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Evaluation of anxiety levels amidst Covid-19 pandemic among Chennai population

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ABSTRACT

Anxiety refers to Intense, excessive and persistent worry and fear about everyday situations. Fast heart rate, rapid breathing, sweating and feeling of tiredness is how WHO defines anxiety. COVID 19 pandemic has increased the global anxiety level. The relatives and acquaintances infected with COVID - 19 is a risk factor for increasing the anxiety level. Self-administered questionnaires were designed based on knowledge attitude, and practice. The participants were in the age group of 18 - 60 years and belonged to the Chennai population. The questions were validated and distributed using google forms. After receiving enough responses, the data was collected and statistically analysed. The knowledge and awareness of COVID 19 are high in the Chennai population. Along with an increase in the anxiety level in the context of COVID 19. The results show the need for social support to alleviate stress and improve mental health

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INTRODUCTION

Anxiety can be defined as an intense, excessive and persistent worry and fear about everyday situations. As per WHO, it can be accompanied with fast heart rate, rapid breathing, Sweating and feeling of tiredness. The significant categories of anxiety disorders are Panic disorder, agoraphobia without panic, social phobia, specific phobia, generalised anxiety disorder, acute stress disorder, post-traumatic stress disorder, Obsessive-compulsive disorder and anxiety disorder or not otherwise specified (Trivedi and Gupta, 2010). The cognitive and behavioural approach has been widely used during the last two decades to precise the ecology of GAD (Gosselin and Laberge, 2003) Anxiety disorder side effects are decreased productivity. Increased mortality rates (Bystritsky, 2013)· The COVID 19 pandemic increases global anxiety level (Huang and Zhao, 2020). Mental state concerns of people impacted by the COVID 19 pandemic have not been adequately addressed. The objective of this study was to develop and evaluate the properties of the Coronavirus Anxiety Scale, which is a brief mental health screener to verify probable cases of anxiety associated with the coronavirus crisis. This study which was based on 775 adults with anxiety over the COVID 19, demonstrated solid reliability and validity. Elevated Coronavirus Anxiety Scale scores were found to be associated with coronavirus diagnosis, impairment, alcohol/drug coping, negative religious coping, extreme hopelessness, suicidal ideation, as well as Chinese products (Lee, 2020). Many people suffer from uncertainty a fear of infection, moral distress and grief often experienced alone (Peteet,

2020)· Since coronavirus is a newly emerging disease, more work is needed to find out the strategies to diagnose, prevent and treat the Covid 19 Pandemic. The current pandemic situation of Covid 19 is still severe (Kaijin, 2020). The relatives and acquaintances infected with Covid - 19 are a risk factor for increasing the anxiety levels (Cao, 2020).

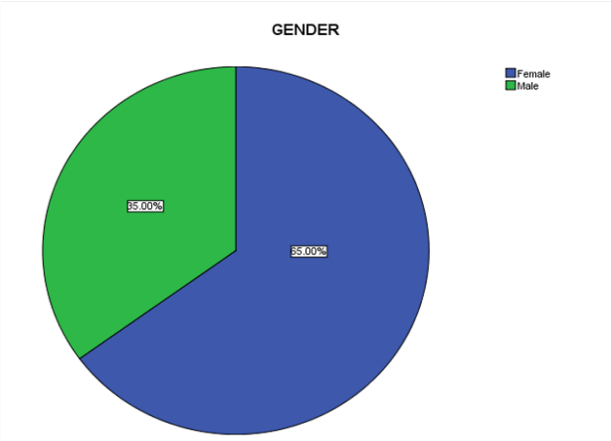

Figure 1: pie chart depicting the age of the participants 65% of people are female [blue zone] 35% male [green zone]

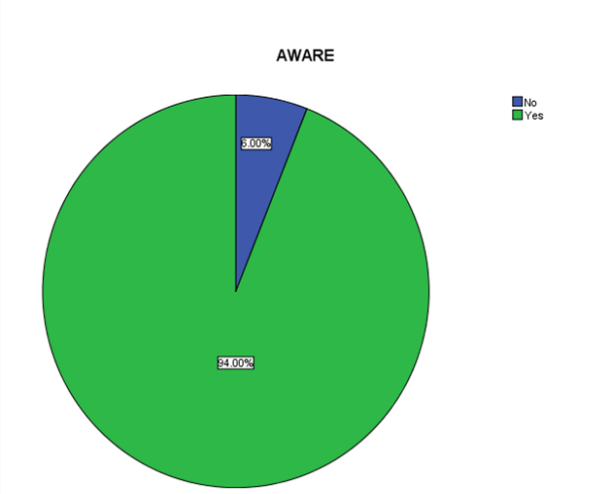

Figure 2: Pie chart depicting the response of the participants regarding awareness about COVID 19

In Study by Huang Y et al. about anxiety levels during COVID 19 in China explained about anxiety disorder, depressive symptoms and sleep quality, the author identified a significant mental health burden in the Chinese public during COVID 19 outbreak (Huang and Zhao, 2020). Young people were spending too much time thinking about the outbreak, and the healthcare workers were at high risk of displaying psychological issues (Huang and Zhao, 2020). Although sources of anxiety may not have affected everyone, they can weaken the confidence

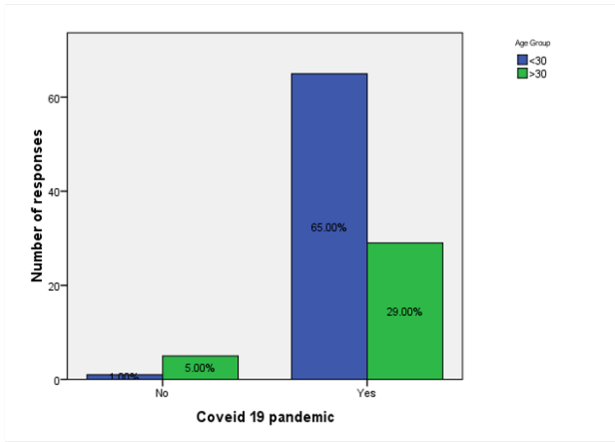

Figure 3: Bar graph depicts the association between age and their awareness about COVID 19

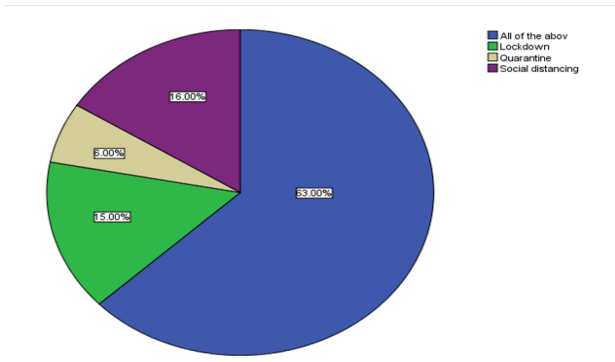

Figure 4: Pie chart depicting the response of the participants regarding the measures taken to prevent COVID 19

