



## Mental Health of Indonesian Millennials: A Descriptive Analysis of Depression Severity

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### Abstract

Depression among young adults has become an increasing global public health concern, with substantial personal and societal impacts. While several studies have explored depression in younger populations, research specifically targeting millennials in Indonesia remains limited. This study aimed to describe the severity of depression and examine gender differences in depression levels among Indonesian millennials. A quantitative, descriptive-comparative design was employed. The participants were 200 individuals aged 26 to 40 years, representing the millennial generation, recruited through purposive sampling. Depression severity was measured using the Patient Health Questionnaire-9 (PHQ-9), a validated self-report instrument. Data were collected through an online survey and analyzed using descriptive statistics and Independent Samples t-Test (with Mann-Whitney U as an alternative when assumptions were not met). The findings revealed that approximately 29% of respondents experienced moderate to severe levels of depression, indicating a substantial mental health burden within this demographic. No significant differences in depression scores were found between male and female respondents. These results highlight the urgency of addressing mental health needs among Indonesian millennials, who are currently in a critical phase of socio-economic productivity and family formation. It is essential to strengthen early detection and develop tailored mental health interventions that are accessible and culturally relevant for this population. Future research should consider longitudinal designs to explore protective and risk factors for depression, and the potential of digital-based mental health interventions to support this tech-savvy generation.

#### Keywords:

*depression; millennials; mental health*

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## Introduction

Depression is one of the most prevalent mental health disorders and a leading contributor to the global burden of disease. Recent data indicate that depression is the primary cause of disability worldwide, with far-reaching impacts not only on individuals but also on families, communities, and national economic productivity (Thapar et al., 2022).

The prevalence of depression has increased significantly, particularly among younger populations. Twenge et al. (2019) and Keyes et al. (2024) reported a concerning upward trend in depression rates among adolescents and young adults. In the United States, Xiang et al. (2024) documented a 60% increase in clinical diagnoses of depression between 2017 and 2021, with a sharper rise observed during the COVID-19 pandemic. These findings underscore that the transition from adolescence to young adulthood is a critical developmental phase, during which individuals are especially vulnerable to depressive disorders (Thapar et al., 2022; Keyes et al., 2024).

This increase in depression among young adults is also evident in low- and middle-income countries (LMICs). Research by Akhtar et al. (2020) and Khan et al. (2021) showed that the prevalence of depression among university students in LMICs ranges from 24.4% to 42.66%. In addition to individual psychological factors, structural factors such as social inequality, environmental stressors, and barriers to accessing mental health services further elevate the risk of depression among young people in these settings (Lugova et al., 2021; Hosseinzadeh et al., 2024).

In Indonesia, similar trends have been observed. National data indicate a relatively high prevalence of depression among young adults. A longitudinal study using the Indonesia Family Life Survey (IFLS) reported a prevalence of 27.86% among young adults (Purborini et al., 2021). During the COVID-19 pandemic, Sarfika et al. (2021) found that 43.2% of respondents experienced moderate to severe depression. Multiple risk factors contribute to this rise in depression among young Indonesians, including excessive social media use, negative health perceptions, economic uncertainty, work-related stress, rapid digitalization, and persistent mental health stigma.

In this context, particular attention should be given to the millennial generation, defined as individuals born between 1981 and 2000. Millennials now represent the largest age cohort within the primary working-age population (26–40 years) and serve as a vital component of national productivity (Brazil & Candipan, 2025). Across various sectors, millennials are driving the growth of the digital economy, leading innovations, and forming the dominant group in Indonesia's labor market. Consequently, their mental health status has direct implications for both economic performance and social stability.

