

Pakistan Journal of Medical _ Health_ Rahma_Ranni_Sumiharso 2020.pdf

 Universitas Mercu Buana Yogyakarta

Document Details

Submission ID

trn:oid::13990:33295475

Submission Date

Mar 30, 2023, 2:17 PM GMT+7

Download Date

Aug 6, 2025, 10:03 AM GMT+7

File Name

Pakistan Journal of Medical _ Health_ Rahma_Ranni_Sumiharso 2020.pdf

File Size

403.9 KB

8 Pages

6,000 Words

29,483 Characters

14% Overall Similarity

The combined total of all matches, including overlapping sources, for each database.

Filtered from the Report

- Bibliography

Exclusions

- 14 Excluded Sources
- 9 Excluded Matches

Match Groups

-  **47 Not Cited or Quoted** 10%
Matches with neither in-text citation nor quotation marks
-  **17 Missing Quotations** 4%
Matches that are still very similar to source material
-  **1 Missing Citation** 0%
Matches that have quotation marks, but no in-text citation
-  **0 Cited and Quoted** 0%
Matches with in-text citation present, but no quotation marks

Top Sources

- 8%  Internet sources
- 8%  Publications
- 12%  Submitted works (Student Papers)

Integrity Flags

0 Integrity Flags for Review

No suspicious text manipulations found.

Our system's algorithms look deeply at a document for any inconsistencies that would set it apart from a normal submission. If we notice something strange, we flag it for you to review.

A Flag is not necessarily an indicator of a problem. However, we'd recommend you focus your attention there for further review.

Match Groups

-  **47 Not Cited or Quoted** 10%
Matches with neither in-text citation nor quotation marks
-  **17 Missing Quotations** 4%
Matches that are still very similar to source material
-  **1 Missing Citation** 0%
Matches that have quotation marks, but no in-text citation
-  **0 Cited and Quoted** 0%
Matches with in-text citation present, but no quotation marks

Top Sources

- 8%  Internet sources
- 8%  Publications
- 12%  Submitted works (Student Papers)

Top Sources

The sources with the highest number of matches within the submission. Overlapping sources will not be displayed.

1	Submitted works	Badan PPSDM Kesehatan Kementerian Kesehatan on 2021-11-02	1%
2	Submitted works	Southwest Tennessee Community College on 2021-04-05	1%
3	Publication	Kim Usher, Joanne Durkin, Navjot Bhullar. "The COVID-19 pandemic and mental h...	<1%
4	Submitted works	University of College Cork on 2021-11-17	<1%
5	Submitted works	Miami University of Ohio on 2020-05-16	<1%
6	Submitted works	Newman College on 2015-10-09	<1%
7	Submitted works	University of Portsmouth on 2022-06-02	<1%
8	Internet	link.springer.com	<1%
9	Internet	www.nature.com	<1%
10	Submitted works	Mudra Institute of Communications Ahmedabad on 2014-09-12	<1%

11	Internet	www.researchsquare.com	<1%
12	Internet	bbrc.in	<1%
13	Submitted works	Universidade Nova De Lisboa on 2022-01-15	<1%
14	Internet	web.pdx.edu	<1%
15	Submitted works	Higher Education Commission Pakistan on 2021-10-07	<1%
16	Publication	Samaneh Zolfaghari, Hamid Ashraf. "The Relationship between EFL Teachers' Ass...	<1%
17	Submitted works	University of Cape Town on 2019-04-23	<1%
18	Submitted works	University of the West Indies on 2021-04-26	<1%
19	Internet	irgu.unigoa.ac.in	<1%
20	Submitted works	Technological Institute of the Philippines on 2021-09-29	<1%
21	Publication	Cuiyan Wang, Agata Chudzicka-Czupała, Michael L. Tee, MaríaInmaculada López ...	<1%
22	Internet	ejurnal.mercubuana-yogya.ac.id	<1%
23	Internet	neuropsychence.net	<1%
24	Internet	watermark.silverchair.com	<1%

25	Internet	www.surveymonkey.com	<1%
26	Submitted works	California Southern University on 2021-11-15	<1%
27	Publication	Michael Fuchs, Irene Renate Faber, Martin Lames. "Spielcharakteristika im Parati...	<1%
28	Internet	www.mdpi.com	<1%
29	Internet	1library.net	<1%
30	Submitted works	Campbell University on 2014-02-28	<1%
31	Publication	Shahram Molavynejad, Galia Bahadori-birgani, Mahboobeh Rashidi, Fereshteh A...	<1%
32	Submitted works	Wright State University on 2014-03-12	<1%
33	Internet	boris.unibe.ch	<1%
34	Internet	doaj.org	<1%
35	Internet	dr-notes.com	<1%
36	Internet	journal.ubaya.ac.id	<1%
37	Internet	scholars.wlu.ca	<1%
38	Internet	www.biomedcentral.com	<1%