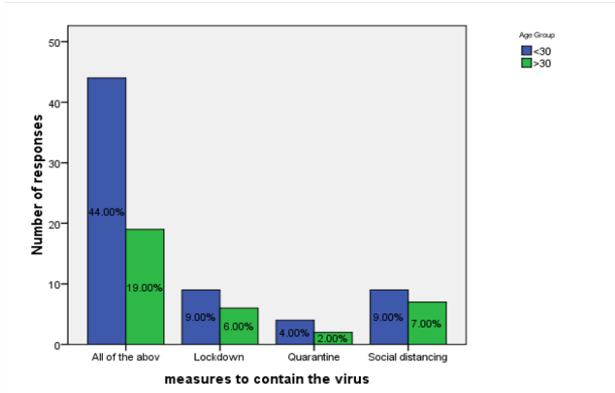

Figure 5: Bar graph depicts the association of knowledge regarding various measures taken to contain the virus with age

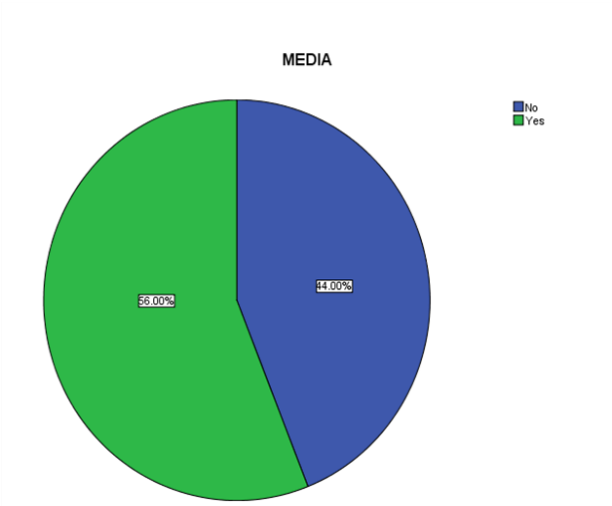

Figure 6: Pie chart showing the opinion of the participants regarding increase in stress level since COVID 19

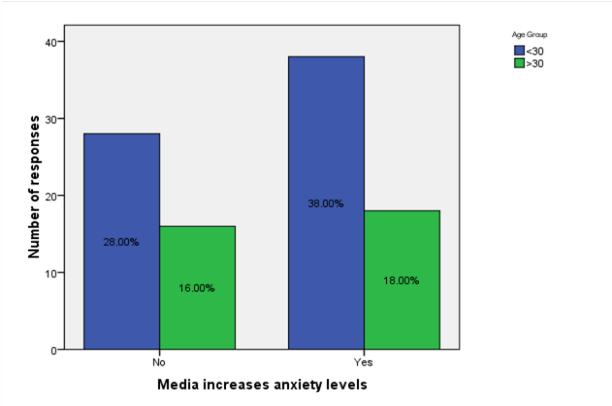

Figure 7: Bar graph depicts the association of the response of the participants regarding the impact of media in increasing the stress level since COVID 19 with age

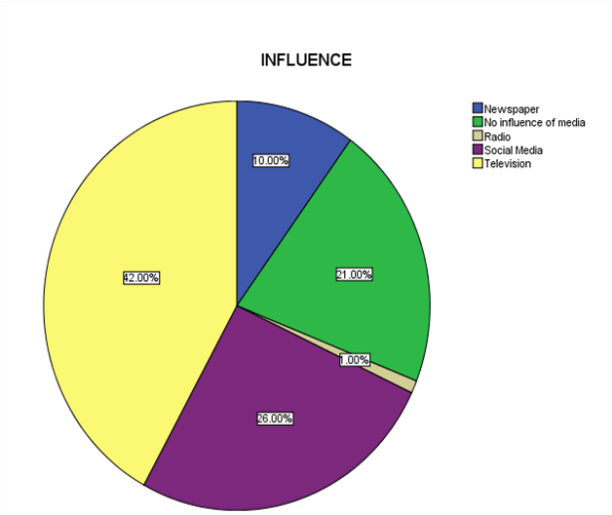

Figure 8: Pie Chart indicating the form of media which most influences the stress levels of the participants

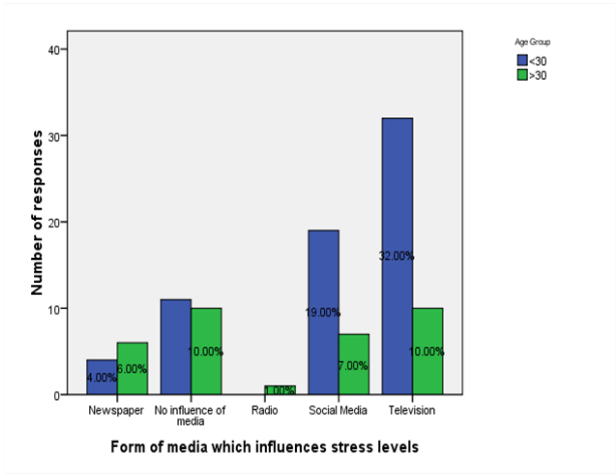

Figure 9: Bar graph depicts the association of responses on the form of media which influences their stress levels the most with age

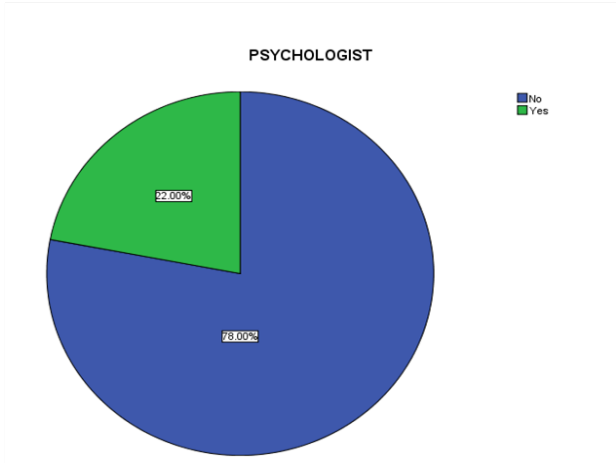

Figure 10: Pie chart showing the opinion of the participants if they have visited a psychologist regarding anxiety issues due to COVID 19

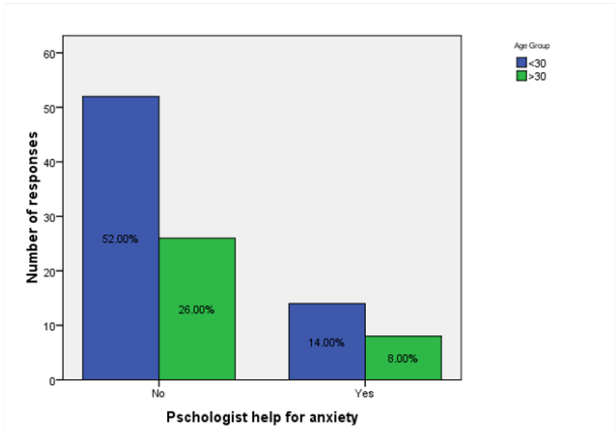

Figure 11: Bar graph depicts association of response on the need to visit a psychologist regarding their anxiety issues due to COVID 19 with age