Moreover, certain characteristics of the millennial generation may increase their vulnerability to depression. Having grown up in a digitally accelerated environment, millennials are frequently exposed to intensive social media use, instant gratification culture, and the pressure to maintain constant productivity (Ardi & Putri, 2020; Cho et al., 2013). They also face labor market instability, the prevalence of contract-based or gig economy work, and delays in achieving traditional life milestones such as marriage and home ownership (Lakasing & Mirza, 2020; Hankin & Griffith, 2023). These factors may contribute to heightened feelings of uncertainty, anxiety, and chronic stress, further increasing the risk of depression.

Despite these concerns, relatively few studies have systematically mapped the severity of depression among millennials in Indonesia. Most previous research has focused on adolescents (Shorey et al., 2021) or university students (Luo et al., 2024; Ramón-Arbués et al., 2020), while young adults, particularly millennials, have received less scholarly attention. Additionally, few studies have employed validated instruments such as the Patient Health Questionnaire-9 (PHQ-9) to assess the distribution of depression severity among this population or to examine potential gender differences in depression levels (Kroenke et al., 2001; 2010; 2021).

A clear understanding of the distribution of depression severity among millennials is essential for informing the development of evidence-based and targeted mental health interventions. Descriptive studies provide an important first step in addressing this knowledge gap,

as they enable detailed mapping of depression profiles within the target population. Such information is critical for designing more effective preventive and promotive interventions. Without this foundational knowledge, mental health policies and intervention programs risk being misaligned with the actual needs of the population.

In light of these considerations, this study aims to: (1) describe the severity of depression among Indonesian millennials using the validated PHQ-9 instrument; and (2) analyze whether there are gender-based differences in depression levels. The findings of this study are expected to contribute to the development of more adaptive and responsive mental health policies and interventions tailored to the needs of Indonesia's millennial generation.

## **Method**

This study employed a quantitative design with a descriptive-comparative approach. The objective was to map the severity of depression and to examine gender-based differences in depression levels among Indonesian millennials. The primary variable analyzed was the severity of depression, while gender served as the categorical variable for comparative analysis.

The study participants were individuals classified as part of the millennial generation, defined as those born between 1981 and 1996. At the time of data collection, participants were aged 26 to 40 years and resided in various regions of Indonesia. Participants were selected through purposive sampling based on the following inclusion criteria: (1) aged between 26 and 40 years; (2) willingness to participate voluntarily; and (3) completion of the questionnaire. A total of 200 respondents participated in this study.

The instrument used to assess depression severity was the Patient Health Questionnaire-9 (PHQ-9), a nine-item questionnaire that measures common depressive symptoms (Kroenke et al., 2001). Respondents were asked to report the frequency of symptoms they experienced over the past two weeks, using a scale ranging from 0 (not at all) to 3 (nearly every day). The total PHQ-9 score ranges from 0 to 27, with the following interpretation: 0–4 indicates no or minimal depression; 5–9 mild depression; 10–14 moderate depression; 15–19 moderately severe depression; and 20–27 severe depression (Kroenke et al., 2001). The PHQ-9 is a widely used and validated instrument in the Indonesian context, with its validity and reliability supported by previous studies (Dian et al., 2022; Jaya et al., 2024).

Data collection was conducted online using Google Forms, a web-based survey platform that enables the distribution and collection of questionnaire responses electronically. The questionnaire link was distributed through various social media channels and the researchers' professional networks. Before completing the questionnaire, all potential participants were provided with an explanation of the study's purpose, procedures, and their rights as participants. Informed consent was obtained online, and only those who agreed to participate proceeded to the questionnaire. Participation in the study was entirely voluntary, and participants were informed that they could decline participation or withdraw from the survey at any time before submitting their responses.

To ensure data completeness, all questionnaire items were configured as required responses within the Google Forms settings (indicated by a red asterisk), meaning that participants could not submit the questionnaire without answering each item. This procedure was implemented to prevent missing data in the dataset.

To minimize the risk of duplicate responses, several data quality control procedures were implemented. The Google Forms settings were configured to limit one response per participant through account-based restrictions. Additionally, responses were screened during the data cleaning process by examining demographic similarities, response patterns, and timestamps to detect potential duplicate entries. Any responses suspected of duplication were removed before analysis. Data collection took place between December 2024 and January 2025.

