Psychological impact of Corona Virus Disease on general population in Karachi

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Abstract

Introduction: In the present day, the most contagious and emerging respiratory disease is Corona Virus Disease 2019 (abbreviated to COVID-19). It's a considerable issue to public health and was first detected in Wuhan, China in December 31, 2019. It is an emerging viral infection that is spreading across the globe. Symptoms of COVID-19 infection include general symptoms (fever and myalgia), respiratory symptoms (chills, cough, coryza, sore throat, breathing difficulty), and gastrointestinal symptoms (nausea, vomiting, and diarrhea). In addition to physical impairment, COVID-19 also poses serious psychological impact and ultimately inducement of fear. There is a perceptible decline in an individual's mental health. Stress, anxiety and depression in the general population is apparent, though frequency and severity varies widely. This is mainly due to falsehoods circulating on social media that is media paranoia; the next vulnerable population is diagnosed patients and health care workers especially those physicians dealing with quarantined patients.

Therefore, individuals should focus only on information from relevant sources and avoid spread of rumors. And since there's no treatment yet, one should take necessary precautionary measures along with quality sleep to keep oneself physically and mentally fit. Using cross-sectional analysis, this study aimed to evaluate the burden on the mental health of the general population of Pakistan during the COVID-19 pandemic. We were also interested in exploring risk factors which jeopardize psychological wellbeing. This might assist health care workers in safeguarding psychological health of the community during the COVID-19 pandemic.

Objective: To determine the psychological impact of Corona Virus Disease 2019 (COVID-19) on the general population in the vicinity of Jinnah Post Graduate Medical Centre (JPMC), Karachi.

Methodology: A cross sectional study from October 2020 to January 2021 was conducted in the vicinity of Jinnah Post Graduate Medical Center in Karachi. The study was conducted on 139 visitors coming to the tertiary care hospital. The sampling technique was non probability purposive sampling. The data was collected by distributing a Structured Questionnaire. The questionnaire was given to the data collectors who distributed them to the visitors coming to the hospital; which in this case was JPMC. Written consent was taken from the participants and all ethical considerations and research protocols were observed. Data was collected in the form of pretested self-administered questionnaires. In order to standardize the questionnaires, a pilot study was conducted among research participants for the purpose of examining content validity. Data collected

was analyzed using SPSS software version 20.0 and chi square test was used to determine factors associated with demographic profile and physical activity and dietary patterns. The statistical analysis was conducted with 95% confidence interval and p-value of <0.05 was taken as threshold of statistical significance.

Results: Out of 139 participants, 35.3%(n=49) were aged 16-21 years, 29.5%(n=41) aged from 27-36 years, 15.8%(n=22) aged 37-46 years, 14.4% (n=20) aged 46-60 years.

47.5%(n=66) were females and 52.5%(n=73) were males. 13.7%(n=19) were not formally educated, 18%(n=25) were primary educated, 15.8%(n=22) were matriculate, 26.6%(n=37) were intermediate, 16.5%(n=23) were graduates and 9.4%(n=13) were post graduate level educated. The majority of participants who were women were home makers 31.7%(n=44), 23.7%(n=33) were self employed,18.7%(n=26) were students, 13.7%(n=19) were working in the private sector and 5%(n=7) were government employees. 63.3%(n=88) were married, 36%(n=50) were single and 0.7%(n=1) was divorced. 61.9%(n=86) had children and 38.1%(n=53) had no children. 56.1%(n=78) had joint family and 43.9%(n=61) had nuclear type family. When the participants were asked what Covid was, 89.9%(n=125) responded by calling it a respiratory disease while 10.1%(n=14) did not have any idea. When asked what was the source of participants' information regarding Covid, 55.4%(n=77) said it was media, newspaper and TV, 21.6%(n=30) was social media, 12.9%(n=18) was family and friends, 8.6%(n=12) was health professionals and only 1.4%(n=2) was verified information from WHO, Government websites and published articles. When asked whether the participants were observing safety protocols, 92.8%(n=129) said yes and 7.2%(n=10) said no.0.75(n=1) had close contact with people who traveled or resided in an epidemic area or country which had the symptoms of COVID 19 during the 14 days prior to symptoms. 10.1%(n=14) had contact with COVID 19 confirmed patients, 14 days prior to symptoms, 1.4%(n=2) had travel history to an epidemic area or country, 14 days prior to symptoms while 87.8(n=122) had no such history.

When asked how was the child care responsibility during lockdown, 31.7%(n=44) said it was difficult, 21.6%(n=30) said it was somewhat difficult, 14.4%(n=20) said it was easy, 0.7%(n=1) said somewhat easy and 31.7%(n=44) said none of these. When asked whether they perceived a threat to their personal health, 55.4%(n=77) said that they felt increased threat while 44.6%(n=62) did not feel any threat. When asked whether they perceived a threat to their financial status, 51.8%(n=72) felt major threat, 23%(n=32) felt minor threat and 25.2%(n=35) did not perceive any threat.
When the participants were asked whether they had trouble keeping their mind on things that they were reading, or watching on television, 46% (n=64) said yes while 54%(n=75) said no.Responding to the question that whether they found it hard to enjoy life, 51.1%(n=71) said yes while 48.9%(n=68) said no. When asked whether they had a lot of different physical symptoms or unusual pains, 18.7%(n=26) said yes 81.3%(n=113) said no. When asked whether they had been feeling more pessimistic or negative than usual, 38.1%(n=53) said yes while 61.9%(n=86) said no. When asked whether they had been less interested in talking to people or mixing with people than usual, 41% (n=57) said yes while 59%(n=82) said no. When asked whether they had been more worried, nervous or uptight than usual, 41%(n=57) said yes while 59%(n=82) said no. When asked whether they had been more anxious, nervous or worried than usual, 44.6%(n=62) said yes while 55.4%(n=77) said no. When asked whether they had been feeling lonely, 33.8%(n=47) said yes while 66.2% (n=92) said no.When asked whether they had been blaming themselves for things, 18%(n=25) said yes while 82%(n=114) said no.When asked whether life seemed meaningless, 33.8%(n=47) said yes while 66.2%(n=92) said no. When asked whether dying looked like a good option, 7.9%(n=11) said yes while 92.1(n=128) said no.