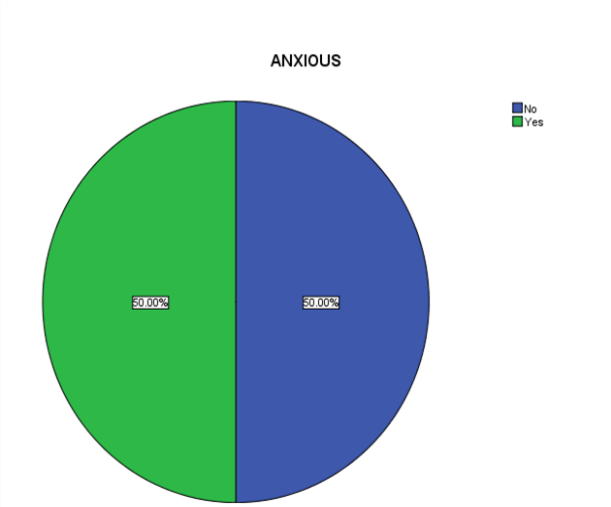

Figure 12: Pie chart showing the opinion of the participants if they very anxious to stepping out of the house when you need essentials

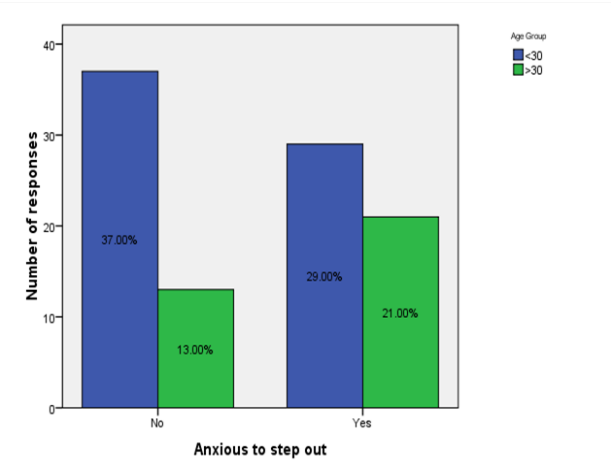

Figure 13: Bar graph depicts the association of responses regarding anxiety level of the participants when they step out of the house for essentials with age

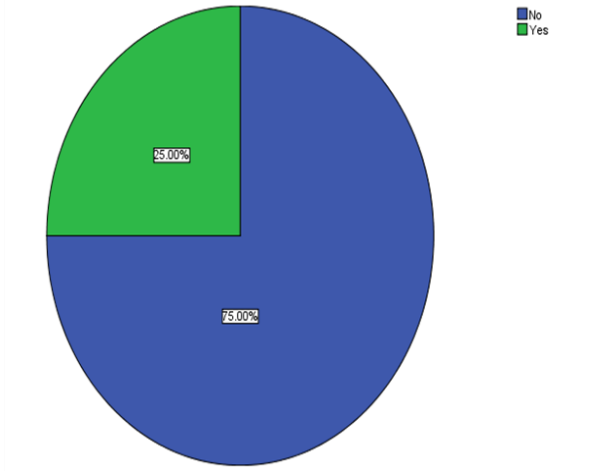

Figure 14: Pie chart showing the opinion of the participants if have thought of COVID 19 which have made you feeldizzy, light headed, shaky or wooby

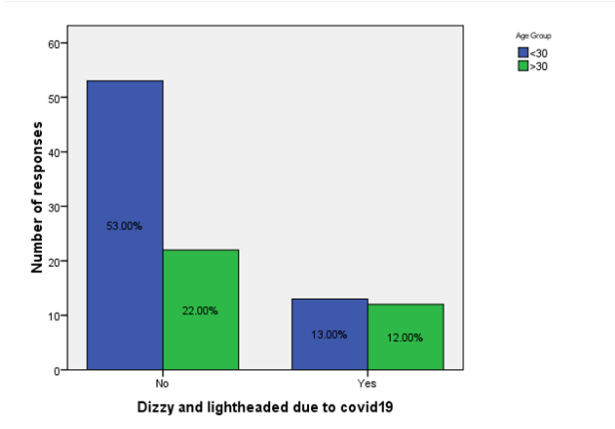

Figure 15: Bar graph depicts the association of the response on whether the thought of COVID19 makes them feel dizzy, light headed, shaky or wobbly with age group

of health care workers in themselves. The health care delivery source says their ability to stay calm and assure the public is most needed. According to the sources, anxiety allows health care workers and organisations to develop targeted approaches to address these queries and provide specific support to their health care workers (Shanafelt *et al.*, 2020). About 80% of the population feels anxious in the Current Situation (Roy, 2020). In the Study by Stein MB, they found out that there is increased anxiety and depression among people thinking about their future with covid 19 (Stein, 2020). A nationwide survey of more than 50,000 people in China during Covid 19 epidemic showed that 35% of the respondents experience psychological distress (Sher, 2020).

The effects were mostly related to the thoughts of loneliness, anxiety and post-traumatic stress disorder symptoms (Skalski *et al.*, 2020). It should be pointed out that the nature of the pandemic has led to constant updating of the media or television on COVID 19, which may increase the level of anxiety. Excessive consumption of knowledge about the spread of communicating diseases may lead to persistent thinking and can affect the mental health of individuals (Skalski *et al.*, 2020). The ability to bring pandemics under control depends on compliance with a warning. One psychological factor capable of affecting adherence to the sign is health anxiety (Özdin and Özdin, 2020). More than 203 countries, areas or territories have been affected by the COVID 19 virus still now, And about 630,000 infected and nearly 30,000 deaths reported

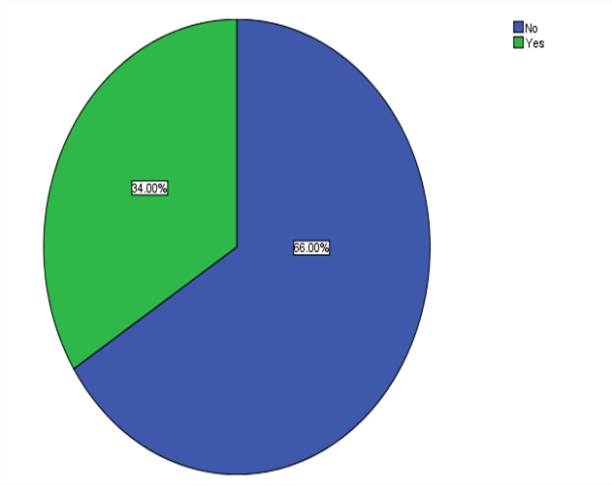

Figure 16: Pie chart showing the opinion of the participants if they have times when you feel like your beat heart is racing and you are hot and Sweaty thinking of COVID 19