The collected data were analyzed using Jamovi. The analysis was conducted in several stages, beginning with descriptive statistics to summarize participants' characteristics and the distribution

of depression scores (mean, median, standard deviation, minimum, and maximum). Depression severity was then categorized based on PHQ-9 score interpretations. To examine gender differences in depression levels, an Independent Samples t-Test was conducted. Prior to the analysis, statistical assumptions were evaluated, including tests of normality and homogeneity of variances using Levene’s test. When the assumption of equal variances was violated, the non-parametric Mann–Whitney U test was additionally performed as a robustness check.

## Result and Discussion

### Result

Table 1. Descriptives Statistic

	<b>N</b>	<b>Missing</b>	<b>Mean</b>	<b>Median</b>	<b>SD</b>	<b>Minimum</b>	<b>Maximum</b>
Depression	200	0	7.41	6.00	5.78	0.00	24.0
Age	200	0	29.18	28.00	5.72	18	40

A total of 200 respondents participated in this study, with no missing data. Participants' ages ranged from 18 to 40 years, with a mean age of 29.18 years (SD = 5.72), consistent with the age range of the millennial generation.

The mean depression score, as measured by the PHQ-9, was 7.41 (SD = 5.78), with a median score of 6.00 and a range from 0 to 24. These results indicate variability in depression severity within the studied population (Table 1).

Table 2. Depression categorization

<b>Total score</b>	<b>Depression severity</b>	<b>N</b>
0 - 4	None – minimal	73
5 - 9	Mild	69
10 – 14	Moderate	27
15 – 19	Moderately severe	24
20 - 27	Severe	7

The distribution of depression severity is presented in Table 2. The majority of respondents reported minimal to mild depressive symptoms. However, approximately 29% of participants fell within the moderate to severe depression categories based on the PHQ-9 classification, indicating that a considerable proportion of the sample reported elevated depressive symptoms.

An analysis of gender differences in depression levels was conducted using an Independent Samples t-test. Before the analysis, the assumption of homogeneity of variances was examined using Levene’s test, which indicated a violation of the equal variance assumption ( $p < .05$ ). Therefore, a non-parametric Mann–Whitney U test was also performed to confirm the robustness of the findings.

Table 3. Independent Samples T-Test

		Statistic	df	p
Depression	Student's t	0.874	a	198
	Mann-Whitney U	4316		0.658

Note.  $H_a \mu_{\text{Perempuan}} \neq \mu_{\text{Laki-laki}}$

<sup>a</sup> Levene's test is significant ( $p < .05$ ), suggesting a violation of the assumption of equal variances

The results indicated no statistically significant difference in depression scores between male and female respondents. This finding was consistent across both the parametric test ( $t = 0.874$ ,  $p = .383$ ) and the non-parametric test ( $U = 4316$ ,  $p = .658$ ), suggesting that gender was not associated with differences in depression severity within this sample (Table 3).

### Discussion

The results of this study showed that the mean depression score among millennials in this sample was 7.41, with approximately 29% of respondents classified as having moderate to severe depression. These findings indicate that depression is a significant mental health issue among millennials in Indonesia. Furthermore, no significant gender differences in depression levels were observed in this study.

These results are consistent with global trends indicating an increasing prevalence of depression among young adults. Twenge et al. (2019) reported a 63% increase in the prevalence of major depressive episodes among individuals aged 18–25 years in the United States between 2009 and 2017. Similarly, Thapar et al. (2022) highlighted a recent surge in depression prevalence, particularly among women, with long-term impacts on interpersonal, social, educational, and occupational functioning. Keyes et al. (2024) demonstrated that increases in depressive symptoms beginning in adolescence often persist into young adulthood, extending the effects of the current mental health crisis.

