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## Profile Of Patient Diagnosed With Depression In Bandar Lampung In 2023 (BPJS Kesehatan Sample Data From 2024): A Descriptive Study

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**Abstract:** Depression is a major global public health concern and a leading cause of disability worldwide, affecting individuals across various demographic groups. Despite its high burden, local descriptive data on depression remain limited, particularly in Bandar Lampung. This study aims to describe the sociodemographic profile of patients diagnosed with depression in Bandar Lampung in 2023 using BPJS Kesehatan sample data. This study employed a descriptive, observational, cross-sectional design using secondary data from the 2023 BPJS Kesehatan dataset. The sample included patients diagnosed with depression based on ICD-10 codes F32 and F33 who accessed referral healthcare facilities (FKRTL). A total of 41 patients from Bandar Lampung were included after data cleaning. Descriptive statistical analysis was conducted to summarize patient characteristics, including diagnosis type, generation, gender, participant segmentation, marital status, and healthcare costs. The results showed that the most common diagnosis was unspecified depressive episode (F329) (31.71%). The majority of patients were from Generation Z (41.46%), female (85.37%), and formally employed participants (31.71%). Most patients were married (53.66%). The total healthcare cost for depression cases reached IDR 10,929,600. These findings highlight the predominance of depression among younger individuals, women, and working populations. In conclusion, depression in Bandar Lampung is influenced by demographic and socioeconomic factors, with higher prevalence observed among vulnerable groups such as Generation Z and women. These findings underscore the need for improved mental health screening, targeted interventions, and strengthened healthcare system support to address depression effectively. Further studies with larger, more comprehensive datasets are recommended.

**Keywords:** Depression, Sociodemographic Profile, BPJS Kesehatan, Bandar Lampung City.

## INTRODUCTION

Depression is among the most prevalent and serious mental health conditions globally, impacting millions of individuals across different regions, cultures, and age groups. The World Health Organization (WHO) identifies depression as a major contributor to disability worldwide and a significant global health concern. This disorder not only affects individuals but also places a substantial burden on society, influencing personal well-being, productivity, and overall



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economic performance (Agustin et al., 2025). Depression is a mental health condition characterized by ongoing feelings of sadness and a diminished interest or pleasure in activities (Singh et al., 2026)

The World Health Organization (WHO) has reported that more than 264 million people globally are affected by depression. It represents a major component of the global burden of disease and is recognized as the leading cause of disability worldwide. As a pressing public health issue, depression was ranked fourth among global diseases in 2022, with approximately 55% of individuals experiencing suicidal ideation. Its high prevalence spans diverse populations, with notably higher rates among women and adolescents. Furthermore, depression is strongly associated with suicide, contributing to over 700.000 deaths each year. These facts underscore the urgent need to address depression as a critical global health concern, particularly due to its potential to progress into more severe consequences if left untreated (WHO, 2023).

The American Psychiatric Association's Diagnostic Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) classifies the depressive disorders into: Disruptive mood dysregulation disorder, Major depressive disorder, Persistent dysphoric disorder, and Depressive disorder due to another medical condition (Chan & Arifin, 2026). All depressive disorders commonly involve feelings of sadness, emptiness, or irritability, along with physical and cognitive changes that markedly impair an individual's ability to function (Ormel et al., 2019).

The International Classification of Diseases (ICD) is a disease classification system used as a standard language for disease diagnosis, health reporting, and health care financing systems. The system originated in the 20th century under the name International List of Causes of Death (Bertillon Classification). It has continued to evolve, eventually reaching ICD-10, a modern global standard (Hirsch et al., 2016). In the ICD-10, the ICD-10 codes for depressive episode and recurrent depressive disorder are F32 and F33 (WHO, 2026).

A 2022 survey on mental health among adolescents in Indonesia found that 5.5% of adolescents aged 10-17 years experienced mental health disorders. Specifically, 1% of adolescents experienced depression, 3,7% experienced anxiety, 0,9% had post-traumatic stress disorder



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(PTSD), and 0,5% had attention-deficit/hyperactivity disorder (ADHD). The 2018 Basic Health Research (Riskesdas) stated that 6,3% of the population aged 15-24 years experienced depression (RI, 2023)(Agustin et al., 2025).