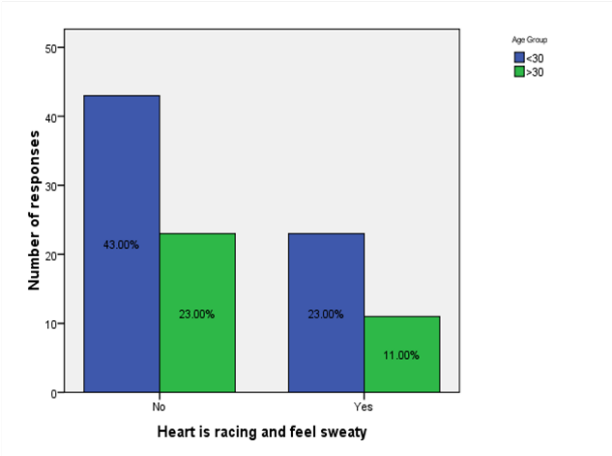

Figure 17: Bar graph depicts the association of increased anxiety levels causing palpitations with age

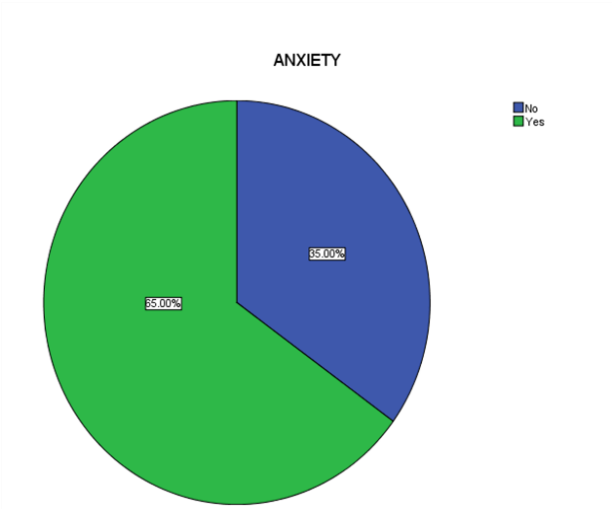

Figure 18: Pie chart showing the opinion of the participants if their anxiety level increased since COVID 19

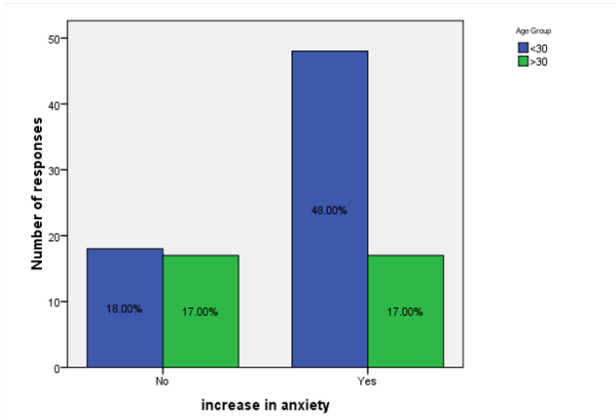

Figure 19: Bar graph depicts the association of increase in anxiety level since COVID 19 with age

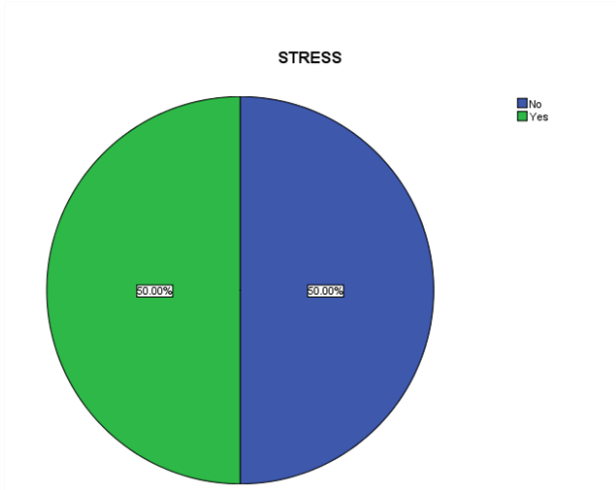

Figure 20: Pie chart showing the opinion of the participants regarding the stress level

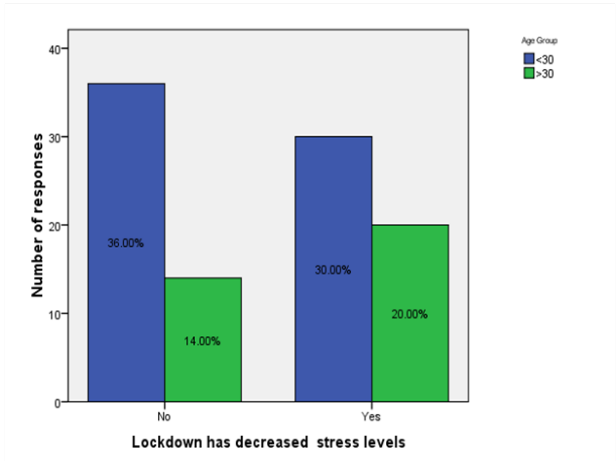

Figure 21: Bar graph depicts the association of decreased stress level since lockdown with age group

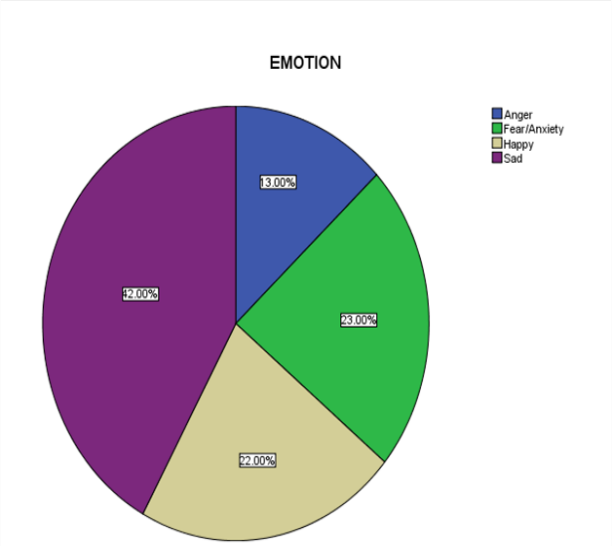

Figure 22: Pie chart indicating the emotion of the participants when they hear the words Quarantine, Lockdown, Social distancing

