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Abstract

Studies have found that mental health problems are more prevalent in urban areas compared to rural ones, including in Indonesia. About 6% of Indonesian people report having mental health problems, and 1.7 out of every thousand residents are diagnosed with a psychiatric problem. This study examines the sociodemographic determinants of reporting mental health problems among Indonesia's general population living in urban areas. One thousand forty participants aged 17 years and over answered sociodemographic questions (i.e., residence, gender, age, education level, income, marital status) and completed the EQ-5D-5L. Their responses to the Anxiety/Depression item of the EQ-5D-5L (no problem vs. any level of problem) were the dependent variable sociodemographic factors were the explanatory variables. About one-third (35.37%) of the participants reported experiencing problems with anxiety/depression. Logistic regression found that marital status was significantly associated with reporting any problems of anxiety/depression in the EQ-5D-5L: single/divorced participants were 58% more likely to report that they suffered from anxiety/depression in comparison to their married counterparts. These results highlight the importance of social support; that is, having a spouse or extended family member whom one can count on for help when facing a problem is essential, regardless of one's gender, age, educational level, or income.

Keywords

Demographic, EQ-5D, mental health, urban

Previous studies have linked living in urban areas and mental health problems. The risk and prevalence of some major mental disorders (e.g., anxiety, mood, and psychotic disorders) are higher in urban compared to rural areas (Jaya & Wulandari, 2018; Nepomuceno, Cardoso, Ximenes, Barros, & Leite, 2016; Peen, Schoevers, Beekman, & Dekker, 2010; Sharifi et al., 2015). Studies in China (Long et al., 2014), Germany (Jacobi et al., 2014), and Denmark (Pedersen & Mortensen, 2001) show similar findings for schizophrenia. Given that (i) more people now live in cities/urban areas than in rural areas and

(ii) it is projected that two-third of the world's population will live in urban areas by 2050, more studies are needed to investigate the effect of living in cities on residents' mental health.

For Indonesia, a national survey found that about 6% of participants self-reported having mental health problems, while 1.7 of every thousand residents were diagnosed with psychiatric problems (National Institute of Health Research and Development (NIHRD) Indonesian Ministry of Health, 2013). The same survey found that the prevalence of such mental health problems was higher in urban compared to rural populations. Like the rest of the world, Indonesia has seen a trend of urbanization. It is expected that by 2035, two-thirds of the nation's population will live in cities (Badan Pusat Statistik, 2015). Therefore, a significant increase in mental health problems could be expected.

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Two broad factors of the urban environment that influence mental health come from its physical and social characteristics. Living in an urban physical environment (e.g., noise, bad smell, bad quality of air, and lack of green areas) has been proven to increase the likelihood mental health problems (Honold, Beyer, Lakes, & der Meer, 2012; Rocha, Perez, Rodriguez-Sanz, Obiols, & Borrell, 2012). For instance, people who live near major streets or airports areas are highly exposed to pollution and traffic noise. They felt impaired, annoyed or threatened by these environmental conditions around their home. The more often people were hearing noises and experiencing bad air, the more sensitive and difficult to habituate they were to these disturbances. These experiences led to higher level of stress, easier to express their aggression toward their surroundings, and more health problems (Dzhambov & Dimitrova, 2014; Seidler et al., 2016).

Several social factors of the urban environment also influence the mental health of its population. A study by Meyer et al. (2014) found that low socio-economic status (SES) (i.e., income and education levels) is negatively related to mental health and self-rated health. They argued that people with low SES consider their neighborhood as unsafe, and in turn lead them to less physical exercise, and resulted in worse physical and mental health outcomes. These relations were found similar across age, race/ethnicity, and gender groups (Meyer, Castro-Schilo, & Aguilar-Gaxiola, 2014). Concerning income, poor people in the cities lack financial resources to cope with high living costs, convenience transportation modes, and harsh living conditions. These difficulties lead to chronic stress and mental health problems (Kjellstrom, Friel, Mercado, Havemann, & Satterthwaite, 2008). Social relationship, such as marital partner, family, and friends also found related to mental health. It is clear that married individuals, especially those with high marital satisfaction and quality, are healthier, happier, and more satisfied toward their life (Cummings & Davies, 2010; Holt-Lunstad, Birmingham, & Jones, 2008; Robles, Slatcher, Trombello, & McGinn, 2014; Spiker, 2014). However, a study found that those married individuals who reside in urban areas reported lower marriage and community satisfaction