Longitudinal studies in the United States support this trend. Xiang et al. (2024) reported a 60% increase in clinically diagnosed depression between 2017 and 2021, with sharper increases observed during the COVID-19 pandemic. Likewise, Matić et al. (2022) found that two years after the onset of the pandemic, levels of depression, anxiety, stress, and suicidal ideation among young adults in Slovenia were higher than during the early stages of the pandemic.

In the Indonesian context, Purborini et al. (2021) reported a 27.86% prevalence of depression among young adults based on data from the Indonesian Family Life Survey (IFLS), a figure that aligns with the findings of the present study. Factors such as health perception, smoking behavior, and acute morbidity were found to significantly contribute to depression. During the COVID-19 pandemic, Sarfika et al. (2021) reported that 43.2% of respondents experienced moderate to severe depression, with social media exposure and perceived health emerging as key predictors.

The predispositional factors identified in this study are consistent with findings from international literature. Thapar et al. (2022) emphasized that social stress, family history of depression, and stressful life experiences are strong predictors of depression. Lakasing and Mirza (2020) noted that economic uncertainty, unemployment, and delayed transitions to independent adult roles heighten millennials' vulnerability to depression. Hosseinzadeh et al. (2024) stressed that social, economic, political, and environmental determinants play crucial roles in either driving or mitigating depression, underscoring the importance of adopting ecological intervention approaches. Supporting this perspective, Lugova et al. (2021) found that depression was more

severe among low-income groups and influenced by various sociodemographic variables in Malaysia.

Beyond individual impacts, depression among young adults also contributes to long-term functional consequences. Hetlevik et al. (2023) demonstrated that depression between the ages of 22 and 26 significantly increases the risk of low income, prolonged unemployment, and reliance on social benefits by age 29. These findings reinforce the argument that restoring social and economic functioning should be a core target of interventions for this population.

However, mental health service gaps for young adults remain a major challenge. Babajide et al. (2019) observed that despite high prevalence rates of depression and anxiety in this group, access to mental health services is lower compared to other age groups. In Indonesia, this gap is further exacerbated by unequal service availability and persistent stigma (Riskseddas, 2018; Jaya et al., 2024). Thus, developing integrated service models at the primary care level, in collaboration with community networks, is essential.

Furthermore, in line with the recommendations of Hankin and Griffith (2023), the development of interventions should adopt a more holistic and multi-level approach. This includes not only individual-focused interventions but also community- and policy-level strategies, such as anti-poverty programs, improved access to public mental health services, and the creation of supportive social environments that foster mental well-being.

This study has several limitations. The cross-sectional design precludes causal inferences. Additionally, the generalizability of the findings should be approached with caution, given the specific characteristics of the sample.

Future research should employ longitudinal designs to better understand the development of depression across the millennial life course. Exploring protective factors such as social support, personal resilience, and work-life balance would be particularly valuable. Considering that millennials are active users of digital technology, the development of digital-based interventions represents a promising direction for future research (Torous et al., 2021).

This study provides a clearer understanding of depression severity among Indonesian millennials. The findings are expected to inform the development of more targeted mental health policies and interventions to enhance the psychological well-being and socio-economic functioning of this productive age group.

## **Conclusion**

The findings of this study indicate that depression is a significant mental health concern among Indonesian millennials, with approximately 29% of respondents classified as having moderate to severe depression. These results are consistent with both global and national trends that show an increasing prevalence of depression among younger age groups. Additionally, this study did not identify any significant gender differences in depression levels.

## **Suggestion**

These findings underscore the importance of strengthening early detection and providing mental health interventions that are tailored to the needs of the millennial generation, particularly given the strategic role this age group plays in social and economic development. Moving forward, the development of community-based mental health services, improved access to digital-based interventions, and longitudinal research on protective and risk factors specific to this population should be prioritized to support the psychological well-being of Indonesian millennials.

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