39	Internet	www.ijllalw.org	<1%
40	Publication	Cuiyan Wang, Riyu Pan, Xiaoyang Wan, Yilin Tan, Linkang Xu, Cyrus S. Ho, Roger C...	<1%
41	Publication	Onyiah, . "Multivariate Analysis of Variance (MANOVA)", Statistics A Series of Text...	<1%
42	Submitted works	Universiti Teknologi MARA on 2014-06-22	<1%
43	Publication	Ben Turner, Jennifer Fleming, Julie Parry, Monique Vromans, Petrea Cornwell, Cas...	<1%
44	Submitted works	Higher Education Commission Pakistan on 2010-02-25	<1%
45	Publication	Maria Komariah, Kusman Ibrahim, Tuti Pahria, Laili Rahayuwati, Irman Somantri....	<1%
46	Submitted works	University of Johannesburg on 2018-06-11	<1%
47	Internet	hrmars.com	<1%

SURVEY

Community Mental Health Survey in Covid-19 Pandemic Situation in Indonesia

RAHMA WIDYANA¹, RANNI MERLI SAFITRI², SUMIHARSO³¹Universitas Mercu Buana Yogyakarta²Universitas Mercu Buana Yogyakarta³NET Assessment System Bandung

Correspondence to Rahma Widyana, email: rahma@mercubuana-yogya.ac.id

ABSTRACT

The disease outbreak caused by the coronavirus (COVID-19), which first appeared in Wuhan, China in late 2019, has now spread to various parts of the world. The impact of its very rapid and widespread, cannot be denied and has caused various problems in many aspects of human life, particularly in economic and health issues. In the field of health aspect, in addition to affecting the physical system of the human body, this epidemic also affects the mental health aspect of individual and society. With the condition of disrupted mental health that, psychological endurance can also become increasingly decreased. Therefore an appropriate handling strategy is needed so that this condition does not get worse. In order to formulate a proper and well-targeted evidence-based strategy, the availability of data on mental health conditions is necessary. The main objective of this strategy is to reduce the spread of psychological effects and psychiatric symptoms that accompany it during an outbreak. The purpose of this study was to obtain an accurate picture of the level of anxiety, depression and stress during the coronavirus outbreak (COVID-19). This research was conducted using online survey methods. While the mental health status that is the focus of this research itself is measured using the Depression, Anxiety and Stress Scale (DASS-42) instrument. The results of the study showed that the number of respondents experiencing depression, anxiety, and stress in above normal (mild to severe) was 15.5%, 28.7%, and 22.2%, respectively. Thus, respondents more anxious rather than stress and depression. Overall there are significant differences between the conditions of depression, anxiety, and stress based on differences in age of the subjects. From Partial Eta Squares of multivariate analysis of variance can be seen that age contributes large effect size by 0.14. Even so, the main effects of the variable Gender, Education, Occupation, and Domicile are insignificant to Depression, Anxiety, and Stress.

Keywords: Depression, Anxiety, Stress, COVID-19, Pandemic

INTRODUCTION

The disease outbreak caused by coronavirus or COVID-19 has been affecting more than 200 countries in the world includes Indonesia. As easy as the spread of this virus, some residents are feeling anxious, stressed, and even quite a lot of them are depressed. The uncertain incubation period of the virus and the possibility of asymptomatic transmission of the disease have caused fear and anxiety among the people. Government policies in the form of regional quarantine or large-scale social restrictions (Pembatasan Sosial Berskala Besar – PSBB) which require the community to remain in their homes also have considerable psychological effects on the community members. Among other several things that play a role as a significant stressor of widespread emotional distress and the risk of psychiatric disorders associated with Covid-19, including:

1. Uncertainty in prognosis,
2. Lack of resources to test the possibility of contracting the disease,
3. The lack of lucid treatment to protect the public and health care providers from the possibility of contracting the disease,
4. Charging fees for public health measures,
5. Increased risk of losing sources of income,
6. The maze of public communication delivered by government officials regarding COVID-19.

The above factors have eventuated an emergency state of mental health that affects psychological health, safety, and well-being, both at the individual level and at the community level. At the individual level, the manifestation of this emergency state of mental health includes insecurity, confusion, emotional isolation and stigma. Meanwhile, at community level has shown the condition of losing job so that economic resources become lost, the closure of offices and schools, insufficient resources for an appropriate medical response, and lack of distribution of necessities of life. Those effects then are manifested into a variety of emotional reactions specifically in People in Monitoring or ODP-Orang Dalam Pengawasan or in individuals who are positive exposed to the virus but without symptoms called People without symptoms or OTG-Orang Tanpa Gejala). The emergence of conditions of distress, excessive consumption of drugs or vitamins, and behaviour that offend public health protocols such as rules to stay at home and conduct self-quarantine are the typical emotional reactions demonstrated by those of people (Pfefferbaum & North, 2020).

