PalArch's Journal of Archaeology of Egypt / Egyptology

THE PSYCHOLOGICAL RESPONSE OF SOCIETY ON THE EXPANSION OF CORONAVIRUS DISEASE CASES (COVID-19)

Dwi Yan Nugraha[1], Agustin Basriani[2], Desi Susanti[3], Y. Rahmat Akbar[4], Murtiadi Awaluddin[5]*

[1*]Department of Psychology, Universitas Negeri Makassar, Indonesia.

[2]Department of Management, Sekolah Tinggi Ilmu Ekonomi Persada Bunda, Indonesia.

[3]Department of Management, Sekolah Tinggi Ilmu Ekonomi Persada Bunda, Indonesia.

[4]Department of Management, Sekolah Tinggi Ilmu Ekonomi Persada Bunda, Indonesia.

[5]Department of Management, Alauddin State Islamic University Makassar, Indonesia.

[1*]dwi_nugraha97@yahoo.com, agustin.[2]basriani@gmail.com, [3]dsusant1.hazel@gmail.com, [4]yyrahmat@gmail.com, [5]Murtiadi.Awaluddin@uin-alauddin.ac.id

Dwi Yan Nugraha, Agustin Basriani, Desi Susanti, Y. Rahmat Akbar, Murtiadi Awaluddin. The Psychological Response of Society on the Expansion of Coronavirus Disease Cases (COVID-19)-- Palarch's Journal of Archaeology of Egypt/Egyptology 17(7), 8741-8765. ISSN 1567-214x

Keywords: Psychological Response, Knowledge, Anxiety, Plague, Coronavirus.

ABSTRACT:

The COVID-19 outbreak has become a major health problem and has become an international concern. In Indonesia, the plague has become a serious concern by the government. Especially in the Province of South Sulawesi, the number of COVID-19 cases has a very significant increase every day. The purpose of this study is to provide an overview of the level of community anxiety in South Sulawesi, Indonesia during the COVID-19 outbreak. Data in this study will also be used for reference in future research. The study began from 27 January to 29 March 2020, researchers conducted a survey either directly by distributing it to the public, or by an online questionnaire with a purposive sampling technique using the STAI questionnaire. This study involved 3146 respondents. Overall, community anxiety about COVID-19 outbreaks was in the high category (35.0%), community state anxiety was in the moderate category (94.5%), and trait anxiety was moderate (94.6%). During the development of the COVID-19 virus in Indonesia, reported levels of public anxiety were in the high category. The findings of our study can be used to formulate and develop psychological interventions to reduce public anxiety during the COVID-19 pandemic.

INTRODUCTION

The Coronavirus Disease (COVID-19) outbreak has become a public health problem and a global concern. This outbreak first appeared in early December 2019, known as COVID-19, and caused outbreaks in the city of Wuhan, Hubei Province, China, and has spread to all 34 regions in China on January 30, 2020. On January 31, 2020, confirmed global cases have reached 9,776 with 213 deaths, and WHO declared the outbreak as a public health emergency of international concern (WHO, 2020). Transmission of this outbreak has been observed and reported that the acceleration of transmission of this outbreak is due to human-to-human interactions (Huang, Wang, Li, Ren, Zhao, Hu, & Cheng, 2020). The reporting rate after January 17, 2020 has been considered to have increased 21-fold compared to the situation in the first half of January 2020 (Zhao, Musa, Lin, Ran, Yang, Wang, & Wang, 2020).

The incubation period is carried out around 14 days, with the aim of reducing the spread of the virus among patients (Li, Guan, Wu, Wang, Zhou, Tong, & Xing, 2020). The spread of this outbreak did not initially show any symptoms (Rothe, et al., 2020; Ryu, et al., 2020). However, health workers have provided information related to symptoms of infection, including fever, coughing, chills, difficulty breathing, sore throat, vomiting, and diarrhea (Chen, Zhou, Dong, Qu, Gong, Han, & Yu, 2020). Older men with suboptimal immunity are more likely to be infected with the outbreak, with very poor results (Chen, et al., 2020). Very severe cases can cause individual respiratory failure, acute respiratory distress syndrome, heart injury, and death (Holshue, DeBolt, Lindquist, Lofy, Wiesman, Bruce, & Diaz, 2020). The severity of this outbreak reported by WHO is around 2%, but some previous studies have reported ranging from 0.3% to 0.6% (Nishiura, Kobayashi, Yang, Hayashi, Miyama, Kinoshita, & Akhmetzhanov, 2020).

On March 28, 2020 WHO has reported 512,701 cases related to this virus, where the number of individuals who have died was 23,495 people. Three days later, on March 31, 2020, WHO showed 693,224 cases of COVID-19. This figure can be said to be a significant increase in the three-day period (Covid19 BNPB, 2020). In Indonesia alone there have been 1,414 cases, with 75 (5.30%) patients recovering, 1,217 (86.06%) in care, and 122 (8.62%) dead, especially in the South Sulawesi area, the number of cases resulting from the outbreak this is increasing every day, which has been confirmed from 24 districts / cities (Covid19 BNPB, 2020). Statistical data on COVID-19 cases in the South Sulawesi region on March 31, 2020 can be seen in the following table.

Table 1 COVID-19 Statistical Data in South Sulawesi Province, Regency/City

Province and Regency/City	**PUM**		**PUS**		**Positive**		
	Monitoring Process	**Finished Monitoring**	**Still Being Treated**	**Go home and Be Healthy**	**Treated**	**Recover**	**Died**
South Sulawesi (N/%)	583/94.0%	37/6.0%	96/91.4%	8/7.6%	46/92.0%	0/0 %	4/8.0%
Total	620		105		50		

City of Makassar	100	51	34
Regency of Bantaeng	60	1	0
Regency of Luwu Timur	50	6	1
Regency of Barru	53	1	0
Regency Bulukumba	40	7	1
Regency of Wajo	38	1	0
Regency of Sidenreng Rappang	29	6	2
Regency of Luwu	34	1	0
Regency of Sinjai	30	1	0
Regency of Kepulauan Selayar	28	1	0
Regency of Gowa	12	8	8
Regency of Luwu Utara	18	7	0
Regency of Pangkajene and Kepulauan	22	2	0
Regency of Jeneponto	19	4	0
Regency of Maros	15	4	3
City of Palopo	17	0	0
Regency of Toraja Utara	12	0	0
Regency of Pinrang	11	0	1
Regency of Enrekang	11	0	0
Regency of Takalar	8	1	0
Regency of Soppeng	7	0	0
City of Parepare	5	1	0
Regency of Bone	0	2	0
Regency of Tana Toraja	1	0	0

Note. PUM (People Under Monitoring); PUS (Patient Under Supervision).

Seeing the number of COVID-19 cases that are considered to be very large, efforts continue to be made by the government such as social distance, requiring people to stay at home, and restricting community travel. This policy is intended to slow the spread of the epidemic. Over time this policy has been extended to various provinces in Indonesia including South Sulawesi. People who feel anxious about this outbreak, eventually they prefer to stay at home and isolate themselves to avoid infection (Horton, 2020). The ongoing COVID-19 outbreak is causing fear, anxiety for the community, so socialization is needed related to health status (Xiang, Yang, Li, Zhang, Zhang, Cheung, & Ng, 2020). The results of previous studies have found that there is a broad and deep psychosocial impact on society, both at the individual, group and international levels. At the individual level, there is a tendency for individuals to experience anxiety, fear of falling ill, useless feelings, and stigma (Hall, Hall, & Chapman, 2008). During the outbreak, around 10% to 30% of the public were very worried about the possibility of contracting the COVID-19 virus (Rubin, Potts, &Michie, 2010). Moreover, with the closure of schools and other places, negative emotions experienced by the community increased (Van Bortel, Basnayake, Wurie, Jambai, Koroma, Muana, & Nellums, 2016). During the presence of the COVID-19 virus, many studies have analyzed the psychological impact on the uninfected group from this outbreak, and found that mental health problems were found to be

strongly associated with a younger age with the regret of being infected (Sim, Chan, Chong, Chua, & Soon, 2010). However, older people with female sex and higher education found that there was a higher risk of infection perception, with moderate anxiety, and individuals with symptoms similar to the COVID-19 virus tended to take precautions (Leung, Lam, Ho, Ho, Chan, Wong, & Hedley, 2003).

Starting from this outbreak has come to the attention of the world, researchers have not found information related to the psychological response of the community in dealing with the COVID-19 pandemic case, especially in the Indonesian people of South Sulawesi Province. The psychological response referred to in this study is people's anxiety in facing the outbreak of COVID-19. Anxiety is an unpleasant emotional reaction to a real or imaginary danger accompanied by changes in the autonomic nervous system and subjective experiences as stress, fear, and anxiety (Spielberger, 1983). Furthermore, vague and pervasive concerns related to feelings of uncertainty and helplessness are anxieties (Stuart, 2006). Types of anxiety are divided into two, namely state anxiety and trait anxiety. State anxiety is anxiety caused by someone when they experience something that is considered threatening and temporary. Meanwhile, trait anxiety is an existing anxiety in a person and is a differentiator between one individual and another individual (Spielberger, 1983).

