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The Influence of Social Trust, Income Inequality, and Employment Status on the Risk of Depression

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ABSTRACT

Background: Depressive disorders are among the most common and complex mental health problems worldwide, including in Indonesia. The determinants of depression are closely linked to social and economic factors. This study aimed to estimate the effects of social trust, income inequality, and employment status on the risk of depression.

Subjects and Method: An observational study with a cross-sectional design utilized the fifth wave of the Indonesia Family Life Survey (IFLS5). The dataset includes more than 29,716 individuals across 13 provinces. The sample was selected using a purposive sampling method.

Results: The risk of depression increased significantly among individuals who were unmarried (b = 0.97; 95% CI: 0.84 to 1.07; p < 0.001), female (b = 0.16; 95% CI: 0.06 to 0.26; p = 0.002), unemployed (b = 0.25; 95% CI: 0.14 to 0.35; p < 0.001), and living in provinces with higher income inequality (b = 0.32; 95% CI: 0.21 to 0.42; p < 0.001). Conversely, the risk of depression decreased significantly with higher social trust (b = -0.18; 95% CI: -0.29 to -0.08; p < 0.001), good sleep quality (b = -0.20; 95% CI: -0.21 to -0.19; p < 0.001), older age (b= -0.81; 95% CI: -0.99 to -0.63; p < 0.001), and higher education level (≥senior high school) (b= -0.36; 95% CI: -0.46 to -0.25; p < 0.001).

Conclusion: The risk of depression increases with unmarried, female, unemployed, and living in provinces with higher income inequality. The risk of depression decreases with higher social trust, good sleep quality, older age, and education ≥senior high school.

Keywords: kepercayaan sosial, ketimpangan pendapatan, risiko depresi

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BACKGROUND

Mental health issues, particularly depression, have become an increasingly concerning global public health problem. Depressive disorders are among the most common and complex mental health challenges across countries, including Indonesia. According to the World Health Organization (WHO, 2023), more than 280 million people worldwide suffer from depression, which impacts not only individuals but also productivity and the socio-economic stability of communities. This phenomenon does not occur in isolation; rather, it is closely linked to complex social

determinants, including social trust, income inequality, and employment status.

Income inequality triggers psychosocial stress due to feelings of injustice, economic insecurity, and social stigma. According to the theory presented in The Spirit Level, societies with high income inequality exhibit a higher prevalence of mental health disorders compared to more egalitarian societies. This phenomenon is also observed in Indonesia, particularly in urban areas where the gap between rich and poor is pronounced (Central Bureau of Statistics of Indonesia, 2022).

Employment status is a key determinant of psychological well-being. Individuals without stable employment or working in the informal sector are at higher risk of depression due to limited income, uncertainty about the future, and lack of social protection (Sulaiman, 2021). The absence of job stability reduces self-esteem and perceived control over one's life, both of which are protective factors against depression (Rozana & Maharani, 2021).

Employment status also plays a crucial role in shaping an individual's mental health. Those who are unemployed, engaged in informal work, or experiencing job instability are more vulnerable to depression due to financial uncertainty, low self-esteem, and limited social protection (Yanti et al., 2018). Mulyani (2023) further supports this, reporting that individuals from low-income families with unstable employment status have a higher risk of postpartum depression and household stress.

To comprehensively and evidence-based capture this phenomenon, the present study utilized secondary data from the fifth wave of the Indonesia Family Life Survey (IFLS5). IFLS5 is a nationally representative longitudinal survey conducted by the RAND Corporation in collaboration with the Demography Institute of the University of Indonesia, encompassing over 30,000 individuals across 13 provinces, representing 83% of the Indonesian population. The survey provides information on mental health (measured using the CES-D score), employment status, income, and social trust at both individual and community levels .

The researcher aims to conduct a study entitled "The Influence of Social Trust, Income Inequality, and Employment Status on Depression Risk" using IFLS5 data. A comprehensive understanding of these variables will aid in formulating effective strategies for depression prevention.

SUBJECTS AND METHOD

1. Study design
This was a cross-sectional study utilized secondary data from the fifth wave of the Indonesia Family Life Survey (IFLS5), covering 13 provinces: North Sumatra, West Sumatra, Riau, Jambi, Bengkulu, Lampung, DKI Jakarta, West Java, Central Java, Yogyakarta Special Region, East Java, Bali, and South Kalimantan.

2. Population and sample
The population of this study comprised all adult respondents (aged ≥18 years) recorded in IFLS-5. The dataset includes more than 29,716 individuals. The sample was selected using a purposive sampling method.

3. Study variables
The dependent variable was depression. The independent variables included social trust, income inequality, employment status, marital status, and sleep quality.

4. Operational definition of variables
Social trust refers to an individual's perception of the level of trust in people within their community.

Marital status denotes the legal status of an individual's marriage.

Income inequality is measured as the ratio of household incomes within a province.

Sleep quality refers to an individual's perception of the duration and comfort of sleep.

Employment status indicates the individual's job position based on stability and formality.

Age refers to the respondent's chronological age in years at the time of data collection.

Gender represents the respondent's biological sex.

