The Impact of the COVID-19 Pandemic on Iranian Psychiatric Trainees’ and Early Career Psychiatrists’ Well-being, Work Conditions, and Education

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Received: 11 March 2022 / Accepted: 6 June 2022 / Published online: 22 June 2022
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Abstract

Objectives This study was conducted to investigate the impact of the COVID-19 pandemic on psychiatric trainees and early career psychiatrists in Iran.

Methods In this cross-sectional survey, the authors used a 24-item questionnaire inquiring about the sociodemographic characteristics of the participants, their views on the impact of the COVID-19 pandemic on their professional careers, methods of education, workplace environment, well-being and mental health, and the use of telepsychiatry in Iran.

Results A total of 159 responses were received. The majority (n=124, 78.0%) reported that “some but not all obligatory activities have been converted to online activities.” Most of the participants (n=103, 64.8%) stated that the pandemic had not affected the duration of their training. Less than half (n=61, 38.4%) reported that their well-being had been affected rather negatively. Some (n=59, 37.1%) reported that their supervisors or coworkers had no significant impact on their well-being, whereas others (n=53, 33.3%) reported a rather positive impact. Almost half of the participants (n=78, 49.0%) did not have access to free psychological counseling. In addition, more than half (n=89, 56.0%) reported that there were no recommendations on how to proceed with telepsychiatry.

Conclusions This study calls for improvements in the education and well-being of psychiatric trainees and early career psychiatrists in Iran amid the COVID-19 pandemic. Additional research should be carried out to maximize learning, provide mental health care, and use telepsychiatry.

Keywords COVID-19 · Psychiatric trainees · Early career psychiatrists · Education · Mental health · Telepsychiatry · Iran

The coronavirus outbreak rapidly spread all over the world, and on January 30, 2020, the World Health Organization (WHO) announced the coronavirus disease (COVID-19) as a public health emergency of international concern [1].

As the COVID-19 pandemic has impacted different sectors of societies, health care workers have endured unutterable pressure due to intensive work; the frontline staff, in particular, have been at higher risk of developing symptoms of COVID-19 and burnout [2–4]. The heavy workload during the pandemic was a new kind of physical and psychological stressor for health workers, making them prone to fear, anger, anxiety, depression, and sleep disorders [5, 6]. The more mental health issues develop, the more psychological support is required [7]. These outbreaks have required novel, varied, and efficient mental health services [8]. As such, telepsychiatry has been widely introduced all over the world as a safer and more convenient tool for both patients and health professionals. Individual and group psychotherapy (including groups for health care professionals) and telephone hotlines have been used as an alternative method of working for psychiatrists in Iran [9].
Previous studies have suggested that the COVID-19 pandemic impacted psychiatrists differently. For instance, some had to change their workplaces and start using telepsychiatry without prior training. This impact was in addition to the financial pressure that the Iranian early career psychiatrists and psychiatric trainees were already dealing with [10].

This study aimed to investigate how Iranian early career psychiatrists and psychiatric trainees have been exposed to the COVID-19 pandemic, their attitudes toward the pandemic, and the impact of the pandemic on their well-being, work conditions, and education.

Methods

This cross-sectional survey was conducted in Iran using a self-report, anonymous 24-item questionnaire. It included questions about the sociodemographic characteristics of the participants, their views on the impact of the COVID-19 pandemic on their professional careers, new COVID-19-related circumstances, methods of education, workplace environment, well-being and mental health, and the use of telepsychiatry in Iran.

The questionnaire was disseminated between September and November 2021 via email and social media to about 700 psychiatric trainees studying in all the nationally recognized institutions in Iran and to early career psychiatrists who are members of the Early Career Psychiatrists Committee of the Iranian Psychiatric Association. The inclusion criterion was being a psychiatric trainee (i.e., a qualified physician who is undertaking psychiatric training in an institution in Iran) or an early career psychiatrist (i.e., a physician who completed psychiatric training not more than 5 years before). When in this report the term participants is used, it is in reference to both psychiatric trainees and early career psychiatrists. In Iran, general practitioners undergo a 4-year residency program after taking the entrance exam. After the residency program, psychiatric trainees take the psychiatric board exam, and they must complete 2–5 years of a compulsory medical service program as general psychiatrists. Before finishing this program, they are not allowed to do private practice.

