Research Article

Correlation between Gender and Occupation with Severity of Stress, Depression, and Anxiety during the COVID-19 Pandemic

Putu Indah Budi Apsari[1*], Anak Agung Sagung ATWN[1], Putu Arya Suryanditha[1], Ni Wayan Widhidewi[1], Made Indra Wijaya[1]

[1]Faculty of Medicine and Health Sciences, Warmadewa University, Bali, Indonesia

*Corresponding author: putuindah51@yahoo.com

ABSTRACT

Background: Mental health was a severe problem among tourism workers during the COVID-19 pandemic. **Purposes:** This study aimed to determine the correlation of gender and occupation with the level of depression, anxiety, and stress during the COVID-19 pandemic. **Methods:** This research used a cross-sectional analytic study to recruit subjects grouped into tourism and non-tourism workers. This research took place in Bali province during the July-August 2023 period. Level of depression, anxiety, and stress score was assessed using Depression, Anxiety, Stress Score (DASS) questionnaires by the Google form sheet and analyzed by Chi-square test with SPSS version 27. **Result:** A total of 138 subjects consisting of 32 (23.2%) males and 106 (76.8%) females, 127 (92.0%) tourism workers, and 11 (8.0%) non-tourism workers. There was a positive correlation between occupation and level of depression, anxiety, and stress, while there was no significant correlation found in gender. **Conclusion:** Occupation in the tourism sector correlated with the severity of stress, depression, and anxiety during the COVID-19 pandemic.

Keywords: anxiety, depression, gender, occupation, stress

INTRODUCTION

Anxiety disorders are the most common psychiatric conditions in the United States and throughout the world (1). The Anxiety and Depression Association of America writes that anxiety and depression disorders are suffered by 40 million adults in the United States over the age of 18 years (2). It is estimated that around 20% of the world's population suffers from anxiety (3).

The World Health Organization (WHO) estimates that in the world 264 million people are suffering from depression and as many as 15.6 million Indonesians suffer from depression (4). The results of Basic Health Research in 2020 show that in Indonesia depressive disorders have occurred since the teenage age range with a prevalence of 6.2% (5). This prevalence pattern will increase with increasing age (6). The prevalence at ages 55-64 years was 6.5%, 65-74 years at 8.0%, and the highest at ages >75 years at 8.9% (7).

Tourism workers were the most population affected by COVID-19 in terms of economic impact. Loss of job, decrease of financial and increasing household needed are factors that

contribute to mental health among tourism workers. Mental health could be evaluated such as level of stress, anxiety and depression (8). There was no research that carefully investigated how the level of stress, anxiety and depression among tourism workers in Bali.

Seeing the large role of mental health disorders in tourism workers which are accompanied by stress, anxiety and depression and can have an impact on the health of human resources in the tourism sector, researchers were interested to conduct research on the relationship between gender and occupation with levels of stress, anxiety and depression in tourism workers in the province Bali.

METHODS

This research was using cross-sectional analytic study with retrospective approach to recruit subjects that grouping into tourism and non-tourism workers. Inclusion criteria were aged 18-65 years old, work in tourism sectors minimum 2 years, and able to communicate well. Exclusion criteria were subject that did not completely answer the question.

This research took place in Bali province included all districts in Bali during July-August 2023. The subject fulfilled questionnaires based on recall during COVID-19 pandemic. Level of depression, anxiety and stress score was assessed using Depression, Anxiety, Stress Score (DASS) questionnaires, informed consent and demographic data was fulfilled before they filled the DASS form (8). All questions were transformed into Google form sheets, and converted into MS Excel form before analyzed with SPSS version 27. All data were presented by distribution frequency table, correlation between gender and level of depression, anxiety, stress assessed by chi-square, also correlation between type of occupation with level of depression, anxiety, stress assessed by chi-square test, with level of significance $p < 0.05$. This research was approved by Ethical Committee of Health Research of Faculty of Medicine and Health Sciences Warmadewa University by ethical number 355/Unwar/FKIK/EC-KEPK/VII/2023, date 22 July 2023.