Conclusion: The findings of this study showed, the positive side of the picture that the majority of the participants were not found to be suffering from any symptoms of psychological stress during the Covid pandemic. There was a global lockdown in place at the time of conduction of this study and all sort of outdoor activities had been completely shut down. Despite of the stressful situation, there was an optimistic outlook on part of most of the participants . Despite of this , the process of ongoing surveillance must carry on to identify cases of psychological stress especially from vulnerable sections of population.There is a need to launch proper health education programmes that impart reliable information regarding the Covid pandemic . The health education programmes should be easily accessible, affordable and available to the general population.

Key words: Psychological impact+ Covid+ general population+ lockdown

Introduction

In the present day, the most contagious and emerging respiratory disease is Corona Virus Disease 2019 (abbreviated to COVID-19). It's a considerable issue to public health and was first detected in Wuhan, China on December 31, 2019 [1].

COVID-19 is a positive sense enveloped single stranded RNA virus [2, 3]. Its incubation period ranges between 5 and 14 days (average 5.2 days), thus it can spread asymptomatically [4, 3]. Human to human transmission has been reported mainly via respiratory droplets, fomites and poor hand washing practices [3].

It is an emerging viral infection that is spreading across the globe. Symptoms of COVID-19 infection include general symptoms (fever and myalgia), respiratory symptoms (chills, cough, coryza, sore throat, breathing difficulty), and gastrointestinal symptoms (nausea, vomiting, and diarrhea) [4]. According to preliminary data, elderly persons, immunocompromised individuals, and those people with underlying medical comorbidities are more susceptible to this viral infection [5]. In such individuals, immune response is undermined. Thus, it leads to cardiac arrest, respiratory insufficiency and ultimately death [4].

In addition to physical impairment, COVID-19 also poses serious psychological impact and ultimately inducement of fear. There is a perceptible decline in an individual's mental health. Stress, anxiety and depression in the general population is apparent, though frequency and severity varies widely. For instance, considerable shortage of surgical masks and alcohol sanitizers across the country signifies anxious behavior [6].

First of all, people susceptible to mental health problems are mainly older citizens and inhabitants of rural areas due to limited access to health information and thus adopt a negative attitude and inappropriate preventive measures towards COVID-19 . Secondly, those people who have high social media exposure are under more emotional distress [7]. This is mainly due to falsehoods circulating on social media that is, media paranoia [8]. Thirdly, the next vulnerable population is diagnosed patients and health care workers especially those physicians dealing with quarantined patients [6].

Therefore, individuals should focus only on information from relevant sources and avoid spread of rumors. And since there's no treatment yet, one should take necessary precautionary measures along with quality sleep to keep themself physically and mentally fit [9].

Using cross-sectional analysis, this study aimed to evaluate burden on mental health of the general population of Pakistan during the COVID-19 pandemic. We were also interested in exploring risk factors which jeopardize psychological wellbeing. This might assist health care workers in safeguarding the psychological health of the community during the COVID-19 pandemic.

Objective

To determine the psychological impact of Corona Virus Disease 2019 (COVID-19) on the general population in the vicinity of Jinnah Post Graduate Medical Centre, Karachi.

Methodology

A cross sectional study from October 2020 to January 2021 was conducted in the vicinity of Jinnah Post Graduate Medical Center in Karachi. The study was conducted on 139 visitors coming to the tertiary care hospital. The sampling technique was non probability purposive sampling. The data was collected by distributing a Structured Questionnaire. The Questionnaire was translated into simple Urdu. The questionnaire was divided into three parts which included demographic profile, general information about Covid 19 and Hopkins Symptoms Check List to determine the symptoms of depression due to the Covid pandemic. The questionnaire was given to the data collectors who distributed them to the visitors coming to the hospital; which in this case was JPMC. Written consent was taken from the participants and all ethical considerations and research protocols were observed. Data was collected in the form of pre-tested self-administered questionnaires. In order to standardize the questionnaires, a pilot study was conducted among research participants for the purpose of examining content validity. Data collected was analyzed using SPSS software version 20.0 and chi square test was used to determine factors associated with demographic profile and physical activity and dietary patterns. The statistical analysis was conducted with 95% confidence interval and a p-value of <0.05 was taken as threshold of statistical significance.

Results

Out of 139 participants, 35.3%(n=49) were aged 16-21 years, 29.5%(n=41) aged from 27-36 years, 15.8%(n=22) aged 37-46 years, 14.4% (n=20) aged 46-60 years.
47.5%(n=66) were females and 52.5%(n=73) were males. 13.7%(n=19) were not formally educated, 18%(n=25) were primary educated, 15.8%(n=22) were matriculate, 26.6%(n=37) were intermediate, 16.5%(n=23) were graduates and 9.4%(n=13) were post graduate level educated. The majority of participants who were women were home-makers 31.7%(n=44), 23.7%(n=33) were self-employed,18.7%(n=26) were students, 13.7%(n=19) were working in the private sector and 5%(n=7) were government employees. 63.3%(n=88) were married, 36%(n=50) were single and 0.7%(n=1) was divorced. 61.9%(n=86) had children and 38.1%(n=53) had no children. 56.1%(n=78) had joint family and 43.9%(n=61) had nuclear type family. When the participants were asked what Covid was, 89.9%(n=125) responded by calling it a respiratory disease while 10.1%(n=14) did not have any idea. When asked what was the source of participants' information regarding Covid, 55.4%(n=77) said it was media, newspaper and TV, 21.6%(n=30) was social media, 12.9%(n=18) was family and friends, 8.6%(n=12) was health professionals

