

## **Mental Distress in Rural Areas of Indonesia**

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### **ABSTRACT**

**Background:** There is a higher prevalence of mental distress in rural areas compared to urban areas in Indonesia. The rural areas of Indonesia have various socio-demographic and sophisticated cultural characteristics, but less exposed to foreign cultures. Thus, the study about the prevalence, associated factors, and predictors of mental distress in rural areas is necessary.

**Purpose:** This study aimed to identify the population's status and related factors of mental distress in rural areas in Indonesia.

**Methods:** A descriptive cross-sectional study was conducted to achieve the aims of the study. An Indonesian version of the Self-Rated Questionnaire, consisting of 20 items, was used to measure mental distress status of population in rural areas in Yogyakarta, Indonesia. A number of 872 records were included and analyzed using both univariate and bivariate analyses in this study.

**Results:** The prevalence of mental distress in this population was 6%. The correlated factors of mental distress were age ( $\chi^2=6.93$ ,  $p=0.01$ ), gender ( $\chi^2=0.07$ ,  $p=0.03$ ), occupation ( $\chi^2=0.26$ ,  $p=0.02$ ), housing dimension ( $\chi^2=5.45$ ,  $p=0.02$ ), and illness status ( $\chi^2=0.01$ ,  $p<0.01$ ).

**Conclusion:** The prevalence of mental distress in rural areas of Indonesia is relatively lower than that of the national level. Future mental health programs may be focused on improving mental health on the elderly, male, vulnerable workers, overcrowded housing, and people who got a chronic illness.

**Keywords:** Community based screening; mental distress; mental health; rural area

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## **BACKGROUND**

Mental health is one of the psychological components in the biopsychosocial model that arranges health during the human life span (Lehman, David, & Gruber, 2017). Mental distress is one of the mental disorders characterized by an emotional change that can develop into a pathological condition (Idaiani, 2010; Idaiani, Kusumawardani, Mubasyiroh, Nainggolan, & Nurchotimah, 2017). An overlook on stress management may develop severe mental illness on many people with chronic diseases and mild distress (DE Hert et al., 2011).

In Indonesia, the rural population has a higher prevalence of mental distress (10%) compared to urban areas. A rural population also tend to have these sociodemographic characteristics such as a rather high proportion of people aged over 75 years old (15.8%), females (12.1%), less educated (13.9%), and unemployed (13.0%) (Ministry of Health of Republic Indonesia, 2018). A study in low-middle income countries showed that gender (female), employment status (employed and self-employed), daily alcohol, and abuse were found to be the correlated factors of developing mental distress (Abbay, Mulatu, & Azadi, 2018). In rural India, women's work demand (high amount of housework, including cleaning and collecting water) is also associated with mental distress (Richardson, Nandi, Jaswal, & Harper, 2017). Furthermore, mental distress is also associated with a history of diseases. The risk of mental distress is in line with the number of chronic illnesses. Subsequently, respondents with hepatitis and stroke were the most experienced mental distress (Widakdo & Besral, 2013).

The Indonesian government's recent effort to promote mental health is by the Mental Health Awareness Village program (*Desa Siaga Sehat Jiwa [DSSJ]*) that is initiated by the Ministry of Health of the Republic of Indonesia (Ministry of Health of Republic Indonesia, 2018). One of the DSSJ programs is mental distress screening using the self-rated questionnaire (SRQ-20). This program has been implemented both in urban and rural areas to get the prevalence of mental distress data. However, Indonesian people have various social-demographic, sophisticated cultural characteristics in dealing with the problem, and less exposed to foreign cultures. Therefore, a study about the prevalence and factors of mental distress in rural areas is needed, so that an appropriate prevention and promotion program can be effectively developed in the future

## **PURPOSE**

This study was conducted to identify the population's status and factors of mental distress among the population in rural areas in Indonesia.

## **METHODS**

### **Design and samples**

This study used a descriptive cross-sectional research design. It was conducted from February to July 2018 in rural areas in Yogyakarta, Indonesia. Three of five villages were chosen purposively by its population. These villages included Kralas, Sraten, and Suren Wetan, with an estimation of the total population that met the inclusion criteria, were 1500 residents. The inclusion criteria were people age over 15 years old and literate.

### Research instrument and data collection

Two questionnaires were used in this study, including the SRQ-20 (Indonesian version) and the socio-demographic questionnaire. The SRQ-20 was developed by WHO and modified into the Indonesian version by the Ministry of Health of Indonesia to measure mental distress. This questionnaire consists of 20 items question with Guttman scale (Yes/No), and a total score equal to or more than 6 represent cases. The sensitivity of SRQ-20 in the English version is 83% and 80% for specificity (Harding 1989). The sociodemographic questionnaire consisted of age, sex, occupation, religion, family history of physical disability or diagnosed with a severe mental disorder, monthly income, and housing dimension.