RESULTS

We analyzed 138 subjects divided into 32 (23.2%) male and 106 (76.8%) female, 127 (92.0%) tourism workers and 11 (8.0%) not a tourism worker. Table 1 shows female dominantly suffer depression compared with male. Female also dominantly suffer very severe depression 65 (61.3%) more than male 21 (65.6%). Fisher's exact test result no significant correlation found between gender and level of depression, $p > 0.05$. Females dominantly suffer anxiety compared with males. Females also dominantly suffer very severe depression 78 (73.6%). Fisher's exact test result shows no significant correlation found between gender and level of anxiety, $p > 0.05$. Females dominantly suffer stress compared with males. Females also dominantly suffer very severe depression 48 (45.3%). Fisher's exact test result shows no significant correlation found between gender and level of stress, $p > 0.05$.

Table 1. Correlation of Level of Depression with Gender

Variable	Gender	Normal	Mild	Moderate	Severe	Very Severe	P
Level of Depression	Male	8 (25.0)	1 (3.1)	1 (3.1)	1 (3.1)	21 (65.6)	0.108
n (%)	Female	11 (10.4)	10 (9.4)	9 (8.5)	11 (10.4)	65 (61.3)	
Level of Anxiety	Male	6 (18.8)	1 (3.1)	1 (3.1)	1 (3.1)	23 (71.9)	0.133
n (%)	Female	6 (5.7)	3 (2.8)	9 (8.5)	10 (9.4)	78 (73.6)	
Level of Stress	Male	10	(31.3)	0	(0.0)	0 (0.0)	0.33
n (%)	Female	25 (23.6)	3 (2.8)	8 (7.5)	22 (20.8)	48 (45.3)	

Significance level at p <0.05

Table 2. Correlation of Level of Depression, anxiety and Stress with Type of Occupation

Variable	Tourism Occupation	Normal	Mild	Moderate	Severe	Very Severe	p
Level of Depression	No	6 (54.5)	4 (36.4)	1 (9.1)	0 (0.0)	0 (0.0)	0.001*
n (%)	Yes	13 (10.2)	7 (5.5)	9 (7.1)	12 (9.4)	86 (67.7)	
Level of Anxiety	No	6 (54.5)	0 (0.0)	2 (18.2)	3 (27.3)	0 (0.0)	0.001*
n (%)	Yes	6 (4.7)	4 (3.1)	8 (6.3)	8 (6.3)	101 (79.5)	
Level of Stress	No	10(90.9)	0 (9.1)	0 (0.0)	0 (0.0)	0 (0.0)	0.001*
n (%)	Yes	25 (19.7)	2 (1.6)	8 (6.3)	31 (24.4)	61 (48.0)	

Significance level at p <0.05

We found positive correlation between occupation and level of depression p <0.05. Tourism workers tend to suffer very severe depression 86 (67.7%) compared with non-tourism workers. The data presented completely in table 2. We also found positive correlation between occupation and level of anxiety p <0.05. Tourism worker tends to suffer very severe anxiety 101 (79.5%) compared with not tourism workers. We also found positive correlation between occupation and level of stress p <0.05. Tourism worker tends to suffer very severe stress 61 (48.0 %) compared with non-tourism workers.

DISCUSSION

The results of this study are in line with previous research which stated that the majority of stress, anxiety, and depression were experienced by female workers (9). This result also supported by others statement mentioned that women tend to suffer mental illness and need psycho cognitive and behavioral treatment (10). Gender also important in experiencing mental illness and some of case need psychological intervention (11,12).

Gender is another demographic characteristic that has been reported as a factor associated with mental health problems (13). Several studies have reported that being female increases vulnerability to depression and anxiety during the pandemic (14,15). Many women worked in healthcare during the pandemic or took care of their families, and the COVID-19 pandemic and quarantine policies may have significantly impacted their lifestyles and caused greater concern (16,17). Biological underpinnings also play an important role in women's susceptibility to depression and anxiety. For example, the hormone estrogen contributes to emotional dysregulation which is overrepresented in women (18,19).

The results shown the majority 127 (92.0%) tourism workers and 11 (8.0%) non-tourism workers. The results of this study are in line with research that was conducted by Asma Saleh in 2021 which stated that depression, anxiety and stress was suffered by tourism workers because of a significant decrease in the number of overnight guests before COVID-19 and after

pandemic (20). This resulted in a decrease in opinion from hotels so that there were greater layoffs for workers at hotels, this could trigger mental health problems (21,22).

