INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN BUSINESS & SOCIAL SCIENCES

Vol 13, Issue 10, (2023) E-ISSN: 2222-6990

The Prevalence and Associated Factors of Psychological Distress Among Adults in a Suburban Community in Johor, Malaysia

N.A. Manan[a], M.A. Abdalqader[a], C.W.M. Ashraf[a], N.A. Mahat[a,b], M.K. Thin[a,c], H.B. Jahubar Sathik[a], M.S. Khaing[a], W.N. Thein[a], A.R. Mohamad[a], and K.G. Rampal[a]

[a]Department of Community Medicine, Faculty of Medicine, University of Cyberjaya, Selangor, Malaysia; [b]Kuliyyah of Nursing, International Islamic University, Pahang, Malaysia; [c]Department of Community Medicine, Manipal University College Malaysia, Melaka, Malaysia

Email: nor.hafizah@cyberjaya.edu.my

To Link this Article: http://dx.doi.org/10.6007/IJARBSS/v13-i10/18978 DOI:10.6007/IJARBSS/v13-i10/18978

Published Date: *25 October, 2023*

Abstract

Psychological distress refers to non-specific symptoms of stress, anxiety, and depression. Although it is common in the community, it is crucial to identify groups at risk of experiencing psychological distress for appropriate intervention strategies. This study aims to assess the prevalence of psychological distress and to determine the association between sociodemographic factors and satisfaction with life on psychological distress among adults in a community in Johor, Malaysia. A cross-sectional survey was conducted in October 2022 at a community residential area in Muar, Johor. Self-administered General Health Questionnaire (GHQ-12) and Satisfaction with Life Scale (SWLS) were used to measure psychological distress and satisfaction with life, respectively. Multiple logistic regression was utilized for the analysis with the significant level set at 5%. Out of 279 respondents, 36.2% (95% CI=36.2%, 42.0%) of them were having psychological distress. Younger age, Chinese, individuals with a primary education and those who were not satisfied with life were significantly associated with psychological distress. In summary, one-third of the population in the community reported psychological distress, with preponderance among certain groups of people. It is important to implement interventions effectively such as community activities in the target population to lower the psychological distress in the community.

Keywords: Psychological Distress, Satisfaction With Life, General Health Questionnaire, Community Intervention, Stress

Introduction

Psychological distress refers to non-specific symptoms of stress, anxiety, and depression. Although it is common in the community, it is essential to identify groups at risk of experiencing psychological distress for appropriate intervention strategies. Depression disorders, depression-like moods, chronic stress, and acute stress are common forms of psychological distress. Depression is characterized by inability to experience pleasure, inactivity, and suicidal thinking (Yang et al., 2015). More than 68% of fatalities worldwide and 75% of deaths in low- and middle-income countries are caused by non-communicable diseases usually associated with stress. Depression is one of the most problematic conditions in the world and the leading cause of disability among people aged 15 to 44 in the USA. As of 2018, an estimated 350,000,000 individuals worldwide suffered from debilitating depression (Nguyen Thai & Nguyen, 2018). These situations are most prevalent in developed societies, among graduate students, and especially among ethnic minority in which their cultures have been uprooted by modernization in a way that prevented a harmonious transition into developed society (Brenner et al., 2015; Gluckman et al., 2019; Nguyen Thai & Nguyen, 2018). Mental health problems, including depression and anxiety, represent 16% of the global burden of disease and injury in individuals aged 10 to 19 years (World Health Organization. (2019). The global prevalence of mental illnesses in children and adolescents was 13.4%, with any anxiety disorder accounting for 6.5% and any depressive disorder accounting for 2.6% (Polanczyk et al., 2015). The onset of mental illnesses is usually in childhood or adolescence (Kessler et al., 2007). Adolescence is a critical phase marked by susceptibility to psychological distress, and it is thus an important time for the promotion of psychological well-being and early mental health intervention, in order to prevent against the progression of mental health issues (Marsh et al., 2018). According to the American Psychological Association (APA) (2020), psychological distress is “a set of painful mental and physical symptoms that are associated with normal fluctuations of mood in most people. It is thought to be what is assessed by many putative self-report measures of depression and anxiety.” The Kessler Psychological Distress Scale, for example, includes “symptoms of depression, anxiety, stress, and somatic complaints” (Kessler et al., 2003). Psychological distress has been measured with various scales, such as the “Psychological Distress Scale”, K-6 or K-10 the “General Health Questionnaire (GHQ-12)” and several different psychological distress items, such as anxiety, loneliness, sadness, and suicide plan, or lack of close friends, anxiety, loneliness, suicidal ideation and suicide attempt (Furukawa et al., 2003; Goldberg & Blackwell, 1970; Kessler et al., 2003; Pengpid & Peltzer, 2020; Siziya & Mazaba, 2015).

