

## **Levels of Depression, Anxiety, and Stress Measured by DASS-21 and their Associated Factors in a Rural Village of Ranau District, Sabah, Malaysia**

### **ABSTRACT**

Background. The prevalence of mental illness in Malaysia is rising each year, with the highest recorded in a mostly rural state of Sabah, possibly due to challenges in accessing healthcare services and the maldistribution of mental health professionals. Moreover, the data on mental illness burden among the rural Sabahans are insufficient. Objective. To identify the levels of depression, anxiety, and stress and their associated factors in a rural village of Sabah, Malaysia. Methods. Demographic data and the risk factors for depression, anxiety, and stress were collected from 115 respondents, followed by the administration of 21-item Depression, Anxiety, and Stress Score (DASS-21) and Short Form International Physical Activity Questionnaire (IPAQ-SF). Results. The respondents' median age was 43 years. The levels of depression, anxiety, and stress were 28.7%, 42.6%, and 19.1%, respectively. Male had significantly lower odds for anxiety (OR: 0.44), while those with a history of hypertension had lower odds for depression (OR: 0.20). Individuals with a history of diagnosed stress had higher chances of having depression (OR: 11.17) and stress (OR: 7.18). Respondents with a history of other illnesses (self-reported gastritis, bloody stools, bronchial asthma, and brain carcinoma) were more likely to have depression (OR: 7.14), anxiety (OR: 9.07), and stress (OR: 34.50). Meanwhile, moderate-high physical activity was associated with higher odds for anxiety (OR: 2.39). Conclusion. In this study, the rural village community had higher depression and anxiety levels than the currently available epidemiological data that may necessitate more rigorous and appropriate mental health intervention by the relevant authorities.