The hospitality service industry is directly related to tourism where most tourists use hotel services for lodging accommodations, in addition to the use of hotels for meetings, seminars, parties and so on which can accommodate a large number of people in a large capacity, so human-to-human physical contact cannot be avoided which could result in the spread of the virus (23). As a result of the COVID-19 pandemic, the number of tourists visiting Indonesia has decreased, resulting in decreased profits, and so many tourism sectors such as hotel, cafeteria, restaurant, tourist destination quite the employee to cut the operational fund (24). There have been 1226 hotels throughout Indonesia that have closed (25). Hotel profits have decreased by up to 40%, impacting hotel operations and threatening business continuity (25). Other businessman in tourism sector also suffer psychological stress because of COVID-19 outbreak, mostly quite the business, sell the hotel and restaurant and quite the employee (26).

CONCLUSION
It can be concluded that gender does not correlate with the level of depression, anxiety, and stress. There was a positive correlation between occupation in the tourism sector and the levels of depression, anxiety, and stress during the COVID-19 pandemic. Further research must be conducted to analyze other factors that significantly influence the level of depression, anxiety, and stress in tourism workers. Suggestions for the government, especially the Ministry of Tourism and Creative Economy, must be to explore alternative work or side jobs to cope with the impact of COVID-19 on the tourism sector for tourism workers.

ACKNOWLEDGMENTS

CONFLICT OF INTEREST
None declared.

REFERENCES
1. Zhu C, Zhang T, Li Q, Chen X, Wang K. Depression and Anxiety During the COVID-19 Pandemic: Epidemiology, Mechanism, and Treatment. Neurosci Bull. 2023 Apr;39(4):675–84.
2. Banna MH Al, Sayeed A, Kundu S, Christopher E, Hasan MT, Begum MR, et al. The impact of the COVID-19 pandemic on the mental health of the adult population in Bangladesh: a nationwide cross-sectional study. Int J Environ Health Res. 2022 Apr;32(4):850–61.
3. Bueno-Notivol J, Gracia-García P, Olaya B, Lasheras I, López-Antón R, Santabárbara J. Prevalence of depression during the COVID-19 outbreak: A meta-analysis of community-based studies. Int J Clin Health Psychol. 2021;21(1):100196.
4. World Health Organization. COVID-19 pandemic triggers 25% increase in prevalence

of anxiety and depression worldwide [Internet]. World Health Organization. 2023 [cited 2023 Sep 25]. Available from: https://covid19.who.int

5. Christasani PD, Fenty, Rudianto Y, Sugisun FK. The Effects of Anxiety, Stress, and Depression Due to Covid-19 Pandemic on Sleep Quality of Workers in Hospital. Media Kesehat Masy Indones. 2021;17(1):36–42.

6. Daly M, Robinson E. Depression and anxiety during COVID-19. Vol. 399, Lancet (London, England). England; 2022. p. 518.

7. Dwiyanti DAA. Tingkat Stres dan Coping Stress pada Pedagang di Daerah Wisata Pantai Sanur. 2021;1–59. Available from: https://repo.undiksha.ac.id/id/eprint/ 9564%0Ahttps://repo.undiksha.ac.id/9564/1/1818011024-DAFTAR PUSTAKA.pdf

8. Maruf MA, Weng Y-H, Chiu Y-W, Chiou H-Y. Perceptions of COVID-19 during and after the Omicron outbreak among healthcare personnel in Indonesia. Front public Heal. 2023;11:1321045.

9. Elvira. Gambaran Tingkat Stres, Kecemasan, Depresi dan Minat di Masa Pandemi COVID-19 di Makassar. J Kedokt Hassanudin. 2022;8(5):2003–5.

10. Fadli A, Asfianti V, Khairani R, Hervina E, Dewi S, Pakpahan R. Kecemasan Karyawan Hotel Dampak Pandemi COVID 19 dan Stres Kerja. 2022.

11. Mahaputra IGYA, Ardana IK. Stres Kerja Berpengaruh Terhadap Kinerja Pegawai dengan Motivasi Sebagai Mediasi di Dinas Pariwisata Klungkung. E-Jurnal Manaj [Internet]. 2020 Apr 3;9(4). Available from: https://ojs.unud.ac.id/index.php /manajemen/article/view/56450

12. Sanjiwani P, Ardana A, Sunarni WO, Sukmadicandra RA, Sak LDN. Dampak Pandemi Covid-19 Terhadap Citra Destinasi Wisata (Kajian Di Kabupaten Badung). In 2020. p. 111–21.