Research on descriptive data of patients diagnosed with depression-including sociodemographic factors (age, gender, living condition), provides significant benefits for improving the quality of patient care, enhancing diagnostic accuracy, and optimizing treatment strategies. This data serves as a foundational tool that transforms raw clinical information into actionable insights, thereby helping to bridge the gap between clinical science and real-world practice (Alemayehu et al., 2018; Siniscalchi et al., 2020).

Although there have been many studies on depression, there has been no descriptive study of patients diagnosed with depression in Bandar Lampung using BPJS Kesehatan sample data. Therefore, this study aims to describe the sociodemographic profile of patients diagnosed with depression in Bandar Lampung in 2023, using BPJS Kesehatan sample data.

## METHOD

This study is a qualitative, observational, cross-sectional study using secondary data from the 2023 BPJS Kesehatan sample, accessible to the public. The sample units in this study were patient visits to Fasilitas Kesehatan Rujukan Tingkat Lanjut (FKRTL) facilities with ICD-10 code F32 and F33 (Depression), categorized under the mental and behavioural disorders. Details of the case-based group codes and their descriptions are presented in Table 1.

ICD-10 code	Descriptive
F320	Mild depressive episode
F321	Moderate depressive episode
F322	Severe depressive episode without psychotic symptoms
F323	Severe depressive episode with psychotic symptoms
F328	Other depressive episodes
F329	Depressive episode, unspecified
F330	Recurrent depressive disorder, current episode mild
F331	Recurrent depressive disorder, current episode moderate
F332	Recurrent depressive disorder, current episode severe without psychotic symptoms

<b>F333</b>	Recurrent depressive disorder, current episode severe with psychotic symptoms
<b>F334</b>	Recurrent depressive disorder, currently in remission
<b>F338</b>	Other recurrent depressive disorders
<b>F339</b>	Recurrent depressive disorder, unspecified

*Table 1. ICD-10 codes and descriptions for depression*

## Sample study and data cleaning process

From a total of 7,836 patients diagnosed with depression identified in the mental health dataset in 2023, we limited our analysis to patients residing in Lampung Province. This resulted in a total of 109 records, with 41 of those patients coming from Bandar Lampung City. The sample cleaning process in this study can be seen in Figure 1.

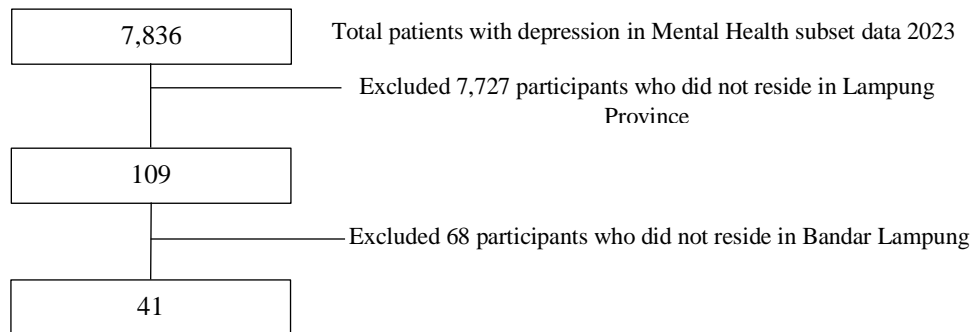


Figure 1. Sample Cleaning Process

## Statistical Analysis

Descriptive statistics were conducted to summarize participant characteristics with diagnosed depression. The sociodemographic data available in the BPJS Kesehatan sample include ICD-10 code, gender, participant segmentation, marital status, and costs. The data from this study were analyzed using StataNow 19.5 MP.

## RESULT AND DISCUSSION

This analysis is based on a sample representing the population of patients diagnosed with depression in Bandar Lampung in 2023, comprising 41 active JKN participants. Table 2 summarizes the sociodemographic profile of patients with depression who visited the FKRTL.