and only 1.4%(n=2) was verified information from WHO, Government websites and published articles. When asked whether the participants were observing safety protocols, 92.8%(n=129) said yes and 7.2%(n=10) said no. When asked whether they wear masks, 17.3%(n=24) said yes while 82.7%(n=115) said no. When asked for how long did they clean their hands, 50.4(n=70) said 5 to 10 seconds, 23%(n=32) said 10 to 20 seconds , 2.9%(n=4) said 20 to 30 seconds and 0.7%(n=1) did not clean their hands. When the participants were asked what was the best way to wash hands, 43.9%(n=61) said using soap and water, 0.7%(n=1) said using sanitizer while 54.7%(n=76) said using sanitizer, soap and water. When the participants were asked if they suffered from any, fatigue, fever, runny nose, muscle pain, sore throat or vomiting, 85.6%(n=119) said none of these, 2.9%(n=4) suffered from fever, 2.2%(n=3) suffered from muscle pain and 0.7%(n=1) suffered from runny nose and sore throat. When asked whether they suffered from any non-communicable diseases, 11.5%(n=16) suffered from hypertension, 0.7% (n=1) suffered from diabetes, 0.7%(n=1) suffered from heart disease, 0.7%(m=1) suffered from both hypertension and diabetes, 0.7% (n=1) suffered from hypertension, diabetes and heart disease, 0.7%(n-1) suffered from hypertension and obesity while 83.5%(n=116) did not suffer from any non-communicable disease. 0.75(n=1) had close contact with people who traveled or resided in an epidemic area or country who had the symptoms of COVID 19 during the 14 days prior to symptoms. 10.1%(n=14) had contact with COVID 19 confirmed patients, 14 days prior to symptoms, 1.4%(n=2) had travel history to an epidemic area or country, 14 days prior to symptoms while 87.8(n=122) had no such history. When asked how was the child care responsibility during lockdown, 31.7%(n=44) said it was difficult, 21.6%(n=30) said it was somewhat difficult, 14.4%(n=20) said it was easy, 0.7%(n=1) said somewhat easy and 31.7%(n=44) said none of these. When asked whether they perceived a threat to their personal health, 55.4%(n=77) said that they felt increased threat while 44.6%(n=62) did not feel any threat. When asked whether they perceived a threat to their financial status, 51.8%(n=72) felt major threat, 23%(n=32) felt minor threat and 25.2%(n=35) did not perceive any threat.

When the participants were asked whether they had trouble keeping their mind on things that they were reading, or watching on television, 46% (n=64) said yes while 54%(n=75) said no, when asked whether they had more trouble with their memory than usual, 33.1% (n=46) said yes and 66.9%(n=93) said no. When asked whether they had been feeling unusually tired every day, 41.7%(n=58) said yes and 58.3%(n=81) said no. Responding to the question whether they found it hard to enjoy life, 51.1%(n=71) said yes while 48.9%(n=68) said no. When asked whether they had a lot of different physical symptoms or unusual pains, 18.7%(n=26) said yes 81.3%(n=113) said no. When asked whether they had been feeling emotionally numb, not caring, sad, unhappy or miserable, 41%(n=57) said yes while 59%(n=82) said no. When asked whether they had been feeling more pessimistic or negative than usual, 38.1%(n=53) said yes while 61.9%(n=86) said no. When asked whether they had lost interest or enjoyment in the things they normally did, 43.2%(n=60) said yes while 56.8%(n=79) said no. When asked whether they had been less motivated, less productive, or found it more difficult to cope than usual, 36%(n=50) said yes while 64%(n=89) said no. When asked whether they had been sleeping worse than usual, 27.3%(n=38) said yes while 72.7%(n=101) said no. When asked whether they had been less interested in talking to people or mixing with people than usual, 41% (n=57) said yes while 59%(n=82) said no. When asked whether they had been more worried, nervous or uptight than usual, 41%(n=57) said yes while 59%(n=82) said no. When asked whether they had been more easily tearful, or crying more than usual, 23.7%(n=33) said yes while 76.3%(103) said no. When asked whether they enjoyed their food less than usual, 20.1%(n=28) said yes while 79.9%(n=111) said no. When asked whether their sexual interest had been less than usual, 12.9%(n=18) said yes while 86.3%(n=120) said no. When asked whether they had been less self-confident than usual, 23%(n=32) said yes while 76.3%(n=106) said no. When asked whether they had been more anxious, nervous or worried than usual, 44.6%(n=62) said yes while 55.4%(n=77) said no. When asked whether they had been more easily annoyed or more impatient than usual, 40.3%(n=56) said yes while 59.7%(n=83) said no. When asked whether they had been feeling lonely, 33.8%(n=47) said yes while 66.2% (n=92) said no.

When asked whether they had been blaming themselves for things, 18%(n=25) said yes while 82%(n=114) said no. When asked whether they had been feeling everything as an effort, 40.3% (n=56)said yes while 59.7%(n=83) said no.

When asked whether life seemed meaningless, 33.8%(n=47) said yes while 66.2%(n=92) said no. When asked whether dying looked like a good option, 7.9%(n=11) said yes while 92.1(n=128) said no.