The Covid-19 epidemic that spreads throughout the world is estimated to have caused several psychological severe impacts, where individuals, families, and communities experience feelings of helplessness, hopelessness, sadness, and very acute loss of goals (Levin, 2019). The feeling of losing control also leads to the emergence of fear and uncertainty about the future. Information from the media and uncertain and mixed policies received from

government officials or the health department can also lead people to conditions of confusion, uncertainty, and fear (Han et al. 2018).

During the epidemic outbreak, the psychological reaction community played an important role, both in terms of spreading the disease, as well as emerging emotional distress and social disturbances. Although the facts have become very clear, sufficient resources to overcome them are generally not available. In other words, efforts to manage or overcome the impact of disease outbreaks on mental health and psychological well-being of the community, in general, are not sufficiently available.

Although it can be understood that due to the acute phase of the spread of the disease outbreaks, the health system prioritizes testing, reducing disease transfer, and treating critical patients, nevertheless the psychological needs of individuals and the community should not be ignored for several reasons. Psychological factors play an essential role in efforts to improve public health and how people overcome the problem of the threat of infectious disease and its consequences (Taylor, 2019). It should be recognized that, even in the ordinary course of events, people with established mental illness have a lower life expectancy and poorer physical health outcomes than the general population (Rodgers et al., 2018).

The above are some crucial issues that are important to consider in the management of any infectious disease, including Covid-19. Psychological reactions to disease outbreaks include maladaptive behaviour, emotional distress, and survival response in challenging situations (Cullen, Gulati, & Kelly, 2020). In general, people who are prone to experiencing psychological problems are also susceptible to infectious diseases.

Respondents

The research respondents covered a total of 587 Indonesians adult. This research was conducted using an internet-based survey method (online survey) where researchers used the PsyToolKit software as is well known that this software is a device used to conduct experiments or psychological surveys online. PsyToolKit itself is designed using Linux-based programming language developed by Professor. Gijsbert Stoet, PhD from the University of Essex, England (Stoet, 2010, 2017). The instruments used are Depression, Anxiety, and Stress Scale or DASS-42. Internet-based survey method has also been previously conducted by several researchers such as Zlomke (2019), Gosling and Mason (2015), and Zhang (2014). Studies with full-length internet administered methods such as this can provide a better understanding of potential benefits and provide value-added instruments in the large-scale, low-cost mental health research process (Gosling & Mason, 2015).

The number and distribution of subjects by gender, education, domicile, occupation, and age as in the following table:

Table 1. Research Subjects (N=587)

Variable	Variation	Total
Gender	Male	202
	Female	385
Education	Primary Education	111
	Secondary Education	64
	Higher Education	412
	Jobless	160
Occupation	Entrepreneur	110
	Employee	317
Domicile	Urban area	439
	Rural area	148
	<20 years	58
Age	20 - 40 years	396
	> 40 years	133

Data Collection: Mental health status was measured using the Depression, Anxiety and Stress Scale (DASS-42) instrument. DASS is a psychological measurement instrument designed to measure three negative emotional states, namely: depression, anxiety and stress. DASS was developed not only as a set of scales to measure emotional states that are conventionally defined, but also to recognize further the process of defining, understanding, and measuring ubiquitous emotional states that are clinically significant describe as depressive conditions, anxiety and stress (Lovibond & Lovibond, 1995). Thus DASS must meet the requirements of researchers, doctors, psychologists and professional scientists. Each of the three DASS scales contains 14 items divided into subscales containing 2-5 items with similar content. The results of testing the measuring instrument conducted by researchers with the subject of 1451 adults showed that the Depression Scale has a total rest coefficient of items that shows the difference in power of moving items from 0.497 to 0.857. In general, each subscale on the depression scale has a moderate to good reliability coefficient, except for the subscale of Inertia (0.534) and Anhedonia (0.670). For the different power coefficient items for each subscale have shown an appropriate item discrimination power with a magnitude > 0.3, so that all items can be used. Anxiety scale has a total rest coefficient ranging from 0.423 to 0.716. All subscales on the anxiety scale have moderate to good reliability coefficients. The discrimination coefficient of the items of each subscale has shown an excellent item discrimination power with a magnitude of > 0.3, so there are no aborted items.

The Stress Scale has a total item coefficient of rest that shows the difference in power of moving items from 0.552 - 0.714. All subscales on the stress scale have moderate to good reliability coefficients. The different power coefficient items for each subscale have shown a right item discrimination power, with a magnitude > 0.3. On the Being Easily Upset / Agitated subscale, item 11 and item 27 have significant residual covariance; this is because the contents of the two items are so similar that one item should be dropped. The dropped item is item 27. Besides item 27, all items on this scale can be used.

The analysis shows that the reliability coefficient is 0.954 for the Depression Scale, 0.903 for the Anxiety Scale, and 0.917 for the stress scale. Therefore, the scale is consistent with each other, and the reliability of the scale is high. These results indicate that the item has an alignment (appropriate) with the original version. In other words, the results of the study show that the Indonesian version of DASS-42 has a high level of validity.

The results of the CFA goodness-of-fit scale for depression, anxiety and stress, the results of the analysis of the confirmatory factor fit model indicate that the third scale model has excellent accuracy with the hypothetical model.