Training in administering the set of questionnaires was given by the research team to the youth cadres in the three villages. This was also part of the study to enable the population to perform screening by themselves. The data collection was conducted by trained *Posbindu* cadres. Within four weeks, the cadres did the data collection using a set of questionnaires, including informed consent. In order to ensure a high response rate and solve any data collection challenges during the period, there was an evaluation process every two weeks.

### Data analysis

There were 1500 distributed questionnaires, and the response rate of the questionnaire was 1225 of 1345 (89.7%), with 872 data included in the analysis. Data obtained were inputted, cleaned, and statistically analyzed in SPSS. A descriptive analysis was used to identify demographic data and mental distress status. Meanwhile, the bivariate analysis was used to identify the factors of mental distress in rural Indonesia. The Chi-square test and logistic regression were used depending on the data type of the variables.

### Ethical consideration

The ethical approval of this study was obtained from the Ethics Committee, Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada.

## RESULTS

The response rate of this study was 89.7%; despite the incomplete data, 71.2% of the returned questionnaire was able to be analyzed. The mean age of respondents was 39.96 years old ( $SD=16.48$ ), and there were more females (50.5%). Most of the respondents work as non-civil servants, while the average monthly income was IDR 1,426,632 ( $SD=IDR 709,112$ ). The average housing dimension was 83.74 m<sup>2</sup> with three to four people on average living in the same house. Most of the respondents reported being in a healthy condition (87.5%). In addition, there were 71 respondents with family members suffering from severe mental health illness (Table 1).

Table 1. Distribution of the demographic data of respondents (n=872)

| Variable(s) | f   | %    | Mean (SD)     | Min-Max |
|-------------|-----|------|---------------|---------|
| Age         |     |      | 39.96 (16.48) | 15-92   |
| Gender      |     |      |               |         |
| Male        | 570 | 46.5 |               |         |

| <i>Variable(s)</i>                                  | <i>f</i> | <i>%</i> | <i>Mean (SD)</i>       | <i>Min-Max</i>        |
|---|----------|----------|------------------------|-----------------------|
| Female  | 619      | 50.5     |                        |                       |
| Occupation  |          |          |                        |                       |
| Civil servant                                       | 39       | 4.5      |                        |                       |
| non-civil servant                                   | 448      | 51.4     |                        |                       |
| Entrepreneur  | 80       | 9.2      |                        |                       |
| Student/not yet employed                            | 287      | 32.9     |                        |                       |
| Retired/unemployed                                  | 18       | 2.1      |                        |                       |
| Education   |          |          |                        |                       |
| Not educated  | 59       | 6.8      |                        |                       |
| Elementary to high school                           | 667      | 76.5     |                        |                       |
| University  | 146      | 16.7     |                        |                       |
| Religion  |          |          |                        |                       |
| Islam   | 824      | 94.5     |                        |                       |
| Christian   | 42       | 4.8      |                        |                       |
| Catholic  | 6        | 0.7      |                        |                       |
| Monthly income (IDR)                                |          |          | 1,426,632<br>(709,112) | 150.000-<br>7,000,000 |
| Housing dimension (m <sup>2</sup> )                 |          |          | 91,18 (96,35)          | 2 - 1160              |
| Number of people at home                            |          |          | 4 (1.34)               | 1 - 11                |
| Illness status                                      |          |          |                        |                       |
| Being sick  | 109      | 12.5     |                        |                       |
| Not sick  | 763      | 87.5     |                        |                       |
| The family member with severe mental health illness |          |          |                        |                       |
| Yes   | 71       | 8.1      |                        |                       |
| No  | 801      | 91.9     |                        |                       |

The SRQ-20 interpretation, as presented in Table 2, showed that the prevalence of the mental distress in those three villages was 6%. Dusun Kralas has the lowest prevalence of residents with mental distress (5.3%), and Dusun Suren Wetan has the highest prevalence, of 6.8%. As shown in Table 2, there is also a relatively similar trend on mental health status, around 93.2 to 94.7% of the population with normal distress status.

*Table 2. Distribution of SRQ-20 score interpretation (n=872)*

| Area         | Mental distress status |                 | Total (n) |
|--------------|------------------------|-----------------|-----------|
|              | Normal                 | Mental distress |           |
| All villages | 820 (94%)              | 52 (6%)         | 872       |
| Kralas       | 429 (94.7%)            | 24 (5.3%)       | 453       |
| Sraten       | 159 (93.5%)            | 11 (6.5%)       | 170       |
| Suren Wetan  | 232 (93.2%)            | 17 (6.8%)       | 249       |

The bivariate analysis of the social-demographic data and SRQ-20 interpretation showed that age, monthly income, housing dimension, the number of families living together, and illness status had a statistically significant relation with mental distress (Table 3).