The questionnaire was developed in English for an international cross-sectional collaborative survey [11], and it was translated into Persian by one of the authors with native proficiency in both English and Persian. The back translation method was used; thereafter, the questionnaire’s face validity and content validity (Cronbach’s alpha=0.92) were assessed.

Data were analyzed with IBM SPSS Statistics (v. 25.0). To report the frequencies and percentages of categorical variables, descriptive statistics were used, and only valid percentages are reported.

Results

A total of 159 psychiatric trainees and early career psychiatrists responded to the survey. The majority (n=115, 72.3%) were female, were married (n=108, 67.9%), and had no children (n=108, 67.9%). They mostly had worked in inpatient psychiatric wards (n=96, 60.4%) and in outpatient psychiatric clinics or day wards (n=38, 23.9%), whereas the rest worked in individual private psychiatric practice (n=9, 5.7%), inpatient COVID-19 wards (n=12, 7.5%), and outpatient COVID-19 clinics (n=4, 2.4%). Table 1 details the sociodemographic data of the participants.

Several participants stated that they had received specific recommendations for early career psychiatrists involving educational activities (e.g., courses, workshops, local conferences) during the pandemic from national/regional authorities (n=36, 22.6%), the national psychiatric association (n=56, 35.2%), or other organizations (n=48, 30.1%). Yet, others (n=64, 40.2%) did not receive any recommendations. Less than half reported having access to general activities for all medical doctors (n=69, 43.3%) or access to specific activities dedicated to all psychiatrists (n=57, 35.8%), and a few had access to specific activities dedicated to early career psychiatrists (n=8, 5.0%). With relation to obligatory activities, the majority (n=124, 78.0%) stated that some but not all were converted to online activities, followed by 16.4% (n=26) who stated all were converted to online activities, 3.8% (n=6) who stated they were canceled with no online alternative offered, and 1.9% (n=3) who stated they were carried out as usual (in person). The pandemic mostly did not affect the duration of the participants’ training (n=103, 64.8%), but for a few it extended the duration of training (n=4, 2.5%), shortened the duration of training (n=14, 8.8%), or prevented them from taking the specialist exam as previously planned (N=5, 3.1%). Table 2 details participants’ COVID-19 knowledge and training.

Most participants (n=127, 79.9%) were not obliged by the authorities to change their workplace (Table 3), and more than half (n=88, 55.4%) were sufficiently provided with personal protective equipment by their medical facilities (e.g., hospital, clinic, university). More than half (n=89, 56.0%) did not have access to free COVID-19 tests or were not tested for COVID-19 (n=89, 56.0%). The majority (n=97, 61.0%) had been clinically diagnosed with COVID-19, and more than half (n=75, 47.2%) were quarantined.

Most (n=61, 38.4%) reported that their well-being had been affected rather negatively with increased stress, burnout, and health concerns, with some reporting a very negative impact (n=29, 18.2%). On the other hand, some reported a positive impact (n=35, 22.0%) or even a very positive impact (n=17, 10.7%), with increased resilience and increased sense of importance of their work. Some reported no significant impact (n=17, 10.7%).
For most ($n=59, 37.1\%$), their supervisors and/or co-workers had no significant impact on their well-being (Table 4). Some ($n=4, 2.5\%$) stated that their supervisors and/or coworkers had affected their well-being negatively or even rather negatively ($n=22, 13.8\%$). Alternatively, some reported their impact as rather positive ($n=53, 33.3\%$) or very positive ($n=14, 8.8\%$). Almost half ($n=78, 49.0\%$) did not have access to free psychological counselling, although some ($n=51, 32.0\%$) received free psychological counselling provided/funded by their medical facility (e.g., hospital/clinic/university).

