Levels of Depression and Treatment Gap Overview in 3 Regions in Indonesia

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Abstract---Depression was one of the leading cause number of person lived with disability and related to premature death. Most depression first occurred in young age. Attention needs to be given to mental health problems in Indonesia starting from the young. Objective: To analyze the relation between level of depression and demographic and socio-economic factors. Another purpose were to get the description of treatment seeking and the reasons not taking medical treatment. Method: The study was cross-sectional studies in 3 districts/cities in Indonesia. Depression measurement was used the MINI (The Mini-International Neuropsychiatric Interview) instrument, analyzed the level of depression was used the ICD-10 guide to Classification of Mental and Behavioral Disorder Diagnostic criteria for research. Result: Participants were 2,173, 8.5% had depression in the last 2 weeks. If measured further, the proportion of mild depression was 3.4% and 8.5% the classified category of moderate to severe depression. There is a significant correlation between the variables of age, marital status, education, and socio-economic status with the level of depression (p<0.05). There were around 66.3% who suffered depression were not seeking medical treatment with main reason felt depressed were not need treated. Of those who were depressed and seek medical treatment there were around 76.5% who prefer went to Puskesmas/clinics/general practitioner practices to seek medical treatment. Conclusion: Demographic and socioeconomic were correlated with depression except gender and occupation variables. The women had job with low income more tendency was depressed. It should to be of particular concern. The people who were depressed were not seek medical treatment, most of them had main reason that depression no need to be treated medically.

Keywords: depression, level of depression, treatment seeking

I. INTRODUCTION

Globally, depression is the top ten major cause of the large number of years a person lives with disabilities (years lived with disability).[1] Furthermore, depression was one of the mental disorders that was the cause of premature death of suicide, the number of sufferers is estimated to exceed 322 million in 2015, most of whom live in the Asian region.[2] The magnitude of the number, attention should be given to mental health problems.

The study results of research and publications sourced from the Global Burden Disease (GBD) study in 2000, 2010 and 2015 conducted by WHO stated that the prevalence of depression in the global population was 4.4%, more commonly found in women at 5.1% and in men male by 3.6%, mostly in adults to the elderly at 7.5% (age 55-74 years) and also have begun to exist in younger and lower levels of adolescence[2]. In line with the results of the WHO study in 2017 a systematic study of 116 literature on the prevalence of depression, the results were more or less the same, global prevalence of depression was 4.7% (4.4-5.0%).[3]

Measurement of depression in Indonesian national survey (Basic Health Reasearch/Riskesdas) in 2018 using The Mini-International Neuropsychiatric Interview (M.I.N.I)[4] and get a national prevalence of depression for people aged over 15 years was 6.1%.[5] The highest number was 12.3% in Central Sulawesi Province at and the lowest was 1.4% in Jambi Province. Based on that survey, people who were depressed diagnose in the last 2 weeks, only 9% were medically treated. That means, there were still around 90% of those who were depressed not taking medication or taking medical drugs.

There was still gaps in the number and distribution mental health workers in Indonesia. Indonesia has 51 mental hospitals in 27 of 34 provinces.[6] Based on health workers, the psychiatric ratio was 0.29 per 100,000 populations, only higher from Laos and Myanmar in the Southeast Asian region.[7] In addition, only 32.5% of government general hospitals had mental services and only 8.1% had mental inpatient services.[8] Based on this data, in this analysis we haved seen how the levels of depression correlate with

demographic and socio-economic factors, and how the description of treatment seeking and the reasons why they had not taking medical treatment.

II. MATERIAL AND METHOD

A. Procedure

Cross sectional design was used for this study. The population study was aged over 15 years in Bogor City (West Java Province), Jombang Regency (East Java Province), and Tojo Una-una Regency. Samples were individuals aged over 15 years both male and female elected in their region.

Sampling was carried out by stratified random sampling[9]. In each regency / city has grouped sub-districts based on proportion people who were depressed so that the districts had depression below and above average. Amount of sub-districts were randomly proportional selected. From each of these sub-districts, one village selected by random. Sampling frame was obtained in each sub village, then a number of households and individuals are randomly selected.