The first COVID-19 case was reported in Malaysia on January 25, 2020 (Elengoe, 2020). The Malaysian Government implemented several rules to control the spread of the disease which include physical distancing rules, restrictions on social gatherings, the proper use of face masks, a Movement Control Order (MCO), a Conditional Movement Control Order (CMCO), an extended movement control order, and border closures between mid-March and August 2020 (Shah et al., 2020).

Previous reports have described the harmful impact of pandemics on psychological health, which can result in acute depression and anxiety (Aktekin et al., 2001; Rahman et al., 2020). A recent review indicated that women, younger people, those residing in rural areas, those with a lower socioeconomic status, those at a higher-risk of COVID-19 infection, and those with longer media exposure are associated with higher levels of anxiety and depression (Wang et al., 2020). Various studies have demonstrated that the COVID-19 pandemic affected

people in various countries in different ways, with certain groups being more susceptible than others.

Other than COVID-19 pandemic situation, another important factor for psychological health is place of living where people from urban are more associated with mental disorder (Gruebner et al., 2017). While urban or rural populations often receive more attention in mental health research, suburban communities are distinctive due to their unique blend of urban and rural characteristics. As the pace of life accelerates and urbanization influences, residents in these areas may encounter specific stressors and lifestyle changes that impact their psychological well-being. Despite its relevance, the prevalence and underlying factors contributing to psychological distress within these suburban contexts remain insufficiently explored. Our study aims to fill a critical gap by exploring the distinct challenges and dynamics faced by suburban adults.

Hence, this study aims 1.) to assess the prevalence of psychological distress and 2.) to determine the associations between sociodemographic factors and satisfaction with life on psychological distress among adults in a suburban community in Johor, Malaysia.

Methodology

This cross-sectional study was conducted in Muar, Johor, Malaysia, in October 2022. Sample size was calculated using one proportion formula by Krejcie & Morgan (1970). The margin of error and desired confidence interval (CI) were set at 5% and 95% respectively. The estimated proportion was set at 0.5, and the total number of adults in the study area was estimated to be around 1000. Thus, a total sample size of 306 was required, including 10% for non-respondents.

Stratified random sampling was utilised, with the type of housing served as strata. For each stratum, systematic random sampling was applied to select the household, and simple random sampling was used to select two respondents from each household. All Malaysian adults aged eighteen years and above from the selected households were included in the study. Non-Malaysians and individuals with severe communication difficulties, including the blind, deaf and mute, were excluded.

A self-administered questionnaire was used to gather the information, consisted of sociodemographic characteristics, psychological distress, and satisfaction with life. The General Health Questionnaire (GHQ)-12 was used to assess psychological distress(Yusoff et al., 2009). This questionnaire consists of six positive and six negative statements, respectively. Negative statements were scored as follows: 0 for ‘not at all’, 1 for ‘Seldom’, 2 for ‘usual’ and 3 for ‘more than usual’, while the score for positive statements was reversed. Respondent was categorised as having psychological distress if the overall score was greater than 12. The Satisfaction with Life (SLS5) survey was utilised to assess life satisfaction. Scores of 14 or less was considered to indicate dissatisfaction, 15 to 19 indicated a degree of slight dissatisfaction, 20 indicated neutrality, 21 to 25 indicated a degree of slight satisfaction, and more than 26 indicated satisfaction (Swami & Chamorro-Premuzic, 2009).

All analyses were performed using SPSS version 20. The sociodemographic data were presented in frequency and percentage. Chi-square test examines the bivariate association between sociodemographic factors, BMI and smoking status with psychological distress. Multivariable logistic regression was used to identify obesity-related factors, and the findings were presented as adjusted odds ratio (OR) with 95% confidence interval (CI). The level of significance was set at $p<0.05$. Ethical approval for this study was obtained from internal research ethics review committee.