More than half ($n=89, 56.0\%$) stated that they did not receive any recommendations on how to proceed with telepsychiatry (Table 5). The tools used ranged from a “dedicated closed platform for audiovisual communication in telemedicine” ($n=29, 18.2\%$) to “general software for audiovisual communication (commonly used applications)” ($n=90, 56.6\%$), “telephone or software for audio communication only” ($n=43, 27.0\%$), and “chat, text messages or e-mail” ($n=5, 6.6\%$).

### Discussion

Most participants stated that some but not all obligatory activities were converted to online activities, whereas some reported that all obligatory activities were converted to online activities. Only a few stated that the activities were carried out as usual (in person) or that they were cancelled without the offer of an online alternative. Most participants stated that the pandemic had not affected the duration of their training but reported that their well-being had been affected rather negatively. About a third reported that their supervisors or coworkers had no significant impact on their well-being, but for nearly half, the impact of supervisors or co-workers was positive. Almost half of the participants did not have access to free psychological counselling. More than half did not receive specific recommendations on how to proceed with telepsychiatry.

This is the first study in Iran to investigate the perception of psychiatric trainees and early career psychiatrists of their well-being during the pandemic. A small sample size and potential reporting bias (such as social-desirability bias) are limitations.

### Table 1 Sociodemographic data of the participants (N=159)

|                          | Male, N (%) | Female, N (%) | Total, N (%) |
|--------------------------|-------------|---------------|--------------|
| Gender                   | 44 (27.7\%) | 115 (72.3\%)  | 159 (100\%)  |
| Marital status           |             |               |              |
| Married                  | 33 (75.0\%) | 75 (65.2\%)   | 108 (67.9\%) |
| Single                   | 11 (25.0\%) | 25 (21.7\%)   | 36 (22.6\%)  |
| In a relationship        | 0           | 11 (9.6\%)    | 11 (6.9\%)   |
| Separated                | 0           | 3 (2.6\%)     | 3 (1.9\%)    |
| Widow                    | 0           | 1 (0.9\%)     | 1 (0.6\%)    |
| Children                 |             |               |              |
| Yes                      | 19 (43.1\%) | 32 (27.8\%)   | 51 (32.1\%)  |
| No                       | 25 (56.8\%) | 83 (72.2\%)   | 108 (67.9\%) |
| Role in the health system|             |               |              |
| Psychiatric trainees     | 20 (45.4\%) | 61 (53.0\%)   | 81 (58.7\%)  |
| Early career psychiatrists| 21 (47.7\%) | 47 (40.8\%)   | 68 (36.9\%)  |
| Psychiatric fellows      | 1 (2.2\%)   | 7 (6.0\%)     | 8 (4.3\%)    |
| Main place of work during the COVID-19 pandemic | | | |
| Inpatient psychiatric ward | 25 (56.8\%) | 71 (61.7\%) | 96 (60.4\%) |
| Outpatient psychiatric clinic or day ward | 11 (25.0\%) | 27 (23.4\%) | 38 (23.9\%) |
| Individual private psychiatric practice | 4 (9.0\%) | 5 (4.3\%) | 9 (5.7\%) |
| Inpatient COVID-19 ward  | 0           | 12 (27.2\%)   | 12 (7.5\%)   |
| Outpatient COVID-19 clinic | 1 (2.2\%) | 3 (2.6\%) | 4 (2.4\%) |
| Province                 |             |               |              |
| Tehran                   | 32 (72.7\%) | 83 (72.1\%)   | 115 (72.3\%) |
| Isfahan                  | 4 (9.0\%)   | 15 (13.0\%)   | 19 (11.9\%)  |
| Khuzestan                | 1 (2.2\%)   | 4 (3.4\%)     | 5 (3.1\%)    |
| Mazandaran               | 1 (2.2\%)   | 2 (1.7\%)     | 3 (1.8\%)    |
| Yazd                     | 0           | 3 (2.6\%)     | 3 (1.8\%)    |
| Sistan and Baluchestan   | 3 (6.8\%)   | 0             | 3 (1.8\%)    |
| Fars                     | 1 (2.2\%)   | 1 (0.9\%)     | 2 (1.2\%)    |
| Zanjan                   | 0           | 2 (1.7\%)     | 2 (1.2\%)    |
| Golestan                 | 0           | 1 (0.9\%)     | 1 (0.6\%)    |
| Guilan                   | 1 (2.2\%)   | 0             | 1 (0.6\%)    |
| Hamedan                  | 0           | 1 (0.9\%)     | 1 (0.6\%)    |
| Ghazvin                  | 0           | 1 (0.9\%)     | 1 (0.6\%)    |
| Kerman                   | 0           | 1 (0.9\%)     | 1 (0.6\%)    |
| Kordestan                | 0           | 1 (0.9\%)     | 1 (0.6\%)    |
| East Azerbaijan          | 1 (2.2\%)   | 0             | 1 (0.6\%)    |
of this study, although the sample size was similar to the sample size of other surveys done with this targeted population [10, 12].