Education level refers to the highest formal educational attainment completed.

Depression is measured using affective symptom scores based on the frequency of symptoms during the past week.

5. Study instrument

Data were collected indirectly through the download of secondary IFLS-5 data from the official RAND Corporation website. The dataset had undergone validation and coding processes. The measurement instruments consisted of items from the IFLS-5 questionnaire.

6. Data analysis

Univariate analysis was conducted to obtain the frequency distribution and percentage of the study subjects' characteristics. Bivariate analysis was performed to examine the associations between independent and dependent variables, while multivariate analysis was used to assess the simultaneous effects of multiple variables.

RESULTS

1. Univariate analysis

Table 1 shows that the average age of respondents was approximately 37 years, with a mean depression score of 6.27 and an average sleep quality score of 28.83. The income inequality coefficient of 0.36 indicates a moderate level of income disparity, while the mean social trust score of 25.58 reflects a relatively high level of trust. These results provide an overview of the demographic characteristics, mental health status, sleep quality, economic inequality, and social trust within the study population.

Variabel	n	Mean	SD	Min.	Max.
Age (years old)	29716	37.18	14.82	14	101
Depression	29716	6.27	4.73	0	30
Sleep quality	29716	28.83	7.14	0	40
Income inequality	29716	0.36	0.06	0.25	0.45
Social trust	29716	25.58	2.76	14	37

Table 2 presents the characteristics of the respondents: 15,809 (53.20%) were female, 17,499 (58.89%) lived in rural areas, 21,607 (72.71%) were married, 15,960 (53.71%) had attained a higher level of education, and 18,936 (63.72%) were employed.

Table 2. Sample Characteristics Based on Categorical Data

Sample characteristics	Category	N	%
Sex	Male	13,907	46.80
	Female	15,809	53.20
Place of residence	Rural	17,499	58.89
	Urban	12,217	41.11
Marital status	Married	21,607	72.71
	Unmarried	8,109	27.29
Highest education	High	15,960	53.71

Sample characteristics	Category	N	%
	Low	13,756	46.29
Employment status	Employed	18,936	63.72
	Unemployed	10,780	36.28

2. Bivariate analysis

Table 3 shows that strong social trust (b= -0.09; 95% CI = -0.11 to -0.07; p < 0.001) and good sleep quality (b = -0.20; 95% CI = -0.21 to -0.20; p < 0.001) significantly reduce the risk of depression. Conversely, high income inequality (b = 0.29; 95% CI = 0.18 to 0.40; p < 0.001), being unmarried (b = 1.03; 95% CI= 0.94 to 1.15; p <0.001), and unemployment (b= 0.40; 95% CI= 0.29 to 0.52; p < 0.001) significantly increase the risk of depression.

Independent variables	b	95% CI		p
		Lower	Upper	
Social trust (≥25.57)	-0.09	-0.11	-0.07	< 0.001
Single/ unmarried	1.03	0.94	1.15	< 0.001
Income inequality (Gini indeks ≥40)	0.29	0.18	0.40	< 0.001
Sleep quality (score ≥28.8)	-0.20	-.021	0.20	< 0.001
Unemployed	0.40	0.29	0.52	0.009

3. Multivariate analysis

Table 4 shows that being aged ≥60 years (b= -0.81; 95% CI = -0.99 to -0.63; p < 0.001), having a high school education or higher (b= -0.36; 95% CI = -0.46 to -0.25; p < 0.001), good sleep quality (b= -0.20; 95% CI = -0.21 to -0.19; p < 0.001), and high social trust (b= -0.18; 95% CI = -0.29 to -0.08; p < 0.001) were associated with a decreased risk of depression. Conversely, being female (b= 0.16; 95% CI = 0.06 to 0.26; p= 0.002), unmarried (b= 0.97; 95% CI = 0.84 to 1.07; p < 0.001), unemployed (b= 0.25; 95% CI = 0.14 to 0.35; p < 0.001), and living in provinces with high income inequality (b= 0.32; 95% CI = 0.21 to 0.42; p < 0.001) were associated with an increased risk of depression.

Variabel Independen	b	95% CI		p
		Lower limit	Upper limit	
Strong social trust (score ≥25.57)	-0.18	-0.29	-0.08	< 0.001
Single/ unmarried	0.97	0.84	1.07	< 0.001
Income inequality (Gini index ≥0.40)	0.32	-0.21	0.42	< 0.001
Sleep quality (score ≥28.8)	-0.20	-0.21	-0.19	< 0.001
Unemployment level (score ≥6.0)	0.25	0.14	0.35	< 0.001
Age (years old)	-0.81	-0.99	-0.63	< 0.001
Female	0.16	0.06	0.26	0.002
Education (≥senior high school)	-0.36	-0.46	-0.25	< 0.001
n observation = 29,716				
Adj R-Squared = 0.11				
p < 0.001				

DISCUSSION

1. Correlation between social trust and depression

High social trust is associated with a reduced risk of depression. Individuals living in communities with high levels of social trust had depression scores 0.18 units lower compared to those in low-trust communities. This finding aligns with the study by Dev and Kim (2020), which reported that individuals residing in environments with high social capital had a lower likelihood of experiencing depression. In their study, an increase in social trust significantly reduced the risk of depression (OR= 0.84; 95% CI= 0.76 to 0.90; p <0.001). Similarly, research among elderly communities in Japan found that community social trust had a protective effect against depressive symptoms. Elderly individuals living in high social trust environments demonstrated a lower risk of depression (OR= 0.71; 95% CI= 0.64 to 0.78; p <0.001) (Haseda et al., 2018).