Variable		n	%
ICD-10 code for primary diagnosis FKRTL	F320	4	9.76
	F321	7	17.07
	F322	5	12.20
	F323	4	9.76
	F329	13	31.71
	F330	1	2.44
	F339	7	17.07
Generation	Baby boomer	2	4.88
	Gen X	10	24.39
	Milenial	11	26.83
	Gen Z	17	41.46
	Gen alpha	1	2.44
Gender	Male	6	14.63
	Female	35	85.37
Participant segmentation	No worker	5	12.20
	PBI- National Budget (APBN)	8	19.51
	PBI- Regional Budget (APBD)	7	17.07
	PBPU- Informal Worker	8	19.51
	PPU- Formal Worker	13	31.71
Marital status	Unmarried	16	39.02
	Married	22	53.66
	Divorce	3	7.32
Total cost		10,929,600	

*Table 2. Participants Sociodemographic*

### ICD-10 code for primary diagnosis FKRTL

The results of the study show that participants with the ICD-10 code F329 (depressive episode, unspecified) constituted the largest group (31.71%, n=13). Coding major depressive disorder requires the documentation to note the following: symptoms present for at least 2 weeks, specifying if it's a single episode or a recurrent episode. ICD-10 code F329 is a code for major depressive disorder, single episode, unspecified. However, this code did not separately capture the



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actual occurrence of depression that was not further specified, and statistically (AmeriHealth, 2026).

## Generation

This study revealed that the majority of participants with depression were from Generation Z (1997-2012), accounting for 41.46% of the total. The participant's age is calculated at the time the participant receives service at the FKRTL. These findings are consistent with a study conducted in Hong Kong, which found that Generation Z had the highest prevalence (30% for anxiety, 22.3% for depression), followed by Millennials (Generation Y) (20.9% and 19.0%), Baby Boomers (15.0% and 13.5%), and Generation X (14.3% and 12.8%). Psychosocial factors such as individual resilience, emotional regulation, a positive outlook on life, and life satisfaction are significantly associated with mental health symptoms across all generations. Generation Z exhibits the highest risk of mental health symptoms and the lowest levels of protective factors, indicating their vulnerability (Park et al., 2024; Tang et al., 2026).

Generation Z is particularly vulnerable to depression and anxiety. The influence of social media platforms such as Facebook, X, Instagram, and YouTube has significantly altered individuals' lifestyles and patterns of communication (Mojtahe, 2022). Social media is transforming traditional forms of communication, shifting from face-to-face interactions to gadget-based exchanges. This transition may contribute to increased stress, depression, anxiety, social isolation, and a reduction in direct physical interaction (Mojtahe, 2022). Evidence indicates a correlation between social media usage and negative mental health issues in Generation Z (Harefa et al., 2025). To reduce stress or prevent depression, engaging in physical activity—such as walking to visit friends or family—can be an effective strategy (Muktifada Matilda et al., 2025).

## Gender

This study indicates that the prevalence of depression is higher among women than among men (85.37%, n=35). Beberapa studi turut menunjukkan hasil penelitian yang serupa (Aviles Gonzalez et al., 2025; Tang & Zhang, 2022). Women are more susceptible to depression, and when



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it occurs, symptoms may persist into adulthood. The prevalence of depression also shows a gender disparity, with an approximate male-to-female ratio of 1:2 (Tang & Zhang, 2022). Women consistently exhibit a higher prevalence of depression than men, a phenomenon generally attributed to the complex interplay of biological, psychological, and social factors. From a biological perspective, fluctuations in reproductive hormones such as estrogen and progesterone play a key role in modulating neurotransmitter systems, particularly serotonin, which is closely linked to mood regulation. Hormonal changes occurring during puberty, the menstrual cycle, pregnancy, and menopause increase women's vulnerability to depression. Additionally, women exhibit a more sensitive stress response through activation of the hypothalamic–pituitary–adrenal (HPA) axis, which can exacerbate the risk of mood disorders (Tang & Zhang, 2022).

Psychologically, women are more likely to adopt internalizing coping patterns, such as rumination—the tendency to repeatedly dwell on negative experiences without constructive solutions. This pattern has been shown to increase the duration and severity of depressive episodes. Women also generally possess higher interpersonal sensitivity, making them more vulnerable to stress related to social relationships, rejection, and interpersonal conflicts. Additionally, dissatisfaction with body image, which begins to develop during adolescence, contributes to the emergence of depressive symptoms in women (Tang & Zhang, 2022).