Based on the results of the validity and reliability test the Indonesian version of the DASS-42 scale (Widyana, Sumiharso, & Safitri, 2020) shows that the scale is ready to use, with validity and safety to determine levels of depression, anxiety and stress. Besides, the DASS Scale is useful for investigating depression, anxiety and stress factors.

RESULTS

Research Data Categorization: Table 3 shows that subjects who experience above normal (mild-moderate) depression by 15.5%, mild to severe anxiety by 28.7%, and mild to severe stress by 22.2%. Thus, respondents experience more anxiety than stress and depression. These results correspond with previous studies conducted by (Wang et al., 2020) in China using DASS-21 that in the COVID -19 pandemic condition, 16.5% of subjects had moderate or severe depressive symptoms, 28.8% had moderate anxiety symptoms or severe, and 8.1% reported experiencing moderate and severe stress levels. The data also indicate that most of the subjects are in the normal category of 84.5%, 71.2%, and 77.7%, respectively, for depression, anxiety, and stress.

Multivariate Variance Analysis Results: The main effect of age variable on depression, anxiety, and stress is significant with $p < 0.05$ (as shown in table 4). This significance proves that overall there are significant differences between depression, anxiety, and stress based on the age difference of the subjects. With Partial Eta Squared value of .14, it concludes that age profoundly affects those three dependent variables (Watson, 2019). Other main effects, however, of gender, education, occupation, and domicile show an insignificant effect on the dependent variables. The following are the results of a summary of the multivariate analysis of variance: Table 2 depicts the mean value for the dependent variable of each variation of independent variables. Subsequently, it will illustrate the main effects and interaction effects of each independent variable, namely gender, education, occupation, domicile, and age on depression, anxiety, and

stress. The interaction effects performed were the interaction of two, three, and four independent variables. In contrast, the interaction of five independent variables was not able to carry out because there are no subjects or fewer than three subjects in the interaction of the independent variable.

Depression: The analysis of variance results pointed out that all the main effects exhibited insignificant results or $p > 0.05$, which means that differences in gender, education, occupation, domicile, and age do not predispose differences in the depression of the subjects. Likewise, with the interaction effects of each independent variable that do not establish any significant effect on depression as well. A complete summary of the analysis of variance in depression displayed in (Table 5).

Anxiety: Analysis of variance proves that the main effect of age significantly influences the difference in subjects' anxiety with $p < 0.05$ (see table 6). The subjects of age < 20 years experienced the highest anxiety by mean of 8.718. The results also asserted that anxiety experienced by this age was significantly higher than anxiety experienced by subjects aged 20 - 40 years (mean 5.794), with a mean difference of 2.69 and $p < 0.01$. Both groups of subjects also had significantly higher anxiety than the age group > 40 years (mean 3.523) with mean differences of 3.80 and 1.12, respectively, with $p < 0.05$, respectively, as illustrated in table 7. Nevertheless, gender, education, occupation, and domicile did not generate differences in the anxiety of the subject. Interestingly, the interaction effect between occupation and domicile provides a significant influence ($p < 0.05$) on anxiety. Subjects who are jobless and live in suburban areas exhibit the most anxiety symptoms (mean 7.460), while the least are employees living in rural areas (mean 4.136). No other interactions among dependent variables showed a significant effect on anxiety with $p > 0.05$. The ANOVA summary table for anxiety displays table 6.

Stress: The analysis of variance of stress showed similar results with those of anxiety in which the main effect of the age variable significantly affect stress with $p < 0.05$ (see table 8). From the mean value in table 2, subjects aged < 20 years have the highest stress that is 13.153 compared with the stress experienced by subjects 20-40 years (mean 10.712) with a mean difference of 2.89 ($p < 0.01$). These two groups of subjects have undergone significantly higher stress than the age group > 40 years (mean 8.005) with mean differences of 5.36 and 2.47 with $p < 0.05$, respectively (refer to table 9). However, there were no indications of stress on the subjects based on other independent variables such as education, occupation, domicile, and gender. The identical results occurred to the interaction effect of each independent variable that does not deliver a significant effect on stress.

Table 2. Description of mean

Independent Variable	Variation	Dependent Variable		
		Depression	Anxiety	Stress
	Total	4.762	5.534	10.197
Gender	Male	4.156	4.992	9.697
	Female	5.180	5.908	10.541
	Primary Education	5.670	5.971	10.758
Education	Secondary Education	4.041	5.167	10.004
	Higher Education	4.321	5.338	9.736
	Jobless	5.043	6.402	10.768
Occupation	Entrepreneur	4.536	5.022	10.437
	Employee	4.716	5.200	9.375
Domicile	Urban area	4.774	5.717	10.065
	Rural area	4.747	5.309	10.359
Age	<20 years	6.853	8.718	13.153
	20 - 40 years	4.881	5.794	10.712
	> 40 years	3.502	3.523	8.005

