



Personal and Perceived Stigmas in Adolescents toward Peers with Mental Disorders in West Sumatra Indonesia

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Abstract

BACKGROUND: The number of mental disorders in adolescents tends to increase every year in Indonesia. However, the stigma of mental disorders is a crucial factor that makes teens hide their mental health problem (MHP).

AIM: This study aimed to examine personal and perceived among adolescents toward peers with mental disorders (PMD) and to identify predictors of these constructs.

METHODS: This quantitative study with a cross-sectional design recruited 977 adolescents using a cluster random sampling technique. Personal and perceived stigma was assessed using the Peer Mental Health Stigmatization Scale. Sociodemographic, the experience of MHP, and experiences of seeking-help professionals for perceived MHP were also collected in this study. Independent t-test, ANOVA, and multivariable general linear models was used for analysis.

RESULTS: The study shows that the perceived stigma ($M = 36.62$, standard deviation [SD] = 5,183) tends to be higher than personal stigma ($M = 39.49$, SD = 5,495). Higher personal stigma was predicted by a lower level of academic ($p < 0.01$), lower levels of family monthly income ($p < 0.01$), and higher perceived stigma ($p < 0.001$). Higher perceived stigma was predicted by younger age ($p < 0.05$), lower levels of academic ($p < 0.05$), higher levels of family monthly income ($p < 0.05$), and higher personal stigma ($p < 0.001$).

CONCLUSION: The findings suggest that stigmatization towards PMD is common among adolescents. The development of intervention programs should be directed at reducing negative perceptions of the environment. The identified predictors must also be considered in the development of future anti-stigma programs.

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Introduction

Adolescence (age 10–19 years) is a transition period from childhood to adulthood, characterized by multiple physical, emotional, and social changes [1]. Adolescence is an emotionally turbulent time of development [2]. In this phase, mental disorders tend to become more apparent [3]. An estimated 10–20% of adolescents globally experience mental disorders [1]. The highest prevalence was occurring at age 18 years (42.9%) and the least occurring at age 15 years (15.1%). Of 69.2% of mental disorders found in adolescents are schizophrenia spectrum and other types of psychotic disorders [4]. Nevertheless, most of them rarely access mental health services [5].

Most adolescents reported that stigma is a significant barrier to seeking help professionals [6]. Visiting a mental health professional means acknowledging that they had a mental health problem (MHP), who are considered weak and inferior individuals [7]. The stigma of mental disorders puts

adolescents at risk for not seeking help for themselves or helping peers dealing with psychological distress [8]. The stigma of mental disorders is a crucial factor that makes teens hide their MHP [9].

Mental disorder is a profoundly stigmatized health issue [10]. One study found that mental disorders were 1.54 times more likely to be stigmatized than other conditions [11]. Another study revealed that four in five people with a mental disorder are stigmatized by their environment [12]. The stigma of mental disorders is the result of four components processes: cognitive (labeling and stereotyping), emotional (prejudice), behavioral (discrimination), and structural (the accumulated organizational policies and practices) causing injustice to people with a mental disorder. In general, mental disorders stigma has two subscales, namely personal stigma and perception of societal stigma or using the term perceived stigma. Personal stigma is the personal agreement for stigmatization toward a peer with mental disorders. Meanwhile, perceived stigma is an adolescent's awareness about mental

disorder stigma that applies in social towards peers with mental disorders (PMD) [13]. Both personal and social stigmas can be a barrier for adolescents to access mental health services [14].

The stigma of mental disorders among adolescents can jeopardize their future [6]. The stigma of mental disorders causes demoralization to sufferers, decreased social support, decreased self-esteem, decreased intention to seek help, and eliminates employment opportunities for people with mental disorders [15]. Most of the stigma reported experiences reported by adolescents are rejected both directly and indirectly by friends, teachers, family, and neighborhoods, such as being ignored, underestimated, insulted, and humiliated [16]. Perceived public stigma refers to discrimination and devaluation by others, and anticipated self-stigma refers to the negative stereotypes about people who seek help [17]. The culmination of the stigmatizing mental disorders is discrimination and the reduction of rights in living life activities such as other humans [15].

