ± 1.14 |
| Primary healthcare center | 3.25 ± 1.06 | 3.45 ± 1.07 | 1.79 ± 0.92 | 2.56 ± 1.10 | 3.56 ± 0.92 | 1.60 ± 0.73 | 2.14 ± 1.09 |
| p value | 0.221 | 0.030 | 0.560 | 0.270 | 0.003 | 0.191 | 0.996 |
| Years of experience | | | | | | | |
| ≤5years | 3.11 ± 1.07 | 3.21 ± 1.08 | 1.76 ± 0.86 | 2.42 ± 1.16 | 3.20 ± 1.22 | 1.67 ± 0.86 | 2.13 ± 1.12 |
| 6–15years | 3.05 ± 1.20 | 3.04 ± 1.24 | 1.94 ± 0.89 | 2.38 ± 1.12 | 3.10 ± 1.24 | 1.84 ± 0.84 | 2.12 ± 1.10 |
| >15years | 2.73 ± 1.19 | 3.10 ± 1.19 | 2.10 ± 0.93 | 2.26 ± 0.99 | 3.10 ± 1.19 | 1.84 ± 0.89 | 2.36 ± 1.49 |
| p value | 0.379 | 0.471 | 0.111 | 0.841 | 0.765 | 0.241 | 0.681 |
| Previous work with Covid-19 patients | | | | | | | |
| Yes | 2.75 ± 1.12 | 2.89 ± 1.14 | 1.86 ± 0.87 | 2.03 ± 1.08 | 2.89 ± 1.31 | 1.72 ± 0.79 | 2.03 ± 0.94 |
| No | 3.09 ± 1.12 | 3.16 ± 1.15 | 1.85 ± 0.88 | 2.43 ± 1.13 | 3.18 ± 1.21 | 1.75 ± 0.86 | 2.15 ± 1.15 |
| p value | 0.123 | 0.233 | 0.989 | 0.071 | 0.224 | 0.848 | 0.515 |

Data are expressed as means ± SD for continuous variables. The differences between means were tested by using independent-sample t test and one-way ANOVA. FCV-19S: Fear of COVID-19 Scale; SD: standard deviation. The p value less than 0.05 was considered as statistically significant.

well-being of people; many studies were conducted by researchers worldwide and focus on the impact of the pandemic on psychological health.^{21–24} The psychological determining factor of health has always been underestimated but in conditions such as the COVID-19 pandemic, it arises as a substantial factor²⁵; hence, the present study highlights the early psychological responses, in terms of fear toward the COVID-19 pandemic among healthcare professionals in the Gaza strip, Palestine.

In the present study, the validated FCV-19S, Arabic version has been used, which is psychometrically robust and

suitable to assess the psychological effect of COVID-19.²⁰ In addition, due to infection concerns, a snowball sampling technique and an online questionnaire were applied. A significant aspect of our study was to assess the fear of COVID-19 among healthcare professionals; the findings indicate that more than half of the study participants (54.3%) consider as low levels of fear, and 45.7% of the participants consider as high levels of fear. A previous study conducted in India demonstrated that more than half of healthcare workers (52.7%) consider as low levels of fear compared to 54.8% among the Indian population; and 47.3% of healthcare workers consider

Table 4. Characteristics of the study participants in relation to levels of fear and the FCV-19S items mean scores.

| Variables | Low n (%) | High n (%) | p value | Mean \pm SD | p value |
|--------------------------------------|--------------|--------------|---------|------------------|---------|
| Gender | | | | | |
| Male | 100.0 (56.8) | 76.0 (43.2) | 0.305 | 16.89 \pm 5.83 | 0.045 |
| Female | 63.0 (50.8) | 61.0 (49.2) | | 18.28 \pm 5.54 | |
| Age | | | | | |
| \leq 30 years | 97.0 (52.7) | 87.0 (47.3) | 0.073 | 17.57 \pm 5.35 | 0.197 |
| 31–50 years | 60.0 (54.5) | 50.0 (45.5) | | 17.66 \pm 6.44 | |
| >50 years | 6.0 (100) | 0.0 (0.0) | | 13.33 \pm 2.80 | |
| Marital status | | | | | |
| Single | 56.0 (53.3) | 49.0 (46.7) | 0.939 | 16.92 \pm 5.21 | 0.305 |
| Married | 100.0 (54.6) | 83.0 (45.4) | | 17.78 \pm 6.06 | |
| Widowed or divorced | 7.0 (58.3) | 5.0 (41.7) | | 19.08 \pm 5.86 | |
| Education level | | | | | |
| Diploma | 35.0 (54.7) | 29.0 (54.3) | 0.338 | 18.42 \pm 6.67 | 0.384 |
| Bachelor | 98.0 (51.9) | 91.0 (48.1) | | 17.31 \pm 5.19 | |
| Postgraduate | 30.0 (63.8) | 17.0 (36.2) | | 17.21 \pm 6.66 | |
| Specialization | | | | | |
| Medicine | 33.0 (55.0) | 27.0 (45.0) | 0.357 | 16.25 \pm 4.66 | 0.002 |
| Nursing | 96.0 (57.5) | 71.0 (42.5) | | 17.1 \pm 5.55 | |
| Lab-Technician | 22.0 (43.1) | 29.0 (56.9) | | 20.19 \pm 7.42 | |
| X-ray-Technician | 12.0 (54.5) | 10.0 (45.5) | | 17.95 \pm 3.96 | |
| Workplace | | | | | |
| Hospital | 141.0 (56.0) | 22.0 (45.8) | 0.959 | 17.36 \pm 5.86 | 0.264 |
| Primary healthcare center | 111.0 (44.0) | 26.0 (54.2) | | 18.37 \pm 5.16 | |
| Years of experience | | | | | |
| \leq 5 years | 85.0 (51.8) | 79.0 (48.2) | 0.369 | 17.53 \pm 5.49 | 0.987 |
| 6–15 years | 65.0 (55.6) | 52.0 (44.4) | | 17.50 \pm 6.11 | |
| >15 years | 13.0 (68.4) | 6.0 (31.6) | | 17.73 \pm 6.34 | |
| Previous work with Covid-19 patients | | | | | |
| Yes | 21.0 (72.4) | 8.0 (27.6)) | 0.032 | 16.20 \pm 5.60 | 0.193 |
| No | 142.0 (52.4) | 129.0 (47.6) | | 17.66 \pm 5.76 | |