Excessive anxiety can have an impact in the form of depression, feelings of guilt and closure (Hawari, 2001). The most dangerous effects due to anxiety are excessive worry about real or potential problems, this can use up energy, cause fear, and prevent individuals from performing their functions adequately in interpersonal situations, work situations and social situations. Individuals always feel worried about something or all things without real reason, feel restless, tired and tense (Viedebeck, 2008). One of the biological causes that can cause anxiety is physical disturbance. Anxiety can affect the nervous system such as being unable to sleep, palpitations, trembling, stomach nausea and so on (Agustarika, 2009).

From the observations and literature readings that have been done by researchers, consider that most of the information related to Coivid-19 only focuses on the clinical characteristics of infected patients (Huang, et al., 2020; Chen, et al., 2020), and management global health (Rubin &Wessely, 2020), and characterization of viral genomes (Lu, Zhao, Li, Niu, Yang, Wu, & Bi, 2020). However, researchers still have not found research articles that report psychological responses to COVID-19 in the community. Based on this, the researcher will conduct the first research related to the psychological response (anxiety) of the community towards COVID-19, which was conducted in South Sulawesi Province, Indonesia. This study aims to look at public anxiety about the outbreak of COVID-19 which is increasing every day. The results of this study can later contribute to the government and psychologists, as well as health care professionals in maintaining the psychological well-being of the community in the face of the expansion of the COVID-19 outbreak in Indonesia, particularly in South Sulawesi, and in various parts of the world.

LITERATURE REVIEW

The World Health Organization has announced that millions of people are at risk of being infected with the 2019 coronavirus disease (COVID-19). This outbreak is considered a world health crisis that poses challenges to mental resilience and is the most significant virus since the SARS outbreak in 2003 (Wang et al., 2020a). This disease originated in China which was reported at the end of 2019 and has spread to 13 countries to be precise on January 24, 2020 (Nishiura et al., 2020). COVID-19 was first identified in Wuhan and considered an infectious disease (Yang & Duan, 2020). The most dangerous impact of this outbreak is that it can cause death. Apart from endangering human health and consequently death, this disease also has a psychological effect that cannot be avoided by society. This disease causes anxiety among the public, especially in countries affected by the outbreak, and the media, which has a significant impact on increasing mental stress (Al-Rabiaah et al., 2020). For example, the large amount of news related to the spread of the coronavirus on the media and social networks has led people to believe that infection from this outbreak can present a deadly danger (Singer, 2020). Then several media and social networks have announced the term "end of the world" since the outbreak of the outbreak, which has resulted in increased anxiety (Rubin & Wessely, 2020).

Research by Wang et al. (2020a) analyzed the psychological effects associated with stress, depression, and anxiety at the onset of this outbreak. The study reports that One thousand two hundred ten people answered online questionnaires from 194 cities in China. Researchers confirmed that 53.8% of the population was severely affected by the virus. Then, there are data of 28.8%, 16.5%, and 8.1% obtained from the community, respectively, reporting anxiety, depression, and stress at moderate to severe levels. Al-Rabiaah et al. (2020) also evaluated the impact of the MERS-CoV outbreak by involving medical students as study participants and reporting that all these students experienced stress, with stress levels higher in female students.

Xu et al. (2020) confirm that fear and anxiety are widespread in patients who are positive for COVID-19. Therefore, they were given a rehabilitation program using traditional Chinese medicine to deal with this psychological crisis. Al Najjar et al. (2016) conducted a study investigating adult people's psychobehavioral responses to the MERS-CoV outbreak in a Jeddah shopping center in Saudi Arabia, reporting that levels of anxiety were significantly associated with increased perceptions of susceptibility to viral infections and social avoidance behavior related to travel and while in place general. Van Bortel et al. (2016) evaluated the psychological impact caused by the Ebola disease on individuals, society, and the world. This outbreak infected nearly 28,000 people from 2013 to 2016 and resulted in 11,000 deaths. The results of this study report that people experience severe psychological trauma because they observe the end of other people from being infected with this disease and have a fear of death caused by the outbreak.

Rubin et al. (2010) conducted a study to analyze the impact of communication and media during the outbreak of influenza (H1N1) involving the general public in the UK. They found that public exposure to the press and publicity

related to the attack resulted in increased purchases of disinfectant gel and also raised concerns and anxiety. McAlonan et al. (2007) conducted a study related to the direct effect of this outbreak on health care staff and reported that individuals infected with the SARS virus developed high levels of anxiety and depression apart from other influences, namely chronic stress. Tucci et al. (2017) evaluated the impact of emerging infectious outbreaks and confirmed that the virus is significantly correlated with obsessive-compulsive disorder and mental illness.

Eleven of the nineteen studies reported mixed results, with a prevalence of anxiety symptoms from 6.33% to 50.9% (Gao et al., 2020; Ahmed et al., 2020; Huang & Zhao, 2020; Gonzalez-Sanguino et al., 2020; Mazza. et al., 2020; Lei et al., 2020; Ozamiz-Etxebarria et al., 2020; Moghanibashi-Mansourieh, 2020; Wang et al., 2020a; Ozdin & Ozdin, 2020; Wang et al., 2020b). Anxiety is often a trigger for depression (Choi et al., 2020). Some of the factors that influence the onset of depressive symptoms also apply to the beginning of anxiety symptoms, namely female gender, with a lower education level, in poor health status, with a younger age group (≤ 40 years), experiencing loneliness, with divorced/widowed status, has concerns about a virus infection, quarantine status, property damage, history of mental health/medical problems, chronic illness, lives in urban areas and experiences specific physical symptoms (Gao et al., 2020; Ahmed et al., 2020; Huang & Zhao, 2020; Gonzalez-Sanguino et al., 2020; Mazza et al., 2020; Lei et al., 2020; Ozamiz-Etxebarria et al., 2020; Wang et al., 2020a; Moghanibashi-Mansourieh, 2020; Wang et al., 2020b). Besides, excessive exposure to social media without coping with news/information about this the outbreak is positively related to symptoms of anxiety (Moghanibashi-Mansourieh, 2020; Gao et al., 2020). When viewed from the perspective of marital status, the study found that married participants had a higher level of anxiety when compared to unmarried participants (Gao et al., 2020). Then, Lei et al. (2020) reported that participants who were divorced/widowed tended to experience more anxiety symptoms than individuals who were single married. Prolonged quarantine also results in a high risk of anxiety symptoms. Intuitively, a history of contact with a patient who is positive for COVID-19 can lead to more symptoms of anxiety, which was reported in one study (Moghanibashi-Mansourieh, 2020).

The social stability of the country is severely affected by the effects of COVID-19 (Chen et al., 2020). Besides, the level of distress for health workers is higher because they are more at risk of being infected with this outbreak (Al-Rabiaah et al., 2020). The consequences of this virus, which affects all aspects of people's lives, continue (Makamure et al., 2013). The COVID-19 outbreak is currently a grave concern by the international community (Xu et al., 2020). Given that no research has been conducted in Indonesia to evaluate public anxiety as a psychological response that is generated due to the widespread COVID-19 outbreak.

METHOD

Design and Respondents

This study uses a cross-sectional survey design to determine the psychological response (anxiety) from the community using a questionnaire, both directly by distributing it to the public, and by an online questionnaire. The sampling technique used was purposive sampling, which focused on the public living in South Sulawesi Province, Indonesia, with an age range of 13 to 60 years, during the COVID-19 pandemic. Questionnaires are directly distributed to people who do not have internet access, while online questionnaires are first given to students, then they are encouraged to disseminate to other communities.

Procedure

When the outbreak of the COVID-19 virus has become a global concern, the Indonesian government has issued several policies related to the outbreak, by ordering people to stay at home and reduce interaction with others. Respondents completed the questionnaire online and offline. Respondents worked on a questionnaire using Indonesian. Information related to this research has been explained before by the researcher before the respondent does it, and has been approved by all respondents. Data collected by researchers, conducted for two months and three days (27 January to 29 March 2020) after WHO announced that the COVID-19 virus had become an international concern.

Measurement

The instrument used in this study was the State Trait Anxiety Inventory (STAI) questionnaire developed by Charles D. Spielberger. This instrument has been very popular and has been available in various languages, so researchers consider this questionnaire to be very appropriate to use. Furthermore, the STAI questionnaire is divided into two parts, namely State Anxiety and Trait Anxiety, each consisting of twenty questions. The anxiety categorization in this questionnaire consisted of four levels for the STAI subscale (state anxiety and trait anxiety), namely no anxiety (score $\leq$ 20), mild (score 21-39), moderate (score 40-59), and severe anxiety (score 60-80). Scores of each level are the provisions of this questionnaire. But for the overall anxiety categorization, researchers used five categories: very low (score $\leq$ 90), low (score 91-97), moderate (score 98-104), high (score 105-112), and very high (score 113 to the top). The determination of this categorization score is based on the mean and standard deviation of the total score obtained by respondents on the STAI scale. This questionnaire consists of four answer choices. The validity value of this STAI instrument has been tested for validity with a value interval of .88, and alpha reliability for state anxiety of .93 and trait anxiety of .91, which means the instrument is reliable with very good categories (McDowell, 2006). However, researchers will continue to conduct validity and reliability analyzes, given the STAI instrument used is an original version that still uses English, of course a language evaluation is needed before it is used. In addition, there are cultural factors that can provide results of the quality of STAI instruments, so it is necessary to test the psychometric properties of the instrument. The advantage of this STAI instrument is that it allows to be able to see the difference in the

condition and nature of anxiety under study, both state anxiety which is momentary anxiety and trait anxiety which is permanent anxiety in an individual.