The COVID-19 pandemic has affected the interaction among students, teachers, and patients. This effect holds an unknown future; therefore, keen observation is required for a fit for purpose curriculum and productive pedagogy. Thus far, there have been complaints of the low-quality education system, elongation of training time, and feeling that skills are being underutilized. Many have claimed that contributing to health care should not be considered students’ duty [13–16].

Not being provided with alternative arrangements has led to dissatisfaction toward education due to scarcity of hands-on practice, randomly organized webinars, unclarity and ambiguity in the evaluation measures, lack of infrastructures, lack of cover when staff require to be in isolation, and the expectation of being called to cover intensive care units or COVID quarantine areas [17]. Tang et al. have reported that US educational websites have been helpful but are limited by inaccurate or outdated information [18].

The promotion of mental health and occupational mental health is frequently neglected in psychiatry residency

| Table 2 COVID-19 knowledge and training |
|----------------------------------------|
| How confident are you in your knowledge on COVID-19 symptoms and management? | Male, N (%) | Female, N (%) | Total, N (%) |
| Very confident | 5 (11.3%) | 8 (7.0%) | 13 (8.2%) |
| Confident | 21 (47.7%) | 40 (34.8%) | 61 (38.4%) |
| Not confident nor unconfident | 14 (31.8%) | 55 (47.8%) | 69 (43.4%) |
| Unconfident | 4 (9.0%) | 12 (10.4%) | 16 (10.1%) |
| How confident are you in managing patients with a comorbidity of COVID-19 and a mental disorder? | | | |
| Very confident | 2 (4.5%) | 6 (5.2%) | 8 (5.0%) |
| Confident | 23 (52.2%) | 43 (37.4%) | 66 (41.5%) |
| Not confident nor unconfident | 15 (34.0%) | 53 (46.1%) | 68 (43.4%) |
| Unconfident | 3 (6.8%) | 12 (10.4%) | 15 (9.4%) |
| Very unconfident | 0 | 1 (0.9%) | 1 (0.6%) |
| Have any specific recommendations for ECPs during the pandemic been introduced in your country? | | | |
| Yes, by the national/regional authorities | 13 (29.5%) | 23 (20.0%) | 36 (22.6%) |
| Yes, by National Psychiatric Association | 18 (40.9%) | 38 (33.0%) | 56 (35.2%) |
| Yes, by other organizations | 39 (88.6%) | 9 (7.8%) | 48 (30.1%) |
| No | 14 (31.8%) | 50 (43.5%) | 64 (40.2%) |
| Have additional educational activities (courses, workshops, local conferences) on COVID-19 been offered for ECPs in your country? | | | |
| Yes, general activities for all MDs | 19 (43.1%) | 50 (43.4%) | 69 (43.3%) |
| Yes, specific activities dedicated to all psychiatrists | 14 (31.8%) | 43 (37.3%) | 57 (35.8%) |
| Yes, specific activities dedicated to ECPs | 3 (6.8%) | 5 (4.3%) | 8 (5.0%) |
| No | 13 (29.5%) | 21 (18.3%) | 34 (21.3%) |
| Have obligatory local training and educational activities for ECPs (courses, workshops, local conferences) been replaced with online activities? | | | |
| Yes, all obligatory activities have been converted to online activities | 5 (11.3%) | 21 (18.3%) | 26 (16.4%) |
| Yes, some but not all obligatory activities have been converted to online activities | 35 (79.5%) | 89 (77.4%) | 124 (78.0%) |
| No, they have been carried out as usual (in person) | 1 (2.2%) | 2 (1.7%) | 3 (1.9%) |
| No, they have been canceled but no online alternative has been offered | 3 (6.8%) | 3 (2.6%) | 6 (3.8%) |
| Has COVID-19 pandemic affected the duration of your training? | | | |
| Yes, it extended the duration of my training | 0 | 4 (3.5%) | 4 (2.5%) |
| Yes, it shortened the duration of my training | 5 (11.3%) | 9 (7.8%) | 14 (8.8%) |
| Yes, it prevented me from taking the specialist exam as planned | 1 (2.2%) | 4 (3.5%) | 5 (3.1%) |
| No | 26 (59.0%) | 77 (67.0%) | 103 (64.8%) |
| Not applicable (I have completed my training and exams before the COVID-19 outbreak) | 11 (25.0%) | 20 (17.4%) | 31 (19.5%) |