Figure 1

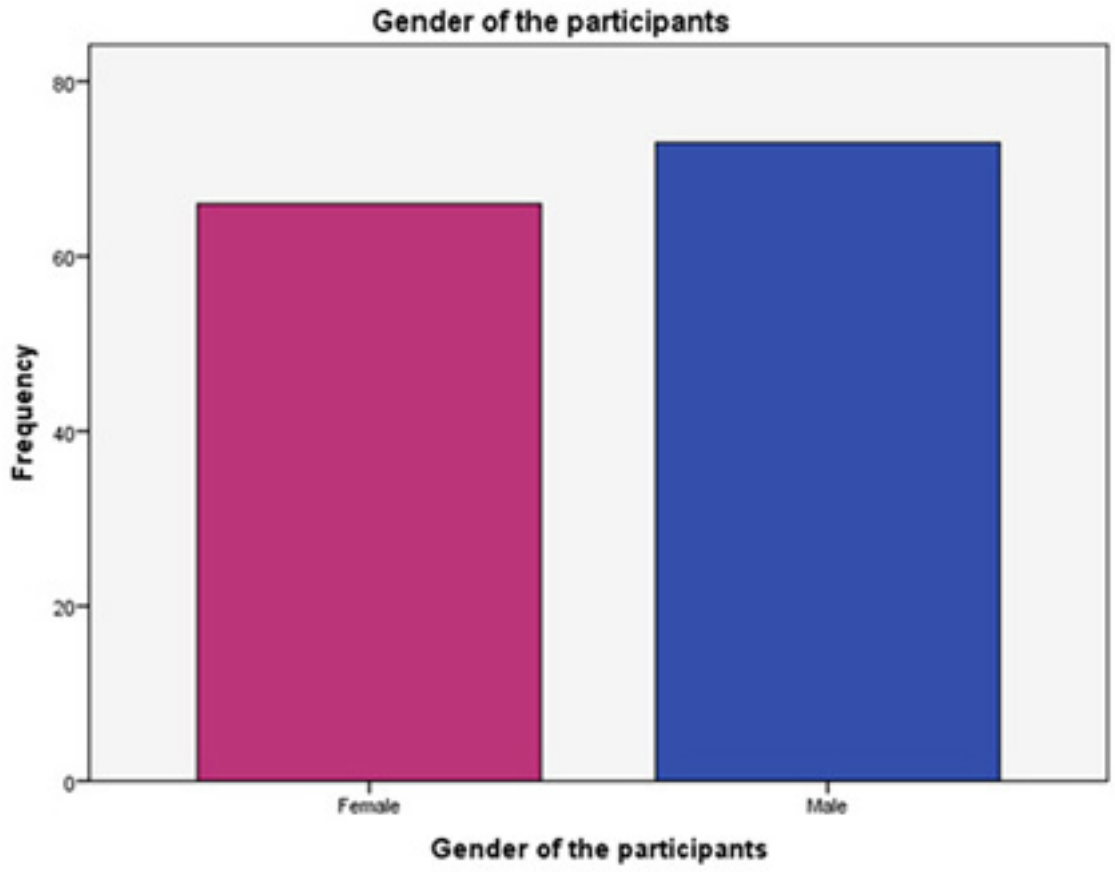

Figure 1 showing out of 139 participants 47.5% (n=66) were females and 52.5% (n=73) were males

Figure 2

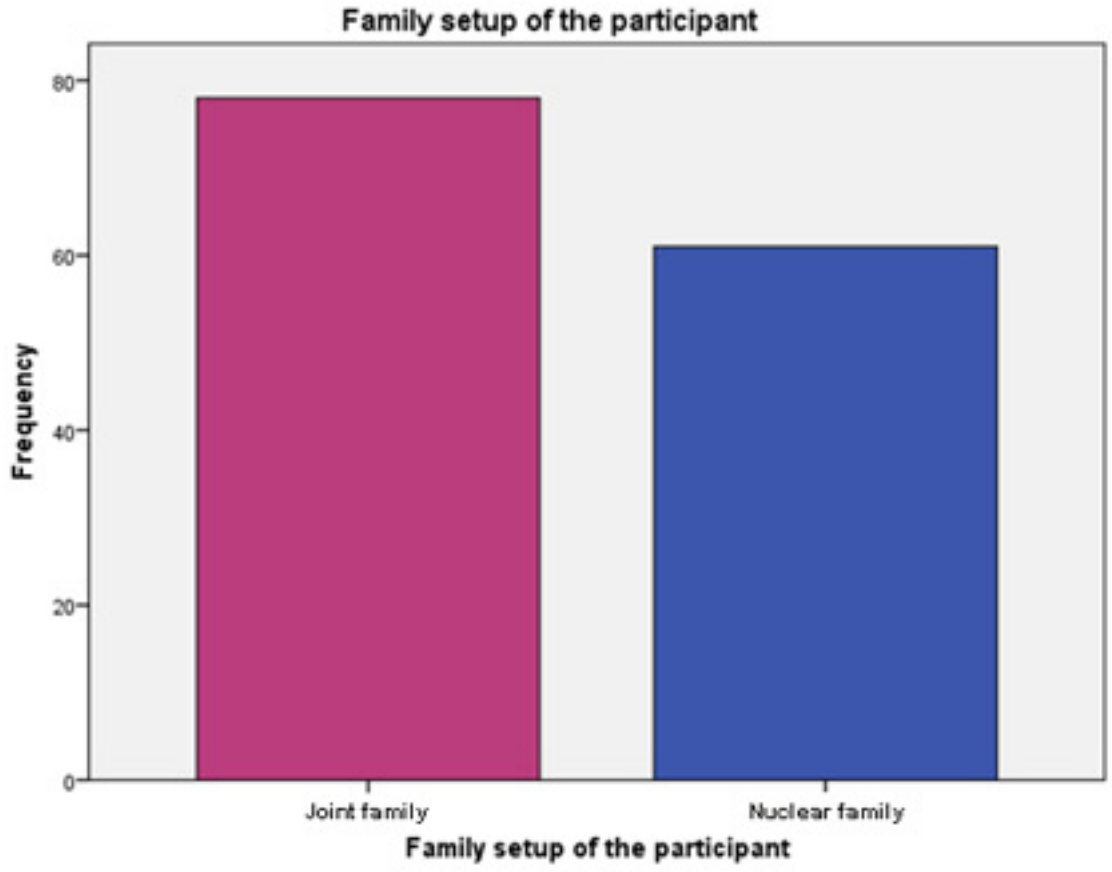

Figure 2 showing the family set up of the participant. It shows that out of a total 139 participants, 56.1% (n=78) had a joint family and 43.9% (n=61) had a nuclear type of family.