Table 3. Categorization Level of Depression, Anxiety, And Stress Of Research Subjects

Category	Total			Percentage		
	Depression	Anxiety	Stress	Depression	Anxiety	Stress
Normal	496	418	456	84.5%	71.2%	77.7%
Mild	63	73	82	10.7%	12.4%	14.0%
Moderate	28	77	48	4.8%	13.1%	8.2%
Severe	0	19	1	0.0%	3.2%	0.2%
Extremely Severe	0	0	0	0.0%	0.0%	0.0%

Table 4. Multivariate Analysis of Variance Results

Effect		F	Hypothesis df	Sig.	Partial Eta Squared
Gender	Pillai's Trace	0.245	3	0.865	0.001
	Wilks' Lambda	0.245	3	0.865	0.001
	Hotelling's Trace	0.245	3	0.865	0.001
	Roy's Largest Root	0.245	3	0.865	0.001
Education	Pillai's Trace	10.373	6	0.222	0.008
	Wilks' Lambda	10.372	6	0.223	0.008
	Hotelling's Trace	10.370	6	0.224	0.008
	Roy's Largest Root	10.966	3	0.118	0.011
Occupation	Pillai's Trace	0.188	6	0.980	0.001
	Wilks' Lambda	0.187	6	0.980	0.001
	Hotelling's Trace	0.187	6	0.980	0.001
	Roy's Largest Root	0.269	3	0.848	0.002
Domicile	Pillai's Trace	0.345	3	0.792	0.002
	Wilks' Lambda	0.345	3	0.792	0.002
	Hotelling's Trace	0.34	3	0.792	0.002
	Roy's Largest Root	0.345 ^b	3	0.792	0.002
Age	Pillai's Trace	20.403	6	0.026	0.014
	Wilks' Lambda	20.415	6	0.025	0.014
	Hotelling's Trace	20.427	6	0.025	0.014
	Roy's Largest Root	40.850	3	0.002	0.028

Table 5. Analysis of Variance Summary for Depression

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Main Effect						
Gender	7.424	1	7.424	0.461	0.497	0.001
Education	29.739	2	14.869	0.923	0.398	0.004
Occupation	6.948	2	3.474	0.216	0.806	0.001
Domicile	2.465	1	2.465	0.153	0.696	0.000
Age	54.255	2	27.127	1.685	0.187	0.007
Interaction Effect AB						
Gender * Education	27.666	2	13.833	0.859	0.424	0.003
Gender * Occupation	19.859	2	9.930	0.617	0.540	0.002
Gender * Domicile	16.379	1	16.379	1.017	0.314	0.002
Gender * Age	45.390	2	22.695	1.409	0.245	0.005
Education * Occupation	34.336	4	8.584	0.533	0.711	0.004
Education * Domicile	18.260	2	9.130	0.567	0.568	0.002
Education * Age	111.177	4	27.794	1.726	0.143	0.013

Occupation * Domicile	78.426	2	39.213	2.435	0.089	0.009
Occupation * Age	95.699	4	23.925	1.486	0.205	0.011
Domicile * Age	3.469	2	1.735	0.108	0.898	0.000
Interaction Effect ABC						
Gender * Education * Occupation	41.547	3	13.849	0.860	0.462	0.005
Gender * Education * Domicile	46.619	2	23.309	1.448	0.236	0.006
Gender * Education * Age	68.025	3	22.675	1.408	0.240	0.008
Gender * Occupation * Domicile	21.836	2	10.918	0.678	0.508	0.003
Gender * Occupation * Age	23.693	3	7.898	0.490	0.689	0.003
Gender * Domicile * Age	63.003	2	31.501	1.956	0.142	0.008
Education * Occupation * Domicile	79.730	4	19.933	1.238	0.294	0.010
Education * Occupation * Age	81.626	5	16.325	1.014	0.409	0.010
Education * Domicile * Age	8.345	3	2.782	0.173	0.915	0.001
Occupation * Domicile * Age	56.090	3	18.697	1.161	0.324	0.007
InteractionEffect ABCD						
Gender * Education * Occupation * Domicile	6.287	2	3.144	0.195	0.823	0.001
Gender * Education * Occupation * Age	8.593	1	8.593	0.534	0.465	0.001
Gender * Education * Domicile * Age	16.888	1	16.888	1.049	0.306	0.002
Gender * Occupation * Domicile * Age	1.942	1	1.942	0.121	0.729	0.000
Education * Occupation * Domicile * Age	43.324	4	10.831	0.673	0.611	0.005