ECP, early career psychiatrist
programs [19]. From this study in Iran, 18.2% reported their well-being had been affected very negatively by the COVID-19 pandemic, 38.4% rather negatively, 22.0% rather positively, and 10.7% very positively, whereas 10.7% reported no significant impact. Another study in Iran by Moini et al. [20] stated that 96% of residents had developed emotional issues, 85.9% were highly stressed about COVID-19 contagion, and 78% complained of an impaired education system. Rezaei et al. [21] have also reported stress, anxiety, the extension of training duration, and the reduction in the workforce due to COVID-19 in Iran. Detterline et al. [22] reported the well-being needs of 88% of US residents were well met and that they were provided with effective communication (86%), scheduling/staffing (78%), preparation for clinical service (78%), and educational needs (76%). Rana et al. [23] reported anxiety among residents in Brazil as a result of unknown professional future (84%). Depression (50%), anxiety (45%), and insomnia (34%) were also reported in China [24] and the USA [25], and they significantly correlated with gender, seen mostly in females. A study conducted in India reported anxiety and stress irrespective of gender, year of study, habitation, and family’s monthly income [26]. In Italy, Lasalvia et al. [27] reported symptoms of posttraumatic distress (63.2%), anxiety (50.1%), and depression (26.6%) among health care workers.

### Table 3  Workplace conditions

| Have you been obliged by the authorities to change the place of work because of the pandemic? | Male, N (%) | Female, N (%) | Total, N (%) |
|-----------------------------------------------|-------------|---------------|--------------|
| Yes                                            | 9 (20.4%)   | 23 (20.0%)    | 32 (20.1%)   |
| No                                             | 35 (79.5%)  | 92 (80.0%)    | 127 (79.9%)  |

| The physical distancing and other recommendations related to COVID-19 prevention were followed at my workplace | Male, N (%) | Female, N (%) | Total, N (%) |
|---------------------------------------------------------------|-------------|---------------|--------------|
| Strongly agree                                                 | 4 (9.0%)    | 4 (3.5%)      | 8 (5.0%)     |
| Agree                                                          | 16 (36.3%)  | 45 (39.1%)    | 61 (38.4%)   |
| Neither agree nor disagree                                      | 12 (27.2%)  | 39 (33.9%)    | 51 (32.1%)   |
| Disagree                                                       | 11 (25.0%)  | 21 (18.3%)    | 32 (20.1%)   |
| Strongly disagree                                              | 1 (2.2%)    | 6 (5.2%)      | 7 (4.4%)     |