Figure 3

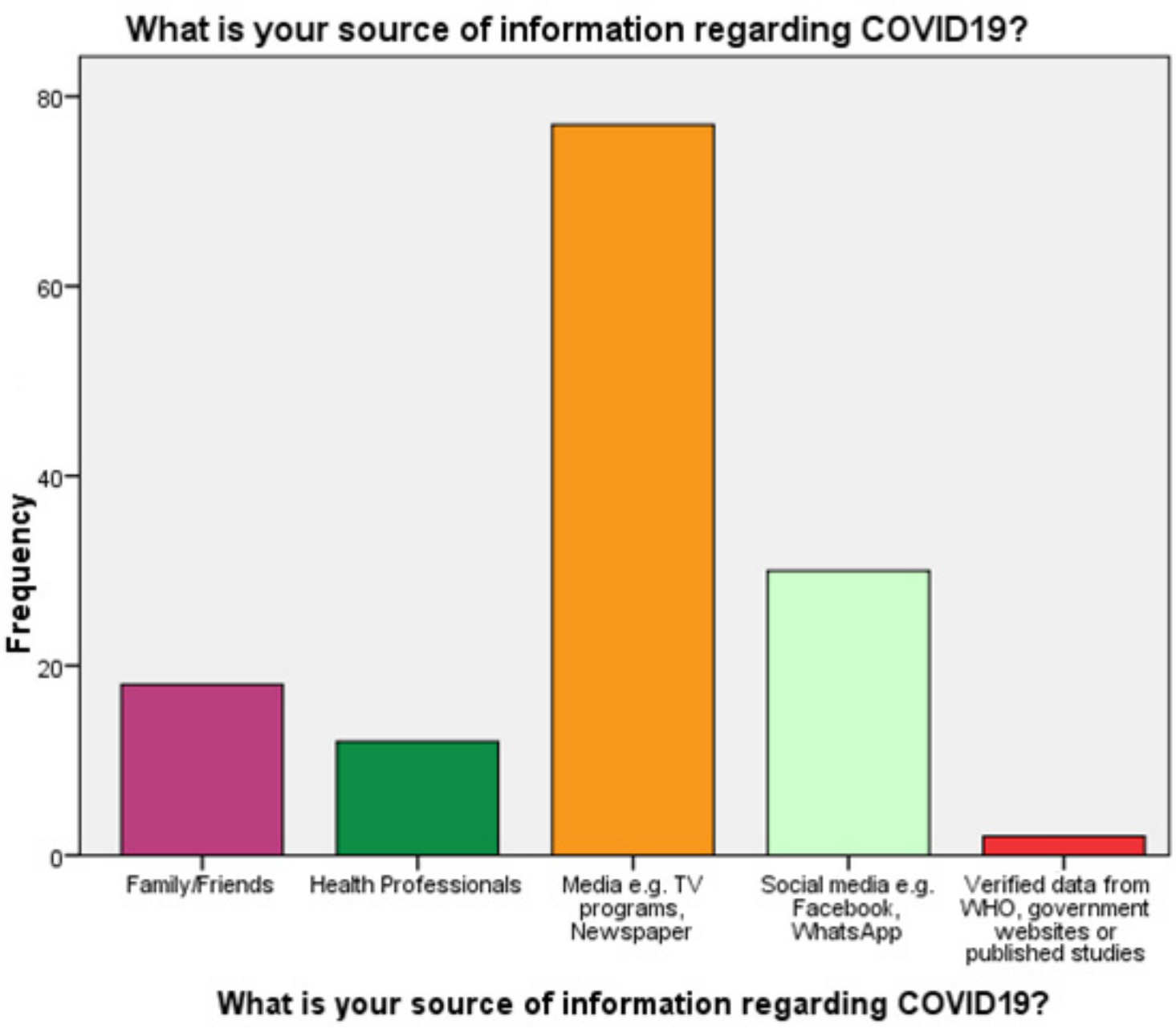

Figure 3 showing the source of information of the participants regarding Covid 19.

When asked what was the source of participants information regarding Covid, 55.4%(n=77) was media, newspaper and TV, 21.6%(n=30) was social media, 12.9%(n=18) was family and friends, 8.6%(n=12) was health professionals and only 1.4%(n=2) was verified information from WHO, Government websites and published articles.

Figure 4

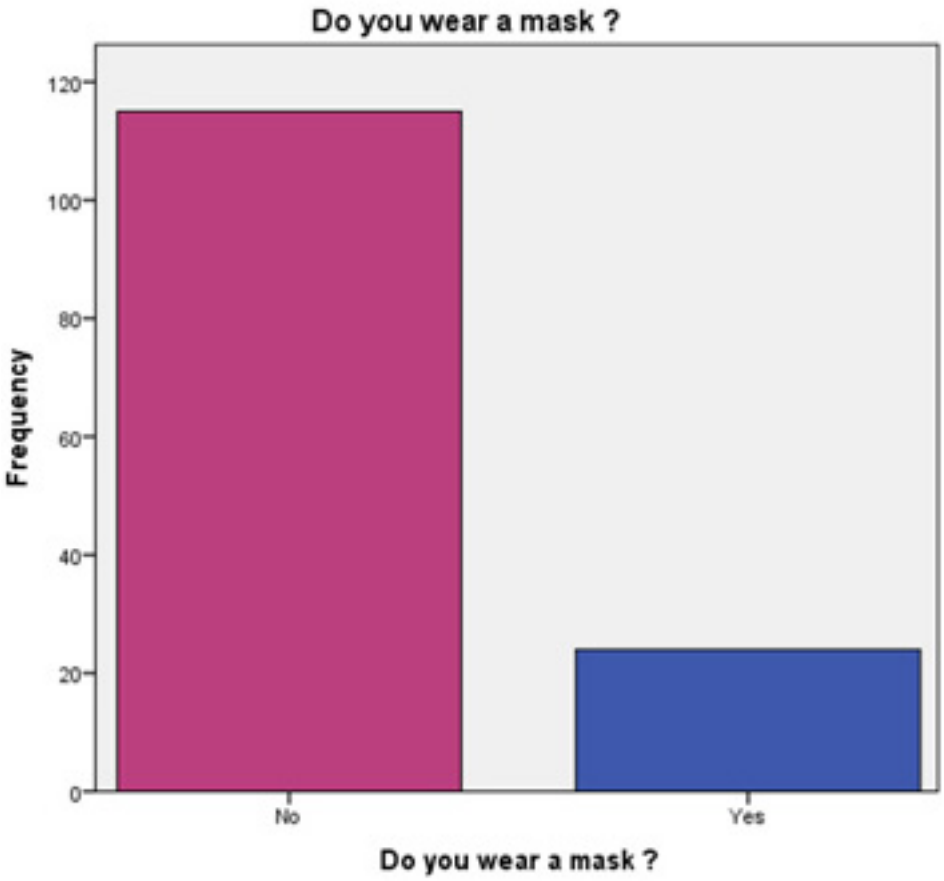

Figure 4 showing when the participants were asked whether did they wear masks, 17.3%(n=24) said yes while 82.7%(n=115) said no.