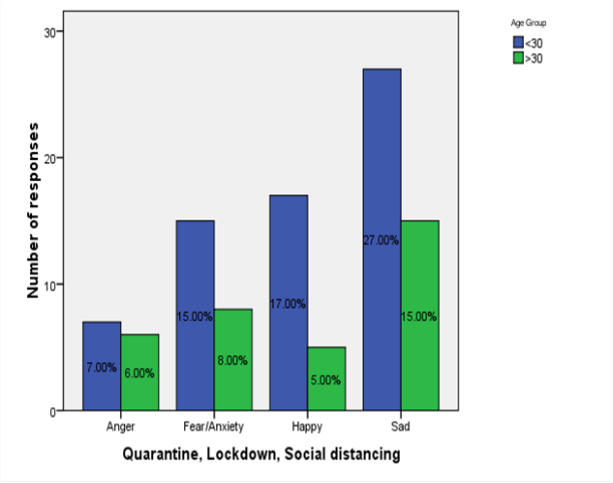

Figure 23: Bar graph depicts the association of emotions regarding Quarantine , lockdown,social distancing with age group

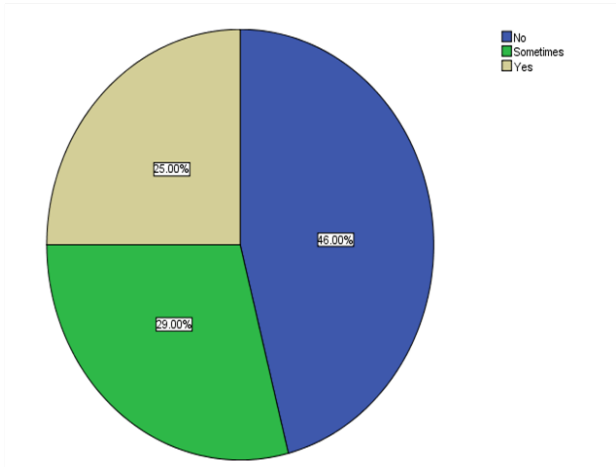

Figure 24: Pie chart showing whether the participants are apprehensive or paranoid if someone coughs a few times at home

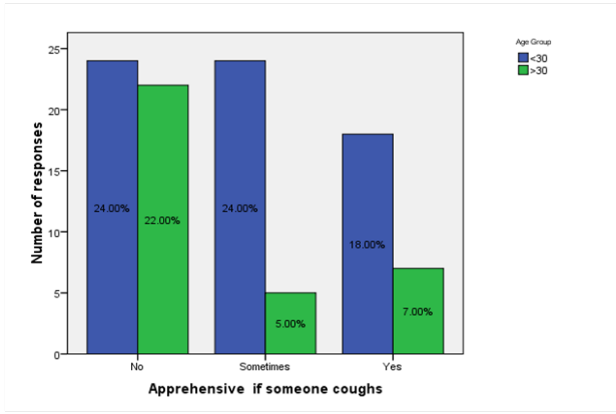

Figure 25: Bar graph depicts the association of level of apprehensiveness when someone coughs a few times at home with age

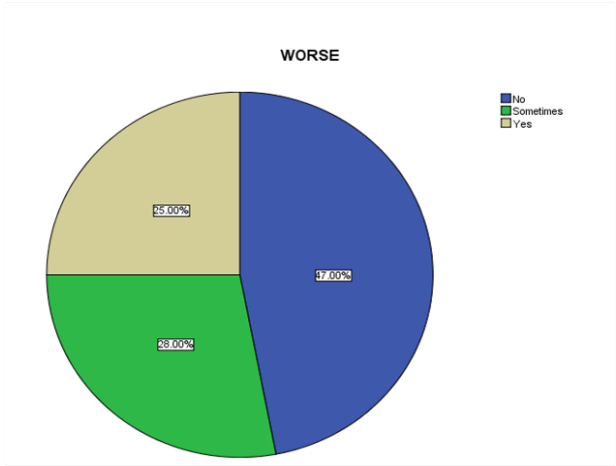

Figure 26: Pie chart indicating whether the participants fear that the worst will happen to them or their family members during this pandemic

by March 29. Iran, after Italy, Spain and China, has had the most significant number of deaths in the entire world. Evidence also shows that individuals may experience symptoms of, anxiety, trauma, suicidal ideation, and panic during outbreaks of infectious diseases (Moghanibashi-Mansourieh, 2020).

Many institution-based studies have been carried out on various oral diseases (Shree *et al.*, 2019; Gunasekaran and R, 2016; Krishnan, 2018; Sarbeen and Gheena, 2016; Sukumaran and Padavala, 2018). There have also been studies done using recent technology to enhance knowledge (Abitha and Santhanam, 2019; Palati *et al.*, 2019; Hannah, 2018; Harrita and Santhanam, 2019; Manohar and Abilasha, 2019). Many surveys were also conducted to

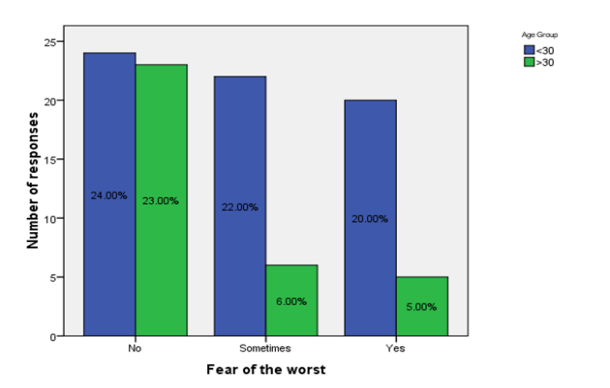

Figure 27: Bar graph depicts the association of the response for fear that the worst will happen to them or their family members during this pandemic with age groups

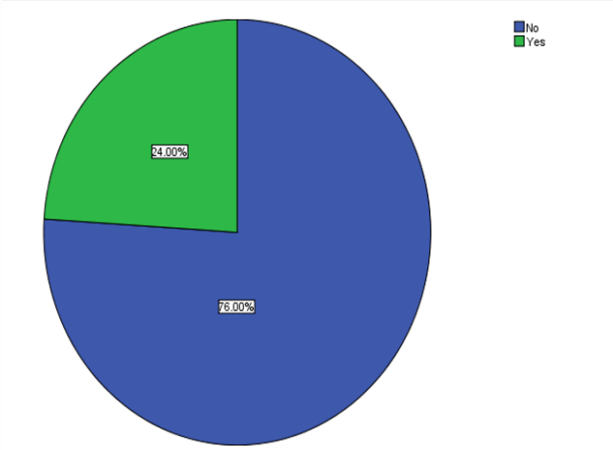

Figure 30: Pie chart indicating whether the participants suffer from nightmares due to COVID19 pandemic