Mental disorders among adolescents in Indonesia tend to increase every year [18]. On the other hand, there is an increase in public awareness and strengthening of the mental health system in Indonesia [19]. Based on the phenomenon, there was greater interest in exploring the stigma of mental disorders among adolescents. Available evidence about the increasing trend of mental disorders in adolescents in Indonesia and public awareness of mental disorders shows the need to conduct specific research related to stigma among adolescents in the cultural context of West Sumatra, Indonesia. Therefore, the purpose of this study: (1) To investigate the stigma of mental disorders as well as the personal stigma and perceived stigma by adolescents toward their PMD; (2) to investigate the factors associated with the mental disorders stigma, personal stigma and perceived stigma by adolescents towards their PMD.

Methods

Participants

We conducted a cross-sectional design in Adolescents of senior high schools in Padang, West Sumatra Province, Indonesia, from February to March 2019. The cluster random sampling was used in this study to determine four schools in Padang as data collection places. We take 4 of 11 sub-districts in the Padang area based on the highest number of mental disorders. Then, from these four sub-districts, we got four public senior high schools randomly based on the highest number of students.

Measures

Stigma toward a peer with mental disorders

We used the 24-item Peer Mental Health Stigmatization Scale (PMHSS) [13] to measure the stigma of participants towards PMD. The PMHSS has two subscales, namely, 12 items related to perceived stigma and 12 items associated with personal stigma. Participants responded to each question on a Likert scale with provisions for negative items ranging from “disagree completely” (1) to “agree” (5), and for actual items ranging from “agree completely” (1) to “disagree completely” (5). Participants were able to achieve a mean score on PMHSS items ranging from 24 to 120, where the neutral score was 72. While on each subscale ranging from 12 to 60, the neutral score was 36 [20]. The lower the score, the higher stigma of participants towards PMD.

Sociodemographic

The sociodemographic information about age (early, middle, and late adolescent), sex, the school grade (grade 10, 11, or 12), parents' education (primary school or less, junior high school, senior high school, or college), family monthly income (< 2.4 IDK “low income” category, 2.4–5.0 IDK “middle income” category, or > 5.0 IDK “high income” category), the status of the house (with both parents or no with both parents), and area of residence (urban or suburban) collected in these study. We also collect information about MHP experience such as anxiety, depression, stress, anger without cause, sadness (ever or never), and the experience of participants seeking help professional for MHP that were felt (ever or never).

Procedures

Ethical approval for the study was obtained from the Faculty of Medicine Andalas University's ethics committee (No: 459/KEP/FK/2018), as well as the Education Authorities of the Province West Sumatra, Indonesia. The target population included students from eight senior high schools in Padang West Sumatra. The participants were recruited at school and conducted from February to March 2019. We obtained parental consent through classroom teachers [21], and students who returned the survey were considered to have received parental consent and were willing to become research participants. Data were collected using a questionnaire package that included sociodemographic, mental disorders stigma, history of MHP, and experience of seeking help professional. If participants had difficulty answering the questions, an enumerator would help them.

Data analysis

Descriptive statistics used to determine the frequency distribution of characteristics and stigma of participants. Independent t-test and ANOVA were used to compare total stigma, personal stigma subscales, and perceived stigma subscales across groups of demographic characteristics. Multivariable general linear models (GLMs) were also used to determine the socio-demographics most associated with each stigma outcome. All results were considered statistically significant at $p < 0.05$. The pragmatic model of stigma was obtained from the final result of GLMs using a backward elimination process where insignificant characteristics were eliminated gradually to reach significant ($p \leq 0.05$). Posteriori pairwise t-test was used to compare adjusted least-squares means within groups.