Table 6. Analysis of Variance Summary for Anxiety

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Main Effect						
Gender	0.168	1	0.168	0.011	0.916	0.000
Education	3.500	2	1.750	0.116	0.890	0.000
Occupation	10.092	2	5.046	0.336	0.715	0.001
Domicile	3.464	1	3.464	0.230	0.631	0.000
Age	211.405	2	105.703	7.030	0.001	0.027
Interaction Effect AB						
Gender * Education	59.352	2	29.676	1.974	0.140	0.008
Gender * Occupation	51.623	2	25.812	1.717	0.181	0.007
Gender * Domicile	22.349	1	22.349	1.486	0.223	0.003
Gender * Age	23.464	2	11.732	0.780	0.459	0.003
Education * Occupation	61.947	4	15.487	1.030	0.391	0.008
Education * Domicile	22.300	2	11.150	0.742	0.477	0.003
Education * Age	61.856	4	15.464	1.028	0.392	0.008
Occupation * Domicile	108.662	2	54.331	3.613	0.028	0.014
Occupation * Age	96.230	4	24.057	1.600	0.173	0.012
Domicile * Age	28.225	2	14.113	0.939	0.392	0.004
Interaction Effect ABC						
Gender * Education * Occupation	34.962	3	11.654	0.775	0.508	0.005
Gender * Education * Domicile	45.143	2	22.572	1.501	0.224	0.006
Gender * Education * Age	26.660	3	8.887	0.591	0.621	0.003
Gender * Occupation * Domicile	5.991	2	2.996	0.199	0.819	0.001
Gender * Occupation * Age	39.647	3	13.216	0.879	0.452	0.005
Gender * Domicile * Age	17.493	2	8.746	0.582	0.559	0.002
Education * Occupation * Domicile	77.125	4	19.281	1.282	0.276	0.010
Education * Occupation * Age	86.825	5	17.365	1.155	0.330	0.011
Education * Domicile * Age	7.172	3	2.391	0.159	0.924	0.001
Occupation * Domicile * Age	29.931	3	9.977	0.664	0.575	0.004
InteractionEffect ABCD						
Gender * Education * Occupation * Domicile	3.585	2	1.792	0.119	0.888	0.000
Gender * Education * Occupation * Age	1.486	1	1.486	0.099	0.753	0.000
Gender * Education * Domicile * Age	2.976	1	2.976	0.198	0.657	0.000
Gender * Occupation * Domicile * Age	5.966	1	5.966	0.397	0.529	0.001
Education * Occupation * Domicile * Age	57.427	4	14.357	0.955	0.432	0.007

Table 7. Multiple comparisons of age

(I) Age	(J) Age	Meandifference(I-J)	Sig.
<20 years	20 - 40 years	2.69	0.000
	> 40 years	3.80	0.000
20 - 40 years	<20 years	-2.6	0.000
	> 40 years	1.12	0.013
> 40 years	<20 years	-3.80	0.000
	20 - 40 years	-1.12	0.013

Table 8. Analysis of Variance Summary for Stress

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Main Effect						
Gender	5.951	1	5.951	0.199	0.655	0.000
Education	40.029	2	20.015	0.670	0.512	0.003
Occupation	21.580	2	10.790	0.361	0.697	0.001
Domicile	.816	1	0.816	0.027	0.869	0.000
Age	223.954	2	111.977	3.750	0.024	0.014
Interaction Effect AB						
Gender * Education	102.240	2	51.120	1.712	0.182	0.007
Gender * Occupation	142.775	2	71.388	2.391	0.093	0.009
Gender * Domicile	8.948	1	8.948	0.300	0.584	0.001
Gender * Age	64.061	2	32.030	1.073	0.343	0.004
Education * Occupation	33.540	4	8.385	0.281	0.890	0.002
Education * Domicile	15.065	2	7.532	0.252	0.777	0.001
Education * Age	79.452	4	19.863	0.665	0.616	0.005
Occupation * Domicile	134.112	2	67.056	2.246	0.107	0.009
Occupation * Age	72.556	4	18.139	0.608	0.657	0.005
Domicile * Age	11.933	2	5.966	0.200	0.819	0.001
Interaction Effect ABC						
Gender * Education * Occupation	89.605	3	29.868	1.000	0.392	0.006
Gender * Education * Domicile	40.825	2	20.412	0.684	0.505	0.003
Gender * Education * Age	130.258	3	43.419	1.454	0.226	0.008
Gender * Occupation * Domicile	8.124	2	4.062	0.136	0.873	0.001
Gender * Occupation * Age	42.756	3	14.252	0.477	0.698	0.003
Gender * Domicile * Age	89.198	2	44.599	1.494	0.226	0.006
Education * Occupation * Domicile	181.767	4	45.442	1.522	0.194	0.012
Education * Occupation * Age	92.713	5	18.543	0.621	0.684	0.006
Education * Domicile * Age	100.372	3	33.457	1.121	0.340	0.007
Occupation * Domicile * Age	25.279	3	8.426	0.282	0.838	0.002
InteractionEffect ABCD						
Gender * Education * Occupation * Domicile	9.093	2	4.547	0.152	0.859	0.001
Gender * Education * Occupation * Age	7.866	1	7.866	0.263	0.608	0.001
Gender * Education * Domicile * Age	105.900	1	105.900	3.547	0.060	0.007
Gender * Occupation * Domicile * Age	3.344	1	3.344	0.112	0.738	0.000
Education * Occupation * Domicile * Age	159.439	4	39.860	1.335	0.256	0.010