Result

Background Characteristics of the Respondents

The prevalence of psychological distress by sociodemographic characteristics is presented in Table 1. A total of 279 residents participated in this study, with a response rate of 93%. The gender distribution was nearly equal, with 140 (50.2%) males, and 139 (49.8%) females. The mean age of the respondents was 45.6 ± 16.55 years old. The majority of respondents were Malays (77.8%), married (70.6%), had a secondary level of education (45.9%) and self-employed (23.7%). Most of them were in the low-income category, non-smokers and obese, with 94.3%, 62.7%, and 53.8%, respectively.

The prevalence of psychological distress was 36%, as shown in Figure 1 (95% CI=30.6, 42.1). The prevalence was 10% higher among females than males (41% vs 31%). Psychological distress was significantly associated with younger populations (p=0.041) (Table 1). About 67% of respondents from the 'Others' ethnic group reported psychological distress, followed by Chinese (50%) and Indian (46%). The prevalence of psychological distress was negatively associated with education level, with the primary education level group of respondents showing the highest prevalence (47%) and the tertiary education level group showing the lowest prevalence (32%). The percentage of people experiencing psychological distress was highest among divorcees (39%), non-smokers (39%), those with high incomes (43.8%), people who were underweight (44%) and people who were dissatisfied with their lives (84%). However, among the examined variables, only age and life satisfaction variables were significantly associated with psychological distress.

Associated Factors of Psychological Distress

Multiple logistic regression (Table 2) demonstrates that younger age is associated with psychological distress, with an odds ratio of 0.98 (95% CI=0.96, 1.00, p=0.048). In comparison to the Malay population, the Chinese population was 2.6 times more likely to indicate psychological distress (95% CI=1.3, 5.5). Individuals with a low level of life satisfaction were about 15 times more likely (95% CI=5.6, 38.9) to experience psychological distress than those with a high level of life satisfaction. In terms of education level, those with a primary education were more likely to experience psychological distress, whereas those with a secondary or higher degree were 55% and 66% less likely to experience it, respectively.

Discussion

The prevalence of psychological distress in this study was found to be 36%, higher than the 29.2% recorded in the National Health and Morbidity Survey conducted among adults aged 16 and older (Institute for Public Health, 2015) . Additionally, it is greater than the prospective population-based study conducted in Finland, where 18% were reported distressed (Puustinen et al., 2011). Nevertheless, a study conducted among Malaysians during the Covid-19 pandemic revealed a greater prevalence than the current study, with 62.1% of the population experiencing moderate to very high levels of psychological distress via the Kessler Psychological Distress Scale (Moni et al., 2021). Covid 19 contributed to a significant increase of psychological distress due to social isolation, limiting the population's capacity to seek support from loved ones and interact with other human beings. The disparity in the literatures may be partially due to differences in assessment instruments, the definition of psychological distress, timeframe of the study and sampling methods.

This study discovered a significant association between age and psychological distress, with the younger age group was more likely to have psychological distress. This finding was

inconsistent with the findings of Taylor et al. (2018), who discovered that older adults were significantly associated with psychological distress ($p<0.05$). They reported that older people who were separated from their friends experienced more psychological discomfort than those who were not separated from either group ($b=.39$, $SE=.12$, $p<.01$). However, most of the younger population in this study area were working and they might have the same issue. This was due to the fact that loneliness was the most significant predictor of psychological distress, and that not knowing one's neighbours increases the likelihood of depression (Tang et al., 2020). In a study conducted by Best et al. (2023), they found similar result to ours where older adult age was negatively associated with reporting psychological distress, older adults were consistently less likely to report psychological distress than younger adults. Older adults' likelihood of reporting psychological distress remained relatively stable throughout the pandemic, while it varied relatively more for younger adults. In another study, they found that older adults may have discovered it easier to cope with these stressors, possibly by applying coping strategies learned from living through other major historical events (Lind et al., 2021).

In this study, we identified a significant association between Chinese participants and psychological distress, with 2.61 times more likely to develop psychological distress than Malay participants (OR: 2.61, 95% CI: 1.25, 5.45) ($p\leq0.05$). Moreover, Indian, and other ethnicities demonstrated a higher prevalence of psychological distress compared to Malay ethnicity, however the association was not significant ($p \geq 0.05$). These findings are parallel to another cross-sectional study among medical students at a local university in Malaysia and they found no significant association between race and psychological distress (Sidik et al., 2003). These findings contradicted those of Abdul Latif et al. (2022), which revealed that Malay women experienced greater psychological distress than those of other ethnicities, although the results were not statistically significant ($p=0.253$). This also contradicting those found by another study conducted by Shar'ie Janon, (2019) in which it was found there is a significant different in the score of GHQ across ethnic groups. The mean score of Malay adolescents is significantly different from the mean score of Chinese adolescents. The mean score of Indian adolescents however, is not significantly different from the mean scores of the Malay and Chinese adolescents.