Results

Sociodemographic of participants

Table 1 presents the sociodemographic of the respondents. Most of respondents consisting of middle-aged adolescents (90.9%, $n = 977$), half of whom were female (57.4%, $n = 977$), and the school grade was even across the level 10 (34.3%, $n = 977$). More than half of the participants came from urban areas (62.1%, $n = 977$), and most participants were living

Table 1: Characteristics of the Participants

Characteristics	N	n	Percentage
Age, in years	977		
12–14 (early adolescent)		36	3.7
15–17 (middle adolescent)		888	90.9
18–20 (late adolescent)		53	5.4
Sex	977		
Male		416	42.6
Female		561	57.4
Academic years	977		
Grades 10		335	34.3
Grades 11		330	33.8
Grades 12		312	31.9
Father's education	967		
Primary school or less		85	8.7
Junior high school		245	25.1
Senior high school		483	49.4
College		154	15.8
Mother's education	966		
Primary school		89	9.1
Junior high school		228	23.3
Senior high school		524	53.6
College		125	12.8
Family monthly income (million)	966		
< 2.4 IDR		335	34.7
2.4–5.0 IDR		425	44.0
> 5.0 IDR		206	21.3
Live with both parents	972		
Yes		871	89.2
No		101	10.3
History of MHP	973		
Never		796	81.8
Ever		177	18.2
Seeking help professional	900		
Never		774	86.0
Ever		126	14.0
Area of residence	977		
Urban		607	62.1
Suburban		370	37.9

IDR: Indonesian rupiah. MHP: Mental health problems.

with both parents (89.2%, $n = 972$). Approximately 21.3% ($n = 977$) of participants reported a family monthly income were high-income (IDR 5,000,000 or high per month). Most participants (81.8%, $n = 973$) reported never had MHP, and 86% ($n = 900$) had never sought professional help.

Mental disorder and difference stigmas in socio-demographic groups

Table 2 provides an overview of the mean scores of total stigmas and the mean scores of personal and perceived stigmas. The overall mean scores of the total stigma of participants were 76.11 (standard deviation [SD] = 9.522), with scores ranging from 24 (very high stigma) to 120 (very low stigma). On the personal stigma subscale, the mean score was 39.49 (SD = 5,495), with scores ranging from 12 (very high personal stigma) to 60 (very low personal stigma). On the perceived stigma subscale, the mean score was 36.62 (SD = 5,183), with scores ranging from 12 (very high perceived stigma) to 60 (very low perceived stigma).

The differences in mean scores of stigmas in the characteristic group can also be seen in the above in Table 2. There is a significant difference mean scores total stigma across level of academic years ($p = 0.016$), level of mothers' education ($p = 0.015$), history of MHP ($p = 0.000$), and area of residence ($p = 0.000$). On the personal stigma subscale, there is a significant difference mean scores stigma across level of academic year ($p = 0.016$), father's education ($p = 0.000$), mother's education ($p = 0.000$), family monthly income ($p = 0.002$), living with both parents ($p = 0.001$), history of MHP ($p = 0.000$), seeking help professional ($p = 0.034$), and area of residence ($p = 0.000$). While on the perceived stigma subscale, significant differences in the mean scores of stigmas were found only in the sexes ($p = 0.033$).

Final pragmatic models of mental disorder stigmas

Tables 3 and 4 illustrates the nature of the association between each significant characteristic with the stigma outcome after controlling for the effects of the other characteristic retained in the final model. These results are obtained from multivariable GLMs analysis using Type III sum of squares for each characteristic. Higher personal stigma was predicted by a lower level of academic ($p < 0.01$), lower levels of family monthly income ($p < 0.01$), and higher perceived stigma ($p < 0.001$). Higher perceived stigma was predicted by younger age ($p < 0.05$), lower levels of academic ($p < 0.05$), higher levels of family monthly income ($p < 0.05$), and higher personal stigma ($p < 0.001$).

