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Peer Review Report for "The COVID-19 Outbreak and Its Emotional Consequences: A Web-Based Cross-Sectional Survey at the Peak of the Pandemic in Iran"

Author(s): Mohammad Ali Fardin, Mahmoud Shirazi, Sophia Khaneghahi

Review Timeline:

Submit Date:	21 Sep 2020
Revised Date:	27 Oct 2020
Accepted Date:	17 Nov 2020

Revision (0)

Here, you can see the **Reviewers**, **Associate Editors** and **EICs'** comments from the beginning to the end of the revision process.

REFEREE: Reviewer | **Revision** (0) — 2 Oct 2020

Dear AE,
The authors should pay attention to the comments on the manuscript and the checklist.
Thanks.

REFEREE: Reviewer | **Revision** (0) — 4 Oct 2020

Dear AE,
A regular manuscript entitled “The COVID-19 Outbreak and Its Emotional Consequences: A web-based cross-sectional survey at the peak of the pandemic in Iran” was reviewed and I write my comments to the authors. Please
Refer to the statistics section of this article to evaluated it by a statistician.
The following are my comments:
1. There are some grammatical errors in the manuscript that needs language edit.
2. The discussion section is too short and it should be expanded.
3. In the manuscript, it is mentioned that the number of samples is 428, but in the table related to the number of men and women, the sum of the number of samples is 425. Please

recheck all tables.
Thanks.

REFEREE: Associate Editor | **Revision** (0) 6 Oct 2020

Dear EIC,
The review of this manuscript is finished and totally this needs minor revision. This needs to be revised in:
1- Grammar.
2- Statistic section.
3- The number of sampling in different parts of the manuscript was not the same.
4- The discussion section was short and needs to be revised.
Best regards

Iraj Mirzaii-Dizgah: EIC | **Revision** (0) 15 Oct 2020

Dear Author,
Your article is reviewed by the reviewers carefully. According to their comments, this document needs minor revision. Please follow their comments as requested.
Thanks.

OPEN PEER REVIEW

Revision (1)

Reply to Reviewers

Ideally, the reviewing process can significantly improve the submitted manuscripts by allowing the authors to take into account the advice of reviewers. Author(s) must reply to all reviewers' comments in a separate Word file, point by point. A "**Reply to Reviewers**" document is submitted along with revised manuscript during submission of revised files, summarizing the changes that the authors made in response to the reviewers' comments. The responses to reviewers' comments specifies how the authors addressed each comment the reviewers made.

You can read the authors' responses to the reviewers' comments in the next page.

The COVID-19 Outbreak and Its Emotional Consequences: A Web-Based Cross-Sectional Survey at the Peak of the Pandemic in Iran

:Reviewer 1
:Reviewer 2
.There are some grammatical errors in the manuscript that needs language edit .1
.All grammatical errors were edited

Abstract

Background: Since the COVID-19 outbreak, which has exponentially spread across the world, the number of cases and deaths in Iran has been higher than in other Middle Eastern countries. This has brought about and will lead to unprecedented psychological and emotional consequences.

Objectives: This study aimed to investigate the psychological impact of COVID-19 on the emotional states of the general population in Iran.

Methods: An online survey was conducted from March 24th to 26th, and a snowball sampling technique was used as the research method. The online survey collected information on demographic data. The Impact of Event Scale-Revised (IES-R) and the Positive and Negative Affect Schedule (PANAS) were applied as the data collection tools.

Results: This study included 428 respondents from 62 cities in Iran. The results of the linear regression analysis showed a significant relationship between the COVID-19 outbreak and the negative emotional states of the general population in Iran, indicating that the COVID-19 prevalence affected negative states ($P<0.05$).

Conclusions: Mental health care is a necessity in the current situation and should be provided to COVID-19 confirmed and suspicious cases, medical staff, people in contact with such people, and the general public so that mental health teams can be formed in different fields and provide online or in-person psychological services with complete and updated treatment information and programs**.**

Keywords: Coronavirus, COVID-19, Psychological Event, Emotion.