In this study, lower educational level is significantly associated with developing psychological distress. This finding is in line with another study which found that those with lower educational attainment had significantly higher prevalence of psychological distress (Muñoz & Santos-Lozada, 2021). This finding is consistent with the results of a study conducted in South Africa which reported that participants with a lower level of formal education were significantly associated with psychological distress (OR = 0.77; 95 % CI = 0.65-0.91) (Peltzer et al., 2012).

The majority of studies conducted in developing countries revealed significant associations between poverty and the emergence of psychological disorders, with the most consistent correlation being low levels of education (Lund et al., 2010; Patel & Kleinman, 2003).

People from low- to middle-income countries with lower levels of education may have experienced psychological distress due to a lack of knowledge and awareness about how to cope with stress, depression, and anxiety brought on by feelings of insecurity and hopelessness, rapid social change, and the risks of violence and physical illness (Pengpid & Peltzer, 2020). Another study found that Low-income respondents were at a significantly higher risk of becoming psychologically distressed, and many of the stressors were associated with a significantly higher risk of becoming distressed. Stressors accounted for 22% of the

relationship between low income and distress for men, and more than a third of this relationship for women (Orpana et al., 2009).

This study also found those with a low level of life satisfaction are nearly 15 times more likely to experience psychological distress than those with a high level of life satisfaction (95% CI=5.6, 38.9). Psychological distress can be construed as an incongruence between the actual self and the ideal self, which may manifest in different dimensions. Over time, such distress diminishes a person's sense of self-worth and depletes their existential capacities, resulting in dissatisfaction, distress, and a lack of control. Low satisfaction with life associated with high psychological distress reported in this study corroborates a meta-analysis on job satisfaction indicating that low job satisfaction increases the risk of psychological stress, anxiety, and depression (Faragher et al., 2005). Other studies have also demonstrated that sociodemographic and work-related aspects can be risk factors for psychological distress (Drapeau et al., 2012; Marchand et al., 2005). It could be aggravated by a lack of social support from one's partner or family and friends, though social support differs for men and women (Kendler et al., 2005; Stansfeld et al., 1998). Further study should be conducted to explore the factors that contribute to less satisfaction with life so that an appropriate intervention can be done in the community.

Conclusion

In summary, one-third of the community in Johor reported to have psychological distress, with preponderance among younger age, Chinese population, those with low life satisfaction, and those who attained primary education level. It is essential to provide adequate information to shed more lights on the prevention. Furthermore, active implementation of interventions such as community health intervention program, is crucial for improving emotional well-being and decreasing psychological distress in the community.

This study stands as a beacon of understanding, piercing through the veil of conventional mental health research. By determining the factors influencing psychological well-being within Johor's suburban community, we embark on a journey to unearth invaluable insights. Not merely content with assessing the prevalence of psychological distress, we meticulously navigate the uncharted waters to reveal the underpinnings of this phenomenon. Through this voyage, we hope to enrich the scientific discourse with a fresh perspective, ignite innovative interventions, and shape policies that resonate with the unique pulse of suburban life.

References

Abdul Latif, N. I., Mohamed Ismail, N. A., Loh, S. Y. E., Nur Azurah, A. G., Midin, M., Shah, S. A., & Kalok, A. (2022). Psychological Distress and COVID-19 Related Anxiety among Malaysian Women during the COVID-19 Pandemic. *International Journal of Environmental Research and Public Health*, *19*(8). https://doi.org/10.3390/IJERPH19084590

Aktekin, M., Karaman, T., Senol, Y. Y., Erdem, S., Erengin, H., & Akaydin, M. (2001). Anxiety, depression and stressful life events among medical students: a prospective study in Antalya, Turkey. *Medical Education*, *35*(1), 12–17. https://doi.org/10.1046/J.1365-2923.2001.00726.X

American Psychological Association (APA) Dictionary of Psychology: Psychological distress, 2020. URL https://dictionary.apa.org/psychological-distress.