Statistical Analysis

The statistical analysis in this study uses a descriptive and inferential approach, with the help of the GNU PSPP Statistical Analysis Software computer program version 1.2.0 and STATCAL version 1.0. The author will first examine the psychometric properties of the STAI instrument using the confirmatory factor analysis (CFA) approach. Descriptive analysis is used to calculate the level of public anxiety. The results of the percentage of data obtained are based on the number of respondents who refer to their anxiety level, with the total number of responses from the questionnaire. The level of anxiety obtained from each respondent is based on the total score of the STAI questionnaire by referring to the categorization that has been determined from the questionnaire. Then further analysis is used in this research which is to look at the level of public anxiety which is reviewed based on sociodemographic characteristics, COVID-19 status, and COVID-19 distribution zones using descriptive cross tabulation analysis method. The inferential analysis is used to see the effect of univariate sociodemographic characteristics of respondents on the total score of STAI and subscales of STAI, using linear regression analysis method at the significance level of 5% ($p < .05$), and 1% ($p < .01$). Meanwhile, to see the effect of multivariate COVID-19 status and COVID-19 distribution zones on the total STAI and subscale scores of STAI, using multiple linear regression analysis methods at the 5% significance level ($p < .05$), and 1% ($p < .01$).

RESULT

The researcher will first report the results of the psychometric property analysis of the STAI instrument using the confirmatory factor analysis (CFA) approach. We measure the validity and reliability using the first order confirmatory factor analysis and second order confirmatory factor analysis methods. The validity and reliability of the construct and the coefficient of determination are presented in table 2 for each method.

Table 2. Constructive validity and construct reliability of the STAI instrument

Method	Variable and Dimension	R^2	SLF	S.E	AVE	CR
1st Order CFA	Anxiety	.22 to .81	40 items (.47 to .90)*	.18 to .78	.50*	.97*
	State Anxiety		20 items (.62 to .89*	.21 to .61		
	Trait Anxiety		20 items (.51 to .85)*	.28 to .74		
2nd Order CFA	Anxiety	.26 to .78	2 dimensi (1.28 to .69)*	-.65 to .52	1.06*	1.03*
	State Anxiety		20 items (.62 to .89)*	.21 to .61	.58*	.96*
	Trait Anxiety		20 items (.51 to .85)*	.28 to .74	.50*	.95*

Note. R^2 = R-Squared (Coefficient of determination); SLF = Standardized loading factor (> .4)*; S.E = Standard error; AVE = Average variance extracted (> .5)*; CR = Construct reliability (> .7)*.

Based on the results of the construct validity and construct reliability tests for each method presented in table 2, it shows that all items have a factor loading interval above .4, so it can be said that the indicator has a high correlation to the measured variable and it can be said that all items of these variables are valid. Furthermore, the construct reliability results also show that the CR value of the variable has a value greater than the threshold value of .7, so it can be said that the measured variable has been reliable and is in the good category. The largest contribution of the indicators in the CFA 1st Order method is 81.5%, and 78.9% for the 2nd Order CFA. Discriminant validity test results can be seen in the table below.

Table 3 The discriminant validity of STAI instruments

Variable	State Anxiety	Trait Anxiety	Anxiety
State Anxiety	1.00*		
Trait Anxiety	.91	1.00*	
Anxiety	.81	.51	1.00*

Note. *Square root value of AVE.

Based on the results of the discriminant validity test presented in table 3, it shows that the square root value of AVE has a higher value than the correlation value between variables, so it can be said that the measurement model is valid. We use five indexes of goodness of fit for each method, each of which uses measures in the statistical measure and non-statistical measures, which can be seen in table 4. When viewed from the goodness of fit test each measure in the statistical measure and non-statistical tests The measure is at a good level. But the model presented by the CFA 2nd Order method is better than the model obtained from the CFA 1st Order method.

Table 4 The goodness of fit STAI instruments

Method	*p*	RMSEA	NFI	CFI	AGFI
1st Order CFA	.04	.07*	.79	.92*	.91*
2nd Order CFA	.06*	.05*	.85	.94*	.93*

Note. *p* = Probability (≥ .05)*; RMSEA = Root mean square error of approximation (.03 to .08)*; NFI = Normed fit index (≥ .90)*; CFI = Comparative fit index (≥ .90)*; AGFI = Adjusted goodness fit of index (≥ .90)*.

The results presented in table 4 in the 1st Order CFA method show that the significance value is still below the threshold value of (.04 < .05). In addition, in terms of non-statistical aspects of the NFI value is still below the criteria (.79 < .90), CFI values (.92), AGFI (.91) are all above the level of .90 which is supported by the value (RMSEA) of .07 or still in the range .03 to .08. When referring to the 2nd Order CFA method, it indicates that the significance value is above the threshold value of (.06 > .05). In addition, in terms of non-statistical measure aspects such as the NFI value is still below the criteria (.85 < .90), the value of CFI, AGFI are all above the level of .90 which is supported by a value (RMSEA) of .05 or still below a specified range.

This study used 3146 respondents, receiving online responses of 2473 respondents, and 673 respondents obtained directly from the community. These respondents came from various districts in South Sulawesi Province, Indonesia. Psychological responses (anxiety) to the outbreak of COVID-19, measured using the STAI scale. The categorization of the level of public anxiety towards the COVID-19 outbreak can be seen in table 5. Based on the total score obtained from respondents shows that 136 (4.3%) respondents with very high anxiety levels (scores 113 and above), there are 1101 (35.0%) respondents who are in the anxiety category with a high category (score 105-112), there are 962 (30.6%) respondents with moderate anxiety category (score 98-104), there are 715 (22.7%) respondents are in the category of low anxiety (score 91-97), and there were 232 (7.4%) respondents with a very low anxiety category (score $\leq$ 90). The results obtained from the categorization of the level of anxiety experienced by the community related to the COVID-19 outbreak were in the high category (M = 101.37; SD = 7.17).

Table 5. Categorization of community anxiety levels

Levels	**Anxiety**			**Levels**	**State Anxiety**			**Trait Anxiety**		
	N(%)	***M***	***SD***		**N(%)**	***M***	***SD***	**N(%)**	***M***	***SD***
Very high	136(4.3)	101.37	7.17	Weight	112(3.6)	50.12	5.04	112(3.6)	51.25	5.59
High	1101(35.0)			Moderate	2973(94.5)			2976(94.6)		
Moderate	962(30.6)			Light	61(1.9)			58(1.8)		
Low	715(22.7)			There is no anxiety	0(0)			0(0)		
Very low	232(7.4)									

Determination of the level of public anxiety based on the anxiety subscale (state anxiety and trait anxiety) for the outbreak of COVID-19 using standard score categorization of the predetermined STAI scale. The state anxiety subscale obtained an average score of 50.12 (SD = 5.04) with the categorization of 112 (3.6%) respondents considered to have severe anxiety (score 60-80), there were 2973 (94.5%) respondents who were in the moderate anxiety category (score 40-59), there were 61 (1.9%) respondents in the mild anxiety category (score 21-39), and there were no respondents in the category of not feeling anxiety. Furthermore, for the trait anxiety subscale shows an average value of 51.25 (SD = 5.59) in the categorization of 112 (3.6%) respondents were considered to have severe anxiety (score 60-80), there were 2976 (94.6%) respondents who were in the anxiety category moderate (score 40-59), there were 58 (1.8%) respondents in the mild anxiety category (score 21-39), and there were no respondents in the category of not feeling anxiety.

Descriptions of anxiety levels based on sociodemographic data are presented in table 6. Descriptive data analysis using the crosstabulation method was carried out to see the level of community anxiety in terms of the sociodemographic of respondents which showed that the majority of male

respondents (35.4%) experienced anxiety with a high category. In terms of age, the level of anxiety of respondents is in the medium category (37.9%) with an age range of 21-28 years. If you look at it in terms of education it is found that anxiety is dominated by high school educated respondents (40.5%) who are in a high anxiety status. Then respondents who work as entrepreneurs (36.2%) are considered to have a high level of anxiety. The majority of respondents who were married (35.7%) had anxiety in the high category. Respondents who have children over the age of twenty (35.1%) tend to have high anxiety. Furthermore, the majority of respondents with household sizes of four to seven people (33.9%) were in high anxiety.

