In this together: Psychological wellbeing of foreign workers in the United Arab Emirates during the COVID-19 pandemic

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The COVID-19 pandemic and the associated infection prevention and control measures (e.g. quarantine, lockdown and isolation), have had an adverse impact on mental health. To date, the mental health status and challenges of foreign workers during the pandemic have been neglected in the literature. This cross-sectional web-based survey assessed levels of post-traumatic stress, depression, anxiety and insomnia among an international sample of foreign workers (n = 319) resident in the United Arab Emirates (UAE). The majority of participants were female (76%), European (69%) and highly educated (83% had a bachelor’s or higher degree). Results indicate high rates of post-traumatic stress, depression, anxiety, and insomnia, especially among women, younger individuals, and those with a previous diagnosis of a psychological disorder. Additionally, foreign workers’ perceptions of pandemic severity in their home nations (mild, moderate, severe) were positively correlated with their symptom levels of depression, anxiety and insomnia. Overall, these findings may help inform future public mental health strategy and pandemic preparedness plans with reference to safeguarding the psychological wellbeing of foreign workers.

Keywords: COVID-19; Depression; Anxiety; Post-traumatic stress; Foreign workers.

A severe acute respiratory syndrome, coronavirus 2 (SARS-CoV-2), later known as COVID-19, was identified in the Hubei Province of China towards the end of 2019. By 30 April 2020, the virus had spread to more than 200 different countries causing 217,769 deaths worldwide, with the per-capita mortality and infection rates varying greatly between nations (World Health Organization, 2020). Part of the variance in infection and mortality rates can be attributed the stringency, timing and effectiveness of the varying infection prevention and control (IPC) measures implemented by different governments, aiming to attenuate the spread of the pandemic.

Typically, national/governmental IPC initiatives involved lockdowns, social distancing and quarantines. Such measures are themselves not without health implications. Several reviews and commentaries have warned mental health professionals on the likely adverse psychological impact of interventions such as quarantine and isolation, based on findings of past pandemics (e.g. Brooks et al., 2020). For instance, during the SARS outbreak in 2003, a study conducted in Hong Kong reported a 30% increase in completed suicides among females aged 65 years and over (Chan et al., 2006). Furthermore, a North American study reported that, among individuals quarantining in response to SARS outbreak, 29% presented symptoms of post-traumatic stress disorder (PTSD) and 31% presented symptoms of depression (Hawryluck et al., 2004); longer quarantine was associated with more severe PTSD symptoms (Reynolds et al., 2008). Early reports from the COVID-19 pandemic have also highlighted a higher risk of experiencing clinically significant levels of psychopathology among individuals required to quarantine or isolate (e.g. Huang...
& Zhao, 2020; Lai et al., 2020). Similarly, an increasing number of studies have suggested elevated rates of depression, anxiety, and insomnia in the general population as a consequence of the Covid-19 pandemic and the associated IPC measures (e.g. Huang & Zhao, 2020; Liu et al., 2020; Tian et al., 2020; Wang et al., 2020).

In this context, an important public mental health goal is identifying groups at elevated risk of mental health problems associated with the pandemic. Several recent studies report that women, younger individuals and people with pre-existing medical conditions or mental health problems, report increased levels of pandemic-related psychopathology (Gentile et al., 2020; Liu et al., 2020; Mazza et al., 2020; Tian et al., 2020; Wang et al., 2020). Additionally, Liem et al. suggested that international migrant/foreign workers could be another potentially vulnerable group, due to threatened job security, access to healthcare, sub-optimal social support and potential language barriers (Liem et al., 2020). However, to the best of our knowledge, no study has yet specifically assessed the mental health status of foreign worker populations during the COVID-19 pandemic.

Foreign workers and their families are an increasingly sizable demographic in our globalised world. As of 2014, there were estimated to be 50.5 million such employees and their families worldwide, with the figure projected to reach 56.8 million by 2017 (Finaccord, 2014). Globalised markets have increased the opportunity for overseas employment and also the number of foreign workers, sometimes known as guest workers or expatriates. This is typically an internationally diverse workforce spanning all employment sectors. In general, the literature on foreign workers has tended to focus on the mental health of those individuals working in low-income, low-skill occupations, for example, construction labourers (e.g. Liem et al., 2020). There are far fewer studies conducted on foreign workers engaged in high skill, managerial, professional occupations (e.g. Bayraktar, 2019).