1. Background

The coronavirus (COVID-19) pandemic is known as a humanities' health crisis that has caused huge challenges for mental health (1). Initially, COVID-19 occurred in Wuhan in late 2019 (2), and by January 24, 2020, it had spread to 13 countries (3). In Iran, the growing trend of the disease was such that 987 people were infected, and 54 cases died on March 1, 2020 (4). By early April, the prevalence rate had risen to 50,468 cases and 3,160 deaths (5). The rapid spread

and outbreak of COVID-19, which have led to the deaths of many people in two months, indicate the power of this virus (6). Restrictions, quarantine, the fear of infection, the depression people experience as a result of losing friends and family, and the anxiety of losing loved ones are all among the issues brought about by COVID-19 (7). Fear seems to be one of the consequences of mass quarantine (8). Research has shown that there was a significant correlation between the duration of quarantine and post-traumatic stress disorder (9).

The COVID-19 pandemic created emotional issues and anxiety among people, mostly in affected countries (10). Indeed, emotional traumas, such as natural disasters, global pandemic diseases, wars, social problems, and the like, cause huge stress disorders in societies (11). Various studies carried out around the world have supported the correlation between the COVID-19 outbreak and mental and emotional problems, especially depression and anxiety (1, 12-14). COVID-19 has led to various kinds of psychological issues, like depression (15), violence (16), hysteria (17), suicide (18), emotional distress, and anxiety, among the general population (19), even in people who are not at a high risk of infection (17). In Asia, Iran and China are severely affected by COVID-19 (20). This virus has influenced all aspects of human life. Its psychological and emotional damage to human societies has been so widespread that many of the psychological effects of the COVID-19 outbreak may become apparent as post-traumatic stress after a few years.

2. Objectives

This study aimed to investigate the psychological impact of COVID-19 on the emotional states of the general population in Iran.

3. Methods

3.1. Study design

After getting accepted in the Research Committee of Islamic Azad University with the following research code, 14/11/5/9381, The present study was conducted in Iran from March 24th to 26th, when the number of COVID-19 cases peaked. Given the fact that the Iranian government has asked people to avoid face-to-face interactions and stay home since early March, this study used an online survey to assess the impact of COVID-19 on the emotional states of the general population. The respondents were invited to take part in the online survey. A snowball sampling technique focused on the general population in various provinces and cities during the COVID-19 pandemic was used. Initially, the online survey was posted on university websites and distributed among university students. Then, the respondents were asked and encouraged to pass it on to others. They completed the questionnaires in Persian through an online survey platform. All the respondents provided their informed consent, and the current study followed the principles embodied in the Declaration of Helsinki. The collected data were anonymous and

remained confidential. Some of the results obtained from this study were presented to students in various workshops.

3.2. Statistical Analyses

Statistical analyses were performed via SPSS ver. 21.0. To calculate the associations between the independent variable, i.e., the impact of COVID-19, and the dependent variable, i.e., emotional states, a linear regression analysis was used.

3.3. Research Tools

The Impact of Event Scale-Revised (IES-R) was used to assess the psychological impact of COVID-19. Weiss and Marmar designed the IES-R in 1997 (21). This scale consists of 22 items and three dimensions. Its dimensions are intrusion (eight items), avoidance (eight items), and hyper-arousal (six items). In the IES-R scale, the total score ranges from 0-23 (normal), 24-32 (low psychological impact), 33-36 (medium psychological impact) to >37 (severe psychological impact). The cut-off point is ≥33, which indicates post-traumatic stress disorder. In Iran, the Cronbach's alpha coefficient of the total scale was 0.83 (22).

The emotional states were measured using the Positive and Negative Affect Schedule (PANAS). This schedule was developed by Watson, Clark, and Tellegen in 1988 (23) and designed in two ten-item mood subscales that consist of positive and negative effects. The responses are scored based on a Likert-type scale ranging from one to five. The validity of the positive (α= 0.88) and negative (α=.87) affect was reported. In Iran, its internal consistency was 0.87 (24).