Inclusion criteria were men and women aged 15 years or more who live as permanent residents in sub-districts in the selected provinces. Exclusion criteria were experiencing severe memory and communication difficulties so that they cannot provide information or answers that represent themselves accurately. The measurement tool was assessed by MINI, especially the sub-themes Depression in the last 2 weeks measured 10 questions using yes or no answered. For gaps treatment seeking additional 2 questions.

The purpose of this analysis was to know correlation between the level of depression and demographic and socio-economic factors. Besides that, we also want to get an idea how to seek treatment and what the reason were not used medical treatment. The Demographic and economic factors were age, sex, marital status, education, employment and family economic status.

B. Data Analysis

Proportion of depression was obtained by MINI-depressed instruments had frame time in the last 2 weeks used 10 questions (Yes / No). The answer was aggregated following the MINI analysis guide into 2 categories, depression and no depression. While the level of depression was analyzed used the ICD-10 Classification of Mental and Behavioral Disorder Diagnostic criteria for research guidelines,[10] criteria into 3 categories were no depression, mild depression, and moderate to severe depression.

Demographics and economic were independent variables, that it affects the dependent variable. Demographic variables consist of age, sex, marital status, education and job. Age of respondent divided into 3 group categories, namely the young age group (15-24 years), productive (25-60 years) and the old age group (over 60 years). Marital status divided into 3 categories, namely single, married and separated / divorced (dead & alive).

The education was the subject has achieved highest education, divided into 3 groups, first who was not pass from elementary school included never formal education, second who have finished junior or senior high school, and those who have completed their first diploma or above. The Job was subjects had activity for make money, divided into 3 categories, namely subjects whose daily activities has not produced the money (housewives included), subjects who had entrepeunerial work or private jobs or goverment employee, and subjects who the work of farmers / fishermen / laborers.

The economic status was ownership of houses and household items in family. Economic status divided into 3 groups, namely the high (rich) group, the moderate (capable) group, and the low (poor) group. Principal Component Analysis[11] was used for clustered socioeconomic status. The proportion of medical treatment was asked if the subject had at least one symptom of depression (total 10 questions) and they were made self-medication or visit to health facility.
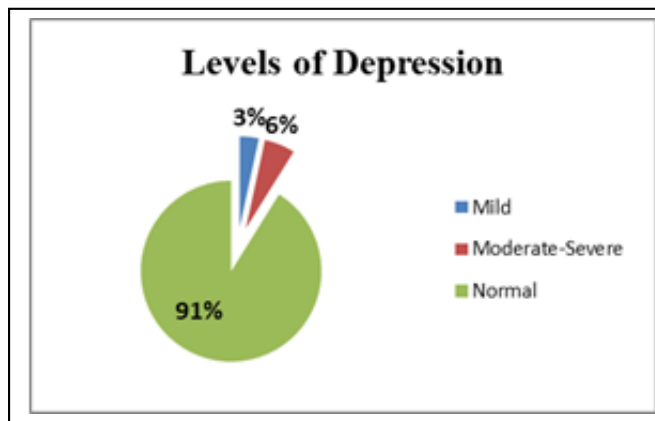
III. RESULTS

The proportion of depression and the level of depression who people above 15 years old in Bogor City, Jombang Regency and Tojo Una-Una Regency were seen in Table 1 and Figure 1.

TABLE 1: PREVALENCE OF DEPRESSION IN THE LAST 2 WEEKS IN 3 REGIONS, INDONESIA 2017

Depression Status	%	n=2,173
Yes	8.5	184
No	91.5	1,989

Based on interviewed 2,173 participant in three regions in Indonesia used MINI instrument, the proportion depression was 8.5%. While if analyzed based on the level of depression used ICD-10 guide for Research, the proportion became 8.9% which was 5.5% moderate to severe depression and was 3.4% mild depression (Figure 1).

Figure 1. Levels of Depression in 3 Districts / Cities in Indonesia in 2017

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The 2,173 participant data were anlayzed after eliminating invalid or incomplete questionnaire. Most participant were productive age groups (n=1,502, 69.1%), younger adolesecent age group were 370 (17%), and eldery age group were 301 (13.9%). Analyzed by sex, women were more than men (40.7%). Marital status of participants were marry (72.9%), single (17.5%) and divorced (9.6%).