The Covid-19 pandemic and the IPC measures are likely to present some fairly unique challenges for foreign workers regardless of occupational status. For instance, the pandemic’s impact on the worker’s country of origin would be viewed from the host nation. This perspective might exacerbate anxieties about the wellbeing of friends and family back home. There may also be extended travel bans, creating additional obstacles for individuals who need to return home urgently on compassionate grounds. Furthermore, job insecurity and indebtedness can, in some contexts, be complicated by foreign worker status, as can access to healthcare in the host nation.

The United Arab Emirates (UAE) has one of the world’s highest foreign worker to citizen ratio with foreign workers and their accompanying families comprising around 80% of the population (National Bureau of Statistics, 2009). Compared to many other countries, the impact of COVID-19 in the UAE has been moderate, with 12,481 reported cases, 105 deaths, and 2429 recoveries (as of 30 April). Since the beginning of March 2020, the UAE government carried out an emergency plan to contain the pandemic. The closure of educational facilities (8 March) was followed by an extensive “work from home” campaign (14 March), and travel bans with the temporary suspension of tourist visas (26 March). Severe fines were enforced for violations of respiratory hygiene (masks) and social distancing measures.

The present study aimed to assess the psychological correlates of the COVID-19 pandemic on a sample of UAE-based foreign workers. In line with findings from the current as well as previous pandemics, we expected to observe (a) high rates of post-traumatic stress, depressed mood, anxiety, and insomnia (e.g. Chua et al., 2004; Forte et al., 2020; Hawryluck et al., 2004; Reynolds et al., 2008); and (b) more severe symptoms of post-traumatic stress, depressed mood, anxiety and insomnia among individuals with a pre-existing medical or psychological condition (Gentile et al., 2020; Mazza et al., 2020). Additionally, we hypothesised that an increased risk of psychopathology would be observed among foreign workers with family and friends living in countries that had experienced relatively high infection and mortality rates by April 2020 (e.g. Italy). To the best of our knowledge, this is one of the first studies to explore the psychological implications of the Covid-19 pandemic among foreign workers and their families. This work has potential implications for the identification of vulnerable groups and may also inform future public mental health and pandemic preparedness plans.

**METHOD**

**Participants**

Participants were adult residents of the UAE, comprised of foreign workers and their families, from various nations (n = 319). An invitation to participate was sent through social media platforms and websites, including WhatsApp, Facebook, Twitter and LinkedIn. Sample optimization was achieved through snowballing. The mean age for participants was 40.6 (SD = 9.0). For a full breakdown of participant’s demographics see Table 1. Participants were invited to complete an online survey in English.

**Procedure**

The study was approved by the local Research Ethics Committee (ZU20_077_F; MOHAP/DXB-REC/MMM/No. 48/2020). The online survey included socio-demographic questions and questions related to participants’ experience with the COVID-19 pandemic. Questions related to COVID-19 included whether or not participants had been diagnosed
TABLE 1
Sample characteristics

| Variable                                      | N = 319 |
|-----------------------------------------------|---------|
| Age (years), mean (SD)                        | 40.6 (9.0) |
| Gender, n (%)                                 |         |
| Male                                          | 76 (24) |
| Female                                        | 243 (76) |
| Education, n (%)                              |         |
| Some high school                              | 4 (1.3) |
| Completed high school                         | 49 (15.4) |
| Bachelor’s degree                             | 106 (33.2) |
| Master’s degree                               | 141 (44.2) |
| PhD                                           | 19 (6.0) |
| Emirate, n (%)                                |         |
| Abu Dhabi                                     | 39 (12.2) |
| Dubai                                         | 264 (82.8) |
| Sharjah                                       | 13 (4.1) |
| Ras Al Khaimah                                | 0 (0) |
| Fujairah                                      | 1 (0.3) |
| Umm Al Quwain                                 | 0 (0) |
| Ajman                                         | 2 (0.6) |
| Nationality, n (%)                            |         |
| Europe                                        | 220 (69) |
| Middle East                                   | 46 (14) |
| India                                         | 16 (5) |
| North America                                 | 15 (5) |
| Other                                         | 22 (7) |
| Religious faith, n (%)                        |         |
| Christianity                                  | 204 (63.9) |
| Islam                                         | 58 (18.2) |
| Hinduism                                      | 12 (3.8) |
| Buddhism                                      | 0 (0) |
| Other                                         | 3 (0.9) |
| Agnostic                                      | 40 (12.5) |
| Past history of psychological disorders, n (%)|         |
| No history of psychological disorders         | 282 (88.4) |
| Anxiety disorders                             | 12 (3.8) |
| Depressive disorders                          | 11 (3.4) |
| Eating disorders                              | 5 (1.6) |
| Multiple diagnoses (depression/anxiety/eating disorders) | 8 (2.5) |
| Personality disorders                         | 1 (0.3) |
| Medical condition increasing risk of COVID-19 complications, n (%) |         |
| Yes                                           | 34 (10.7) |
| No                                            | 285 (89.3) |