Figure 5

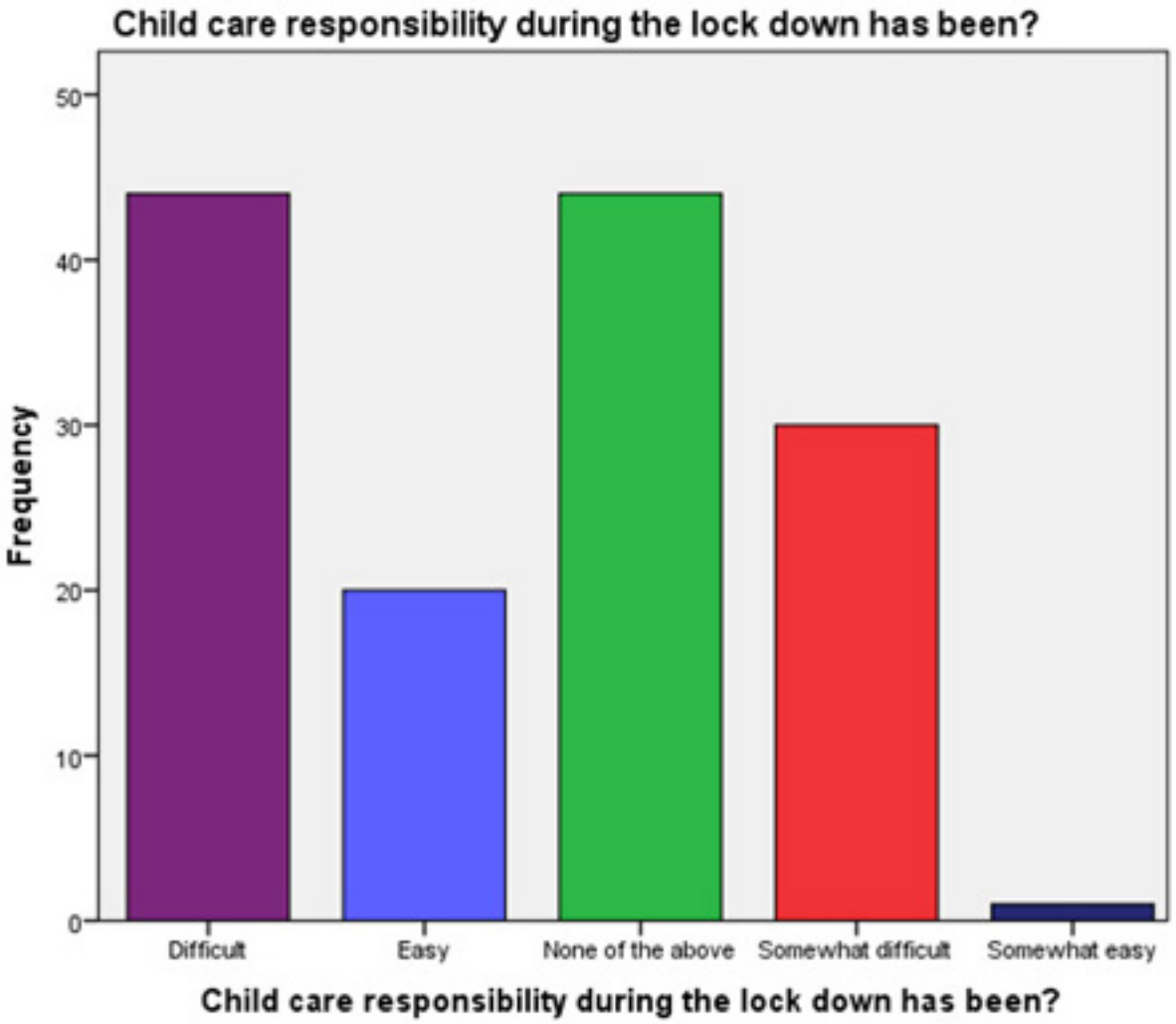

Figure 5 showing that when the participants were asked how was the child care responsibility during lockdown, 31.7%(n=44) said it was difficult, , 21.6%(n=30) said it was somewhat difficult, 14.4%(n=20) said it was easy , 0.7%(n=1) said somewhat easy and 31.7%(n=44) said none of these