Based on the score for the anxiety subscale, state anxiety was found that the majority of male respondents (93.5%) had moderate anxiety. In terms of age, the level of anxiety of respondents is in the medium category (93.5%) with an age range of 13-20 years. If you look at it from an educational perspective, it is found that anxiety is dominated by respondents with a high school education (92.9%) who are in a moderate anxiety status. Then respondents who work as entrepreneurs (94.3%) are considered to have a moderate level of anxiety. The majority of respondents who were married (93.4%) had anxiety in the medium category. Respondents who have children over the age of twenty (94.8%) tend to have moderate anxiety. Furthermore, the majority of respondents with a household size of four to seven people (94.4%) are in the midst of moderate anxiety.

The results of cross tabulation in trait anxiety showed that the majority of male respondents (95.1%) had moderate anxiety. In terms of age, the level of anxiety of respondents is in the medium category (91.6%) with an age range of 13-20 years. If you look at it in terms of education it is found that anxiety is dominated by respondents with a high school education (93.4%) who are in a moderate anxiety status. Then respondents who work as entrepreneurs (94.2%) are considered to have a moderate level of anxiety. The majority of respondents who were married (94.0%) had anxiety in the medium category. Respondents who have children over the age of twenty (94.7%) tend to have moderate anxiety. Furthermore, the majority of respondents with a household size of four to seven people (94.9%) are at moderate anxiety levels.

Table 6 Descriptions of anxiety levels based on sociodemographic data

Variables	**Anxiety**					**State Anxiety**				**Trait Anxiety**			
	Very high N (%)	high N (%)	Moderate N (%)	Low N (%)	Very low N (%)	Weight N (%)	Moderate N (%)	Light N (%)	There is no anxiety N (%)	Weight N (%)	Moderate N (%)	Light N (%)	There is no anxiety N (%)
Gender													
Male	66(4.1)	564(35.4)	488(30.7)	358(22.5)	116(7.3)	71(4.5)	1488(93.5)	33(2.1)	0(0)	51(3.2)	1514(95.1)	27(1.7)	0(0)
Female	70(4.5)	537(34.6)	474(30.5)	357(23.0)	116(7.5)	41(2.6)	1485(95.6)	28(1.8)	0(0)	61(3.9)	1462(94.1)	31(2.0)	0(0)
Age (Years)													
13 to 20	44(4.7)	277(29.4)	312(33.1)	237(25.2)	72(7.6)	40(4.2)	881(93.5)	21(2.2)	0(0)	57(6.1)	863(91.6)	22(2.3)	0(0)

21 to 28	31(3.9)	174(21.9)	301(37.9)	216(27.2)	72(9.1)	15(1.9)	759(95.6)	20(2.5)	0(0)	19(2.4)	758(95.5)	17(2.1)	0(0)
29 to 36	31(3.6)	250(28.7)	301(34.5)	214(24.5)	76(8.7	30(3.4)	826(94.7)	16(1.8)	0(0)	26(3.0)	831(95.3)	15(1.7)	0(0)
37 to 44	23(8.2)	196(69.5)	26(9.2)	29(10.3)	8(2.8)	19(6.7)	261(92.6)	2(.7)	0(0)	5(1.8)	276(97.9)	1(.4)	0(0)
45 to 52	5(3.3)	115(75.2)	14(9.2)	15(9.8)	4(2.6)	5(3.3)	147(96.1)	1(.7)	0(0)	3(2.0)	147(96.1)	3(2.0)	0(0)
53 to 60	2(1.9)	89(86.4)	8(7.8)	4(3.9)	0(0)	3(2.9)	99(96.1)	1(1.0)	0(0)	2(1.9)	101(98.1)	0(0)	0(0)
Education attainment													
None	20(4.0)	172(34.0)	168(33.2)	107(21.1)	39(7.7)	17(3.4)	477(94.3)	12(2.4)	0(0)	13(2.6)	486(96.0)	7(1.4)	0(0)
Middle School	21(3.9)	174(32.7)	162(30.5)	141(26.5)	34(6.4)	17(3.2)	503(94.5)	12(2.3)	0(0)	20(3.8)	503(94.5)	9(1.7)	0(0)
High School	33(6.0)	222(40.5)	147(26.8)	108(19.7)	38(6.9)	32(5.8)	509(92.9)	7(1.3)	0(0)	24(4.4)	512(93.4)	12(2.2)	0(0)
Bachelors	22(4.1)	180(33.9)	171(32.2)	122(23.0)	36(6.8)	18(3.4)	504(94.9)	9(1.7)	0(0)	19(3.6)	501(94.4)	11(2.1)	0(0)
Masters	14(2.7)	181(34.9)	159(30.7)	128(24.7)	36(6.9)	13(2.5)	494(95.4)	11(2.1)	0(0)	17(3.3)	491(94.8)	10(1.9)	0(0)
Doctorate	26(5.1)	172(33.7)	155(30.3)	109(21.3)	49(9.6)	15(2.9)	486(95.1)	10(2.0)	0(0)	19(3.7)	483(94.5)	9(1.8)	0(0)
Employment status													
Student	21(5.4)	137(35.1)	113(29.0)	90(23.1)	29(7.4)	14(3.6)	368(94.4)	8(2.1)	0(0)	10(2.6)	378(96.9)	2(.5)	0(0)
Government officials	19(5.0)	126(33.3)	117(31.0)	93(24.6)	23(6.1)	14(3.7)	358(94.7)	6(1.6)	0(0)	11(2.9)	359(95.0)	8(2.1)	0(0)
Retired	18(4.5)	140(35.0)	122(30.5)	95(23.8)	25(6.3)	13(3.3)	375(93.8)	12(3.0)	0(0)	22(5.5)	370(92.5)	8(2.0)	0(0)
Farmers	18(4.6)	132(33.8)	110(28.2)	94(24.1)	36(9.2)	16(4.1)	365(93.6)	9(2.3)	0(0)	14(3.6)	368(94.4)	8(2.1)	0(0)
Employed	19(4.8)	141(35.8)	123(31.2)	84(21.3)	27(6.9)	10(2.5)	379(96.2)	5(1.3)	0(0)	16(4.1)	372(94.4)	6(1.5)	0(0)
Entrepreneur	36(3.6)	363(36.2)	311(31.0)	217(21.6)	77(7.7)	39(3.9)	947(94.3)	18(1.8)	0(0)	35(3.5)	946(94.2)	23(2.3)	0(0)
Unemployment	5(2.6)	62(32.6)	66(34.7)	42(22.1)	15(7.9)	6(3.2)	181(95.3)	3(1.6)	0(0)	4(2.1)	183(96.3)	3(1.6)	0(0)
Marital status													
Single	23(3.7)	219(34.8)	197(31.3)	147(23.4)	43(6.8)	18(2.9)	600(95.4)	11(1.7)	0(0)	21(3.3)	599(95.2)	9(1.4)	0(0)
Married	43(4.6)	332(35.7)	272(29.2)	210(22.6)	74(7.9)	36(3.9)	870(93.4)	25(2.7)	0(0)	37(4.0)	875(94.0)	19(2.0)	0(0)
Widower	26(4.4)	196(33.1)	183(30.9)	149(25.1)	39(6.6)	22(3.7)	562(94.8)	9(1.5)	0(0)	17(2.9)	572(96.5)	4(.7)	0(0)
Widow	34(5.0)	242(35.6)	204(30.0)	146(21.5)	53(7.8)	26(3.8)	642(94.6)	11(1.6)	0(0)	29(4.3)	628(92.5)	22(3.2)	0(0)
Divorced	10(3.2)	112(35.7)	106(33.8)	63(20.1)	23(7.3)	10(3.2)	299(95.2)	5(1.6)	0(0)	8(2.5)	302(96.2)	4(1.3)	0(0)
Status as a parent													
Having children $\leq$ 20 years old	43(4.1)	371(35.3)	324(30.9)	233(22.2)	79(7.5)	36(3.4)	994(94.7)	20(1.9)	0(0)	32(3.0)	992(94.5)	26(2.5)	0(0)

Having children over 20 years old	67(4.2)	558(35.1)	479(30.2)	375(23.6)	109(6.9)	54(3.4)	1506(94.8)	28(1.8)	0(0)	65(4.1)	1504(94.7)	19(1.2)	0(0)
Do not have children	26(5.1)	172(33.9)	159(31.3)	107(21.1)	44(8.7)	22(4.3)	473(93.1)	13(2.6)	0(0)	15(3.0)	480(94.5)	13(2.6)	0(0)
Household size													
One person	16(4.2)	137(36.2)	107(28.3)	89(23.5)	29(7.7)	19(5.0)	356(94.2)	3(.8)	0(0)	17(4.5)	350(92.6)	11(2.9)	0(0)
Two to three people	29(3.8)	266(34.6)	251(32.6)	164(21.3)	59(7.7)	22(2.9)	730(94.9)	17(2.2)	0(0)	24(3.1)	733(95.3)	12(1.6)	0(0)
Four to seven people	58(4.9)	403(33.9)	364(30.6)	275(23.1)	90(7.6)	43(3.6)	1123(94.4)	24(2.0)	0(0)	37(3.1)	1129(94.9)	24(2.0)	0(0)
Eight or more people	33(4.1)	295(36.5)	240(29.7)	187(23.1)	54(6.7)	28(3.5)	764(94.4)	17(2.1)	0(0)	34(4.2)	764(94.4)	11(1.4)	0(0)