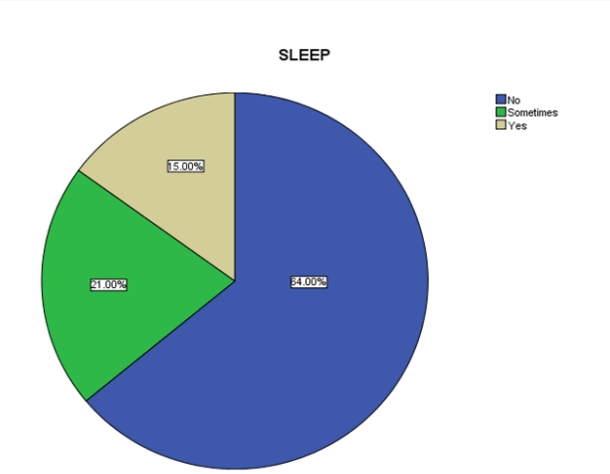

Figure 28: Pie chart indicating whether the participants suffer from lack of sleep due to the COVID 19 pandemic

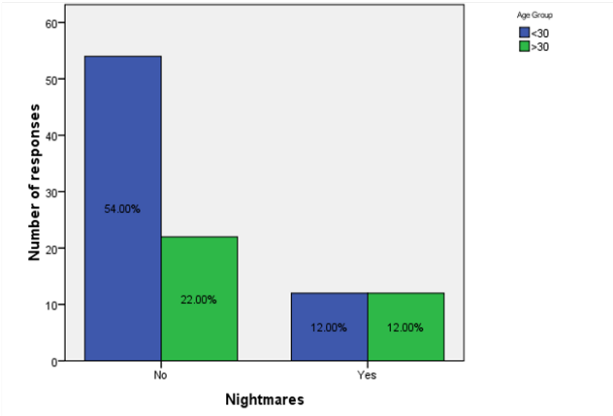

Figure 31: Bar graph depicts the association of the responses on whether they suffer from nightmares due to COVID 19 pandemic with the age groups

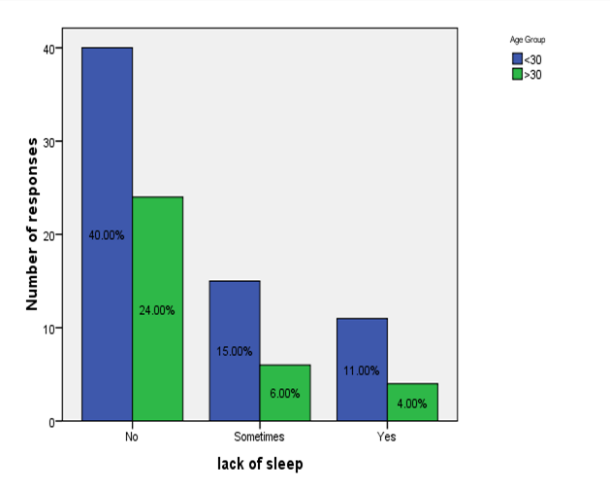

Figure 29: Bar graph depicts association of lack of sleep due to the COVID 19 pandemic with age groups

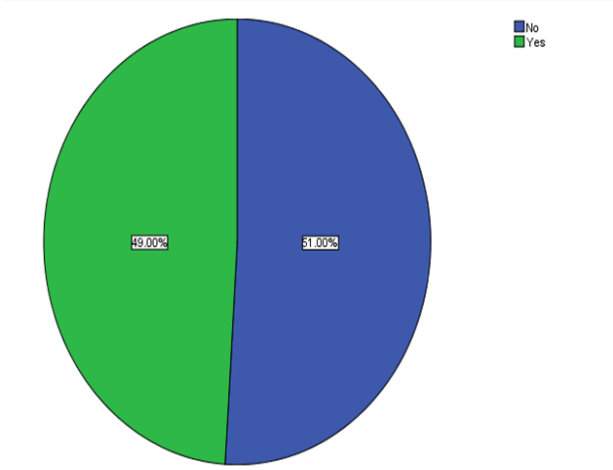

Figure 32: Pie chart showing whether the participants have been obsessed with news lately

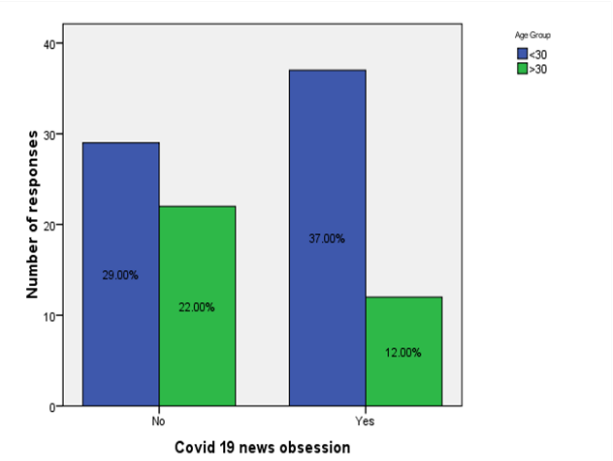

Figure 33: Bar graph depicts the association of the obsession with COVID related news with age groups

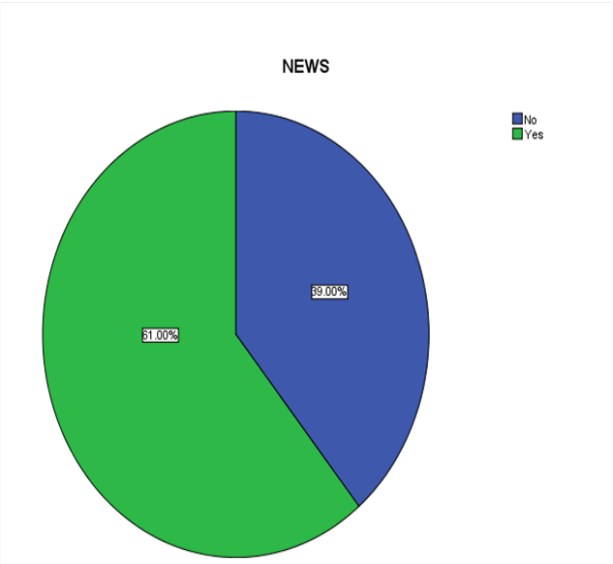

Figure 34: Pie chart indicating whether the participants get anxious on listening to news regarding COVID 19

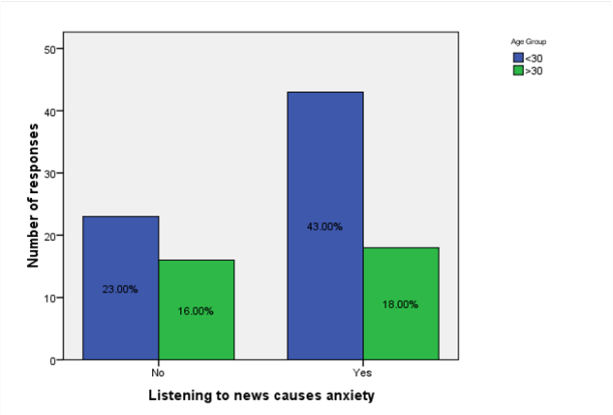

Figure 35: Bar graph depicts the association of opinionon whether news regarding COVID 19 causes anxiety with age groups