Instruments

The Impact of Event scale-revised

The Impact of Event Scale-Revised, or IES-R (Weiss & Marmar, 1997), is a 22-item self-report that allows for the subjective assessment of responses to traumatic events in the general population. This scale has good psychometric properties and has been extensively used to assess the psychological effects of pandemics (e.g. Lai et al., 2020; Reynolds et al., 2008). Participants were asked to rate each item in relation to their experience with COVID-19, using a 5-point scale ranging from 0 (“not at all”) to 4 (“extremely”). The IES-R yields a total score (i.e. the sum of scores in the 22 items) ranging from 0 to 88, and three sub-scores relative to the sub-scales of Intrusion (the presence of repeated thoughts about the traumatic event), Avoidance (how much the individual actively tries to avoid situations that remind of the traumatic event) and Hyperarousal (the physiological component of the symptoms). A proposed cutoff score of 33 is indicative of a probable diagnosis of PTSD (Creamer et al., 2003). This cutoff was used in the present study. The internal reliability of this scale among the current sample was excellent (α = .93).

The patient health questionnaire-8

The Patient Health Questionnaire-8 (PHQ-8; Kroenke et al., 2009) is a 8-item instrument assessing the frequency, in the past 2 weeks, of depressive symptoms in the general population. Participants’ responses can range from 0 to 3 with 0 = not at all, 1 = several days, 2 = more than half the days, 3 = nearly every day. The total score, ranging from 0 to 24, is obtained by summing the responses to each item. A score of less than 5 is considered to indicate an absence of depressive symptoms; scores between 5 and 9, between 10 and 14, between 15 and 19, and between 20 and 24 are thought to indicate mild, moderate, moderately severe, and severe depressive symptoms, respectively. In the present study a cutoff score ≥10 was used to identify clinically relevant (moderate) depressive symptoms, following recommendations from previous studies (Kroenke et al., 2009). Notably, the PHQ-8 is a shortened version of the PHQ-9 in which the last item, relative to suicidal ideation, has not been included (Kroenke et al., 2009). In agreement with UAE cultural norms, the use of the PHQ-8 was deemed preferable in the present study. The reliability of the PHQ-8 among the current sample was excellent (α = .91).

The generalised anxiety disorder-7

The Generalised Anxiety Disorder-7 (GAD-7; Spitzer et al., 2006) is a self-report scale that allows to measure anxiety in the general population. Participants are asked
to indicate how often in the past 2 weeks, they have experienced each one of the seven main symptoms of generalised anxiety disorder. The total score can range from 0 to 21 and is calculated by assigning scores of 0 (not at all), 1 (several days), 2 (more than half the days) and 3 (nearly every day), to participants’ responses in each item. Total scores of 5, 10 and 15 are considered cut-off points for mild, moderate and severe anxiety, respectively. The psychometric properties and normative data of the scale have been reported by Lowe et al., who suggested a cutoff score of 10 yielding a prevalence of anxiety disorders of 5%; the authors further suggest a high generalizability of their results to other populations (Löwe et al., 2008). The suggested cutoff of 10 was used in the present study. The reliability of this scale among the current sample was excellent (α = .93).

**The Insomnia Severity Index-7**

The Insomnia Severity Index-7 (ISI-7; Bastien et al., 2001) is a 7-item self-report questionnaire assessing the nature, severity, and impact of insomnia. The first three questions assess the current (i.e., last 2 weeks) presence or frequency of sleep problems. The remaining four questions assess individuals’ satisfaction, worry, and interference with everyday life, relative to their current sleep pattern. A 5-point Likert scale is used to rate each item (e.g., 0 = no problem; 4 = very severe problem), with a total score ranging from 0 to 28. The total score is interpreted as absence of insomnia (0–7), sub-threshold insomnia (8–14), moderate insomnia (15–21) and severe insomnia (22–28). A study conducted with a community sample has identified the cutoff score of 10 to have 86.1% sensitivity and 87.7% specificity (Morin et al., 2011). This cutoff was used in the present study. The reliability of this scale among the current sample was excellent (α = .92).