Table 2: Mental disorders stigma and characteristics-related mental disorders stigma

Category	Total stigma			Personal stigma			Perceived stigma		
	Mean ± SD	t or F	p	Mean ± SD	t or F	P	Mean ± SD	t or F	P
Stigma	76.11 ± 9.522			39.49 ± 5.495			36.62 ± 5.183		
Age, in years									
12–14	74.22 ± 7.754	0.284	0.753	37.75 ± 4.198	2.332	0.098	36.47 ± 4.513	0.476	0.621
15–17	74.26 ± 8.696			37.86 ± 5.284			36.40 ± 4.867		
18–20	73.34 ± 8.933			36.26 ± 4.864			37.08 ± 5.114		
Sex									
Male	75.71 ± 9.214	-1.116	0.264	37.40 ± 5.058	-1.909	.057	36.06 ± 4.867	-2.236	0.033*
Female	76.40 ± 9.742			38.04 ± 5.349			36.73 ± 4.850		
Academic years									
Grades 10	73.74 ± 8.020	4.165	0.016*	37.45 ± 4.872	4.145	0.016*	36.28 ± 4.602	2.105	0.122
Grades 11	73.60 ± 8.621			37.43 ± 4.998			36.17 ± 4.769		
Grades 12	75.38 ± 9.286			38.47 ± 5.773			36.90 ± 5.213		
Father's education									
Primary school	73.64 ± 8.336	1.604	0.187	37.69 ± 5.087	7.033	0.000***	35.94 ± 5.286	0.913	0.434
Junior high school	75.10 ± 8.381			38.74 ± 5.340			36.36 ± 4.622		
Senior high school	74.20 ± 9.090			37.80 ± 5.530			36.40 ± 5.031		
College	73.25 ± 8.077			36.29 ± 4.452			36.96 ± 4.619		
Mother's education									
Primary school	73.74 ± 7.480	3.486	0.015*	37.83 ± 5.144	8.926	0.000***	35.91 ± 5.044	0.824	0.481
Junior high school	75.58 ± 8.367			38.87 ± 5.402			36.71 ± 4.541		
Senior high school	74.07 ± 8.927			37.74 ± 5.165			36.32 ± 4.997		
College	72.62 ± 8.431			35.90 ± 4.728			36.72 ± 4.683		
Family monthly income									
< IDR 2.4	73.59 ± 8.104	1.330	0.265	36.98 ± 4.606	6.161	0.002**	36.61 ± 4.824	0.477	0.621
IDR 2.4–5.0	74.54 ± 8.809			38.27 ± 5.494			36.27 ± 4.885		
>IDR 5.0	74.59 ± 9.419			38.10 ± 5.595			36.49 ± 5.023		
Live with both parents									
Yes	74.07 ± 8.618	-1.516	0.130	37.58 ± 5.131	-3.420	0.001***	36.39 ± 4.814	0.956	0.339
No	75.46 ± 9.913			39.46 ± 5.859			36.00 ± 5.391		
History of MHP									
Never	73.75 ± 8.662	-3.692	0.000***	37.29 ± 5.172	-6.375	0.000***	36.46 ± 4.774	0.177	0.859
Ever	76.40 ± 8.642			40.01 ± 4.945			36.38 ± 5.322		
Seeking help professional									
Never	74.63 ± 8.677	1.811	0.070	38.08 ± 5.298	2.118	0.034*	36.55 ± 4.885	0.943	0.346
Ever	73.11 ± 9.124			37.00 ± 5.292			36.11 ± 4.946		
Area of residence									
Urban	75.19 ± 8.963	4.692	0.000***	38.86 ± 5.494	9.181	0.000***	36.33 ± 5.003	-0.908	0.364
Suburban	72.61 ± 7.923			35.59 ± 4.215			36.62 ± 4.633		

MHP: Mental health problem, *p < 0.05, **p < 0.01, ***p < 0.001.