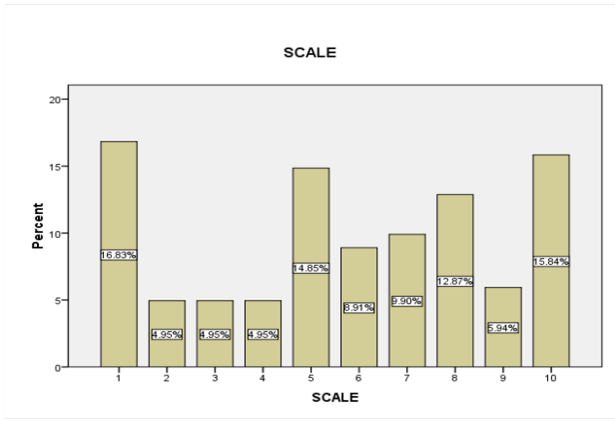

Figure 36: Bar Graph showing the anxiety level of the participants in a scale from 1 to 10

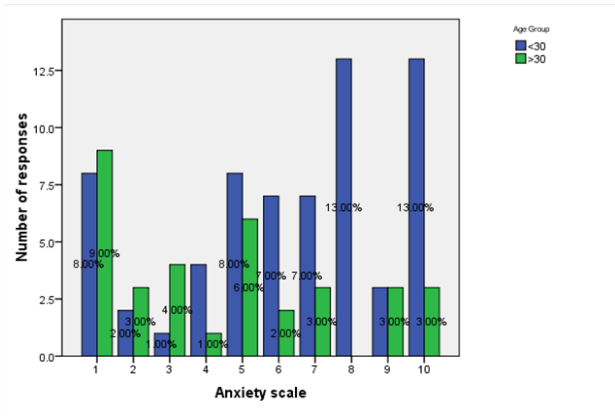

Figure 37: Bar graph depicts association of anxiety level of the participants in a scale from1 to 10 with age groups

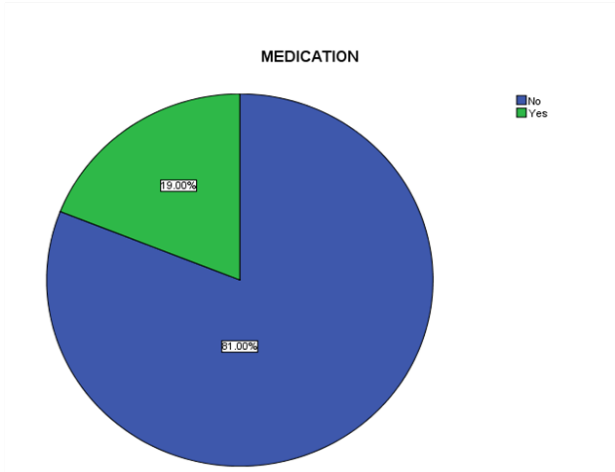

Figure 38: Pie chart showing whether the participants take medication in order to bring down their anxiety level

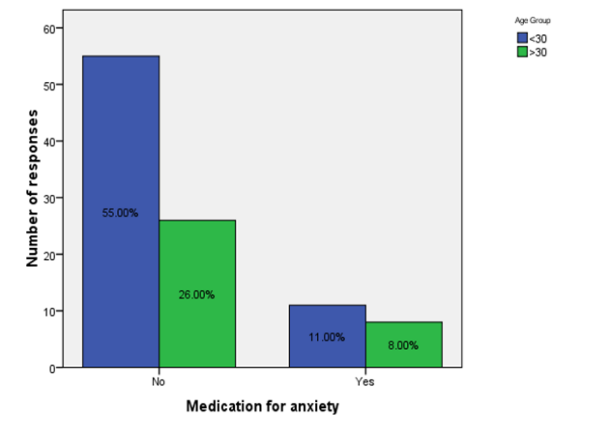

Figure 39: Bar graph depicts the association of the participants who take medication in order to bring down their anxiety level with age groups

improve the level of awareness regarding various diseases and recent development among the general population and the dental students (Palati *et al.*, 2020; Prasanna and Gheena, 2016; Uma, 2020; Ahad and Gheena, 2016; Sheriff and Santhanam, 2018). The current study was conducted in the light of the studies mentioned above to evaluate the knowledge, attitude and practice regarding anxiety level during Covid 19 pandemic among Chennai population.

Methodology

This is a cross-sectional descriptive Survey that is conducted among 108 people in the age group between 20-60 years. This survey consists of 18 self-administered questions. This was done through an online survey (google forms) This survey was carried among Chennai population that consists of both male and female between the age between 20-60 Years. Chi-square analysis to compare the two groups is done using SPSS. Simple Random sampling was done to eliminate response bias. Demographic Information knowledge, Attitude and Practice were the output of variable. Age, gender, physical problems, work were the independent Variables, whereas knowledge, Altitude and Practice were the dependent variables. The results were collected and were tabulated. The results were analysed using statistical analysis.

RESULTS AND DISCUSSION

The descriptive data showed that the majority of the population that actively participated in the survey were 18 years of age. In this study, the male population was 34.7%, whereas the female population was 65.3%. The participants engaged in this survey, 44% were students. 5% of the population were retired .3%of the population were teachers.2% of the population were lawyers. 9% of the population were health workers .7% of the population were Entrepreneur.17% of the population were engineers.10% of the population were homemakers. 2% of the population were scientists.1% of the population were farmers.

On assessing the knowledge of the participants, 94% of the participants were aware of COVID 19 pandemic and on comparing between the <30 and >30 age groups, statistically significant increase in awareness was seen among <30 age group Figures 1, 2 and 3 shows that Chi square test shows statistical significance (P = 0.009) showing more awareness among <30 years of age.When the participants were asked what measures were taken to contain the spread of virus 6% of the population said Quarantine 15% said lockdown 16% said Social distancing and 63% said all of the above, on comparing between the groups no difference was found Figures 4 and 5 shows that Chi square analysis shows no statistical significance (P=0.721). When the participants were asked if the media increased their anxiety level, 56% of the population said yes, and 44% said no. Still, no difference was seen between the groups Figures 6 and 7 sows that Chi square test shows no statistical significance with P=0.658 (P>0.05). When the participants were asked which form of media had the most influence in their stress levels, 42% of the population said television, 10% said Newspapers, 26 % said social media and 21% said No influence of media. Still, no difference in response was seen between the groups Figures 8 and 9 shows that Chi square test shows no statistical significance with P = 0.056 (P>0.05).