From a social perspective, women are more frequently exposed to risk factors such as gender-based violence, the burden of dual roles (work and domestic responsibilities), economic inequality, and social pressures related to beauty standards and gender roles. A lack of social support and traumatic experiences, particularly sexual violence, also play a significant role in increasing vulnerability to depression. On the other hand, men tend to underreport depressive symptoms and are less likely to seek professional help due to masculinity norms that emphasize independence and the suppression of emotions. This can lead to underdiagnosis in men, thereby reinforcing the impression that the prevalence of depression is higher among women (Riecher-Rössler, 2017; Shi et al., 2021; Tang & Zhang, 2022).



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## Participant segmentation

The difference in the prevalence of depression among participants in various insurance segments is apparent: the formal worker group (PPU) has a statistically higher rate than the other groups (31.71%,  $n=13$ ). Several studies indicate that employed individuals experience higher levels of stress (du Prel et al., 2024; Luca et al., 2014; Ogawa et al., 2018). An imbalance between job demands and available resources can lead to work-related psychosocial stress (Bakker & Demerouti, 2007). Approximately 30% of workers in Europe hold positions where job demands exceed available resources, with variations across countries (Eurofound, 2022). The healthcare sector (45%), transportation (42%), and agriculture (40%) are the sectors with the highest proportion of jobs that cause stress (Eurofound, 2022).

Although characteristics of low socioeconomic status—such as poverty, unemployment, material deprivation, limited access to education, and bleak economic prospects—have been identified as psychosocial risk factors with long-term effects on mental health and an increased likelihood of experiencing depressive symptoms or even depression (Zheng et al., 2025), recent studies indicate that workers face specific risk factors for depression. Research indicates that the longer the work schedule, the higher the prevalence of depression. This supports the hypothesis that work is a significant source of stress and can trigger depressive symptoms (Luca et al., 2014; Ogawa et al., 2018).

## Marital status

The findings of this study indicate that more participants were married than unmarried or divorced (53.66%,  $n = 22$ ). Although many studies suggest that unmarried individuals have a higher risk of developing depression (Anggana et al., 2022; Zhai et al., 2024), Other studies indicate an association between marriage and depression. There is a significant correlation between marital status and depressive symptoms, mediated by factors such as sleep duration, pain, and life satisfaction (Pan et al., 2022).



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## Cost

Costs for JKN patients are allocated based on INA-CBGs (Indonesia Case-Based Groups). INA-CBGs is a package-based payment system used by BPJS Kesehatan for hospitals, in which service costs are determined based on disease diagnoses and medical procedures, rather than a fee-for-service model. This system aims to improve efficiency and control healthcare costs by grouping cases (Kemenkes, 2016). The INA-CBG code consists of 4 digits. The first digit represents the CMG (Casemix Main Groups) code, the second digit represents the case group type, the third digit represents the case group specification, and the fourth digit represents the severity level of the case group. In this study, the INA-CBGs code for depression is F-5-14-0 (Kemenkes, 2016). The total amount spent by the participants was Rp. 10,929,600.

## CONCLUSION

This study provides a descriptive overview of patients diagnosed with depression in Bandar Lampung in 2023 based on BPJS Kesehatan sample data. The findings indicate that the majority of cases were classified under unspecified depressive episode (F329), highlighting potential limitations in diagnostic specificity within clinical documentation. Sociodemographically, depression was more prevalent among females, Generation Z, formal workers, married status, and the total cost was Rp. 10,929,600. These findings emphasize the importance of improving mental health screening, diagnostic accuracy, and targeted interventions, particularly for high-risk groups such as young individuals, female, and workers. Furthermore, the study highlights the need for strengthening mental health services within the national health insurance system (JKN).

This study has several limitations. First, reliance on BPJS administrative data may introduce coding bias and misclassification, particularly reflected in the high use of unspecified diagnoses (F329). Second, the small sample size ( $n = 41$ ) limits the generalizability of the findings. Third, the absence of key clinical variables (e.g., severity, comorbidities, treatment outcomes) restricts deeper analysis. Fourth, potential selection bias exists, as only patients accessing referral



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healthcare facilities (FKRTL) were included, excluding undiagnosed or untreated cases. Finally, the cross-sectional design precludes any causal inference.

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