Best, R., Strough, J. N., & Bruine de Bruin, W. (2023). Age differences in psychological distress during the COVID-19 pandemic: March 2020 – June 2021. *Frontiers in Psychology*, *14*. https://doi.org/10.3389/FPSYG.2023.1101353/FULL

Brenner, S. L., Jones, J. P., Rutanen-Whaley, R. H., Parker, W., Flinn, M. V., & Muehlenbein, M. P. (2015). Evolutionary Mismatch and Chronic Psychological Stress. *Journal of Evolutionary Medicine*, *3*, 1–11. https://doi.org/10.4303/jem/235885

Drapeau, A., Marchand, A., Beaulieu-Prévost, D., Drapeau, A., Marchand, A., & Beaulieu-Prévost, D. (2012). Epidemiology of Psychological Distress. *Mental Illnesses - Understanding, Prediction and Control*. https://doi.org/10.5772/30872

Elengoe, A. (2020). COVID-19 Outbreak in Malaysia. *Osong Public Health and Research Perspectives*, *11*(3), 93–100. https://doi.org/10.24171/j.phrp.2020.11.3.08

Faragher, E. B., Cass, M., & Cooper, C. L. (2005). The relationship between job satisfaction and health: a meta-analysis. *Occupational and Environmental Medicine*, *62*(2), 105–112. https://doi.org/10.1136/OEM.2002.006734

Furukawa, T. A., Kessler, R. C., Slade, T., & Andrews, G. (2003). The performance of the K6 and K10 screening scales for psychological distress in the Australian National Survey of Mental Health and Well-Being. *Psychological Medicine*, *33*(2), 357–362. https://doi.org/10.1017/S0033291702006700

Gruebner, O., Rapp, M. A., Adli, M., Kluge, U., Galea, S., & Heinz, A. (2017). Cities and mental health. *Deutsches Ärzteblatt International,* 114, 121–127.

Gluckman, P. D., Hanson, M. A., & Low, F. M. (2019). Evolutionary and developmental mismatches are consequences of adaptive developmental plasticity in humans and have implications for later disease risk. *Philosophical Transactions of the Royal Society of London. Series B, Biological Sciences*, *374*(1770). https://doi.org/10.1098/RSTB.2018.0109

Goldberg, D. P., & Blackwell, B. (1970). Psychiatric Illness in General Practice: A Detailed Study Using a New Method of Case Identification. *British Medical Journal*, *2*(5707), 439. https://doi.org/10.1136/BMJ.2.5707.439

Institute for Public Health (IPH) 2015.National Health and Morbidity Survey 2015 (NHMS 2015). Vol. II: Non-Communicable Diseases, Risk Factors & Other Health Problems; 2015.

Kendler, K. S., Myers, J., & Prescott, C. A. (2005). Sex differences in the relationship between social support and risk for major depression: a longitudinal study of opposite-sex twin pairs. *The American Journal of Psychiatry*, *162*(2), 250–256. https://doi.org/10.1176/APPI.AJP.162.2.250

Kessler, R. C., Amminger, G. P., Aguilar-Gaxiola, S., Alonso, J., Lee, S., & Üstün, T. B. (2007). Age of onset of mental disorders: a review of recent literature. *Current Opinion in Psychiatry*, *20*(4), 359–364. https://doi.org/10.1097/YCO.0B013E32816EBC8C

Kessler, R. C., Barker, P. R., Colpe, L. J., Epstein, J. F., Gfroerer, J. C., Hiripi, E., Howes, M. J., Normand, S. L. T., Manderscheid, R. W., Walters, E. E., & Zaslavsky, A. M. (2003). Screening for Serious Mental Illness in the General Population. *Archives of General Psychiatry*, *60*(2), 184–189. https://doi.org/10.1001/ARCHPSYC.60.2.184

Krejcie, R. V, & Morgan, D. W. (1970). Determination sample size for research activities. *Educational And Psychological Measurement*, 30.