Tabel 3. Mental distress and the related factors (n=872)

| Variable(s)   | Frequency<br>Normal<br>Distress | Frequency<br>Mental<br>Distress | $\chi^2$ | df | p-value |
|---|---------------------------------|---------------------------------|----------|----|---------|
| Age   |                                 |                                 | 6.93     | 1  | 0.01*   |
| Gender  |                                 |                                 | 0.07     |    | 0.03*   |
| Male  | 397                             | 17                              |          |    |         |
| Female  | 423                             | 35                              |          |    |         |
| Occupation  |                                 |                                 | 0.26     |    | 0.02*   |
| Civil servant                                       | 39                              | 0                               |          |    |         |
| Non-civil servant                                   | 427                             | 21                              |          |    |         |
| Entrepreneur  | 71                              | 9                               |          |    |         |
| Student/not yet employed                            | 269                             | 19                              |          |    |         |
| Retired/unemployed                                  | 15                              | 3                               |          |    |         |
| Education   |                                 |                                 | 0.08     |    | 0.08    |
| Not educated  | 54                              | 5                               |          |    |         |
| Elementary to high school                           | 623                             | 44                              |          |    |         |
| University  | 143                             | 3                               |          |    |         |
| Religion  |                                 |                                 | 0.20     |    | 0.78    |
| Islam   | 774                             | 50                              |          |    |         |
| Christian   | 40                              | 2                               |          |    |         |
| Catholic  | 6                               | 0                               |          |    |         |
| Monthly income (IDR)                                |                                 |                                 | 2.76     | 1  | 0.10    |
| Housing dimension (m <sup>2</sup> )                 |                                 |                                 | 5.45     | 1  | 0.02*   |
| Number of people at home                            |                                 |                                 | 0.34     | 1  | 0.56    |
| Illness status                                      |                                 |                                 | 0.17     |    | <0.01*  |
| Being sick  | 91                              | 18                              |          |    |         |
| Not sick  | 729                             | 34                              |          |    |         |
| The family member with severe mental health illness |                                 |                                 | 0.01     | 1  | 0.97    |

\* Significant with  $p=0.05$

## DISCUSSION

This study aimed to identify the population's status and related factors of mental distress among the population in rural areas in Indonesia. This study showed that mental distress prevalence at the coverage area of *Puskesmas* (public health center) Jetis II was lower than that of Yogyakarta province and Indonesia (6%: 10.0%: 9.8%) (Ministry of Health of Republic Indonesia, 2018). This result slightly differs from a previous study by Islam (2019), which found that people in rural areas tend to have a higher prevalence of mental distress compared to the urban area. Similar to an estimation of psychological distress prevalence in Bangladesh in 2018, it is shown that people who live in a semi-urban area significantly more prevalent with psychological distress than rural (Islam, 2019).

According to socio-demography data, some variables that significantly related to mental distress are highlighted. Those variables are age ( $\chi^2=6.93$ ;  $p=0.01$ ), gender ( $\chi^2=0.07$ ;  $p=0.03$ ), occupation ( $\chi^2=0.26$ ;  $p=0.02$ ), housing dimension ( $\chi^2=0.45$ ;  $p=0.02$ ), and illness status ( $\chi^2=0.01$ ,  $p<0.01$ ). This result is in line with the WHO report, which stated

that the social and economic status had an effect on mental health (World Health Organization, 2018).

People with chronic illness, low welfare, and the elderly had a risk of developing mental disorders (World Health Organization, 2018). In a veteran housing, depression was observed among 13.4% of patients with Chronic Obstructive Pulmonary Disease (COPD) while there are only 9.3% of patients without COPD ( $p < 0.001$ ) (DE Hert et al., 2011; Garrido et al., 2017). Moreover, health problems such as deterioration of health, mobility function, daily activity, and socioeconomic are rising in older people (Cao, Chen, Tian, & Jiang, 2015). All of those problems can increase the stressor, so it raises the case of mental distress, which may explain that mental distress is more common in older people compared to younger and middle adults (Sutin, Stephan, & Terracciano, 2018).