| Have personal protective equipment been sufficiently provided for the ECPs in your workplace? | Male, N (%) | Female, N (%) | Total, N (%) |
|-----------------------------------------------------------------------------------------------|-------------|---------------|--------------|
| Yes, they have been provided by the medical facility (hospital/clinic/university)            | 21 (47.7%)  | 67 (58.2%)    | 88 (55.4%)   |
| Yes, they have been provided by the local or national authorities                             | 12 (27.2%)  | 12 (10.4%)    | 24 (15.0%)   |
| Yes, they have been provided by non-governmental organizations                              | 5 (11.3%)   | 4 (3.4%)      | 9 (5.6%)     |
| Yes, they have been provided by private entities or other individuals                         | 1 (2.2%)    | 0             | 1 (0.6%)     |
| No, I had to buy or prepare the protective equipment myself                                   | 13 (29.5%)  | 34 (29.6%)    | 46 (28.9%)   |

| Did you have access to free COVID-19 tests at your place of work? | Male, N (%) | Female, N (%) | Total, N (%) |
|------------------------------------------------------------------|-------------|---------------|--------------|
| Yes                                                              | 15 (34.0%)  | 55 (47.8%)    | 70 (44.0%)   |
| No                                                               | 29 (65.9%)  | 60 (52.2%)    | 89 (56.0%)   |

| Have you been tested for SARS-CoV-2?                              | Male, N (%) | Female, N (%) | Total, N (%) |
|------------------------------------------------------------------|-------------|---------------|--------------|
| Yes, at least one test positive                                   | 12 (27.2%)  | 23 (20.0%)    | 35 (22.0%)   |
| Yes, all tests negative                                          | 12 (27.2%)  | 22 (19.1%)    | 34 (21.4%)   |
| Yes, awaiting the results of my first test                       | 0           | 1 (0.9%)      | 1 (0.6%)     |
| No                                                               | 20 (45.4%)  | 60 (60.0%)    | 80 (56.0%)   |

| Have you been clinically diagnosed with COVID-19?                 | Male, N (%) | Female, N (%) | Total, N (%) |
|------------------------------------------------------------------|-------------|---------------|--------------|
| Yes, I have recovered                                           | 32 (72.7%)  | 65 (56.5%)    | 97 (61.0%)   |
| Yes, I still have COVID-19                                      | 0           | 1 (0.9%)      | 1 (0.6%)     |
| No                                                               | 12 (27.2%)  | 49 (42.6%)    | 61 (38.4%)   |

| Have you been quarantined?                                       | Male, N (%) | Female, N (%) | Total, N (%) |
|------------------------------------------------------------------|-------------|---------------|--------------|
| Yes, due to clinical diagnosis of COVID-19                       | 27 (61.3%)  | 48 (41.7%)    | 75 (47.2%)   |
| Yes, due to positive test for COVID-19                           | 5 (11.3%)   | 16 (13.9%)    | 21 (13.2%)   |
| Yes, due to potential exposure to SARS-CoV-2 but not confirmed with test | 2 (4.5%)   | 14 (12.2%)    | 16 (10.1%)   |
| No                                                               | 10 (22.7%)  | 37 (32.2%)    | 47 (29.6%)   |

ECP, early career psychiatrist
More than half (56.0%) of our participants reported that they did not receive any recommendations on how to proceed with telepsychiatry in Iran. Some studies have suggested that providing general education and establishing systems for telepsychiatry can reduce the pressure on psychiatric trainees and early career psychiatrists. These can support psychiatric departments to provide appropriate care in non-urgent situations that do not necessarily require face-to-face interaction, minimizing the risk of COVID contagion. It also helps mental health providers