Lind, M., Bluck, S., & McAdams, D. P. (2021). More Vulnerable? The Life Story Approach Highlights Older People's Potential for Strength During the Pandemic. *The Journals of*

Gerontology. Series B, Psychological Sciences and Social Sciences, *76*(2), E45–E48. https://doi.org/10.1093/GERONB/GBAA105

Lund, C., Breen, A., Flisher, A. J., Kakuma, R., Corrigall, J., Joska, J. A., Swartz, L., & Patel, V. (2010). Poverty and common mental disorders in low and middle income countries: A systematic review. *Social Science & Medicine*, *71*(3), 517–528. https://doi.org/10.1016/J.SOCSCIMED.2010.04.027

Marchand, A., Demers, A., & Durand, P. (2005). Do occupation and work conditions really matter? A longitudinal analysis of psychological distress experiences among Canadian workers. *Sociology of Health & Illness*, *27*(5), 602–627. https://doi.org/10.1111/J.1467-9566.2005.00458.X

Marsh, I. C., Chan, S. W. Y., & MacBeth, A. (2018). Self-compassion and Psychological Distress in Adolescents-a Meta-analysis. *Mindfulness*, *9*(4), 1011–1027. https://doi.org/10.1007/S12671-017-0850-7

Moni, A. S. B., Abdullah, S., Abdullah, M. F. I. L. Bin, Kabir, M. S., Alif, S. M., Sultana, F., Salehin, M., Islam, S. M. S., Cross, W., & Rahman, M. A. (2021). Psychological distress, fear and coping among Malaysians during the COVID-19 pandemic. *PLOS ONE*, *16*(9), e0257304. https://doi.org/10.1371/JOURNAL.PONE.0257304

Muñoz, I. G., & Santos-Lozada, A. R. (2021). Educational attainment and psychological distress among working-age adults in the United States. *SSM - Mental Health*, *1*, 100003. https://doi.org/10.1016/J.SSMMH.2021.100003

Nguyen Thai, Q. C., & Nguyen, T. H. (2018). Mental health literacy: knowledge of depression among undergraduate students in Hanoi, Vietnam. *International Journal of Mental Health Systems*, *12*(1). https://doi.org/10.1186/S13033-018-0195-1

Orpana, H. M., Lemyre, L., & Gravel, R. (2009). Income and psychological distress: The role of the social environment. In *Statistics Canada*,20 (1)..

Patel, V., & Kleinman, A. (2003). Poverty and common mental disorders in developing countries. *Bulletin of the World Health Organization*, *81*(8), 609.

Peltzer, K., Naidoo, P., Matseke, G., Louw, J., Mchunu, G., & Tutshana, B. (2012). Prevalence of psychological distress and associated factors in tuberculosis patients in public primary care clinics in South Africa. *BMC Psychiatry*, *12*. https://doi.org/10.1186/1471-244X-12-89

Pengpid, S., & Peltzer, K. (2020). Psychological Distress and Its Associated Factors Among School-Going Adolescents in Tanzania. *Psychological Studies*, *65*(2), 174–181. https://doi.org/10.1007/S12646-020-00550-2/METRICS

Polanczyk, G. V., Salum, G. A., Sugaya, L. S., Caye, A., & Rohde, L. A. (2015). Annual Research Review: A meta-analysis of the worldwide prevalence of mental disorders in children and adolescents. *Journal of Child Psychology and Psychiatry*, *56*(3), 345–365. https://doi.org/10.1111/JCPP.12381

Puustinen, P. J., Koponen, H., Kautiainen, H., Mäntyselkä, P., & Vanhala, M. (2011). Psychological distress measured by the GHQ-12 and mortality: a prospective population-based study. *Scandinavian Journal of Public Health*, *39*(6), 577–581. https://doi.org/10.1177/1403494811414244

Rahman, M. A., Hoque, N., Alif, S. M., Salehin, M., Islam, S. M. S., Banik, B., Sharif, A., Nazim, N. B., Sultana, F., & Cross, W. (2020). Factors associated with psychological distress, fear and coping strategies during the COVID-19 pandemic in Australia. *Globalization and Health*, *16*(1), 1–15. https://doi.org/10.1186/S12992-020-00624-W/TABLES/6

Shah, A. U. M., Safri, S. N. A., Thevadas, R., Noordin, N. K., Rahman, A. A., Sekawi, Z., Ideris, A., & Sultan, M. T. H. (2020). COVID-19 outbreak in Malaysia: Actions taken by the Malaysian government. *International Journal of Infectious Diseases : IJID : Official Publication of the International Society for Infectious Diseases*, *97*, 108–116. https://doi.org/10.1016/J.IJID.2020.05.093