compared to their counterparts who reside in rural areas (Toth, Brown, & Xu, 2002). Another factor that influences mental health problems in urban populations is social capital. A positive and non-anonymous social atmosphere, as well as various social activities held by the community, can be a resource for the mental and physical health of city residents (Honold, Wippert, & van der Meer, 2014). Other factors that may buffer stress are social support (Bertotti et al., 2013; Harandi, Taghinasab, & Nayeri, 2017) and collective efficacy (Ahern & Galea, 2011).

Therefore, this study aims to examine sociodemographic determinants of mental health problems among the general population living in urban areas of Indonesia.

Methods

Participants. In 2016, a large study focused on the general adult population was carried out to measure the quality of life of Indonesian people. A thorough description of the sampling method and interviews may be found in (Purba et al., 2017). In summary, the study utilized a multistage stratified quota in examining six demographic factors: (i) residence: rural or urban; (ii) gender: female or male; (iii) age: 17–30 years, 31–50 years, or above 50 years; education level: low (primary school and below), middle (junior and senior high school), or high (college and university); (v) religion: Islam, Christian, or other; and (vi) ethnicity: Jawa, Sunda, Sumatera, Sulawesi, Madura-Bali, or other. This quota was based on data from the Indonesian Bureau of Statistics (27). Each participant was given a mug or t-shirt for participating in the study.

The data collection was conducted by sixteen interviewers in six cities and rural areas near them in Indonesia, namely, Bandung, Jakarta, Jogjakarta, Medan, Makasar, and Surabaya. For the present report, only data from those who live in urban areas are included in the final analysis. All the participants gave their written informed consent to participate in the research. Ethical clearance was obtained from the Health Research Ethics Committee, Faculty of Medicine, Padjadjaran University, Indonesia.

Measures. We collected demographic data (i.e.,

Table 1. Socio-demographics of the study participants

Characteristic	Sample (N = 1040)		Indonesian population*	
	N	%	%	
Gender	Female	266	49.26	49.65
	Male	274	50.74	50.35
Age	17-30	215	39.81	36.73
	31-50	225	41.67	40.76
	>50	199	36.85	22.51
Education**	Basic	154	28.52	35.18
	Middle	299	55.37	51.72
	High	87	16.11	13.10
Income (in IDR)	Less than 500K	186	34.44	-
	500K-5000K	317	58.70	-
	More than 5000K	37	6.85	-
Marital status	Single	229	42.41	-
	Married	311	57.59	-

* Based on the Indonesian Central Bureau of Statistics (Badan Pusat Statistik, 2015)

** Basic: primary school or below. Middle: junior or senior high school. High: College/university.

residence, gender, birth date, level of education, marital status, and income) using a questionnaire.

The EQ-5D-5L, developed by the EuroQol Group, consists of a descriptive part and a visual analog part. The descriptive part measures HRQOL on five dimensions: mobility (MO), self-care, usual activities, pain/discomfort, and anxiety/depression (AD). Each dimension may be assigned one of five levels of severity: none, slight, moderate, severe, and unable/extreme (Herdman et al., 2011). This study used the Bahasa Indonesia version of the EQ-5D-5L, which has been proven reliable and valid for Indonesian populations (Setiawan, Dusafitri, Galistiani, van Asselt, & Postma, 2018). The online version of the EQ-5D-5L was utilized in this study, as part of the EuroQol EQ-Valuation Technology (EQ-VT) platform (Oppe, Devlin, van Hout, Krabbe, & de Charro, 2014; Oppe, Rand-Hendriksen, Shah, Ramos-Goni, & Luo, 2016). For the present report, we only used the responses to the AD dimension because this dimension measures (part of) mental health.

Analysis. For the sociodemographic factors, we analyzed categorical data using cross-tabulation. For the self-reported AD dimension, we classified each response into one of two categories: “no problems” for a response of level 1 (no) and “any problems” for a response of

level 2 (slight) to level 5 (unable/extreme). Logistic regression was carried out where the responses in the AD dimension (“no problems” vs. “any problems”) served as the outcome and the sociodemographic variables served as predictors. A p-value of less than 0.05 was considered significant.

