The Mental Emotional Disorder Pattern: Study of National Basic Health Research 2007, 2013, and 2018

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ABSTRACT
Riset kesehatan dasar (Riskesdas) in 2007, 2013 and 2018 showed the prevalence of mental emotional disorder were 11.6%, 6.0% and 9.8% respectively. This study aims to describe mental emotional pattern among Indonesian and to compare the symptoms based on three Riskesdas. Riskesdas was a population survey. Inclusion criteria were people ≥15 years old and able to answer questions. Self-reporting questionnaire (SRQ) consisted of 20 questions was used to assess mental emotional disorder. Subject was indicated mental emotional disorder if they have "yes" answer minimum in 6 questions. A statistical program SPSS 22.0 was used to analyze data. STATA map version 14.00 to visualize the prevalence among provinces was applied. Headache, sleep disturbance, poor appetite, and easily tired were the most frequent symptoms appeared in general population. While thinking of ending life, not feeling life is useful, feeling worthless, loss of interest in life, daily work is suffering were the most frequent symptoms in people with mental emotional disorder. Even though there were different prevalence of mental emotional disorder between 2007, 2013 and 2018 but the pattern of most symptoms both in general population and people with mental emotional disorder are similar.
Keywords: mental emotional disorder, symptoms, Riskesdas

1. INTRODUCTION

Basic health research or riset kesehatan dasar (Riskesdas) is carried out by National Institute of Health Research and Development (NIHRD) of the Ministry of Health regularly every five year. Riskesdas 2007, 2013 and 2018 assessed mental emotional disorder (MED) in Indonesian population and the prevalence were 11.6%, 6.0% and 9.8% respectively [1–3]. Mental emotional disorder was a sign that someone was undergoing psychological changes which can heal itself, but can become a certain mental disorder if not solved.

Although there were different prevalence of MED from Riskedas to Riskesdas, but the symptoms has the same pattern. This already explained in previous publications [4,5]. Examining the patterns of MED symptoms in Indonesian population is interesting because it can reveal symptoms most commonly experienced by Indonesian general population or in populations with MED indication. Riskesdas 2007 and 2013 showed the most common symptoms experienced by general population were headache, sleep disturbance and no appetite, but populations who experience MED, have symptoms mostly thought ending life in mind, unable to play an useful part in life, feel as worthless person, loss of interest in things, daily work is suffering [4,5].

How about MED in the Indonesian population according to Riskesdas 2018? Does it have the same pattern of symptoms? Comparing results of these three national health surveys will be more interesting by displaying the results together with interesting visualizations to show comprehensive conclusions.

This analysis aims to describe mental emotional pattern among Indonesian and to compare the symptoms based on three Riskesdas (2007, 2013 and 2018).

2. METHOD

Riskesdas was a population survey assessing health indicators. In general, the sampling method of three Riskesdas were multi stage sampling. Completed information of these sampling were available in report book [1–3]. The inclusion criteria of people interviewed mental health questionnaire were ≥15 years old and able to answer questions. Total samples were 657,795, 703,946, and 706,688 people respectively in 2007, 2013 and 2018. The self-reporting questionnaire (SRQ) consisted of 20 items questions; with "yes" or "no" answer was used to assess mental health condition [6]. Subject was indicated MED if they have "yes" answer minimum in 6 items. Each item or question represented of a psychological symptom. The items then were ranked from the most to the less, but only 5 highest rank is shown due to the two previous studies took 5 highest rank as well.

Univariate and descriptive analysis were implemented for this study using statistical program SPSS 22.0 with complex samples method in data analyzing. We used the STATA map version 14.00 to visualize the prevalence among provinces.

All Riskesdas obtained ethical approval from Ethic

Comission of NIHRD of Ministry of Health.

3. RESULTS AND DISCUSSION

The prevalence shows inconsistent pattern of 11,6%, 6,0% and 9,8%. Figure 1 shows it below.
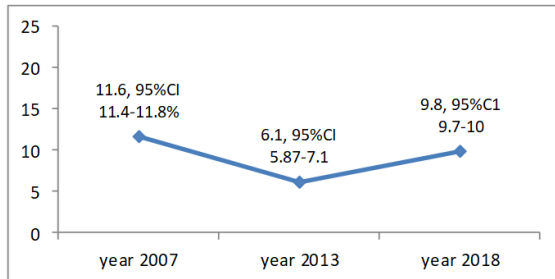

Figure 1. Mental Emotional Disorder Prevalence in 2007, 2013 and 2018

In 2013, the prevalence of MED decreased and then slightly increased in 2018. The STATA map categorized the prevalence of MED in color gradation automatically based on the maximum and minimum prevalence number in each map. The difference in prevalence between .provinces is illustrated in the following figure, while the provincial prevalence was provided in Riskesdas report books.[1–3]

Figure 2. Map of Indonesia based on magnitude of MED prevalence, Riskesdas 2007
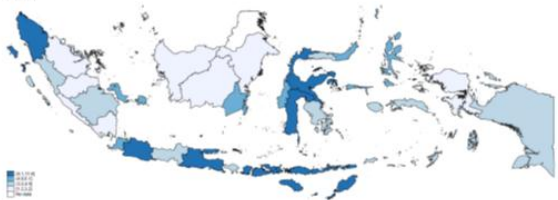

Figure 3. Map of Indonesia based on magnitude of MED prevalence, Riskesdas 2013

Figure . Map of Indonesia based on magnitude of MED prevalence, Riskesdas 2018

Based on picture above, shows East Nusa Tenggara and Central Sulawesi are consistent having high prevalence of MED compared to other provinces in three periods.

Twenty questions of SRQ-20, reflecting anxiety and depression and somatic symptoms. The description of symptoms in general population and MED people was described in two tables below.