**Statistical analysis**

For each outcome measure, descriptive statistics were computed. Using the recommended cutoff scores for each measure, the prevalence of probable PTSD, depression, anxiety and insomnia was reported. Correlation analysis was used to explore the relationship of each measure with the others and with age. The Shapiro–Wilk test indicated that the outcome variables were not normally distributed and attempts to transform the data to symmetry were unsuccessful. Therefore, non-parametric tests, including Mann–Whitney U test and Kruskal-Wallis H test, were used for between-group comparisons. To explore the effect of potential vulnerability factors in predicting the prevalence of probable PTSD, depression, anxiety and insomnia, a set of logistic regressions were conducted. Potential vulnerability factors included gender, age, education, pre-existent medical condition, previous diagnosis of psychological disorders, having family or friends living in a country severely affected by COVID-19, and the perceived severity of COVID-19 in the foreign worker’s home country.

**RESULTS**

The sample included 319 individuals (mean age = 40.6; SD = 9.0). Participants were mostly female, holding graduate or post-graduate degrees, with no past history of psychological disorders, mostly Christian and living in the Emirate of Dubai. None of the study participants had received a diagnosis of COVID-19. The majority (98%) had not quarantined in the previous 2 weeks, while six participants (2%) reported having quarantined due to contact with an infected person. In total, 79% of participants reported having a family member or close friends living in countries severely affected by COVID-19. European nationalities were most prevalent (69%). About 11% of the sample reported being affected by a pre-existing medical condition likely to increase the risk of COVID-19 related complications (e.g., asthma, cardiovascular diseases, compromised immune system). About 12% of the sample reported a current or past history of psychological disorders (see Table 1).

When asked to describe the impact of COVID-19 in their home country, 65.2% of participants described their home country as “severely affected,” 27.3% described it as “moderately affected,” 5% as “mildly affected” and the remaining 2.5% indicated not being able to estimate or not being well-informed.

Descriptive statistics are reported in Table 2. Data collected using the IES-R highlighted a probable PTSD in 25% of participants. Similarly, data collected using the PHQ-8 indicated that 23% of participants experienced moderate to severe depressive symptoms (4% severe). Moderate to severe anxiety symptoms (12% severe) were observed in the 24% of participants, as highlighted by the GAD-7. Insomnia symptoms were observed in 33% of participants, with 4% of participants showing severe symptoms, as highlighted by the ISI-7. Significant and positive correlations were observed among outcome measures; more severe symptoms were observed among younger individuals (all p < .001; see Table 3).

A significant effect of gender was also observed across the four outcome measures (IES-R: U = 5075.00, p < .001; PHQ-8: U = 5968.50, p < .001; GAD-7: U = 5428.00, p < .001; ISI-7: U = 6782.50, p < .001), with more severe symptoms among women compared to men. Results of a Kruskal-Wallis test indicated no significant effect of education on symptoms severity (IES-R: H(4) = 8.71, p = .07; PHQ-8: H(4) = 8.84, p = .06; GAD-7: H(4) = 4.38, p = .36; ISI-7: H(4) = 6.55, p = .16).
TABLE 2
Descriptive statistics

| Measure | Cutoff | Range | N=319 | M (SD) | Median | Prevalence (%) |
|---------|--------|-------|-------|--------|--------|----------------|
| IES-R   | ≥33    | 0–85  | 23.77 (15.60) | 22 | 25 |
| PHQ-8   | ≥10    | 0–24  | 6.40 (5.67) | 5 | 23 |
| GAD-7   | ≥10    | 0–21  | 6.59 (5.69) | 5 | 24 |
| ISI-7   | ≥10    | 0–28  | 7.49 (6.12) | 6 | 33 |

GAD-7 = Generalized Anxiety Disorder-7; IES-R = Impact of Event Scale-Revised; ISI-7 = Insomnia Severity Scale-7; PHQ-8 = Patient Health Questionnaire-8.