Figure 6

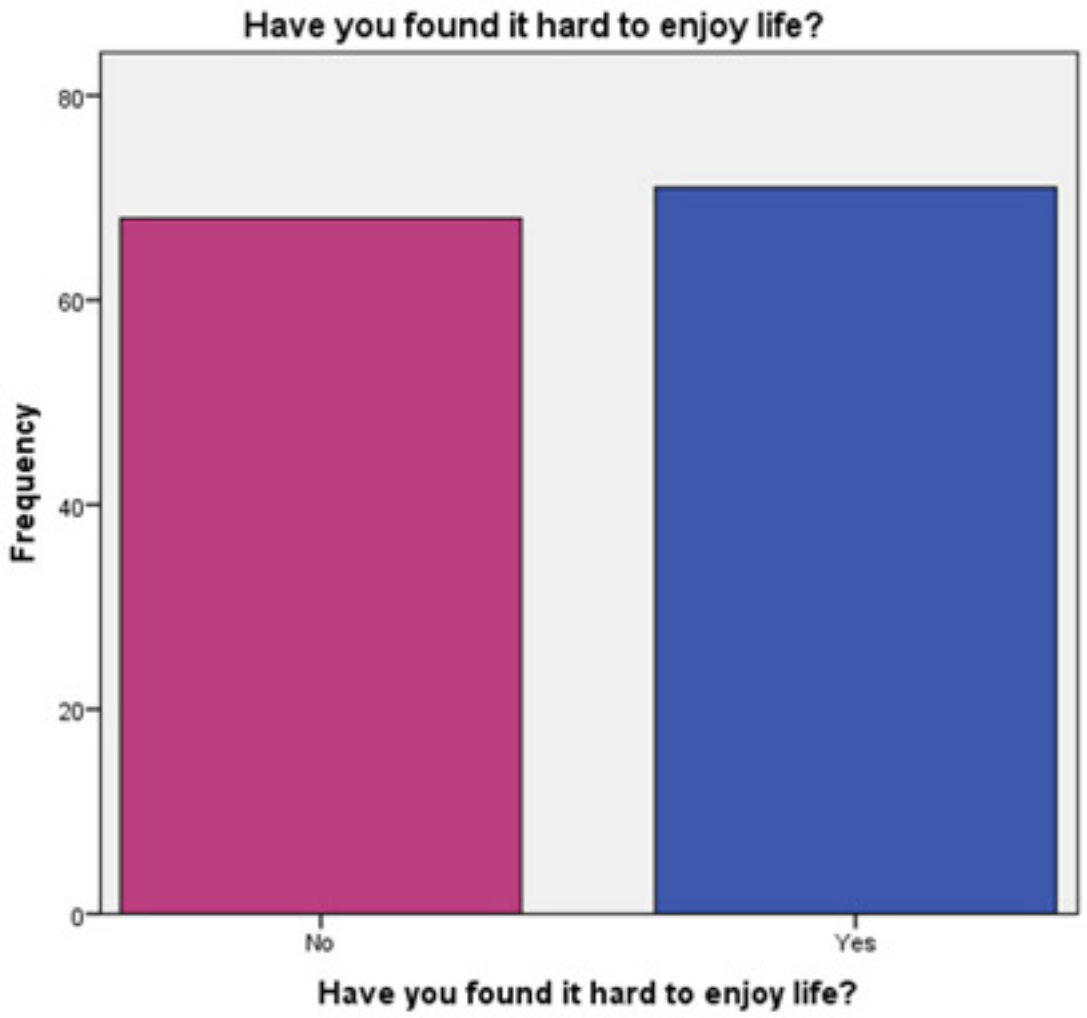

Figure 6 showing that when the participants were asked whether they found it hard to enjoy life, 51.1%(n=71) said yes while 48.9%(n=68) said no

Figure 7

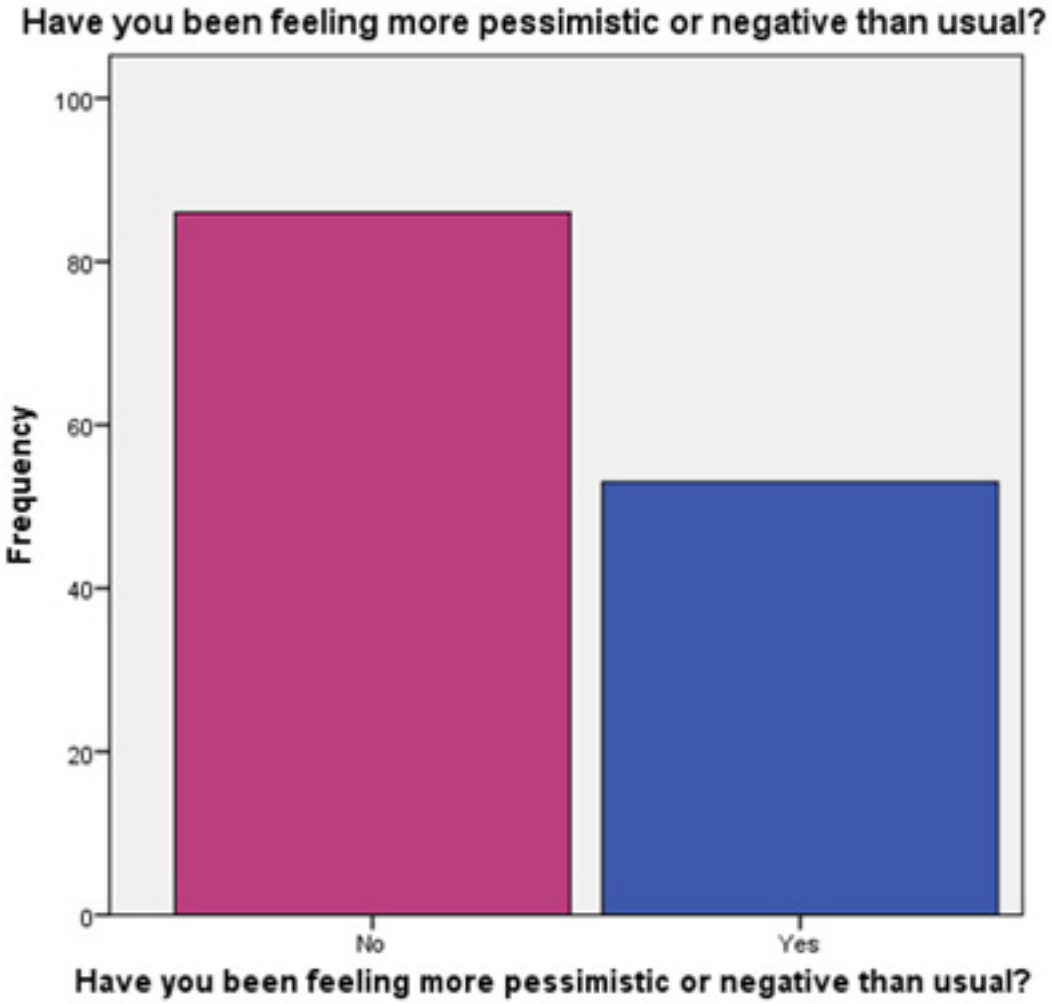

Figure 7 showing that when the participants were asked whether they had been feeling more pessimistic or negative than usual, 38.1%(n=53) said yes while 61.9%(n=86) said no