Table 9. Multiple comparisons of age

(I) Age	(J) Age	Meandifference(I-J)	Sig.
<20 years	20 - 40 years	2.89	0.001
	> 40 years	5.36	0.000
20 - 40 years	<20 years	-2.89	0.001
	> 40 years	2.47	0.000
> 40 years	<20 years	-5.36	0.000
	20 - 40 years	-2.47	0.000

DISCUSSION

The subjects of this study indicated more anxiety symptoms than stress and depression, for 28.7% of them are in mild to severe condition. Only 15.5% of subjects are categorized in mild-moderate depression without one in severe, even more, in extremely severe. Furthermore, close to stress, 22.2% of subjects reported that they were on mild to severe condition. This empirical data was not surprising because people tend to feel anxious and insecure, along with the occurrence of environmental changes. In infectious disease outbreaks, to exemplify, when the cause, the escalating number of sufferers, and the consequences are unclear, rumours will develop and provoke close minded attitudes (Ren et al. 2020). Anxiety levels increase significantly when the SARS outbreak occurs. For example, in Hong Kong, about 70% of people feel anxious about SARS, and people report that they believe that they are more likely to have SARS than the common cold (Cheng & Cheung, 2005). People's response to fear and intolerance of uncertainty leads to negative societal behaviour (Rubin & Wessely, 2020) Wessely 2020). Uncertainty intensifies alarm feeling, which will eventuate behaviours to reduce the uncontrolled situation that people fear. People clearing shelves of supermarkets resulting in global shortages of food and essentials such as toilet paper (El-Terk 2020) is an example of this behaviour. This behavior intends for two reasons: firstly, because the COVID-19 threat is considered a 'real' threat and expected to end one time, and secondly, it means to regain control (El-Terk 2020).

The main effects of the age were significant with $p < 0.05$ to the difference of depression, anxiety, and stress among the subjects. The empirical data also evince those younger people, age <20 years, have more considerable depression, anxiety, and stress than the older ones. This finding argues that the older an individual brings more emotional stability to them so that they are more invulnerable to experience negative affects. Scott, Sliwinski, & Blanchard-Fields (2013). suggest that negative affects and age are abstruse without a proper assessment of the broader context of life. Age discrepancy is not only a social context but also a context about how we respond to stress (Charles & Piazza, 2009).

The other factors in this study, namely, gender, education, occupation, and domicile, were not associated with the level of stress, anxiety, and depression ($p > 0.05$). In other words, the stress, anxiety and depression can afflict to anyone in the COVID-19 pandemic situation. In contrast to the results, the study of Wang et al., 2020 stated that female and student status were significantly associated with outbreaks psychological impact as well as stress, anxiety, and depression ($p < 0.05$). The results of this study also discord with the results of Lim's (2014)

study, which is in line with previous epidemiological studies that women have a higher risk of experiencing depression. Moreover, according to Bhargava & Trivedi (2018), the existence of stress depends on the existence of a stressor. Stress is resulting from environmental, psychological, biological, and social factors. A stressor is a stimulus that challenges the individuals' adaptability or stimulates both their body and or mental. In this study, the environmental factor, i.e., COVID-19 outbreaks, is a more influencing factor of stress, so other factors such as gender, education, occupation, and domicile show no effect to stress. COVID-19 outbreaks occur globally, wherever people live, whatever their job, or with any different levels of education, all can have the possibility to be afflicted by the disease.

The interaction effect between occupation and domicile provides a significant effect ($p < 0.05$) on anxiety. Subjects who are jobless and lived in rural areas experienced the highest anxiety (mean 7.460), while the lowest are employees who lived in rural areas (mean 4.136). This situation existed related to their concerns about the current economic condition of a pandemic where many people lose their job. Meanwhile, the prices of daily needs are gradually more costly due to transportation restrictions as a consequence of large-scale social restrictions or Pembatasan Sosial Berskala Besar (PSBB).

RECOMMENDATION

Based on the results of the study, we recommend designing and conducting psychological interventions for people affected by COVID-19, primarily providing support for people at high risk of experiencing psychological problems, raising awareness and mental health diagnosis (especially in hospitals, or health centres) and improve access to psychological interventions (especially those done online and through smartphone technology). Measurements from the results of this study could help prevent psychiatric morbidity in the future.