13. Seprilianda F, Adrian A. Tinjauan Stres Kerja Karyawan Kyriad Bumiminang Hotel Kota Padang Pada Masa Pandemi Covid-19. 1 Utami, Noor Latifah A Dian, Andriyani FF Muhammadiyah Public Heal Journal Gambaran Tingkat Stres dalam Pelaks Work From Home Selama Masa Pandemi Covid19 di DKI Jakarta 2021;1(2)40–51 2 Seprilianda F, Adrian A Tinj Stres Kerja Karyawan Kyri. 2021;1(3):161–8.

14. Haikal M. Terapi kognitif perilaku untuk mengurangi gejala kecemasan. Procedia Stud Kasus dan Interv Psikol [Internet]. 2022 Jun 30;10(2 SE-Journal):47–52. Available from: https://ejournal.umm.ac.id/index.php/procedia/article/view/19215

15. Matahari R, Agustin H, Utami FP. Perceptions ofthe COVID-19 Pandemic and Perceived Health Impacts; Gender Perspectives on Tourism Worker Groups. J Kesehat Komunitas. 2021;7(3):333–40.

16. Nur L, Mugi H. Tinjauan literatur mengenai stres dalam organisasi. J Ilmu Manaj [Internet]. 2021;18(1):20–30. Available from: https://journal.uny.ac.id/index.php/jim /article/view/39339/15281

17. Al Omari O, Al Sabei S, Al Rawajfah O, Abu Sharour L, Aljohani K, Alomari K, et al. Prevalence and Predictors of Depression, Anxiety, and Stress among Youth at the Time of COVID-19: An Online Cross-Sectional Multicountry Study. Depress Res Treat. 2020;2020:8887727.

18. Porter C, Favara M, Hittmeyer A, Scott D, Sánchez Jiménez A, Ellanki R, et al. Impact of the COVID-19 pandemic on anxiety and depression symptoms of young people in the global south: evidence from a four-country cohort study. BMJ Open. 2021 Apr;11(4):e049653.

19. Powers L, Farinde A, Smith-East M. Anxiety Disorders. In: Handbook of Geropsychiatry for the Advanced Practice Nurse [Internet]. New York, NY: Springer Publishing Company; 2020. Available from: http://connect.springerpub.com/lookup/doi/10.1891/9780826157515.0005

20. Soetikno N. Descriptive Study of Adolescent Depression in Covid-19 Pandemic. 2020;478(Ticash):588–92.

21. Asma Saleh. Dampak Wabah Covid-19 Terhadap Tingkat Hunian Hotel. J Chem Inf Model. 2021;53(9):1689–99.

22. Salari N, Hosseinian-Far A, Jalali R, Vaisi-Raygani A, Rasoulpoor S, Mohammadi M, et al. Prevalence of stress, anxiety, depression among the general population during the COVID-19 pandemic: a systematic review and meta-analysis. Global Health. 2020 Jul;16(1):57.

23. Argo TM, Kurniawan A, Liem JA, Sugianto JO, Michael RJ, Tanuwijaya NVS, et al. Profile and Factors Associated with Depression, Anxiety, and Stress in Indonesian People During COVID-19 Pandemic. Medicinus. 2021;8(3):131.

24. Turna J, Zhang J, Lamberti N, Patterson B, Simpson W, Francisco AP, et al. Anxiety, depression and stress during the COVID-19 pandemic: Results from a cross-sectional survey. J Psychiatr Res. 2021 May;137:96–103.

25. Utami, Noor Latifah A Dian, Andriyani FF. Gambaran Tingkat Stres dalam Pelaksanaan Work From Home Selama Masa Pandemi COVID19 di DKI Jakarta. Muhammadiyah Public Heal J. 2021;1(2):40–51.

26. Wijaya MI, Pradnyawati L. Tekanan Psikologis COVID-19 terhadap Pelaku Pariwisata di Bali. J Ilmu Kesehat Masy. 2022 Sep 7;11:380–9.