Figure 8

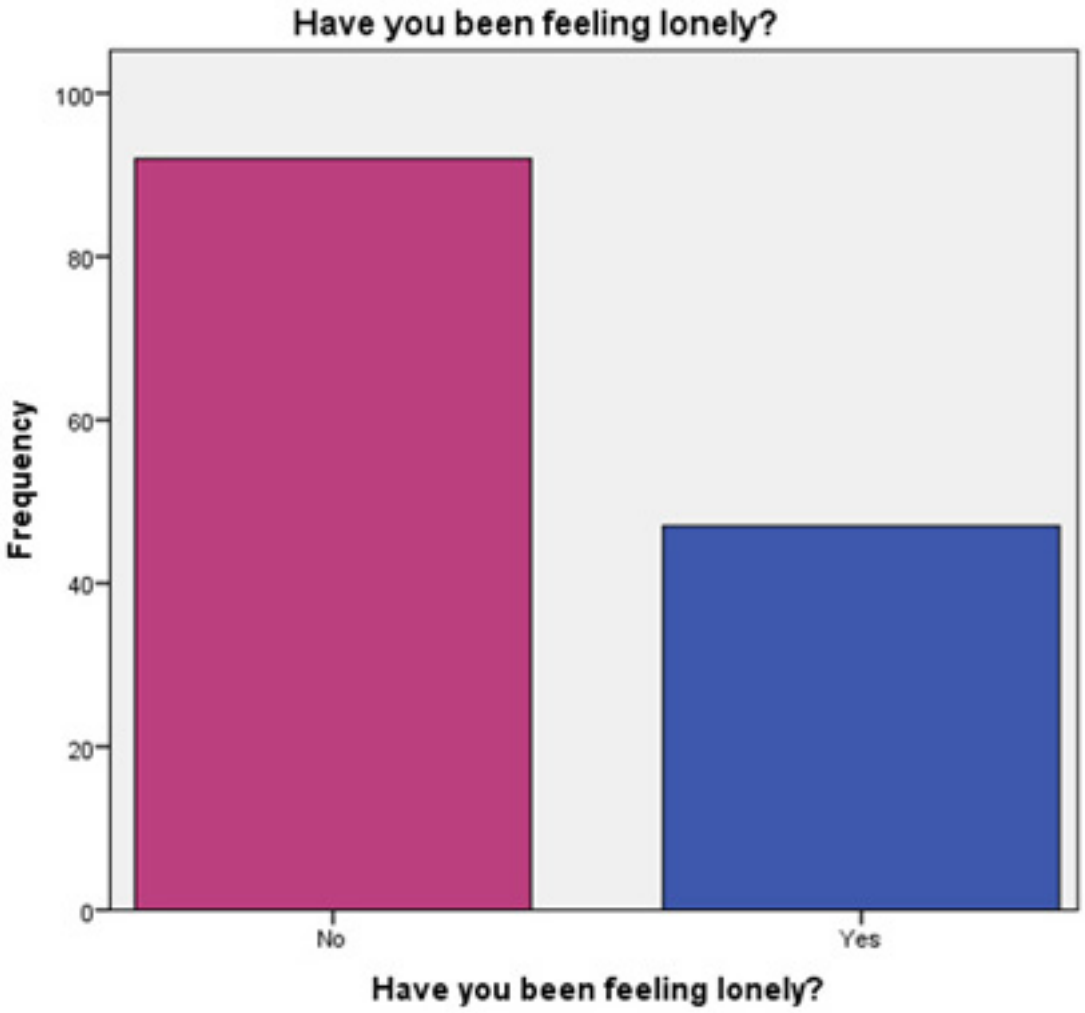

Figure 8 showing that when the participants were asked whether they had been feeling lonely, 33.8% (n=47) said yes while 66.2% (n=92) said no.

Discussion

The study conducted showed very informative findings regarding the psychological impact of Covid 19 on the general population in Karachi. The attitudes of most of the participants towards this pandemic were not found to be serious and most of them did not feel threatened by this pandemic. In this study 47.5% were females and 52.5% were males. Similar was the gender distribution in a study conducted in Turkey which aimed to explore the COVID-19 experiences of Turkish female academics in terms of gender roles by focusing on how these women have dealt with domestic and academic responsibilities.(10). Regarding the source of information of the participants about Covid 19. 55.4% was media, newspaper and TV, 21.6% was social media, 12.9% was family and friends, 8.6% was health professionals and only 1.4% was verified information from WHO, Government websites and published articles. This was also confirmed by another study which showed that over one-quarter of the most viewed YouTube videos on COVID-19 contained misleading information, reaching millions of viewers worldwide. As the current COVID-19 pandemic worsens, public health agencies must better use YouTube to deliver timely and accurate information and to minimise the spread of misinformation. This may play a significant role in successfully managing the COVID-19 pandemic(11). In this study a highly careless behavior was witnessed among the participants. When the participants were asked whether they wear masks, 17.3% said yes while 82.7% said no. This was contrary to the finding of a study conducted in China where much of the population was wearing masks (12).

In this study showing that when the participants were asked how was the child care responsibility during lockdown, 31.7% said it was difficult, 21.6% said it was somewhat difficult, 14.4% said it was easy, 0.7% said somewhat easy and 31.7% said none of these. Similar findings were reported by a study conducted in Italy (13). In this study it was found that when the participants were asked whether they found it hard to enjoy life during the Covid 19 pandemic, 51.1% said yes while 48.9% said no. This was also confirmed by another study which recommended that addressing mental health during and after this global health crisis should be placed into the international and national public health agenda to improve

citizens' wellbeing(14). This study showed that when the participants were asked whether they had been feeling more pessimistic or negative than usual, 38.1% said yes while 61.9%.said no. This was a good sign as the majority of the participants were optimistic regarding the course of this global pandemic. This was contrary to the findings of research conducted in Hong Kong which showed that nineteen per cent of the respondents had depression and fourteen per cent had anxiety during the COVID-19 pandemic. Their findings suggested that COVID-19 had substantially affected individuals' mental health (15).

This study showed that when the participants were asked whether they had been feeling lonely, 33.8% said yes while 66.2% said no. This is probably due to the predominantly prevalent joint family system in Pakistani culture which has its positive impacts. These findings were in contrast with findings of a study conducted in United Kingdom which showed a large percentage of participants suffering from loneliness (16).

Hence the findings of this study showed a large segment of population taking life a little too easy. They were not found to be predominantly suffering from psychological stress but took life carelessly while observing safety protocols.

Conclusion

The findings of this study showed a large segment of population observing lack of compliance for safety protocols against the Covid pandemic. They are risking threat to themselves and their families. However, the positive side of the picture shows that the majority of the participants were not found to be suffering from any symptoms of psychological stress during the Covid pandemic. There was a global lockdown in place at the time of conduction of this study and all sort of outdoor activities had been completely shut down. Despite of the stressful situation, there was an optimistic outlook on part of most of the participants. Despite of this , the process of ongoing surveillance must carry on to identify cases of psychological stress especially from vulnerable sections of population .There is a need to launch proper health education programmes that impart reliable information regarding the Covid pandemic. The health education programmes should be easily accessible, affordable and available to the general population.

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