The sociodemographic characteristics of the respondents can be seen in table 7. Respondents in this study were dominated by men (50.6%), aged 13-20 years (29.9%), high school educated (17.4%), working as entrepreneurs (31.9%), who are married (29.6%), and have children over the age of 20 years (50.5%), and with household sizes of four to seven people (37.8%). Further analysis was carried out by looking at the effect of respondents' sociodemographic data on anxiety. The results obtained showed that only age significantly affected the level of community anxiety (p = .000 < .001; R2 = .035; AR2 = .035; B = 1.027, 95% Confidence Interval = .839 to 1.216). Then from the anxiety subscale it is found that age significantly influences trait anxiety (p = .000 < .001; R2 = .067; AR2 = .067; B = 1.108, 95% Confidence Interval = .964 to 1.253). However, age had no significant effect on people's state anxiety (p = .240 > .001; R2 = .000; AR2 = .000; B = -.081, 95% Confidence Interval = -.216 to .054), and also on other sociodemographic variables namely gender, education, employment status, marital status, parental status, and household size did not show a significant effect on anxiety and anxiety subscales.

Table 7 Effects of sociodemographic on anxiety and anxiety subscales

Variables	**N(%)**	**Anxiety**				**State Anxiety**				**Trait Anxiety**			
		p	**R^2**	**AR^2**	**B(95%CI)**	***p***	**R^2**	**AR^2**	**B(95%CI)**	***p***	**R^2**	**AR^2**	**B(95%CI)**
Gender													
Male	1592(50.6)	.671	.000	.000	-.109 (-.611 to .393)	.948	.000	.000	.012 (-.341 to .365)	.546	.000	.000	-.120 (-.511 to .271)
Female	1554(49.4)												
Age (Years)													
13 to 20	942(29.9)	.000	.035	.035	1.027 (.839 to 1.216)	.240	.000	.000	-.081 (-.216 to .054)	.000	.067	.067	1.108 (.964 to 1.253)
21 to 28	794(25.2)												
29 to 36	872(27.7)												
37 to 44	282(9.0)												
45 to 52	153(4.9)												
53 to 60	103(3.3)												

Education attainment													
None	506(16.1)	.663	.000	.000	-.033 (-.181 to .116)	.768	.000	.000	.016 (-.089 to .120)	.410	.000	.000	-.049 (-.164 to .067)
Middle School	532(16.9)												
High School	548(17.4)												
Bachelors	531(16.9)												
Masters	518(16.5)												
Doctorate	511(16.2)												
Employment status													
Student	390(12.4)	.640	.000	.000	-.031 (-.163 to .100	.839	.000	.000	-.010 (-.102 to .083)	.677	.000	.000	-.022 (-.124 to .081)
Government officials	378(12.0)												
Retired	400(12.7)												
Farmers	390(12.4)												
Employed	394(12.5)												
Entrepreneur	1004(31.9)												
Unemployment	190(6.0)												
Marital status													
Single	629(20.0)	.698	.000	.000	-.039 (-.158 to .235)	.324	.000	.000	.070 (-.069 to .208)	.694	.000	.000	-.031 (-.184 to .122)
Married	931(29.6)												
Widower	593(18.8)												
Widow	679(21.6)												
Divorced	314(10.0)												
Status as a parent													
Having children ≤ 20 years old	1050(33.4)	.826	.000	.000	.041 (-.327 to .409)	.300	.000	.000	.137 (-.122 to .395)	.514	.000	.000	-.095 (-.382 to .191)
Having children over 20 years old	1588(50.5)												
Do not have children	508(16.1)												
Household size													
One person	378(12.0)	.599	.000	.000	.070 (-.190 to .330)	.881	.000	.000	.014 (-.169 to .197)	.589	.000	.000	.056 (-.147 to .259)
Two to three people	769(24.4)												
Four to seven people	1190(37.8)												
Eight or more people	809(25.7)												

Note. **p* < .05; ***p* < .01; R^2 = (R-Squared); AR^2 = (Adjusted R-Squared); B(95%CI) = Beta (95% Confidence Interval).

Descriptions of anxiety levels based on COVID-19 status data and COVID-19 zones are presented in table 8. Descriptive data analysis using the crosstabulation method was carried out to see the level of community anxiety in terms of the COVID-19 status of respondents indicating that the majority of respondents with positive COVID-status 19 (63.4%) experienced anxiety in the high category. In terms of the distribution zone, COVID-19 shows that the majority of respondents who are in the green zone experience high anxiety with a percentage (35.6%). Based on the state anxiety score, it was found that the majority of respondents with positive COVID-19 status (63.5%) had moderate anxiety. Judging from the spread zone of COVID-19, the respondents' anxiety was in the moderate category (34.6%) originating from the green zone. The results of crosstabulation on trait anxiety showed that the majority of respondents who were positive were COVID-19 (63.6%) had moderate anxiety. In terms of the spread zone of COVID-19, the respondents' anxiety was in the moderate category (33.9%) originating from the green zone.

Table 8 Descriptions of anxiety levels based on COVID-19 status and COVID-19 zone data

Variable	**PUM**	**PUS**	**Positive**	**Green Zone**	**Yellow Zone**	**Orange Zone**	**Red Zone**
	N(%)	**N(%)**	**N(%)**	**N(%)**	**N(%)**	**N(%)**	**N(%)**
Anxiety							
Very high	16(11.8)	29(21.3)	91(66.9)	49(36.0)	33(24.3)	31(22.8)	23(16.9)
High	137(12.4)	266(24.2)	698(63.4)	392(35.6)	263(23.9)	250(22.7)	196(17.8)
Moderate	107(11.1)	251(26.1)	604(62.8)	326(33.9)	309(32.1)	301(31.3)	26(2.7)
Low	89(12.4)	164(22.9)	462(64.6)	252(35.2)	220(30.8)	214(29.9)	29(4.1)
Very low	29(12.5)	59(25.4)	144(62.1)	76(32.8)	72(31.0)	76(32.8)	8(3.4)
State Anxiety							
Weight	19(17.0)	22(19.6)	71(63.4)	45(40.2)	18(16.1)	30(26.8)	19(17.0)
Moderate	356(12.0)	730(24.6)	1887(63.5)	1028(34.6)	858(28.9)	826(27.8)	261(8.8)
Light	3(4.9)	17(27.9)	41(67.2)	22(36.1)	21(34.4)	16(26.2)	2(3.3)
There is no anxiety	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
Trait Anxiety							
Weight	17(15.2)	24(21.4)	71(63.4)	60(53.6)	21(18.8)	26(23.2)	5(4.5)
Moderate	350(11.8)	733(24.6)	1893(63.6)	1010(33.9)	859(28.9)	831(27.9)	276(9.3)
Light	11(19.0)	12(20.7)	35(60.3)	25(43.1)	17(29.3)	15(25.9)	1(1.7)
There is no anxiety	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)

Note. PUM = People Under Monitoring; PUS = Patient Under Supervision.

A comparison of respondent's anxiety based on COVID-19 status and COVID-19 zone can be seen in table 9. The results obtained indicate that there are differences in anxiety when viewed in terms of COVID-19 status experienced by respondents (p = .001), and research results It also reports that there are differences in the level of anxiety of respondents based on the spread

zone of COVID-19 (p = .000). In terms of the anxiety subscale, different results found that there was no difference in the respondent's state anxiety regarding the COVID-19 status experienced by the community (p = .109), and also showed no difference if based on the COVID-19 distribution zone (p = .503). However, the results obtained in other anxiety subscales indicate that there is a difference between trait anxiety and COVID-19 status experienced by the community (p = .009), as well as the COVID-19 distribution zone where the respondent is located (p = .000).