Shar'ie Janon, N. (2019). Psychological Distress among Adolescents of Different Ethnic Groups in Malaysia. *IIUM JOURNAL OF HUMAN SCIENCES*, *1*(1), 1–9. https://journals.iium.edu.my/irkh/index.php/ijohs/article/view/27

Sidik, S. M., Rampal, L., & Kaneson, N. (2003). Prevalence of emotional disorders among medical students in a Malaysian university. *Asia Pacific Family Medicine*, *2*(4), 213–217. https://doi.org/10.1111/J.1444-1683.2003.00089.X

Siziya, S., & Mazaba, M. L. (2015). Prevalence and Correlates for Psychosocial Distress Among In-School Adolescents in Zambia. *Frontiers in Public Health*, *3*, 180. https://doi.org/10.3389/FPUBH.2015.00180

Stansfeld, S. A., Fuhrer, R., & Shipley, M. J. (1998). Types of social support as predictors of psychiatric morbidity in a cohort of British Civil Servants (Whitehall II Study). *Psychological Medicine*, *28*(4), 881–892. https://doi.org/10.1017/S0033291798006746

Swami, V., & Chamorro-Premuzic, T. (2009). Psychometric evaluation of the Malay satisfaction with life scale. *Social Indicators Research*, *92*(1), 25–33. https://doi.org/10.1007/S11205-008-9295-7/METRICS

Tang, W., Hu, T., Hu, B., Jin, C., Wang, G., Xie, C., Chen, S., & Xu, J. (2020). Prevalence and correlates of PTSD and depressive symptoms one month after the outbreak of the COVID-19 epidemic in a sample of home-quarantined Chinese university students. *Journal of Affective Disorders*, *274*, 1–7. https://doi.org/10.1016/J.JAD.2020.05.009

Taylor, H. O., Taylor, R. J., Nguyen, A. W., & Chatters, L. (2018). Social Isolation, Depression, and Psychological Distress Among Older Adults. *Journal of Aging and Health*, *30*(2), 229–246. https://doi.org/10.1177/0898264316673511

Wang, Y., Kala, M. P., & Jafar, T. H. (2020). Factors associated with psychological distress during the coronavirus disease 2019 (COVID-19) pandemic on the predominantly general population: A systematic review and meta-analysis. *PloS One*, *15*(12). https://doi.org/10.1371/JOURNAL.PONE.0244630

World Health Organization (WHO). Adolescent mental health; 2019. URL: https://www.who.int/news-room/fact-sheets/detail/adolescent-mental-health (Accessed 3 Jan 2020).

Yang, L., Zhao, Y., Wang, Y., Liu, L., Zhang, X., Li, B., & Cui, R. (2015). The Effects of Psychological Stress on Depression. *Current Neuropharmacology*, *13*(4), 494. https://doi.org/10.2174/1570159X1304150831150507

Yusoff, M. S. B., Rahim, A. F. A., & Yaacob, M. J. (2009). The Sensitivity, Specificity and Reliability of the Malay Version 12-ITEMS General Health (GHQ-12) in Questionnaire Detecting Distressed Medical Students. *ASEAN Journal of Psychiatry,*11 (1).