4. Results

The data analysis was conducted in both descriptive and inferential levels. In the descriptive level, means, standard deviations, and percentages were used, and in the inferential level, to answer the main research question, the linear regression analysis was applied. A total of 721 citizens from 62 cities in Iran participated in this study, and 293 respondents did not complete the questionnaires. Eventually, this study included 428 respondents who had completed the questionnaires.

Overall, 284 female subjects and 141 male subjects took part in this study. Their mean age was 32 years. Most of the participants had a bachelor's degree. Moreover, 249 of the subjects were married. On average, the subjects spent 21 hours at home during the COVID-19 outbreak (Table 1). The results of the linear regression analysis showed that there was a significant relationship between the COVID-19 outbreak and the negative emotional states of the general population in Iran (B =0.251, 95% CI: 0.207 to 0.295) (Table 2).

:Reviewer 1

The number of sampling in different parts of the manuscript was not the same. In the manuscript, it is mentioned that the number of samples is 428, but in the table related to the number of men and women, the sum of the number of samples is 425. Please rechecked all tables.

number of sampling was fixed

Table 1: A description of the demographic characteristics of the Iranian respondents (n= 428)

Variables		(%) N	Variables		(%) N
Gender	Female	67.1)287 (	Marital status	Single	) 179 (41.8
	Male	32.9)141 (		Married	) 249 (58.2
Education	Illiterate	(1.2) 5	Age	years 19- 10	(17.5) 75
	Elementary	(0.2) 1		years 20-29	) 127 (29.7
	Junior High school	(3.3) 14		years 30-39	(22.4) 96
	Diploma	(17.5) 75		years 40-49	(21) 90
	Advance Diploma	(13.8) 59		years 50-59	(6.3) 27
	Bachelor	) 147 (34.3		and more years 60	(3) 13
	Master	(23.1) 99			
	.Ph.D	(6.5) 28	staying at home		
Employment status	Student	(4.9)21		hour 0-5	(3.0) 13
	Unemployed	(3.5) 15		hour 6-10	(4) 17
	Housewife	(7.5) 32		hour 11-15	(3.7) 16
	Retired	(5.8) 25		hour 16-19	(8.6) 37
	Employed	) 191 (44.6		hour 20-24	) 345 (80.5
	University Student	) 144 (33.6			

Table 2: The association between the coronavirus disease (COVID-19) outbreak and the emotional states of the general population in Iran (n = 428).

Impact of COVID-19 Event			
Emotions	R-Squared (R2)	Adjusted R-Squared	B (95% Confidence Interval)
Negative Emotions	** 0.263	** 0.261	(to 0.295 0.207) **0.251
Positive Emotions	0.088	0.005	(to 0.009 0.11-) 0/05-

* P< 0.05; ** P< 0.01; *** P< 0.001.

:Reviewer 1

.The discussion section is too short and it should be expanded

Discussion was expanded

5. Discussion

This research was the first study in Iran that investigated the psychological impact of COVID-19 on the emotional states of the general population at the peak of the pandemic. The results indicated that the spread of the virus had a direct and effective impact on the negative states of the general population.

In a similar study, the findings demonstrated that the distress rate among Iranian adults was higher than that in the Chinese population (25). The final impact of the COVID-19 pandemic is still unclear; however, it should be noted that the prevalence of coronavirus has many psychological effects, including anxiety about not getting sick, fear of death, disappointment, job burnout, and negative emotions, all of which affect the physical and emotional health of people in the society (16). Additionally, depression, post-traumatic stress disorder, insomnia, anxiety, anger, and even suicide in patients and their families are other psychological consequences of the COVID-19 prevalence (26). In Italy, research showed a high percentage of the PTSD symptoms during the COVID-19 pandemic in the community, which resulted in sleep problems (27). Moreover, the COVID-19 outbreak has created huge problems for educational systems all around the world (28). In China, women, compared to men, experience higher levels of PTSD and sleep issues (29).