On assessing the attitude of the participants, 78% of the participants felt the need to visit a professional psychologist to help with anxiety issues. Still, Chi-square test did not show a statistically significant difference between the groups Figures 10 and 11 shows that Chi square test shows no statistical significance with P =0.781(P>0.05). When the participants were asked if were anxious to step out of the house for essentials, 50% of the population answered yes, but Chi-square test did not show a statistically significant difference between the groups Figures 12 and 13 shows that Chi square test shows no statistical significance with P=0.091(P>0.05). When the participants were asked whether the thought of COVID 19 made you feel dizzy, light-headed, shaky or wobbly 25% of the population answered yes, but no significant difference was seen between the groups Figures 14 and 15 shows that Chi square test shows no statistical significance with P = 0.88(P>0.05). When

the participants were asked if they have had times when they feel like their heartbeat is racing, and they are hot and Sweaty thinking of COVID 19, 34% of the participants answered yes. Still, no significant difference was seen between the groups Figures 16 and 17 shows that Chi square test shows no statistical significance P = 0.803(P>0.05). When the participants were asked if their anxiety level has increased since COVID 19, 65% of the population answered yes, Chi-square test showed statistical significance with more increase in anxiety level among the <30 age group Figures 18 and 19 shows that Chi square analysis shows statistical significance P = 0.024 (P<0.05). When the participants were asked if lockdown decreased their stress level, 50% of the population said yes, but no significant difference was seen between the groups Figures 20 and 21 shows that Chi square test shows no statistical significance with P =0.205(P>0.05). When the participants were asked about their emotion when they hear the words quarantine, lockdown and social distancing. 42% of the population answered sadly, 22 % said happy, 13% said anger and 23% said fear, but no significant difference was seen between the groups Figures 22 and 23 shows that Chi square test shows no statistical significance with P =0.539(P>0.05). When the participants were asked if they were apprehensive or paranoid if someone coughs a few times at home, 25% of the population answered yes, and 29% sometimes answered Figure 24. Chi-square analysis shows statistical significance P = 0.012. More anxiety is seen among < 30 age group Figure 25 shows that Chi square analysis shows statistical significance P = 0.012. More anxiety is seen among < 30 age group. When the participants were asked if they fear that the worst will happen to their family members during this pandemic, 25% of the population answered yes Figures 26 and 27 shows that Chi square analysis shows statistical significance(p value 0.012). More fear is seen among <30 age group. Chi-square analysis showed statistical significance (p-value 0.012) with more fear seen among <30 age group.

On assessing the Practice, When the participants were asked if they suffered from lack of sleep thinking about COVID 19, 15% of the population said yes, and 64% answered no. Still, no significant difference was seen between the groups Figures 28 and 29 shows that Chi square test shows no statistical significance with P = 0.611(P>0.05). When the participants were asked if they get nightmares about COVID 19, 24% of the population answered yes, but no significant difference was seen between the groups Figures 30 and 31 shows that Chi square test shows no statistical significance with P = 0.058(P>0.05). When the participants were asked if they were obsessed with news regarding COVID 19, 61% of the population answered yes Figure 32. Chi-square analysis showed statistical significance with more obsession among < 30 age group Figure 33 shows that Chi square analysis shows statistical significance P = 0.049 (P<0.05), More obsession is seen among< 30 age group. When the participants were asked if listening to news regarding COVID 19 cause anxiety, 61% of the population said yes, but no significant difference was seen between the groups Figures 34 and 35 shows that Chi square analysis shows no statistical significance with P = 0.236 (P>0.05). When the participants were asked On the scale of 1-10 how anxious they were about COVID 19, 17% of the population said 1, 5% said 2,5% said 3, 5% said 4,16% said5, 9% said 6,10% said 7, 13% said 8,6% said 9,16% said10, but no significant difference was seen between the groups Figures 36 and 37 shows that Chi square analysis shows no statistical significance P =0.549 (P>0.05). When the participants were asked if here there were days when they had taken medication to bring their anxiety levels down, 19% of the population answered yes. Still, no significant difference was seen between the groups Figures 38 and 39 shows that Chi square analysis shows no statistical significance with P = 0.407(P>0.05).

In our study, 35% of the participants in the Chennai population showed increased anxiety levels amidst COVID 19 pandemic. In contrast, in a study done by Roy D et al. the anxiety level on COVID 19 pandemic in Indian population is 80%. Comparing to Roy D et al. study in our study, the anxiety level is a little lower. The difference may be because, in our research, predominant populations were lesser than 30 years of age (Roy, 2020). In a study done by Huang Y et al. amidst COVID 19 in the Chinese population, he evaluated anxiety disorder, depressive symptoms and sleep quality to be more prevalent. The anxiety level was 30% which is similar to our study, where it is 35%. The knowledge of the participants regarding COVID 19 was good which agreed with research done by Roy D et al. and Huang Y et al. This increased knowledge and awareness can be attributed to increased exposure to media by the participants (Huang and Zhao, 2020; Roy, 2020). COVID 19 is an infectious disease caused by a novel coronavirus, and it causes anxiety and mental stress to people.

Roy et al. in their study deciphered that for 36.5% of the participant's social media was the primary form of media which influenced their stress levels which is similar to the results of our study where media influence 26%. In today's world of living with COVID 19 pandemic, the role of the psychol-

ogist seems to be crucial. Roy D et al. in their study showed that 76% of the participants needed to go to see a psychologist, whereas, in contrast, our study results show that only 33% needed to go to the psychologist. The variations in the result may be because of less awareness about the role of psychologists among the Chennai population and also more awareness about the pandemic and coping mechanisms (Roy, 2020). In the study done by Ozdin, the majority of the population needed some psychological support. But in our research, only 33% required support. This variation in the results may be because the study by Ozdin et was carried among people above 60 years of age which is in contrast with our study. Populations above the age group of 60 are known to succumb more to the disease and hence are naturally more apprehensive. So participants are more anxious and need the help of psychological Support (Özdin and Özdin, 2020). Psychologists are trained to diagnose anxiety disorder and teach patients an effective way to cope up. CBT therapy by psychologists is a very effective way to treat anxiety disorder

In the study done by Amir Moghani Bashi, the findings show that more than 94% of people follow the news of COVID 19, but in our study, only 50% of the population follow the news regarding COVID 19. The variation in results may be because the other research was done among the Iran population, and the awareness and social stigma towards COVID 19 may be different from the Indian population. But the anxiety level among the Iran population for COVID 19 is similar to our study, which is 33% (Moghanibashi-Mansourieh, 2020). Some of the measures taken by the participants to combat anxiety associated with covid19 are to take a time out, to eat well-balanced food, to have enough sleep, to pray and meditate.

The limitation of our study is the less sample size, response bias and survey fatigue. It is also done in a homogenous population which may mislead.

The Future scope of this study is to do a survey-based complete survey on the Anxiety level of COVID 19 during the lockdown and its effects on mental health in a larger population and a larger scale.

CONCLUSION

This study has shown an increase in the anxiety level among the Chennai population in the context of COVID19 pandemic. The manifestation of anxiety level is more among <30 age group, and this is attributed to the increased exposure to information from media. The study reflects a need for more awareness programs about coping with anxiety levels during COVID19 among the Chennai population. There is a need for social support to alleviate anxiety and improve mental health.

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Conflict of Interest

The authors declare that they have no conflict of interest for this study.

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