REFERENCES

- Bhargava, D., & Trivedi, H. (2018). A Study of Causes of Stress and Stress Management among Youth. *International Journal of Management & Social Sciences*, vol 1(03), 108–117.
- Charles, S. T., Piazza, J. R., Luong, G., & Almeida, D. M. (2009). Now You See It, Now You Don't: Age Differences in Affective Reactivity to Social Tensions. *Psychology and Aging*, 24(3), 645–653. <https://doi.org/10.1037/a0016673>
- Cheng, C., & Cheung, M. W. L. (2005). Psychological responses to the outbreak of severe acute respiratory syndrome: A prospective, multiple time-point study. *Journal of Personality*, 73(1), 261–285. <https://doi.org/10.1111/j.1467-6494.2004.00310>.
- Cullen, W., Gulati, G., & Kelly, B. D. (2020). Mental health in the Covid-19 pandemic. *QJM: An International Journal of Medicine*, (March), 1–2. <https://doi.org/10.1093/qjmed/hcaa110>.
- El-Terk, N. (2020). No Toilet paper, canned food: What explains coronavirus panic buying Title. Retrieved May 10, 2020, from <https://www.aljazeera.com/news/2020/03/toilet-paper-canned-food-explains-coronavirus-panic-buying200313083341035.html>.

6. Han, P. K. J., Zikmund-Fisher, B. J., Duarte, C. W., Knaus, M., Black, A., Scherer, A. M., & Fagerlin, A. (2018). Communication of Scientific Uncertainty about a Novel Pandemic Health Threat: Ambiguity Aversion and Its Mechanisms. *Journal of Health Communication*, 23(5), 435–444. <https://doi.org/10.1080/10810730.2018.1461961>.
7. Levin, J. (2019). Mental health care for survivors and healthcare workers in the aftermath of an outbreak. In: D. Huremovic' (Ed). *Psychiatry of Pandemics* (pp. 127–141). Cham, Switzerland: Springer.
8. Lim, G.Y., Tam, W.W., Lu, Y., Ho, C.S., Zhang, M.W., & Ho, R.C. (2018) Prevalence of depression in the community from 30 countries between 1994 and 2014. *Sci Rep* 2018;8:2861.
9. Lovibond, P., & Lovibond, S. H. (1995). The Structure of Negative Emotional States: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour Research and Therapy*, 33(3), 335–343. Retrieved from [https://doi.org/10.1016/0005-7967\(94\)00075-U](https://doi.org/10.1016/0005-7967(94)00075-U).
10. Pfefferbaum, B., & North, C. S. (2020). Mental Health and the Covid-19 Pandemic. *The New England Journal of Medicine*, 1–3.
11. Ren, S. Y., Gao, R. D., & Chen, Y. L. (2020). Fear can be more harmful than the severe acute respiratory syndrome coronavirus 2 in controlling the coronavirus disease 2019 epidemic. *World Journal of Clinical Cases*, 8(4), 652–657. <https://doi.org/10.12998/wjcc.v8.i4.652>.
12. Rodgers, M., Dalton J., Harden, M., Street, A., Parker, G., Eastwood, A. (2018). Integrated care to address the physical health needs of people with severe mental illness: a mapping review of the recent evidence on barriers, facilitators and evaluations. *International Journal of Integrated Care*, 18(1): 9, 1–12. DOI: <https://doi.org/10.5334/ijic.2605>.
13. Rubin, G. J., & Wessely, S. (2020). The psychological effects of quarantining a city. *The BMJ*, 368(January), 1–2. <https://doi.org/10.1136/bmj.m313>
14. Scott, S. B., Sliwinski, M. J., & Blanchard-Fields, F. (2013). Age differences in emotional responses to daily stress: The role of timing, severity, and global perceived stress. *Psychology and Aging*, 28(4), 1076–1087. <https://doi.org/10.1037/a0034000>
15. Stoet, G. (2010). PsyToolkit - A software package for programming psychological experiments using Linux. *Behavior Research Methods*, 42(4), 1096–1104.
16. Stoet, G. (2017). PsyToolkit: A novel web-based method for running online questionnaires and reaction-time experiments. *Teaching of Psychology*, 44(1), 24–31.
17. Taylor S. (2019). *The Psychology of Pandemics: Preparing for the Next Global Outbreak of Infectious Disease*. Newcastle upon Tyne, Cambridge Scholars Publishing.
18. Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., Ho, C. S., & Ho, R. C. (2020). 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). <https://doi.org/10.3390/ijerph17051729>
19. Watson, P. (2019). Rules of thumb on magnitudes of effect sizes. <http://imaging.mrc-cbu.cam.ac.uk/statswiki/FAQ/effectSize>
20. Widyana, R., Sumiharso, & Safitri, R. M. (2020). Psychometric Properties of Internet-Administered Version of Depression, Anxiety and Stress Scales (DASS-42) in sample Indonesian Adult. *Talent Development and Excellent*, 12(2), 1422–1434.
21. Zhang, M.W. (2014). Usage of social media and smartphone application in assessment of physical and psychological well-being of individuals in times of a major air pollution crisis. *JMIR mHealth uHealth* 2014, 2, e16, <https://doi.org/10.2196/mhealth.2827>.
22. Zlomke, K. R. (2009). Psychometric properties of internet administered versions of Penn State Worry Questionnaire (PSWQ) and Depression, Anxiety, and Stress Scale (DASS). *Computers in Human Behavior*, 25(4), 841–843. <https://doi.org/10.1016/j.chb.2008.06.003>.