Table 3: Linear regression analyses for sociodemographic characteristics predicting mental disorders personal stigma

	Model 1		Model 2		Model 3		Model 4		Model 5	
	B	β	B	β	B	β	B	β	B	β
Personal characteristic										
Age	0.108	0.019	0.109	0.019	0.222	0.040	-0.178	-0.032	-0.187	-0.033
Gender	0.504	0.046	0.519	0.047	0.597	0.054	0.482	0.044	0.426	0.039
Academic year	0.764	0.114*	0.759	0.113*	0.642	0.096*	0.778	0.116**	0.771	0.115**
Parent's education										
Father's education			0.243	0.037	0.127	0.019	0.052	0.008	0.029	0.004
Mother's education			-0.153	-0.023	-0.241	-0.036	-0.330	-0.049	-0.309	-0.046
Family monthly income					0.613	0.082*	0.715	0.096**	0.703	0.094**
Perceived stigma							0.606	0.573***	0.605	0.573***
Family/friend/other with PMD									-0.437	-0.048
Constant	28.626		28.397		27.133		11.361		11.918	
R ² (Adjusted R ²)	0.019 (0.015)		0.019 (0.014)		0.025 (0.018)		0.349 (0.344)		0.351 (0.345)	
R ² change	0.019		0.019		0.025		0.349		0.351	
F	5.646		3.523		3.788		67.971		59.990	
Sig F	0.001**		0.004**		0.001**		0.0001***		0.0001***	

*p < 0.05, **p < 0.01, ***p < 0.001.

Discussion

Mental disorder stigmas

This study can consider as the first study in Indonesia that focused on personal and perceived stigmas among adolescents towards PMD. This study is designed to advance understanding of mental disorder stigma among adolescents in Indonesia. The first aim of the study was to investigate mental disorder stigma as well as the personal stigma and perceived stigma by adolescents towards a PMD. In general, this study found that the vast majority of adolescents are relatively stigmatizing PMD. We found that the perceived stigma tends to be higher than personal stigma. The mean score of perceived stigmas was 36.62 (SD = 5.183),

while the mean score of personal stigma was 39.49 (SD = 5.495), with scores ranging that might be achieved on the personal stigma subscale and perceived stigma from 12 (very high stigma) to 60 (very low stigma).

This result supports the few previous studies also found higher levels of perceived compared to personal stigma [22], [23], [24]. These results may reflect the social desirability bias, which makes participants more willing to assess people's attitudes toward people with mental disorders than reflecting their beliefs [10]. Social desirability and the tendency of one to portray own's views as positive might affect the perceived stigma scores compared to personal stigma scores [23]. These results provide facts about the views and behavior of adolescents if they experience mental disorders. Therefore, we suggest anti-stigma programs

to reduce perceived stigma among adolescents through the growing self-awareness of MHP.

Mental disorder stigma and related factors

The second aim of the present study was to identify the factors associated with the mental disorder's stigma, as well as the personal stigma subscale and perceived stigma subscale. Our research found that sex and area of residence are factors significantly associated with stigmas. On the personal stigma subscale, a significant factor related to the stigma is sex, mother's education, history of MHP, and area of residence. Meanwhile, there were no significant factors related to perceived stigma. These findings indicate that the need to adjust the anti-stigma program is based on a set of sociodemographic factors.

The result of the study found that there are significant differences revealed from male and female sex in personal stigma, while no significant differences between males and females on the perceived stigma. Male had significantly higher mean scores than females on the personal stigma subscale. These results are consistent with previous studies that male gender was associated with significantly higher personal stigma towards people with mental disorders [20], [22], [25]. Asian male adolescent has a more negative view of people who ask for mental health professional help [22]. Female adolescents were significantly more regarding psychological openness than male adolescents. Also, female adolescents had a significantly higher propensity for seeking help than male adolescents [26], based on these results, targeting anti-stigma programs tailored to groups of male adolescents, such as internet-based health education.

This study also found that a mother's education level is one of the factors that influence the total stigma and personal stigma among adolescents, while there is no related significantly to perceived stigma. This study provides an understanding that mother with higher educational levels was associated with higher personal stigma among adolescents. This finding is consistent with previous studies in Arab, as reported by Dardas *et al.* (2017), with higher

educational levels and social concerns regarding their community's status [24]. Negative views about mental disorders inherent in society make those with higher education more sensitive to accept people with mental disorders. In other words, higher education people assumed they would be more respected and valued in society than those who are lower education. Besides, parents' educational levels influence parental attitudes in childcare, affecting adolescent attitudes and behavior [27]. In West Sumatra, Indonesia, known as the Minangkabau and matrilineal culture, mothers play a significant role in the family and childcare. Therefore, adolescents in West Sumatra Indonesia may get more parenting from mothers in the family. In adult women, they have a higher stigma against mental illness [28]. Thus, it is necessary to develop a school-based anti-stigma program that involves a family's role to increase the mental health literacy of the family.