Data are expressed as means \pm SD for continuous variables and as percentage for different categorical variables. The differences between means were tested by using independent-sample t test and one-way ANOVA. The chi-square test was used to examine differences in the prevalence of different categorical variable. FCV-19S: Fear of COVID-19 Scale; SD: standard deviation. The p value less than 0.05 was considered as statistically significant.

as high levels of fear compared to 45.2% among Indian population.²⁶ In fact, the healthcare professionals are most at risk for developing psychological and mental health symptoms, particularly among those who are the first contact and responsible for treatment, diagnosis, and care with COVID-19 cases.¹² The healthcare professionals may face many challenges such as the risk of infecting their family members, shortage of protective materials and equipment, and shortage of treatments; these challenges may lead to increased stress, depression, anxiety, suicidal thoughts, insomnia, irritability, loss of appetite, frustration, and fear.^{13,14}

Furthermore, the results of the present study demonstrated that demographic variables such as gender, age group, marital status, specialization, and workplace emerged to be a statistically significant difference for the different scale items. For instance, the female healthcare professionals reported that, they become more nervous or anxious when watching news and stories about COVID-19 compared to males

(FCV-19S item 5), this result is consistent with previous studies conducted in different countries.^{22,27,28} In addition, the study results are consistent with the previous study which demonstrated that older healthcare professionals had statistically significant lowest mean scores in the FCV-19S item 7 (My heart races or palpitates when I think about getting COVID-19).²¹ Moreover, single healthcare professionals had a statistically significant lowest mean score in the FCV-19S item 3 (My hands become clammy when I think about COVID-19). In addition, all fear scale items are statistically significant between different healthcare professional disciplines; there was a lack of evidence to assess fear of COVID-19 among different healthcare professionals' disciplines.

Our study determined a statistically significant difference between healthcare professionals working in the hospitals and primary healthcare centers in the FCV-19S item 2 and item 5. A study conducted in Gaza Strip demonstrated that

59.8% of participants claimed that their hospitals had a local protocol to deal with COVID-19, and 45.4% attended a COVID-19 training course, which could be a possible explanation for the lower mean of most items score of the healthcare professionals working in the hospitals compared to primary healthcare centers.²⁹ Furthermore, the mean scores of the study are higher than previous study conducted among medical and hospital staffs,²⁷ and lower than other studies conducted among different countries.^{19,30,31} A previous study showed that medical and nursing staff scale items scored higher than non-medical hospital staff.²⁷ This may be due to the direct contact with COVID-19 cases, their understanding of the nature of disease consequences, and the associated mortality.

On the contrary, the present study aimed to identify the high-risk groups among healthcare professionals for early psychological interventions. A statistically significant difference was found between different healthcare professionals disciplines, the Lab-Technicians emerged to be at high risk of having greater fear toward COVID-19; a possible explanation of this result may be because Lab-Technicians are directly responsible about screening tests for COVID-19 virus in Gaza Strip. Further future studies are required to confirm these findings.

Possible limitations of the study are the snowball sampling technique, which could lead to selection bias; only healthcare professionals who access to the Internet had an opportunity to participate in the study, as well as, the small sample size can be one of the limitations of our study. In spite of that, our study provides preliminary results about the fear of COVID-19 among healthcare professionals in the Palestinian context.

Conclusion

The study results demonstrated that fear of COVID-19 was high among female healthcare professionals compared to males, as well as, in Lab-Technicians compared to Physicians and Nurses. There is a need to establish a strategy to continuously measure the psychological effect of COVID-19 among healthcare professionals especially females. The results could help the decision maker to plan for suitable strategy intervention to reduce the psychological effect of COVID-19 among healthcare professionals.

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Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Ethical approval

The study protocol was approved by the Helsinki Ethical Committee in the Gaza Strip, Palestine (Code: PHRC/HC/742/20).

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Informed consent

The participants were asked to approve their participation to proceed with the online survey. Informed consent for an Internet survey was also obtained from each participant, and the method of obtaining informed consent was approved by the Helsinki Ethical Committee in the Gaza Strip, Palestine. No monetary rewards were given for completing the questionnaire.

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Supplemental material

Supplemental material for this article is available online.

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