Table 4  Well-being and support

| How did COVID-19 pandemic affect your well-being? | Male, N (%) | Female, N (%) | Total, N (%) |
|--------------------------------------------------|-------------|----------------|--------------|
| Very positively                                  | 5 (11.3%)   | 12 (10.4%)     | 17 (10.7%)   |
| Rather positively                                | 13 (29.5%)  | 22 (19.1%)     | 35 (22.0%)   |
| No significant impact                            | 5 (11.3%)   | 12 (10.4%)     | 17 (10.7%)   |
| Rather negatively                                | 17 (38.6%)  | 44 (38.3%)     | 61 (38.4%)   |
| Very negatively                                  | 4 (9.0%)    | 25 (21.7%)     | 29 (18.2%)   |

What was the impact of your supervisors and/or coworkers on your well-being?

|                                | Male, N (%) | Female, N (%) | Total, N (%) |
|--------------------------------|-------------|---------------|--------------|
| Very positive                  | 3 (6.8%)    | 11 (9.6%)     | 14 (8.8%)    |
| Rather positive                | 16 (36.3%)  | 37 (32.2%)    | 53 (33.3%)   |
| No significant impact          | 16 (36.3%)  | 43 (37.4%)    | 59 (37.1%)   |
| Rather negative                | 7 (15.9%)   | 15 (13.0%)    | 22 (13.8%)   |
| Very negative                  | 1 (2.2%)    | 3 (2.6%)      | 4 (2.5%)     |
| Not applicable                 | 1 (2.2%)    | 6 (5.2%)      | 7 (4.4%)     |

Did you have access to free psychological counseling?

|                                 | Male, N (%) | Female, N (%) | Total, N (%) |
|---------------------------------|-------------|---------------|--------------|
| Yes, provided/funded by the medical facility (hospital/clinic/university) | 13 (29.5%)  | 38 (33.0%)    | 51 (32.0%)   |
| Yes, provided/funded by the local or national authorities | 4 (9.0%)    | 12 (10.4%)    | 16 (10.0%)   |
| Yes, provided/funded by non-governmental organizations | 3 (6.8%)    | 3 (2.6%)      | 6 (3.7%)     |
| Yes, provided/funded by private entities or individual professionals | 5 (11.3%)   | 6 (5.2%)      | 11 (6.9%)    |
| No                              | 19 (43.1%)  | 59 (51.3%)    | 78 (49.0%)   |

Table 5  Telepsychiatry

| Was telepsychiatry used in your country during the pandemic? | Male, N (%) | Female, N (%) | Total, N (%) |
|-------------------------------------------------------------|-------------|---------------|--------------|
| Yes, there are recommendations on how to proceed with telepsychiatry in my country | 11 (25.0%)  | 50 (43.5%)    | 61 (38.4%)   |
| Yes, however there are no recommendations on how to proceed with telepsychiatry in my country | 29 (65.9%)  | 60 (52.2%)    | 89 (56.0%)   |
| No, it is not legally approved in my country                 | 4 (9.0%)    | 5 (4.3%)      | 9 (5.7%)     |

What means of communication did you use for telepsychiatry?

|                                | Male, N (%) | Female, N (%) | Total, N (%) |
|--------------------------------|-------------|---------------|--------------|
| Dedicated closed platform for audiovisual communication in telemedicine | 10 (22.7%)  | 19 (16.5%)    | 29 (18.2%)   |
| General software for audiovisual communication (commonly used applications) | 31 (70.4%)  | 59 (51.3%)    | 90 (56.6%)   |
| Telephone or software for audio communication only             | 11 (25.0%)  | 32 (27.8%)    | 43 (27.0%)   |
| Chat, text messages or e-mail                                 | 2 (4.5%)    | 7 (6.0%)      | 9 (5.6%)     |
| Not applicable                                                | 3 (6.8%)    | 19 (16.5%)    | 22 (13.8%)   |