Results

In total, 1040 participants completed the EQ-5D-5L. Table 1 presents their sociodemographic characteristics. About two-thirds of the participants (64.53%) reported having no problems with AD, and the rest (35.37%) reported some level (2-4) of AD (see Table 2).

Logistic regression analysis demonstrated that among the five demographic characteristics investigated, only marital status was significantly associated with reporting any problems of AD in the EQ-5D-5L: single/divorced participants were 58% more likely to report having AD than those who are married (see Table 3). The other sociodemographic factors (i.e., gender, age, level of education, and monthly income) were not significantly associated with self-reporting AD problems in the EQ-5D-5L. An additional logistic regression was done to check whether there was any significant interaction between the predictors. The results found no significant interaction.

Table 2. EQ-5D-5L Self-reported health profiles

Level of problems	% reporting
Not anxious or depressed	64.63
Slightly anxious or depressed	28.89
Moderately anxious or depressed	5.93
Severely anxious or depressed	0.37
Extremely anxious or depressed	0.19

Discussion

This study investigated sociodemographic determinants of reporting mental health problems among Indonesian general populations living in urban areas. We found that those who were single or divorced were 58% more likely to report having AD on the EQ-5D-5L than those who were married.

The importance of marital status on mental health, as shown in this study, is in line with previous studies: married people are healthier and more satisfied with life (Holt-Lunstad et al., 2008; Kiecolt-Glaser & Newton, 2001), report less depression (Brown, 2000), and report better psychological and emotional well-being (Spiker, 2014) than those who are single, cohabiting, or divorced. It could be argued that having a partner who provides social support is beneficial in tackling mental health problems (Harandi et al., 2017).

The finding that other sociodemographic factors were not significantly associated with reporting AD problems is contradictory to previous studies. For instance, a study of the South Korean general population found higher percentages of self-reported AD problems among female compared to male participants, older people compared to younger ones, and those with higher education and income (Kim, Jo, Lee, Kim, & Chung, 2013). Similar results regarding gender and age differences in South Korea was reported by a study in Spain (Garcia-Gordillo, Adsuar, & Olivares, 2016). Several explanations are offered for this, namely, that big cities present similar stressors for everyone and are related to weakened social ties. First, various environmental factors in cities, such as air and water pollution, noise pollution (e.g., because of traffic), some urban designs (e.g., skyscrapers), or physical threats (e.g., accidents, violence) are experienced by everyone living

there, regardless of their education, income, or age. The presence of such environmental problems is associated with higher stress that could affect the population's mental health (Rocha et al., 2012). Second, urban populations experience weakened social ties compared to their rural counterparts (see, e.g., (Duboz, Boetsch, Gueye, & Macia, 2017), and social ties, more specifically social support, are associated with physical and mental health (Duboz et al., 2017; Grav, Hellzen, Romild, & Stordal, 2012; Wang, Cai, Qian, & Peng, 2014). It could be expected that people living in cities will experience more mental health problems. This certainly supports the finding that marital status was significantly associated with lower odds of mental health problems: having someone, such as a spouse or extended family member, to rely on for support when facing a problem is essential.

Several limitations of this study should be mentioned. First, five of the six cities of data collection are located on the island of Java. This could limit the representativeness of the sample. However, it could be argued that our sample could be considered representative of the Indonesian general population for two reasons: Java is the most populous island and the primary target of migration from the whole archipelago (Badan Pusat Statistik, 2015). Second, the measure of mental health problems was a single questionnaire item, and this might not be able to capture its complexity. In the future, the EQ-5D and additional mental health questionnaires could be added to the Indonesian national health survey to achieve ideal representativeness and a thorough picture of mental health in Indonesian urban populations.

Conclusion

This study of Indonesian urban populations suggests that, among several sociodemographic factors, only marital status is significantly associated with reporting any problems of AD on the EQ-5D-5L questionnaire: single/divorced participants have higher odds of reporting AD than those who are married. These findings highlight the importance of social support; that is, having a spouse or extended family member whom one can count on for help when facing a problem is essential, regardless of one's gender,

age, educational level, or income.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the authorship and/or publication of this article.

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