Table 9 Differences of anxiety levels based on COVID-19 status data and COVID-19 zone data

Variable	**COVID-19**	**M**	**SD**	**Std. Error**	**95% CI**		**df1**	**df2**	***F***
					LB	**UB**			
Anxiety	COVID-19 status								
	PUM	101.975	7.270	.207	101.567	102.383	2	3143	7.549**
	PUS	100.828	7.181	.233	100.371	101.286			
	Positive	101.146	7.006	.224	100.706	101.587			
	COVID-19 zone								
	Green Zone	101.561	7.244	.218	101.132	101.991	3	3142	35.083**
	Yellow Zone	100.732	7.165	.239	100.262	101.202			
	Orange Zone	100.542	7.077	.239	100.072	101.012			
	Red Zone	105.251	5.878	.350	104.562	105.940			
State Anxiety	COVID-19 status								
	PUM	50.348	5.219	.149	50.055	50.640	2	3143	2.216
	PUS	49.906	4.989	.162	49.587	50.224			
	Positive	50.042	4.882	.156	49.735	50.348			
	COVID-19 zone								
	Green Zone	50.207	5.249	.158	49.896	50.518	3	3142	.784
	Yellow Zone	49.972	5.037	.168	49.642	50.302			
	Orange Zone	50.059	4.981	.168	49.728	50.390			
	Red Zone	50.439	4.479	.266	49.914	50.964			
Trait Anxiety	COVID-19 status								
	PUM	51.627	5.766	.164	51.304	51.950	2	3143	4.748**
	PUS	50.922	5.472	.177	50.573	51.271			
	Positive	51.104	5.461	.174	50.761	51.447			
	COVID-19 zone								
	Green Zone	51.354	5.745	.173	51.013	51.695	2	3142	48.094**

	Yellow Zone	50.760	5.393	.180	50.406	51.113			
	Orange Zone	50.482	5.248	.177	50.133	50.831			
	Red Zone	54.812	5.289	.314	54.192	55.432			

Note. Std. Error = Standard error; 95% CI = 95% Confidence Interval for Mean; LB = Lower Bound; UB = Upper Bound; *p < .05; **p < .01.

The findings of the research described above indicate that there are differences in anxiety between the COVID-19 status of the respondents and the COVID-19 spread zone. Therefore, the researcher will complete an explanation of the differences that have been obtained, by looking at the magnitude of the effect given by the respondents' COVID-19 status and the COVID-19 spread zone on anxiety and anxiety subscales (table 10). The results obtained indicate that there was an effect of the respondents' COVID-19 status on anxiety (p = .000), and the COVID-19 spread zone also affected anxiety (p = .000), with each contributing 1.1%. However, it is different from the anxiety subscale which reported that there was no influence between the respondents' COVID-19 status (p = .072), and the COVID-19 spread zone (p = .323) to state anxiety, with each contributing 1%. Meanwhile, other findings reported that there was an influence between the respondents' COVID-19 status (p = .000), and the COVID-19 spread zone (p = .000) on trait anxiety, with each contributing 13%.

Table 10. Effects of COVID-19 zone and COVID-19 status on anxiety and anxiety subscales

Variable	**N(%)**	**Anxiety**		**State Anxiety**		**Trait Anxiety**	
		B(95%CI)	**Std. Error**	**B(95%CI)**	**Std. Error**	**B(95%CI)**	**Std. Error**
COVID-19 status							
PUM	1224(38.9)	-.901** (-1.246 to -.556)	.176	-.224 (-.468 to .020)	.124	-.677** (-.946 to -.408)	.137
PUS	947(30.1)						
Positive	975(31.0)						
COVID-19 zone							
Green Zone	1095(34.8)	.787** (.496 to 1.078)	.149	.104 (-.102 to .310)	.105	.683** (.456 to .910)	.116
Yellow Zone	897(28.5)						
Orange Zone	872(27.7)						
Red Zone	282(9.0)						
R		.107		.032		.112	
R^2		.011		.001		.013	
AR^2		.011		.000		.012	

Note. *p < .05; **p < .01. R^2 = (R-Squared); AR^2 = (Adjusted R-Squared); B(95%CI) = Beta (95% Confidence Interval); Std. Error = Standard error.

DISCUSSION

Researchers' findings indicate that the community's psychological (anxiety) response, from January 27 to March 29, 2020, was only two weeks after the COVID-19 outbreak was widespread and after WHO announced that the virus had become a global concern, 35.0% of respondents felt high anxiety from spread the plague to remote areas. When viewed from the state of community anxiety 94.5% of respondents reported moderate anxiety, while community anxiety about the outbreak of COVID-19 showed 94.6% of respondents reported moderate anxiety. The prevalence of psychological responses experienced by each respondent when referring to sociodemographic data is certainly very different. This is due to how respondents assessed an event, in this study, the events of the COVID-19 outbreak.

This study found that the majority of male respondents (35.4%) had higher anxiety compared to women. Men can cause this more often to leave the house and interact with each other, so that there are fears of contracting COVID-19. Furthermore, respondents in the age range 21-28 tend to feel moderate anxiety (37.9%). At this age, respondents are more likely to move outside the home which is likely to catch the plague. In addition, it is seen from the level of education that most of the respondents with the most recent high school education (40.5%) showed high anxiety. This finding is in line with the theory of Kaplan and Sadock (1998) that the lower the level of education of a person, the more susceptible to stress or anxiety. It is also in line with the findings of Wang, Pan, Wan, Tan, Xu, Ho, and Ho (2020) who reported that students were found to experience higher levels of stress, anxiety, and depression resulting from the COVID-19 outbreak. Then this study also found that entrepreneurs (36.2%) had a high level of anxiety. This is very reasonable because their work does require meeting many people and allowing the transmission to occur. Further findings of married respondents (35.7%), who have children over the age of twenty (35.1%), and with household sizes of four to seven people (33.9%) report high anxiety. This finding is in line with the studies of Wang, Pan, Wan, Tan, Xu, Ho, and Ho (2020) who found that people with married status who have children over 16 years and living with a family of three more reported feelings of anxiety related to the COVID-19 outbreak.

When viewed from the level of community anxiety based on COVID-19 status, it is reported that people tend to have anxiety in the high category. Based on the distribution zone COVID-19 also reported that people in the green zone experienced high anxiety. Meanwhile, in terms of state anxiety and trait anxiety showed that the majority of people with positive status COVID-19, who experienced moderate anxiety with COVID-19 spreading zones in the green zone also experienced anxiety with moderate categories. According to Videbeck (2008), moderate anxiety is an annoying feeling that something is really different, a person becomes nervous and agitated. If this anxiety continues and is not intervened, it does not rule out the possibility that this moderate anxiety will increase to severe or even severe anxiety and there arises social anxiety disorder. This is where the role of psychologists is needed to overcome the moderate anxiety experienced by the community associated with the spread of the COVID-19 virus, so that public anxiety does not rise to

a higher level. According to Stuart (2006) interventions that can be done to overcome anxiety is to use relaxation techniques (Liu, Chen, Wu, Lin, Wang, & Pan, 2020).

The findings from our study also confirm that there are differences in anxiety in terms of COVID-19 status and COVID-19 zones. Communities that are People Under Monitoring (PUM) and come from the red zone tend to have high anxiety when compared to Patient Under Supervision (PUS) and positive, as well as people who are outside the red zone (M = 101,975; SD = 7,270). In terms of the anxiety subscale, reporting different results shows that there is no difference in state anxiety with COVID-19 status experienced by the community, and also does not show differences in the COVID-19 distribution zone. However, the results obtained by trait anxiety confirm that there are differences when viewed from the status of COVID-19 experienced by the community, as well as the distribution zone of COVID-19 where the community lives.

The results of this study also report that there is an effect of the respondents' COVID-19 status and the COVID-19 spread zone on anxiety and anxiety subscales. According to Stuart (2006), the anxiety experienced by the community causes individuals to only focus on what they consider important and put aside others, this anxiety narrows the field of one's perception, thus the individual experiences selective inattention but can focus on more areas if directed to do it. This anxiety may occur because the public will be a threat and danger that occurs to him, the general public is worried about the expansion of the COVID-19 outbreak and is afraid to hear that he has been infected by the virus, because in their cognitive it is very dangerous and maybe he will soon die, the community also did not know what kind of treatment they would face and its side effects, and the community also did not know the prognosis of the illness he had just suffered. Therefore, the tendency of the community to feel threatened and helpless about the presence of the plague, causing anxiety. In line with the theory of Spielberger (1983) that there are three elements that influence the appreciation of anxiety, namely the existence of a sense of uncertainty, a sense of helplessness and both feelings are directed at the problem to be faced.

Further explanation regarding public anxiety about the COVID-19 outbreak, can also be explained with a biopsychological perspective. Nowadays when we read the news or tell about the symptoms of the COVID-19 virus, and then suddenly we feel our throat will itch, feel pain and feel a little bit, chill despite the normal body temperature. That is because there are psychosomatic reactions in the body. This reaction arises because of individual anxiety that is triggered by news of an ever-increasing outbreak of COVID-19. Amygdala or the center of anxiety, as well as our memory becomes too active at work, eventually sometimes he is unable to cope with the hard work. This overworked amygdala will also over activate the autonomic nervous system, causing the individual to always be in a fight or flight condition or constantly on standby. This imbalance that makes psychosomatic symptoms appear as a reaction to be prepared to face the threat. One way we can reduce psychosomatic symptoms due to our overactive amygdala is to reduce and

limit information related to COVID-19. Do something other than browsing the internet, do fun hobbies and spread your optimism to get past all of these issues.