COVID-19 is stressful for humans because we do not know much about it (30), and controlling its spread is one of the main techniques that experts are taking into account (31). Therefore, psychologists and psychiatrists should look for methods to decrease the impacts of the aftermath of the COVID-19 outbreak. As an instance, in this global critical status quo, spirituality can help people to stay calm (26). Mental healthcare is a necessity in the current situation and should be provided to COVID-19 confirmed and suspicious cases, medical staff, people in contact with such people, and the general public so that mental health teams can be formed in different fields and provide online or in-person psychological services with complete and updated treatment

information and programs. The first strength of the present study was that an online survey was used, and people could easily participate in the research. Secondly, the present study was the large-scale research that collected data from all parts of Iran and gathered information about the general population at the peak of the pandemic. On the other hand, the researcher could not collect any information from some respondents who were not eager to participate in the online survey.

Footnotes

Authors' Contributions

Mohammadali Fardin and Mahmoud Shirazi conceived and designed the evaluation, interpreted the data, and revised the manuscript critically for important intellectual content. Moreover, they performed the statistical analyses and revised the manuscript critically for important intellectual content. Sophia Khaneghahi and Mohammadali Fardin participated in the interpretation of the data and revised the manuscript critically for important intellectual content. They collected data and drafted the manuscript. The authors read and approved the final manuscript.

Conflict of interest

The authors report no conflicts of interest in this work.

Ethical Approval

This study was approved by the Research Committee of Islamic Azad University, Zahedan Branch in March 2020 with the following research code, 14/11/5/9381. All ethical principles were considered in the present article. The participants were informed about the purpose of the research, and they were assured of the confidentiality of their personal information, and if desired, the results of the research would be available to them.

Funding/Support

This research was supported by a fund provided by the Islamic Azad University, Zahedan branch.

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OPEN PEER REVIEW

Revision (1)

Here, you can see the **Reviewers**, **Associate Editors** and **EICs'** comments from the beginning to the end of the revision process.

Iraj Mirzaii-Dizgah: EIC | Revision (1) 24 Oct 2020

Dear Author,
Please provide an appropriate conclusion at the end of the Discussion section. The conclusion must be revised according to the result of the study. Therefore revise the conclusion at the end of the abstract.
Thanks.

OPEN PEER REVIEW

Revision (2)

Reply to Reviewers

Ideally, the reviewing process can significantly improve the submitted manuscripts by allowing the authors to take into account the advice of reviewers. Author(s) must reply to all reviewers' comments in a separate Word file, point by point. A "**Reply to Reviewers**" document is submitted along with revised manuscript during submission of revised files, summarizing the changes that the authors made in response to the reviewers' comments. The responses to reviewers' comments specifies how the authors addressed each comment the reviewers made.

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The COVID-19 Outbreak and Its Emotional Consequences: A Web-Based Cross-Sectional Survey at the Peak of the Pandemic in Iran

Abstract

EIC Decision:
Revise the conclusion at the end of the abstract.

Conclusion was revised.

Background: Since the COVID-19 outbreak, which has exponentially spread across the world, the number of cases and deaths in Iran has been higher than in other Middle Eastern countries. This has brought about and will lead to unprecedented psychological and emotional consequences.

Objectives: This study aimed to investigate the psychological impact of COVID-19 on the emotional states of the general population in Iran.

Methods: An online survey was conducted from March 24th to 26th, and a snowball sampling technique was used as the research method. The online survey collected information on demographic data. The Impact of Event Scale-Revised (IES-R) and the Positive and Negative Affect Schedule (PANAS) were applied as the data collection tools.

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Conclusions: The COVID-19 outbreak has had a direct and effective impacts in all aspects of life and the main consequence of that is negative emotions, so mental health teams in media can be formed in different fields for improving emotions of general public and provide online or in-person psychological services with complete and updated treatment information and programs.