TABLE 3
Correlations between demographic variables and measures

|       | IES-R | PHQ-8 | GAD-7 | ISI-7 |
|-------|-------|-------|-------|-------|
| PHQ-8 | 0.68* | —     | —     | —     |
| GAD-7 | 0.74* | 0.78* | —     | —     |
| ISI-7 | 0.61* | 0.71* | 0.65* | —     |
| Age   | −0.19*| −0.26*| −0.24*| −0.18*|

PHQ-8 = Patient Health Questionnaire-8. *p < .001.

Results of the logistic regressions are presented in Table 4. A higher reported prevalence of depression, anxiety and insomnia was observed among younger participants. Female gender was associated with higher prevalence of probable PTSD and insomnia. A previous diagnosis of a psychological disorder was associated with a higher reported prevalence of probable PTSD, depression and anxiety but not insomnia. A more severe (perceived) impact of COVID-19 in the home country predicted elevated scores for depression, anxiety and insomnia. Education, a pre-existent medical condition, and having family or friends living in a country severely affected by COVID-19 did not significantly predict psychopathology.

DISCUSSION

The present study aimed at assessing the psychological impact of the COVID-19 pandemic in a sample of foreign workers resident in the UAE. The study was conducted during the early stages of the national response to the pandemic, which included curfews, lockdowns, travel bans and quarantines among other measures. Although pre-pandemic data were not available for our specific sample, an examination of data available in the literature seems to suggest that the rates of psychopathology observed among the foreign workers in the present study were relatively high compared to normative samples (Ashbaugh et al., 2016; Gagnon et al., 2013; Kroenke et al., 2009; Löwe et al., 2008), and were similar to the elevated levels of psychopathology reported during the current or previous pandemics (e.g. Casagrande et al., 2020; Chua et al., 2004; Forte et al., 2020; Hawryluck et al., 2004; Reynolds et al., 2008). While elevated levels of depression and anxiety might be expected during times of national crisis, the longer-term effect of this remains unknown. There is also a need to identify which groups, among foreign workers and their families appear to be most vulnerable to heightened levels of psychopathology during the pandemic.

In the present study more severe symptoms of post-traumatic stress, depression, anxiety and insomnia were observed among females and younger individuals. This is in line with recent studies also reporting such age and gender effects (Forte et al., 2020; Mazza et al., 2020; Wang et al., 2020). Surprisingly, however, the presence of a pre-existent medical condition was not significantly associated with elevated symptom severity for post-traumatic stress, depression, anxiety or insomnia. This result contradicted our expectations and was discordant with the findings of Mazza et al. (2020), who reported elevated anxious and depressive symptomatology among individuals with a history of medical problems. Notably, the study of Mazza et al. was undertaken in Italy at a time when Italy had one of the highest infection and mortality rates in the world; this may explain the difference between their results and ours. Furthermore, pre-existing medical conditions in our sample were reported by a minority of participants (11%), which may not provide enough data to generate adequate statistical power. It is also worth noting that the residential status of foreign workers can be highly dependent on their overall health (i.e. being fit for work). For example, in the UAE, residency visa allocation and renewal are contingent upon passing mandatory health checks. This may explain the relative dearth of pre-existing health conditions in the present sample. These links between health and residency also highlight an obvious additional stressor for foreign workers during pandemics.

Physical health aside, the results of the logistic regression highlighted a higher reported prevalence of probable PTSD, depression, and anxiety among individuals with a current or previous diagnosis of psychological disorders. These results were both expected and in line with the literature (Cukor et al., 2011; Gentile et al., 2020),
### TABLE 4
Results of the logistic regression analysis