Our study also provides an understanding of the history of MHP as one of the factors associated with personal stigma. Adolescents who reported never had a MHP had higher personal stigma than those who had a history of MHP. This finding is in line with previous research reported by Dardas *et al.* (2017), where adolescents who did not have current or former MHP had a higher personal depression stigma than those who had a history of MHP [24]. This problem may be related to the lack of knowledge about mental health issues despite having higher interactions with people who have MHP. For this reason, we recommend developing and implementing anti-stigma programs at schools that can increase adolescents' knowledge and awareness of mental health, such as campaigns, and contact-based health education with people with mental disorders.

The finding of this study also revealed that adolescents in the suburbs had higher personal stigma than urban adolescents. However, no differences in personal stigma were found. This result is inconsistent with the study previously in adolescents reported by Dardas *et al.* (2017) [24], which revealed that the area of residence was significantly related to perceived stigma, but no significant relationship with personal stigma. Further, this study showed that a higher

Table 4: Linear regression analyses for sociodemographic characteristics predicting mental disorders perceived stigma

Personal characteristic	Model 1		Model 2		Model 3		Model 4		Model 5	
	B	β	B	β	B	β	B	β	B	β
Age	0.663	0.125**	0.693	0.130**	0.661	0.124*	0.539	0.101*	0.543	0.102*
Gender	0.192	0.018	0.212	0.020	0.190	0.018	-0.137	-0.013	-0.113	-0.011
Academic year	-0.221	-0.035	-0.256	-0.040	-0.224	-0.035	-0.577	-0.091*	-0.574	-0.090*
Parent's education										
Father's education			0.091	0.015	0.123	0.020	0.054	0.009	0.064	0.010
Mother's education			0.123	0.019	0.147	0.023	0.280	0.044	0.270	0.042
Family monthly income					-0.170	-0.024	-0.506	-0.071*	-0.501	-0.071*
Personal stigma							0.549	0.580***	0.550	0.582***
Family/ friend/other with PMD									0.194	0.022
Constant	28.036		27.345		27.695		12.800		12.081	
R ² (Adjusted R ²)	0.011 (0.007)		0.012(0.006)		0.012 (0.006)		0.341 (0.335)		0.341 (0.335)	
R ² change	0.011		0.012		0.0.012		0.341		0.341	
F	3.245		2.114		1.832		65.461		57.339	
Sig F	0.021*		0.062		0.090		0.0001***		0.0001***	

*p < 0.05, **p < 0.01, ***p < 0.001.

perceived stigma found in adolescents living in the city center. However, when compared with studies in the adult group reported by Simmons *et al.* (2015) [28], the results of the study are in line: that women who are far from urban areas have a higher level of personal stigma than women living in urban areas. We assume this result may be related to the limited access to information and the availability of mental health services in suburban areas, which causes people living in suburban areas to be less informed about mental health. Thus, the recommended intervention for this problem is the active role of psychiatric nurses in community health centers to promote and provide mental health education in adolescents.

Conclusion

In conclusion, the study results show that most adolescents report that they will see or treat someone differently if they are known to have MHP. This finding has implications for designing interventions to reduce personal stigma and perceived stigma among adolescents and promoting treatment initiation among those with MHP. We recommend the development and implementation of anti-stigma programs, such as internet-based and school-based health education and campaigns tailored to adolescents to reduce stigma and increase the initiation of adolescent mental health care. The collaboration of psychiatric nurses with community nurses is also recommended in promoting mental health in the community to improve public and family literacy about mental health.

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