As the COVID-19 pandemic continues to spread, findings from this study will contribute to the development of prioritized psychological strategies in South Sulawesi Province and other places. Because the number of individuals infected with COVID-19 is currently increasing, psychologists should consider providing psychoeducation and online-based psychological interventions such as cognitive-behavioral therapy (CBT) to reduce the risk of virus transmission with face-to-face therapy. CBT interventions need to be modified to suit community needs during the COVID-19 pandemic. CBT should be done online or by telephone to avoid the possibility of spreading infection. Because by doing CBT online, it doesn't require the presence of a therapist (psychologist). In addition, this will also be beneficial for people in South Sulawesi Province who still lack understanding of Psychologists in treating the community as well as how dangerous the psychological effects arising from the COVID-19 pandemic. Based on researchers' findings, CBT interventions can provide information and evidence to increase public confidence in addressing the expansion of the COVID-19 virus. CBT interventions can also overcome cognitive bias when people overestimate the risk of being infected and dying from a COVID-19 outbreak. CBT interventions can focus on relaxation exercises in overcoming anxiety and depression due to restrictions on community activities during the COVID-19 outbreak. For this reason, further research is needed regarding the effectiveness of these interventions.

Our study has several weaknesses. Given the small number of respondents available and limited interactions due to the COVID-19 outbreak, we adopted a sampling technique that is purposive sampling. This strategy is not based on random sampling, so the results of this study cannot reflect the study population in general. As a result, the conclusions from this study cannot be generalized to the entire population. Another limitation is that the psychological response of the explored community is only limited to anxiety, there are many other psychological responses. However, despite the limitations that have been described by researchers, this study provides a very important and invaluable contribution and information related to the community's psychological (anxiety) response to the expansion of the COVID-19 outbreak, especially in South Sulawesi Province. The results of our study can be used as a reference in the development of this study and as a historical source related to the description of the level of community anxiety in South Sulawesi Province due to the COVID-19 outbreak. A very important result in our study is that there is direct information to develop psychological interventions that can reduce psychological effects, such as anxiety, stress, and depression during the COVID-19 outbreak and provide a basis for evaluating prevention and treatment efforts during a pandemic COVID-19 is still ongoing when this manuscript is still being prepared for publication.

CONCLUSION

During the initial phase of the development of the COVID-19 virus in China to the attention of the international community, and then spread to every other country, including Indonesia, especially in the Province of South Sulawesi, more than half the people reported high anxiety. The majority of people of the male sex, in the age range 21-28 with the last high school education, with work as entrepreneurs, who are married and have children over the age of twenty, and with household sizes of four to seven people report anxiety high. People with the positive status of COVID-19 have high anxiety, with the spread zone of COVID-19 being in the green zone. The results of our study also confirm that there are differences in anxiety in terms of COVID-19 status and COVID-19 zone, and also report that the respondent's COVID-19 status and COVID-19 spread zone have an effect on anxiety experienced by the community.

Given that our study provides information related to the development of psychological interventions, the researchers, therefore, recommend developing this research by formulating and evaluating psychological interventions in order to improve the mental health of the community during the COVID-19 pandemic. And the researchers also suggested to involve more psychological responses experienced by the community, such as stress and depression, and the location of the study was not only focused on one Province, but involved many other Provinces so that the information obtained was more accurate, comprehensive, and generalizable.

ACKNOWLEDGMENTS

The author would like to thank the community, especially in the Province of South Sulawesi for being willing to fill out the questionnaire distributed, both online and by filling indirectly.

FUNDING

This study did not receive grant funding.

COMPETING INTEREST STATEMENT

None.

REFERENCES

Agustarika. 2009. *Mental Nursing Textbook.* Jakarta: EGC.

Ahmed, M.Z., Ahmed, O., Zhou, A., Sang, H., Liu, S., & Ahmad, A. (2020). Epidemic of COVID-19 in China and associated psychological problems. *Asian J. Psychiatry*, *51*, 102092. https://doi.org/10.1016/j.ajp.2020.102092

Al Najjar, N.S., Attar, L.M., Farahat, F.M., & Al Thaqafi, A. (2016). Psychobehavioural responses to the 2014 Middle East respiratory syndrome-novel corona virus [MERS CoV] among adults in two shopping malls in Jeddah, western Saudi Arabia. *EMHJ-Eastern Mediterranean Health Journal*, *22*(11), 817-823. https://doi.org/10.26719/2016.22.11.817

Al-Rabiaah, A., Temsah, M.H., Al-Eyadhy, A.A., Hasan, G.M., Al-Zamil, F., Al-Subaie, S., Alsohime, F., Jamal, A., Alhaboob, A., Al-Saadi, B., &

Somily, A.M. (2020). Middle East Respiratory Syndrome-Corona Virus (MERS-CoV) associated stress among medical students at a university teaching hospital in Saudi Arabia. *Journal of Infection and Public Health*, *13*(5), 687-691. https://doi.org/10.1016/j.jiph.2020.01.005

Chen, C., Zhang, X.R., Ju, Z.Y., & He, W.F. (2020). Advances in the research of cytokine storm mechanism induced by Corona Virus Disease 2019 and the corresponding immunotherapies. *Zhonghua shao shang za zhi= Zhonghua shaoshang zazhi= Chinese journal of burns*, *36*, E001-E005. https://doi.org/10.3760/cma.j.cn501120-20200224-00088

Chen, N., Zhou, M., Dong, X., Qu, J., Gong, F., Han, Y., & Yu, T. (2020). Epidemiological and clinical characteristics of 99 cases of 2019 novel coronavirus pneumonia in Wuhan, China: a descriptive study. *The Lancet*, *395*(10223), 507-513. https://doi.org/10.1016/S0140-6736(20)30211-7

Choi, K.W., Kim, Y., & Jeon, H.J. (2020). Comorbid Anxiety and Depression: clinical and Conceptual Consideration and Transdiagnostic Treatment. *Advances in Experimental Medicine and Biology*, *1191*, 219-235. https://doi.org/10.1007/978-981-32-9705-0_14

Covid19 BNPB. (2020). *GIS Portal of the Task Force for the Acceleration of Handling COVID-19*. http://covid19.bnpb.go.id accessed on March 28, 2020.

Gao, J., Zheng, P., Jia, Y., Chen, H., Mao, Y., Chen, S., Wang, Y., Fu, H., & Dai, J. (2020). Mental health problems and social media exposure during COVID-19 outbreak. *PloS ONE*, *15*(4), 1-10. https://doi.org/10.1371/journal.pone.0231924

Gonzalez-Sanguino, C., Ausin, B., Castellanos, M.A., Saiz, J., Lopez-Gomez, A., Ugidos, C., & Munoz, M. (2020). Mental Health Consequences during the Initial Stage of the 2020 Coronavirus Pandemic (COVID-19) in Spain. *Brain, Behavior, and Immunity*, *87*, 172-176. https://doi.org/10.1016/j.bbi.2020.05.040

Hall, R.C., Hall, R.C., & Chapman, M.J. (2008). The 1995 Kikwit Ebola outbreak: Lessons hospitals and physicians can apply to future viral epidemics. *General Hospital Psychiatry*, *30*(5), 446-452. https://doi.org/10.1016/j.genhosppsych.2008.05.003

Hawari, D. (2001). *Management of stress, anxiety and depression.* Faculty of Medicine, University of Indonesia.

Holshue, M.L., DeBolt, C., Lindquist, S., Lofy, K.H., Wiesman, J., Bruce, H., & Diaz, G. (2020). First case of 2019 novel coronavirus in the United States. *New England Journal of Medicine*, *382*(10), 929-936. https://doi.org/10.1056/NEJMoa2001191

Horton, R. (2020). Offline: 2019-nCoV-"A desperate plea". *The Lancet*, *395*(10222), 400. https://doi.org/10.1016/S0140-6736(20)30299-3

Huang, C., Wang, Y., Li, X., Ren, L., Zhao, J., Hu, Y., & Cheng, Z. (2020). Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *The Lancet*, *395*(10223), 497-506. https://doi.org/10.1016/S0140-6736(20)30183-5

Huang, Y., & Zhao, N. (2020). Generalized anxiety disorder, depressive symptoms and sleep quality during COVID-19 outbreak in China: a

web-based cross-sectional survey. *Psychiatry research*, *288*, 112954. https://doi.org/10.1016/j.psychres.2020.112954

Kaplan, H.I., & Sadock, B.J. (1998). *Synopsis of psychiatry, behavioral science clinical psychiatry, 7th edition. Translated by: Lydia L. Mandera. Jakarta: Literacy Development*.