Both women and men have their own context of resistance and disability of social life functions that may affect mental distress (Timander & Möller, 2018). Furthermore, a study by Lowry, Johns, Gordon, Austin, Robin, & Kann (2018) reported that those who do not meet society's expectations (behavior and appearance) based on gender or so-called gender nonconformity have a strong association with mental distress among young adults in the US. The form of this mental distress includes substance use and suicide, and feeling sad and hopeless. It is also known that males are more prevalent with gender nonconformity than females, moreover with lesbian or gay, bisexual, and they who "are not sure" about their gender. This research adds further evidence of the correlation between gender and mental distress. Apparently, males tend to have a higher risk of developing mental distress (Smith, Schacter, Enders, & Juvonen, 2018).

The average monthly income of the respondent's was IDR 1,426,632 ( $SD = 709,112$ ) for all occupations, and it was grouped by low income (below IDR 1,454,154,15) based on the minimum wage at Yogyakarta Province (Pemerintah Daerah DIY, 2017). This finding is in line with a study by Suyoko (2012), which reported that the prevalence of mental distress in people with low economic status is 0.8 times higher than those with high economic status (Suyoko, 2012). This research shows that there is no correlation between monthly income and mental distress. On the other hand, occupations were statistically significant to the presence of mental distress.

It is argued that occupation is not only related to economic status, but also the work demands, including psychological and social work demands (Finne, Christensen, & Knardahl, 2016). However, it is supported by the result of the basic health research by the Ministry of Health of Republic Indonesia (2018) that the unemployed (13.0%) were the group with the highest prevalence of mental distress. Regarding the relation between financial distress and overall distress, it was reported that financial distress was associated with overall distress, while emotional distress mediated this association. In addition, the total effect of financial distress on overall distress was - 0.727 (Meeker et al., 2016)

Even though this research shows that there is no correlation between mental distress and the number of families in one home, another study shows the opposite. Grinde and

Tambs (2016) found this factor difference in the group of age. In children, they will have a lower risk of mental distress with an increasing number of member families who live together. Their family members, especially adults, will protect them and become their playmates, which can support their mental condition. In contrast, that situation can add a stressor for adults. It can increase the possibility of sibling conflicts or conflict between children and parents, which can improve the risk of mental distress (Grinde & Tambs, 2016). However, Indonesia has a sophisticated culture that flourished by the society. Intergenerational support may bring support in maintaining better mental health in the rural area (Schröder-Butterfill, 2004).

The dimension of the home is significantly related to mental distress (Grinde & Tambs, 2016). It is assumed that these factors were also linked to the number of family members who live together, which indirectly affects the personal space of the home. Personal space is a space that makes people feel safe and comfortable. If the invasion of this space presents, stress might happen. A previous study stated that caregiver of people with mental illness who lack social support is strongly associated with mental distress, although, in this study, those dependent variables failed to be factors that statistically significant related to GME (Sintayehu, Mulat, Yohannis, Adera, & Fekade, 2015).

In addition, respondents with a chronic illness have a risk of 2.6 times of mental distress. Respondents with two chronic illnesses have a risk of 4.6 times of mental distress, and respondents with three chronic illnesses have a risk of >11 times (Widakdo & Besral, 2013). That physiological disorder has a direct effect on the deterioration of social function and finally improved mental distress (Stuart, 2007). Furthermore, based on the health statistic and information system estimates for 2000-2012 data, depression caused by chronic disease can decrease life expectancy for around 20 years (Islam, 2019). Depression or anxiety that develops from physical illness might be one of the risk factors to heart disease, stroke (Clarke & Currie, 2007), diabetes (Aikens, Rosland, & Piette, 2015; Clarke & Currie, 2007), cancer (Meeker et al., 2016), and also acute illness (Stewart-Ibarra et al., 2017); thus, it can increase morbidity and mortality (Clarke & Currie, 2007)

This study has limitations. A cross-sectional research design was used in this research, as it draws a better understanding in terms of current information regarding the mental distress topic in the rural areas. However, this research may not be relevant in the long run, so a follow-up survey may be needed in the future. Aside from a rather high participation rate, the results of this study may not be generated to all rural areas in Indonesia as the data were collected from specific areas in Yogyakarta province. More sites need to be included to draw generalizations in interpreting the result of the study. As this study was concerned with rural areas, further investigation is needed to study mental distress in urban areas.

## **CONCLUSION**

The sociodemographic status, such as older age, gender (male), occupation, small-size housing, and being ill, were found to be correlated factors of having mental distress in rural Indonesia. Based on the results of this study, it is suggested that *Puskesmas* may

consider developing mental distress prevention programs by considering age, gender, occupation, housing size, and illness status to improve their outcome, particularly in mental health. Further research on the same topic in other rural areas in Indonesia, including the remote ones, is necessary.

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#### **CONFLICT OF INTEREST**

The authors declare no conflict of interest.

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