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1. Background

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3. Methods

3.1. Study design

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Variables					
Gender					
Ec	) 127 (29.7	years 20-29		(0.2) 1	Elementary
	(22.4) 96	years 30-39		(3.3) 14	Junior High school
	(21) 90	years 40-49		(17.5) 75	Diploma
	(6.3) 27	years 50-59		(13.8) 59	Advance Diploma
	(3) 13	and more years 60		) 147 (34.3	Bachelor
				(23.1) 99	Master
				(6.5) 28	.Ph.D
Emp			(3.0) 13	hour 0-5	
n t	(4) 17	hour 6-10		(3.5) 15	Unemployed
us	(3.7) 16	hour 11-15		(7.5) 32	Housewife
	(8.6) 37	hour 16-19		(5.8) 25	Retired
	) 345 (80.5	hour 20-24		) 191 (44.6	Employed
				) 144 (33.6	University Student

Table 2: The association between the coronavirus disease (COVID-19) outbreak and the emotional states of the general population in Iran (n = 428).

Impact of COVID-19 Event

Emotions	R-Squared (R2)	Adjusted R-Squared	B (95% Confidence Interval)
Negative Emotions	** 0.263	** 0.261	(to 0.295 0.207) **0.251
Positive Emotions	0.088	0.005	(to 0.009 0.11-) 0/05-

* P< 0.05; ** P< 0.01; *** P< 0.001.

5. Discussion

EIC Decision:
Please provide an appropriate conclusion at the end of the Discussion section. The conclusion must be revised according to the result of the study.

Conclusion was revised.

This research was the first study in Iran that investigated the psychological impact of COVID-19 on the emotional states of the general population at the peak of the pandemic. The results indicated that the spread of the virus had a direct and effective impact on the negative emotions of the general population.

In a similar study, the findings demonstrated that the distress rate among Iranian adults was higher than that in the Chinese population (25). The final impact of the COVID-19 pandemic is still unclear; however, it should be noted that the prevalence of coronavirus has many psychological effects, including anxiety about not getting sick, fear of death, disappointment, job burnout, and negative emotions, all of which affect the physical and emotional health of people in the society (16). Additionally, depression, post-traumatic stress disorder, insomnia, anxiety, anger, and even suicide in patients and their families are other psychological consequences of the COVID-19 prevalence (26). In Italy, research showed a high percentage of the PTSD symptoms during the COVID-19 pandemic in the community, which resulted in sleep problems (27). Moreover, the COVID-19 outbreak has created huge problems for educational systems all around the world (28). In China, women, compared to men, experience higher levels of PTSD and sleep issues (29).

COVID-19 is stressful for humans because we do not know much about it (30), and controlling its spread is one of the main techniques that experts are taking into account (31). Therefore, psychologists and psychiatrists should look for methods to decrease the impacts of the aftermath of the COVID-19 outbreak. As an instance, in this global critical status quo, spirituality can help people to stay calm (26). As result, The COVID-19 outbreak has had a direct and effective impacts in all important aspects of life and the main consequences of that is negative emotions,

so mental health teams can be formed in different fields for improving emotions of general public and provide online or in-person psychological services with complete and updated treatment information and programs.

The first strength of the present study was that an online survey was used, and people could easily participate in the research. Secondly, the present study was the large-scale research that collected data from all parts of Iran and gathered information about the general population at the peak of the pandemic. On the other hand, the researcher could not collect any information from some respondents who were not eager to participate in the online survey.

Footnotes

Authors' Contributions

Mohammadali Fardin and Mahmoud Shirazi conceived and designed the evaluation, interpreted the data, and revised the manuscript critically for important intellectual content. Moreover, they performed the statistical analyses and revised the manuscript critically for important intellectual content. Sophia Khaneghahi and Mohammadali Fardin participated in the interpretation of the data and revised the manuscript critically for important intellectual content. They collected data and drafted the manuscript. The authors read and approved the final manuscript.

Conflict of interest

The authors report no conflicts of interest in this work.

Ethical Approval

This study was approved by the Research Committee of Islamic Azad University, Zahedan Branch in March 2020 with the following research code, 14/11/5/9381. All ethical principles were considered in the present article. The participants were informed about the purpose of the research, and they were assured of the confidentiality of their personal information, and if desired, the results of the research would be available to them.

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Iraj Mirzaii-Dizgah: EIC | **Revision** (2) 17 Nov 2020

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The document is reviewed carefully by the reviewers. According to their comments and your revisions as requested, this manuscript is accepted.
Thanks.