Table 1. The five highest symptoms in the Indonesian population.

No	2007		No	2013		No	2018	
	Symptoms	%		Symptoms	%		Symptoms	%
1	Often headache	46,8	1	Often headache	29,4	1	Often headache	33.3
2	Easily tired	26,3	2	Sleep badly	14,4	2	Sleep badly	21.1
3	Sleep badly	22,0	3	Easily tired	11,6	3	Easily tired	18.4
4	Poor appetite	17,2	4	Poor appetite	10,0	4	Poor appetite	14.4
5	Feeling uncomfortable in stomach	16,3	5	Feel nervous, tense or worried	6,3	5	Feel nervous, tense or worried	11.4

It shows that 4 out of 5 most symptoms experienced by general population are the same in 2007 and 2013. Headache was the highest position, easily tired and sleep badly (disturbance) in second or third ranking, while poor appetite always ranks fourth. However, the number (percentage) obtained was different and it was to be lower in 2013.There is similar pattern between 2013 and 2018. Next table shows the most common symptoms of people with MED (those having more than 6 yes answer)

Table 2. The five highest common symptoms of people with MED.

No	2007		No	2013		No	2018	
	Symptoms	%		Symptoms	%		Symptoms	%
1	Unable to play an useful part in life	90,9	1	Thought ending life in mind	88,0	1	Thought ending life in mind	86.1
2	Thought ending life in mind	89,6	2	Unable to play an useful part in life	87,5	2	Unable to play an useful part in life	82.9
3	Feel a worthless person	89,3	3	Feel a worthless person	85,4	3	Feel a worthless person	82.7
4	Loss of interest in things	86,4	4	Loss of interest in things	83,0	4	Loss of interest in things	80.3
5	Daily work is suffering	85,8	5	Daily work is suffering	78,2	5	Daily work is suffering	78.3

Table 2 shows that pattern of symptoms in MED people is same. They are thought ending life in mind, unable to play a useful part in life, feel worthless person, loss of interest in things, daily work is suffering. The ranks of symptoms in 2013 and 2018 are absolutely same.

This analysis didn't assess relationship between prevalence and characteristics. The relationship between population characteristics and MED prevalence based on Riskesdas 2007 and 2013 was available in the previous article.[4,5] Inconsistent pattern of prevalence is probably due to MED assessment which is only for conditions in the past month that allow symptoms to come and go. However, the decline pattern is similar with that in cohort study of non-communicable diseases in Bogor City. [7] In that city, MED prevalence in 2011 was 29,0%, in 2012 was 33,9% and in 2013 was 23,2%.

The provinces identified always have a high prevalence of MED, are West Nusa Tenggara, East Nusa Tenggara, South Sulawesi and Central Sulawesi. STATA map automatically classifies regions based on the high and low prevalence in the same year, but not with the same category restrictions for different years. However, it can be said that provinces that consistently have high prevalence need to explore the causes or things that are influence it.

There is different pattern of symptoms experienced by the general population and population with MED. The general population experience more somatic symptoms such as headaches, fatigue, sleep badly, poor appetite, abdominal

discomfort and tension and anxiety. The five most common symptoms are the same in 2007, 2013 and 2018. In the Al Ain population in the United Arab Emirates the most symptoms in the population using SRQ-20 instrument based on survey in 1996 and 1997 (two stages) were tension, anxiety, headache, concentration disturbances and unhappiness.[8] A survey with the Iraqi population in 2006-2007 , many of the symptoms experienced are also somatic and almost the same symptoms with this finding but it was added with fatigue all the time. [9] Another study in Pakistan 2001 with different measurement in population treated at the hospital also found symptoms of headaches and other somatic symptoms such as joint pain, chest pain, abdominal pain etc [10].

In group of people with MED, the most symptoms experienced are symptoms of depression such as thought ending life, not being able to take on a useful role, feeling worthless, loss of interest in things and daily work is suffering. Thus if people experience symptoms that are predominantly depressed symptoms are likely to experience MED. In another study with higher cut-off of SRQ also found the same results [11].

This analysis is simple therefore it cannot reveal the relationship between variables. STATA map only categorize areas with the same assessment boundaries in one period as well and cannot be used with different years, although the visualization of the resulting map is quite interesting.

SRQ-20 is only a screening tool consisting of 2-3 domains. [6,12] There are some symptoms that may not be accommodated in SRQ, for example dysphoria.[12] There are suggestion to use differences cut-off between men and women [13]. But the results of this survey can be exploited because there are many facts that state that there is a relationship between symptoms of mental disorders with the utilization of health services, job performance and people who have these symptoms should be given early treatment so as not to develop into more severe disorders. [14–16]. Although widely used in the community and primary health services, the detection of symptoms of mental disorders for malaria patients is not appropriate with a simple questionnaire such as SRQ.[17] Population groups with higher socio-economic and higher education are more responsive to mental health so it needs to be considered when drawing conclusions.[18] In comparison, in Malaysia the health survey used GHQ to assess mental health status and the questionnaire was similar to SRQ in the form of a screening tool.[19] Whereas in India the mental health survey used a more diagnostic tool namely MINI 7[20]

4. CONCLUSION

This analysis results are consistent with previous Riskesdas results. Although it seems inconsistency of MED prevalence but the pattern of symptoms is the same. In general population is dominated by somatic symptoms while in people who experience MED are generally dominated by depressive symptoms. We suggest a further observation for people with depression symptoms because most likely they are experiencing MED therefore it can be managed or treated earlier by preventing stress and mental disorders. In the provinces of West Nusa Tenggara, East Nusa Tenggara, Central Sulawesi, South Sulawesi, which always have a high prevalence, promotion and prevention programs are needed therefore MED does not continue to a mental disorder.

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