Participant reported almost half had graduated junior and high school (46.7%); graduated first diploma nad above (34.5%); and never school until not completed primary school (18.8%). The percentage of participant had not work was 39.7% (included housewives), while 36.8 percent participants profession as farmer or fishermen or labor worker and other informal; 23.5 percent work as entrepeneur or civil servants or private sectors. More than half the participants (63.2%) with socioeconomic moderate, 35.4 percent poor, and 1.4% reported rich people. (Table 2)

TABLE 2. UNIVARIATE ANALYSIS RESULTS CHARACTERISTICS IN 3 AREAS IN 2017

Characteristics	%	n=2173
Age Group		
15-24 years	17	370
25-60 years	69.1	1,502
> 60 years	13.9	301
Sex		
Male	40.7	884
Female	59.3	1,289
Marital Status		
Single	17.5	380
Married	72.9	1,585
Divorce (life/death)	9.6	208
Education		
Not graduated primary school	18.8	409
Graduated from junior high school	46.7	1,015
Graduated from D1+	34.5	749
Job		
Not working	39.7	863
Self-employed/private/civil servants	23.5	510
Farmer/fishermen/labor/other	36.8	800
Social Economic		
Rich	1.4	30
Moderate	63.2	1,373
Poor	35.4	770

A. Correlate Level of Depression with Social Demographic

The results of the bivariate analysis of the relationship between the characteristics of the respondents and the level of depression showed that the age group was statistically significant. This means that between age groups have different levels of depression. Based on the mild level of depression, the teenage age group had the largest proportion who experienced mild depression compared to the elderly age group and the productive age group. But at moderate to severe levels of depression, the proportion is greatest in the elderly group compared to adolescents and productive. Based on the

chi square test, there was a relationship between the age group and the level of depression of respondents with p value 0.002.

According to the relationship between marital status and the respondent's level, it is seen that those who were divorced (live / die) were more depressed, both mild, moderate to severe depression than those with married and unmarried status. Based on the chi square statistical test, there is a relationship between marital status and the level of depression of respondents with p value 0.010.

The relationship between the level of depression and education shows that there is a pattern of lower education which will make the tendency to experience moderate to severe depression. This relationship is statistically significant by looking at the value of p Chi Square of less than 0.001. In addition, socio-economic status has an influence on the occurrence of depression. Low socioeconomic (poor) respondents had a higher proportion of moderate to severe depression compared to middle and rich economies. The complete picture of all variables related to the level of depression is shown in table 3.

TABLE 3. RESULTS OF BIVARIATE ANALYSIS OF THE CHARACTERISTICS OF RESPONDENTS WITH DEPRESSION LEVELS

Variable	Depression			Total n	P Value
	Normal n (%)	Mild n (%)	Moderate-Severe n (%)		
Age Group					**0.002**
15-24 years	346 (93.5)	16 (4.3)	8 (2.2)	370	
25-60 years	1,373 (91.4)	45 (3.0)	84 (5.6)	1.502	
> 60 years	262 (87.0)	12 (4.0)	27 (9.0)	301	
Sex					0.093
Male	820 (92.8)	25 (2.8)	39 (4.4)	884	
Female	1,161 (90.1)	48 (3.7)	80 (6.2)	1,289	
Marital Status					**0.010**
Single	363 (95.5)	9 (2.4)	8 (2.1)	380	
Married	1,435 (90.5)	55 (3.5)	95 (6.0)	1,585	
Divorce (life/death)	183 (88.0)	9 (4.3)	16 (7.7)	208	
Education					**>0.001**
Not graduated primary school	352 (86.1)	18 (4.4)	39 (9.5)	409	
Graduated from junior high school	924 (91.0)	35 (3.4)	56 (5.5)	1.015	
Graduated from D1+	705 (94.1)	20 (2.7)	24 (3.2)	749	
Job					0.131
Not working	789 (91.4)	28 (3.2)	46 (5.3)	863	
Self-employed/private/civil servants	477 (93.5)	14 (2.7)	19 (3.7)	510	
Farmer/fishermen/labor/other	715 (89.4)	31 (3.9)	54 (6.8)	800	
Social Economic					**0.005**
Rich	27 (90.0)	1 (3.3)	2 (6.7)	30	
Moderate	1,276 (92.9)	36 (2.6)	61 (4.4)	1,373	
Poor	678 (88.1)	36 (4.7)	56 (7.3)	770	