Lei, L., Huang, X., Zhang, S., Yang, J., Yang, L., & Xu, M. (2020). Comparison of prevalence and associated factors of anxiety and depression among people affected by versus people unaffected by quarantine during the covid-19 epidemic in southwestern China. *Medical Science Monitor: International Medical Journal of Experimental and Clinical Research, 26*, 1-12. https://doi.org/10.12659/MSM.924609

Leung, G.M., Lam, T.H., Ho, L.M., Ho, S.Y., Chan, B.H.Y., Wong, I.O.L., & Hedley, A.J. (2003). The impact of community psychological responses on outbreak control for severe acute respiratory syndrome in Hong Kong. *Journal of Epidemiology & Community Health*, *57*(11), 857-863. https://doi.org/10.1136/jech.57.11.857

Liu, K., Chen, Y., Wu, D., Lin, R., Wang, Z., & Pan, L. (2020). Effects of progressive muscle relaxation on anxiety and sleep quality in patients with COVID-19. *Complementary Therapies in Clinical Practice*, *39*(101132), 1-4. https://doi.org/10.1016/j.ctcp.2020.101132

Li, Q., Guan, X., Wu, P., Wang, X., Zhou, L., Tong, Y., & Xing, X. (2020). Early transmission dynamics in Wuhan, China, of novel coronavirus–infected pneumonia. *New England Journal of Medicine*, *382*(13), 1199-1207. https://doi.org/10.1056/NEJMoa2001316

Lu, R., Zhao, X., Li, J., Niu, P., Yang, B., Wu, H., & Bi, Y. (2020). Genomic characterisation and epidemiology of 2019 novel coronavirus: implications for virus origins and receptor binding. *The Lancet*, *395*(10224), 565-574. https://doi.org/10.1016/S0140-6736(20)30251-8

Makamure, M., Makamure, M., Mendiola, W., Renteria, D., Repp, M., & Willden, A. (2013). A review of critical care nursing and disease outbreak preparedness. *Dimensions of Critical Care Nursing*, *32*(4), 157-161. https://doi.org/10.1097/DCC.0b013e318299801f

Mazza, C., Ricci, E., Biondi, S., Colasanti, M., Ferracuti, S., Napoli, C., & Roma, P. (2020). A nationwide survey of psychological distress among Italian people during the COVID-19 pandemic: immediate psychological responses and associated factors. *International Journal of Environmental Research and Public Health*, *17*(3165), 1-14. https://doi.org/10.3390/ijerph17093165

McAlonan, G.M., Lee, A.M., Cheung, V., Cheung, C., Tsang, K.W., Sham, P.C., Chua, S.E., & Wong, J.G. (2007). Immediate and sustained psychological impact of an emerging infectious disease outbreak on health care workers. *The Canadian Journal of Psychiatry*, *52*(4), 241-247. https://doi.org/10.1177/070674370705200406

McDowell, I. (2006). *State trait anxiety inventory*. New York: Oxford University Press.

Moghanibashi-Mansourieh, A. (2020). Assessing the anxiety level of Iranian general population during COVID-19. *Asian journal of psychiatry*, *51*, 102076. https://doi.org/10.1016/j.ajp.2020.102076

Nishiura, H., Jung, S.M., Linton, N.M., Kinoshita, R., Yang, Y., Hayashi, K., Kobayashi, T., Yuan, B., & Akhmetzhanov, A.R. (2020). The extent of transmission of novel coronavirus in Wuhan, China, 2020. *Journal of clinical medicine*, *9*(2), 1-5. https://doi.org/10.3390/jcm9020330

Nishiura, H., Kobayashi, T., Yang, Y., Hayashi, K., Miyama, T., Kinoshita, R., & Akhmetzhanov, A.R. (2020). The rate of under ascertainment of novel coronavirus (2019-nCoV) infection: Estimation using Japanese passengers data on evacuation flights. *Journal of clinical medicine*, *9*(419), 1-3. https://doi.org/10.3390/jcm9020419

Ozamiz-Etxebarria, N., Dosil-Santamaria, M., Picaza-Gorrochategui, M., & Idoiaga-Mondragon, N. (2020). Stress, anxiety and depression levels in the initial stage of the COVID-19 outbreak in a population sample in the northern Spain. *Cadernos de Saude Publica*, *36*(4), 1-9. https://doi.org/10.1590/0102-311X00054020

Ozdin, S., & Ozdin, S.B. (2020). Levels and predictors of anxiety, depression and health anxiety during COVID-19 pandemic in Turkish society: the importance of gender. *International Journal of Social Psychiatry*, *66*(5), 504-511. https://doi.org/10.1177/0020764020927051

Rothe, C., Schunk, M., Sothmann, P., Bretzel, G., Froeschl, G., Wallrauch, C., & Seilmaier, M. (2020). Transmission of 2019-nCoV infection from an asymptomatic contact in Germany. *New England Journal of Medicine*, *382*(10), 1-2. https://doi.org/10.1056/NEJMc2001468

Rubin, G.J., Potts, H.W.W., & Michie, S. (2010). The impact of communications about swine flu (influenza A H1N1v) on public responses to the outbreak: results from 36 national telephone surveys in the UK. *Health Technology Assessment*, *14*(34), 183-266. https://doi.org/10.3310/hta14340-03

Rubin, G.J., & Wessely, S. (2020). The psychological effects of quarantining a city. *Bmj*, *368*(313), 1-2. https://doi.org/10.1136/bmj.m313

Ryu, S., Chun, B.C., & of Epidemiology, K.S. (2020). An interim review of the epidemiological characteristics of 2019 novel coronavirus. *Epidemiology and Health*, *42*, 1-4. https://doi.org/10.4178/epih.e2020006

Sim, K., Chan, Y.H., Chong, P.N., Chua, H.C., & Soon, S.W. (2010). Psychosocial and coping responses within the community health care setting towards a national outbreak of an infectious disease. *Journal of psychosomatic research*, *68*(2), 195-202. https://doi.org/10.1016/j.jpsychores.2009.04.004

Singer, N. (2020). Coronavirus media discourse and current situation (QCA for different responses to combat Covid-19). *Humanities & Social Sciences Reviews*, *8*(3), 665-675. https://doi.org/10.18510/hssr.2020.8371

Spielberger, C.D. (1983). *State trait anxiety inventory (STAI)*. Palo Alto, CA: Consulting Psychologists Press.

Stuart, G.W. (2006). *Mental nursing pocket book.* Translated by: R.P. Kapoh, E.K. Yudha; P.E. editor Karyuni. Jakarta: EGC.

Tucci, V., Moukaddam, N., Meadows, J., Shah, S., Galwankar, S.C., & Kapur, G. B. (2017). The forgotten plague: psychiatric manifestations of ebola, zika, and emerging infectious diseases. *Journal of global*

infectious diseases, *9*(4), 151-156. https://doi.org/10.4103/jgid.jgid_66_17

Van Bortel, T., Basnayake, A., Wurie, F., Jambai, M., Koroma, A.S., Muana, A.T., & Nellums, L.B. (2016). Psychosocial effects of an Ebola outbreak at individual, community and international levels. *Bulletin of the World Health Organization*, *94*(3), 210-214. https://doi.org/10.2471/BLT.15.158543

Viedebeck, S.L. (2008). *Mental Nursing Textbook. Translated by*: Regina K. Jakarta: EGC.

Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., Ho, C.S., & Ho, R.C. (2020a). Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in china. *International Journal of Environmental Research and Public Health*, *17*(5), 1729. https://doi.org/10.3390/ijerph17051729

Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., McIntyre, R.S., Choo, F.N., Tran, B., Ho, R., Sharma, V.K., & Ho, C. (2020b). A longitudinal study on the mental health of general population during the COVID-19 epidemic in China. *Brain, behavior, and immunity*, *87*, 40-48. https://doi.org/10.1016/j.bbi.2020.04.028

WHO. (2020). *Statement on the second meeting of the International Health Regulations (2005) Emergency Committee regarding the outbreak of novel coronavirus (2019-ncov)*. URL: https://www.who.int/news-room/detail/30-01-2020-statement-on-the-second-meeting-of-the-international-health-regulations-(2005)-emergency-committee-regarding-the-outbreak-of-novel-coronavirus-(2019-ncov), accessed on February 21, 2020.

Xiang, Y.T., Yang, Y., Li, W., Zhang, L., Zhang, Q., Cheung, T., & Ng, C.H. (2020). Timely mental health care for the 2019 novel coronavirus outbreak is urgently needed. *The Lancet Psychiatry*, *7*(3), 228-229. https://doi.org/10.1016/S2215-0366(20)30046-8

Xu, K., Cai, H., Shen, Y., Ni, Q., Chen, Y., Hu, S., Jianping, L., Huafen, W., Liang, Y., He, H., Yunqing, Q., Guoqing, W., Qiang, F., Jianying, Z., Jifang, S., Tingbo, L., & Lanjuan, L. (2020). Management of corona virus disease-19 (COVID-19): the Zhejiang experience. *Journal of Zhejiang University (medical science)*, *49*(2), 147-157. https://doi.org/10.3785/j.issn.1008-9292.2020.02.02

Yang, H.Y., & Duan, G.C. (2020). Analysis on the epidemic factors for the corona virus disease. *Chinese Journal of Preventive Medicine*, *54*, E021-E021. https://doi.org/10.3760/cma.j.cn112150-20200227-00196

Zhao, S., Musa, S.S., Lin, Q., Ran, J., Yang, G., Wang, W., & Wang, M.H. (2020). Estimating the unreported number of novel coronavirus (2019-nCoV) cases in China in the first half of January 2020: a data-driven Modelling analysis of the early outbreak. *Journal of clinical medicine*, *9*(2), 388. https://doi.org/10.3390/jcm9020388