| Predictor            | Probable PTSD | Depression | Anxiety | Insomnia |
|----------------------|---------------|------------|---------|----------|
|                      | B             | OR (95% CI) | p       | B        | OR (95% CI) | p       | B         | OR (95% CI) | p       |
| **Gender**           |               |            |         |          |            |         |           |            |         |
| Gender               | 1.44          | 4.23 (1.70–10.54) | <.01 | 0.64     | 1.90 (0.85–4.24) | .12 | 0.74     | 2.11 (0.94–4.70) | .07 | 0.72     | 2.05 (1.05–4.04) | <.05 |
| **Age**              |               |            |         |          |            |         |           |            |         |          |            |         |
| 18–29                | 1.12          | 3.08 (0.98–9.64) | .05 | 2.05     | 7.77 (2.02–29.86) | <.01 | 2.21     | 9.16 (2.35–35.70) | <.01 | 1.41     | 4.11 (1.41–12.00) | <.05 |
| 30–49                | −0.09         | 0.92 (0.40–2.12) | .84 | 0.97     | 2.64 (0.87–8.02) | .09 | 1.07     | 2.96 (0.96–8.90) | .06 | −0.26    | 0.77 (0.37–1.60) | .48 |
| 50+                  | Reference     | Reference   |         | Reference | Reference   |         | Reference | Reference   |         |
| **Education**        |               |            |         |          |            |         |           |            |         |          |            |         |
| Some high school     | −0.01         | 0.99 (0.07–13.14) | .99 | 0.54     | 1.72 (0.11–27.31) | .70 | −0.58    | 0.56 (0.04–7.70) | .67 | −0.25    | 0.78 (0.07–8.96) | .84 |
| Completed high school | −0.35        | 0.70 (0.17–2.82) | .62 | −0.57    | 0.56 (0.15–2.11) | .39 | −0.39    | 0.68 (0.18–2.54) | .56 | 0.00     | 1.00 (0.30–3.35) | .99 |
| Bachelor’s degree    | −0.19         | 0.82 (0.23–2.94) | .77 | −0.76    | 0.47 (0.14–1.57) | .22 | −0.53    | 0.59 (0.18–1.97) | .39 | −0.05    | 0.95 (0.31–2.88) | .93 |
| Master’s degree      | −0.27         | 0.77 (0.22–2.66) | .67 | −0.62    | 0.53 (0.17–1.72) | .29 | −0.63    | 0.53 (0.16–1.72) | .29 | −0.47    | 0.63 (0.21–1.86) | .40 |
| PhD or similar       | Reference     | Reference   |         | Reference | Reference   |         | Reference | Reference   |         |
| Medical condition    | 0.61          | 1.85 (0.83–4.13) | .13 | 0.60     | 1.82 (0.77–4.31) | .17 | 0.46     | 1.59 (0.68–3.72) | .29 | 0.40     | 1.50 (0.69–3.25) | .31 |
| Psychological disorder | **1.02**   | **2.78 (1.28–6.08)** | <.05 | **1.25** | **3.49 (1.58–7.70)** | <.01 | **1.13** | **3.09 (1.39–6.85)** | <.01 | 0.67     | 1.95 (0.89–4.27) | .10 |
| Family/Friends       | 0.23          | 1.26 (0.58–2.75) | .56 | −0.35    | 0.70 (0.32–1.54) | .37 | −0.43    | 0.65 (0.30–1.41) | .27 | 0.31     | 1.37 (0.67–2.81) | .39 |
| COVID-19 severity    |               |            |         |          |            |         |           |            |         |          |            |         |
| Mild                 | −1.45         | 0.23 (0.04–1.33) | .10 | −0.64    | 0.53 (0.13–2.22) | .38 | −1.79    | 0.17 (0.03–0.98) | <.05 | −1.57    | 0.21 (0.04–0.97) | <.05 |
| Moderate             | −0.37         | 0.69 (0.35–1.36) | .29 | −0.82    | 0.44 (0.21–0.95) | <.05 | −0.99    | 0.37 (0.17–0.79) | <.05 | −0.78    | 0.46 (0.24–0.87) | <.05 |
| Severe               | Reference     | Reference   |         | Reference | Reference   |         | Reference | Reference   |         |
| Unable to estimate   | 0.39          | 1.48 (0.31–7.00) | .62 | 0.49     | 1.63 (0.33–7.94) | .54 | 0.87     | 2.40 (0.49–11.74) | .28 | −0.33    | 0.72 (0.14–3.62) | .69 |
and confirmed the idea of a higher susceptibility for this group during the pandemic. One major concern is that this elevated symptomatology could lead to the relapse for some individuals. This group would almost certainly benefit from initiatives aimed at secondary prevention. Also, as with physical health, mental health conditions (psychiatric diagnoses) could potentially impact the residency status of some foreign workers, further exacerbating concerns about job security and the implications for accompanying family members.