B. Treatment Seeking in People with Depression

People with at least one depression symptom were had treatment seeking that reported in this analyzed. Definition of treatment seeking were they had ever been medical cured or taking depressant medication until recovery them.
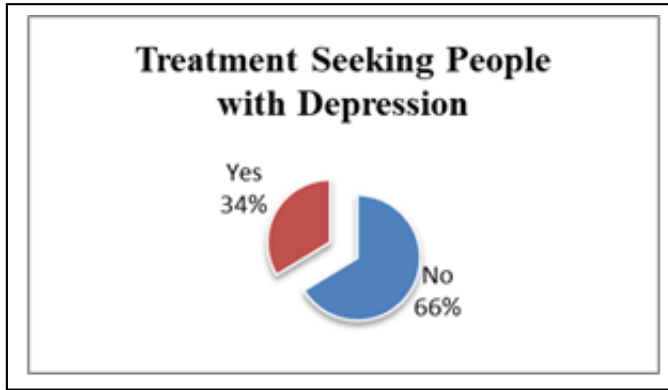

Figure 2. Proportion of Treatment Seeking in People with Depression in 3 Districts / Cities in Indonesia in 2017

Based on figured 2 most of people with depression had not to medically treatment seeking (66.3%) and only was 33.7 percent ever to seek professional to cure them. In other word, only 3 by 10 person with depression had treatment seeking behavior. Most of them decided to health public center (puskesmas) or clinic or medical general practitioners facilitates to recovery from depression. They decided mental hospitalized only was 1.5 percent. There was 15 percent chosen midwives/nurses/ Posyandu, and buying medication included to traditional healer. (Figured 3)
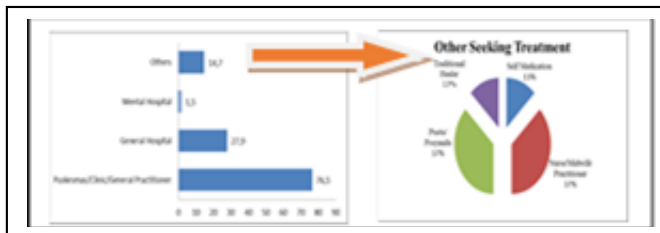

Figure 3. Type of health facilities in people with Depression in 3 districts / cities in Indonesia in 2017

People with depression but had not used medically treatment was 66.3 percent. They have many reason why they did it. Most of three by eight reason were symptoms of depression no need medication (79.2%), feeling depressed not medical sickness (38.5%), and they did not know mental health services (20.3%). The detailed was Figure 4.
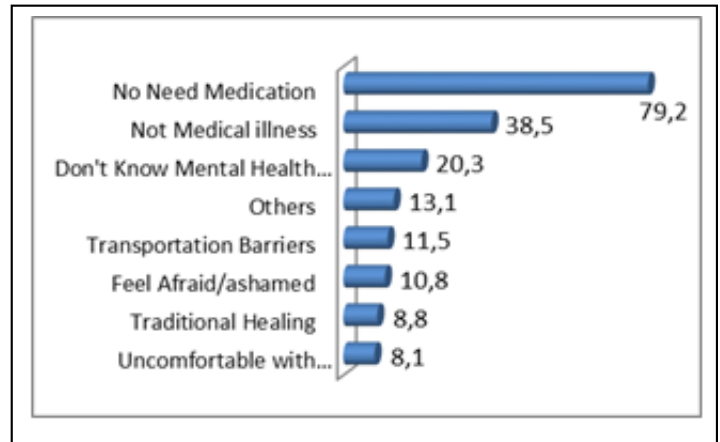

Figure 4. The reason of people with Depression not used medically treatment

IV. CONCLUSION

In this study the proportion of mild depression was 3.4% and moderate to severe depression was 5.5% in three districts/cities in Indonesia. Demographic factors such as age, marital status, education and socioeconomic status have a significant relationship with the incidence of depression. Sex and occupational variables were not statistically proven to be related to depression, but the tendency of depression was more prevalent among women and low income jobs can be of particular concern. Most people with depression do not seek medical treatment for the main reason feeling depressed did not need to be treated. Depressed people who took medical treatment mostly prefer go to puskesmas or clinics or general practitioner practices as the main place to seek medical treatment.

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