How satisfied are you with the use of telepsychiatry during the pandemic?

|                                     | Male, N (%) | Female, N (%) | Total, N (%) |
|-------------------------------------|-------------|---------------|--------------|
| Very satisfied                      | 10 (22.7%)  | 12 (10.4%)    | 22 (13.8%)   |
| Rather satisfied                    | 14 (31.8%)  | 34 (29.6%)    | 48 (30.2%)   |
| Moderately satisfied                | 11 (25.0%)  | 34 (29.6%)    | 45 (28.3%)   |
| Rather dissatisfied                 | 5 (11.3%)   | 14 (12.2%)    | 19 (11.9%)   |
| Very dissatisfied                   | 1 (2.2%)    | 2 (1.7%)      | 3 (1.9%)     |
| Not applicable, never used telepsychiatry | 3 (6.8%)    | 19 (16.5%)    | 22 (13.8%)   |

How likely are you to use telemedicine after the pandemic?

|                          | Male, N (%) | Female, N (%) | Total, N (%) |
|--------------------------|-------------|---------------|--------------|
| Extremely likely         | 20 (45.4%)  | 42 (36.5%)    | 62 (39.0%)   |
| Likely                   | 19 (43.1%)  | 44 (38.3%)    | 63 (39.6%)   |
| Neutral                  | 2 (4.5%)    | 19 (16.5%)    | 21 (13.2%)   |
| Unlikely                 | 2 (4.5%)    | 6 (5.2%)      | 8 (5.0%)     |
| Extremely unlikely       | 0           | 4 (3.5%)      | 4 (2.5%)     |
| Not applicable (e.g., no legal conditions for telemedicine) | 1 (2.2%)    | 0              | 1 (0.6%)     |
with redirecting and maximizing the use of available resources [28]. Further research is needed, however, on its applicability to local health care systems and resources during the pandemic.

Our study supports working on a standardized national plan to provide the necessary care for psychiatric trainees and early career psychiatrists in the current and future pandemics. This emphasizes the role of national organizations (e.g., Iranian Psychiatric Association, Iranian Medical Council) and departments of psychiatry in decision-making for guidelines. We recommend that early career psychiatrists and psychiatric trainees take part in the writing and implementation of these guidelines. Several actions can help with the management plan: providing the knowledge of managing COVID-19 patients and patients with a comorbidity of a mental disorder; providing online educational activities (e.g., courses, workshops, local conferences); providing protective equipment; providing free access to COVID tests; providing free access to psychological counselling; and training supervisors and/or coworkers to act empathetically. Importantly, to use telepsychiatry more effectively, it is key to have improved platforms, ensure confidentiality, and educate the providers and the recipients.

In conclusion, the obstacles caused by the COVID-19 pandemic have become a challenge for all health professionals. To maximize learning, this study calls for improvements in education, workplace conditions, and mental health of psychiatric trainees and early career psychiatrists in Iran. Further advances of technology and research are expected to implement telepsychiatry as an adjunct to conventional care. Though it may pose challenges that should be addressed to make it fully functional, it is expected to decrease inequity in the workforce in access to health care.

Acknowledgements This study has been conducted as a collaboration between the European Psychiatric Association Early Career Psychiatrists Committee (EPA ECPC) and the Task Force on Meetings and Associations, the European Federation of Psychiatric Trainees (EFPT), the Section of Education, and the Section of Early Career Psychiatrists of the World Psychiatry Association (WPA). We would like to thank the participants who shared their experiences and the ECPs committee of the Iranian Psychiatric Association.

Declarations

Ethics Approval and Consent to Participate The survey was anonymous and online consent was obtained from the participants. The study was approved by the Institutional Review Board of Iran University of Medical Sciences (Reference: IR.IUMS.REC.1400.720).

Disclosures On behalf of all authors, the corresponding author states that there is no conflict of interest.

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