2. Correlation between marital status and depression

Being unmarried increases the risk of depression. Individuals who are not married had, on average, depression scores 0.97 units higher than those who are married. This finding is consistent with the study by Asnani et al. (2010), which reported that unmarried individuals were more likely to experience depression compared to married individuals (OR = 2.5; 95% CI = 1.1–5.4; p = 0.027). These results underscore that marital status can be an important determinant of vulnerability to depression. Similarly, Kongsomboon (2011) found in a study among employees that being unmarried significantly increased the likelihood of depression.

3. Correlation between income inequality and depression

Income inequality at the provincial level is associated with an increased risk of depression. Individuals living in provinces with high income inequality had depression scores 0.32 units higher compared to those living in provinces with low income inequality. This finding is consistent with the longitudinal study by Benny et al. (2023) among high school students in Canada, which reported that income disparities between schools significantly increased the risk of depression in adolescents. In their study, depression increased with an odds ratio of 1.56 (95% CI= 1.14 to 2.13; p <0.001), indicating that adolescents residing in high-income-inequality environments had a higher likelihood of experiencing mental health problems. Local income inequality was also found to significantly increase depression scores in adolescents (β= 0.25; 95% CI= 0.10 to 0.39; p = 0.002), suggesting that uneven economic distribution in residential areas has a direct impact on the psychological well-being of young generations (Haselbach, 2025).

4. Correlation between sleep quality and depression

Good sleep quality is associated with a reduced risk of depression. Individuals with good sleep quality had depression scores 0.20 units lower than those with poor sleep quality. This finding aligns with Gelaye et al. (2017), who reported that poor sleep quality significantly increased the risk of depression (OR= 1.28; 95% CI= 1.15 to 1.41). Similarly, Chang et al. (2014) found that poor perceived sleep quality was significantly associated with depression in the elderly population. In their study, each increase in sleep disturbance scores correlated with higher depressive symptoms (OR= 1.36; 95% CI= 1.11 to 1.66; p <0.001). Poor sleep quality is thus significantly related to increased depression scores (Shafipour et al., 2015).

5. Correlation between unemployment and depression

Unemployment increases the risk of depression. Individuals who were

unemployed had, on average, depression scores 0.25 units higher than those who were employed. This finding is consistent with the study by Zimmerman and Katon (2015), which reported that financial stress due to unstable employment was significantly associated with higher depression scores. They found that individuals experiencing economic insecurity from employment had a regression coefficient of $\beta = 0.22$ (95% CI= 0.10–0.34; p < 0.001), indicating a direct effect of economic burden on psychological well-being.

6. Correlation between age and depression

Age is associated with a decreased risk of depression. Individuals aged ≥60 years had depression scores 0.81 units lower than those aged <60 years. This finding is consistent with the study by Zhang et al. (2025), which reported that older adults who were not frail had a lower risk of depressive symptoms (OR = 0.71; 95% CI = 0.63–0.80; p < 0.001). Furthermore, elderly individuals who received intergenerational support from their children experienced a significant reduction in depressive symptoms. Older adults aged ≥60 years with such support had an OR of 0.78 (95% CI: 0.72–0.85; p < 0.001), indicating a 22% reduction in depression risk. This support was not only emotional but also associated with life satisfaction and social connectedness (Lu et al., 2025).

7. Correlation between sex and depression

Female gender is associated with a higher risk of depression. Consistent with the study by Du et al. (2025) in China, female students who did not engage in regular physical activity had a significantly higher risk of depression compared to those who exercised. Logistic regression analysis indicated that the non-exercising group—predominantly female—had an odds ratio of 7.85 (95% CI: 3.39–18.17; p < 0.001), suggesting that women with a sedentary lifestyle are particularly vulnerable to severe depressive symptoms. Additionally, an analysis of emotional structure across four demographic groups in China found that females had an increased risk of depression (OR= 1.64; 95% CI= 1.38 to 1.95; p < 0.01) (Xiong et al., 2025).

8. Correlation between education and depression

Higher education is associated with a decreased risk of depression. Individuals with a high school education or above had depression scores 0.36 units lower than those with less than a high school education. This finding is consistent with the study by Yang et al. (2025), which reported that higher educational attainment enhances the positive effects of community health services on reducing depression. Among working adults and university students in Africa, higher education reduced the risk of depression (OR= 0.65; 95% CI= 0.53 to 0.80; p<0.001). Education provides greater access to economic opportunities, more stable social networks, and better mental health literacy, all of which contribute to a lower risk of depression (Magakwe et al., 2025).

CONFLICT OF INTEREST

There are no conflicts of interest associated with this study.

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