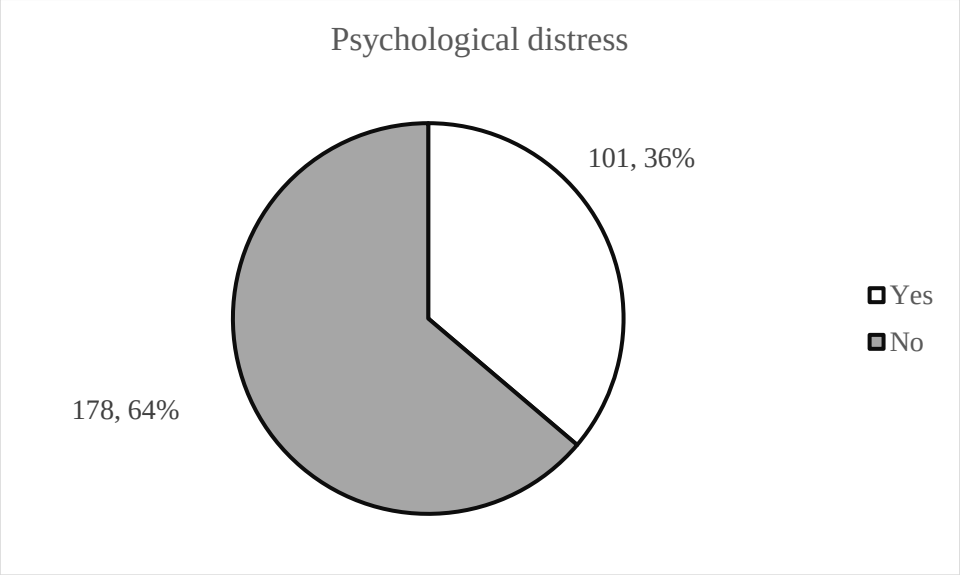

Figure 1 Caption: Prevalence of psychological distress in the community

Table 1:
Background Characteristics of the Respondents

		Psychological Distress			
Variable	Total	No	Yes	Stat (df)	*p*-value
	N (%)	N (%)	N (%)		
Age*	45.6 (1.0)	47.1 (1.3)	42.9 (1.5)	2.05 (277)	0.042
Gender					
Male	140 (50)	96 (69)	44 (31)	2.77 (1)	0.096
Female	139 (50)	82 (59)	57 (41)		
Ethnicity					
Malay	217 (78)	147 (68)	70 (32)	7.02 (3)	0.071
Chinese	46 (16)	23 (50)	23 (50)		
Indian	13 (5)	7 (54)	6 (46)		
Others	3 (1)	1 (33)	2 (67)		
Education Level					
Primary/others	78 (28)	41 (53)	37 (47)	5.92 (2)	0.052
Secondary	128 (46)	87 (68)	41 (32)		
Tertiary	73 (26)	50 (69)	23 (32)		
Occupation					
Unemployed	46 (16)	24 (52)	22 (48)	11.87 (6)	0.065
Government	30 (11)	24 (80)	6 (20)		
Private	51 (18)	35 (69)	16 (31)		
Self-employed	66 (24)	37 (56)	29 (44)		
Housewife	41 (15)	25 (61)	16 (39)		
Retiree	39 (14)	30 (77)	9 (23)		
Others	6 (2)	3 (50)	3 (50)		
Marital Status					
Never Married	69 (25)	44 (64)	25 (36)	0.03 (2)	0.985
Married	197 (71)	126 (64)	71 (36)		
Divorcee	13 (5)	8 (62)	5 (39)		
Smoking Status					
Non-smoker	175 (63)	107 (61)	68 (39)	4.44 (2)	0.109
Smoker	84 (30)	54 (64)	30 (36)		
ex-smoker	20 (7)	17 (85)	3 (15)		
Household Monthly Income					
B40	263 (94)	169 (64)	94 (36)	0.42 (1)	0.518
M40 & T20	16 (6)	9 (56)	7 (44)		
BMI Category					

Underweight	15 (5)	7 (47)	8 (53)	2.08 (3)	0.556
Normal	73 (26)	48 (66)	25 (34)		
Overweight	41 (15)	26 (63)	15 (37)		
Obese	150 (54)	97 (65)	53 (35)		
Satisfaction with life					
Extremely satisfied & satisfied	170 (61)	127 (75)	43 (25)	45.44 (3)	<0.001
Slightly satisfied	61 (22)	39 (64)	22 (36)		
Neutral	11 (4)	6 (55)	5 (46)		
Dissatisfied & extremely satisfied	37 (13)	6 (16)	31 (84)		

* Mean (SD)

Table 2:
Associated factors of psychological distress among the community

Factors	**AOR**	**z**	***P* > z**	**95% CI**	
Age	0.98	-1.97	0.048	0.96	1.00
Satisfaction with life					
Satisfied & Extremely Satisfied	1				
Slightly satisfied	1.72	1.62	0.105	0.89	3.31
Neutral	2.93	1.62	0.105	0.80	10.74
Dissatisfied & Extremely Dissatisfied	14.72	5.43	<0.001	5.58	38.85
Education Level					
Primary	1.00				
Secondary	0.45	-2.34	0.019	0.23	0.88
Tertiary	0.34	-2.64	0.008	0.16	0.76
Ethnicity					
Malay	1				
Chinese	2.61	2.55	0.011	1.25	5.45
Indian	1.82	0.92	0.356	0.51	6.53
Others	1.51	0.3	0.762	0.10	22.21
Constant	1.15	0.27	0.784	0.42	3.16