Interestingly, the perceived impact of the pandemic on participants’ home country predicted the severity of depression, anxiety, and insomnia, with greater impact being associated with more severe symptomatology. Although no previous literature is available on the psychological impact of pandemics among foreign workers, these results are generally in line with our predictions. The physical, psychological and financial threats that come with COVID-19 might have a greater impact on individuals who, worried about their status in the host country, cannot envision an early repatriation as a viable option. This state of uncertainty, combined with witnessing the tragic events in their home country from afar, could exacerbate concerns and give rise to psychopathology. It is worth noting, however, that our study did not include an objective measure of the pandemic’s impact in participants’ home countries, therefore these results must be interpreted with caution.

Contrary to our predictions, we did not observe a higher reported prevalence of probable PTSD, depression, anxiety or insomnia among those who reported having family or close friends living in countries severely affected by COVID-19. Although this result was unexpected, an interpretation can be attempted. On one hand, increased worry could be expected among individuals whose family and friends live in a country with higher infection and mortality rates. Conversely, it seems possible that greater concern could have contributed to bringing people together to (virtually) share the lockdown experience with family and friends, possibly leading to individuals experiencing the benefits of greater social support. While this interpretation remains speculative, it would be partially in line with recent findings reporting an inverse association between social support and depressive symptoms during the COVID-19 pandemic (Grey et al., 2020). Notably, previous studies conducted on foreign workers, outside of the COVID-19 context, highlight the psychological benefits of receiving social support from relatives and friends in the home country (Bayraktar, 2019). All in all, the impact of social support on the psychological wellbeing of foreign workers during pandemics seems worthy of further investigation.

The strengths of our study include the focus on a multicultural and international sample and the specific attention given to foreign workers, a group often neglected in the psychological research literature. Aside from its strengths, our study also has several important limitations. Firstly, the study is cross-sectional and correlational limiting our ability to infer temporality or causality. Given the absence of pre-pandemic data for our specific sample, our results were compared with data available in the literature. Such a comparison is obviously sub-optimal, methodologically speaking, due to the differing sample demography and data collection procedures. These comparisons, therefore, should be interpreted with utmost caution. Moreover, our data were collected from a convenience sample; hence, it is not representative of the broader population of foreign workers living in the UAE. Notably, our sample mainly included highly educated individuals, mostly European, while “blue-collar” manual workers, were notably absent in our sample. This absence may be due to this group having less access to the internet, less leisure time, and being less likely to be literate in English (the language of the current survey). Further research specifically focusing on the psychological wellbeing of the lower-skilled manual labour workforce during pandemics is recommended. Another potential limitation in the present study is the use of an online questionnaire, which, although necessitated by social distancing requirements, could have affected the characteristics of our sample (self-selection bias). It is also worth noting that none of the measures used in the present study had been previously validated among samples of foreign workers. This important point should be addressed by future research.

Taken together, our results from an early phase of the COVID-19 pandemic confirm that high rates of probable PTSD, depression, anxiety and insomnia can be expected among foreign workers and their families. Women, younger individuals and individuals affected by a pre-existing psychological disorder appear to be most vulnerable. Separation from family and friends who live in countries with higher infection and mortality rates does not seem to impact psychological wellbeing; nevertheless, the mitigating role of additional factors (e.g. social support) that were not investigated in the present study cannot be excluded. The perceived impact of COVID-19 in the participants’ home country was associated with an elevated risk of depression, anxiety and insomnia. Overall, due to the lack of previous literature addressing the psychological wellbeing of foreign workers during pandemics, our results must be considered only preliminary and the need for further research must be reiterated.

The integration of psychological interventions during the COVID-19 outbreak can prove useful. The UAE is currently offering, through the National Program for Happiness and Wellbeing (NPHW), online support for individuals feeling overwhelmed by the COVID-19 pandemic. The present study could contribute to the development of targeted interventions to guarantee an easy access to a culturally appropriate psychological support
for vulnerable populations. Furthermore, foreign workers’ dependence on information technology might mediate social connection and support, therefore the strengthening of IT infrastructure at a national level would be an essential part of future pandemic preparedness plans. Similarly, current social distancing measures in the UAE limit social gatherings to a small number of first-degree family members, which might not take into account the psychological needs of foreign workers, many of which rely solely on friends and compatriots for social support. While our results provide a picture of early reactions to the pandemic among foreign workers living in the UAE, future studies could examine late reactions to the pandemic as well as the efficacy of psychological interventions in reducing levels of pandemic-related psychopathology.

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