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ORIGINAL RESEARCH

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EXPOSURE TO MASS MEDIA AS A DOMINANT FACTOR INFLUENCING PUBLIC STIGMA TOWARD MENTAL ILLNESS BASED ON SUNRISE MODEL APPROACH

Ni Made Sintha Pratiwi^{1*}, Lilik Zuhriyah², Lilik Supriati³

¹Postgraduate Program, Faculty of Medicine, Universitas Brawijaya, Indonesia

²Department of Public Health, Faculty of Medicine, Universitas Brawijaya, Indonesia

³Department of Nursing, Faculty of Medicine, Universitas Brawijaya, Indonesia

*Corresponding author:

Ni Made Sintha Pratiwi

Master nursing student at Postgraduate Program, Faculty of Medicine, Universitas Brawijaya
Jl. Veteran, Ketawanggede, Kec. Lowokwaru, Kota Malang, Jawa Timur 65145, Indonesia

Email: sintha.libra@gmail.com

Abstract

Background: The person suffering mental disorders is not only burdened by his condition but also by the stigma. The impact of stigma extremely influences society which is considered to be an obstacle in the mental disorder therapy. Stigma as the society adverse view towards severe mental disorders is related with the cultural aspect. The interaction appeared from each component of nursing model, called sunrise model, is a model developed by Madeleine Leininger that connects with the wide society views about severe mental disorders condition.

Objective: The aim of this study was to analyze the factors related to public stigma and to find out the dominant factors related to public stigma about severe mental illness through sunrise model approach in Indonesia.

Methods: This study used observational analytical design with cross sectional approach. There were 150 respondents contributed in this study selected using purposive sampling technique. Spearman Rank and multiple logistic regression were used for data analysis.

Results: The results showed a significant relationship between mass media exposure, spiritual well-being, interpersonal contact, attitude, and knowledge with public stigma about mental illness. The result of multiple logistic regression revealed that the low exposure of mass media had the highest OR value at 26.744.

Conclusion: There were significant correlations between mass media exposure, spiritual well-being, interpersonal contact, attitude, and knowledge with public stigma toward mental illness. Mass media exposure was a dominant factor influencing public stigma toward mental illness.

Keywords: mass media exposure; public stigma; stigma toward mental illness; sunrise model

INTRODUCTION

Based on Indonesia's Basic Health Research data in 2007, the number of people with severe mental illness reached 4.6 per mile and decreased to 1.7 per mile in 2013. East Java is one of the provinces in Indonesia having a high number of people with severe mental illness, which were 3.1 per mile in 2007 and decreased to 2.2 per mile in 2013 ([Risksedas, 2007](#)). Despite the decline, the prevalence is

still high compared to the national prevalence. Severe mental illness such as schizophrenia is the most commonly found type in East Java. This mental illness may cause problems in individuals, families, and society. Within the social environment, the main existing problem is the problem of stigma ([Efendi & Makhfudli, 2009](#)). In general, people still believe that severe mental illness is a curse

and weakness of faith owned by someone. The society tends to bring family members with severe mental illness to seek a *dukun* rather than to the Psychiatric Hospital ([Simanjuntak, 2008](#); [Wicaksana, 2008](#)).

People suffering from severe mental illness are not only burdened by their condition but also by the stigma associated with mental illness itself ([Saldivia et al., 2014](#)). An online survey conducted from 2014 to 2015, involving 596,712 respondents from 229 countries in the world, proves that the stigma associated with mental illness is higher in developing countries rather than in developed countries. The result shows around 16% respondents felt that people who suffer from mental illness were more violent than others ([Seeman, Tang, Brown, & Ing, 2016](#)). Stigma could hinder a therapy, become a barrier to health services access and affect the self-esteem of people who suffer from mental illness. In addition, stigma also obstructs the social interactions between people with severe mental illness and their environment, affecting their quality of life ([Gearing et al., 2012](#); [Saldivia et al., 2014](#)).

Stigma as a negative view of society toward severe mental illness is associated with cultural aspects ([Moncrieff, Byrne, & Crawford, 2012](#); [Sismulyanto, Supriyanto, & Nursalam, 2015](#)). The nursing theory supporting the cultural aspect is Madeleine Leininger's Culture Care: Diversity and Universality Theory through a model known as the sunrise model. This theory involves cultural factors consisting of seven components, i.e. technology, religion and philosophy, kinship and social, cultural values and beliefs, political and legal concerns, economics, and education. The interaction of each component of culture and social structure is related to the social views regarding severe mental illness in the society ([McEwen & Wills, 2011](#)).

The factors associated with stigma when linked to socio-cultural components in sunrise models include exposure to mass media, spiritual well-being, interpersonal contact,

attitudes, and knowledge. Several previous studies have shown inconsistent results on factors related to public stigma toward severe mental illness. These conflicting results are very interesting to be re-examined using the nursing theory approach. Stigma in society is still a quite difficult problem to be handled and become one of the obstacles to cure people with mental illness and society reluctance to come to the mental health services.

Based on the results of the preliminary study in Sukonolo Village, one of the villages in Malang regency, the number of people with mental illness is high. The severe mental illness prevalence in this village is 6.29%. In this village, there is a mixture of two cultures i.e. Java and Madura. From the preliminary study, the researchers found that society still has stigma toward severe mental illness. From the results of interviews with 10 people, as many as 70% said they were afraid to interact with people with severe mental illness and considered people with severe mental illness should be avoided and impossible to cure. There are two patients with severe mental illness in Sukonolo Village who are put in "*pasung*" or physical restraint. Based on the problem, the researcher was interested to conduct a research regarding factors related to public stigma and to find out the dominant factor related to public stigma toward people with severe mental illness through Sunrise Model approach in Sukonolo Village, Malang Regency.

METHODS

Study design

This research was a quantitative research. The design used was observational analytic with the cross-sectional approach. This research was conducted in Sukonolo Village, Malang Regency Indonesia from December 18th, 2017 to January 11th, 2018. Independent variables included mass media exposure, spiritual well-being, interpersonal contact, attitude, and knowledge. Dependent variable was public stigma toward mental illness. Study

hypothesis was mass media exposure, spiritual well-being, interpersonal contact, attitude, and knowledge had significant relationship with public stigma toward mental illness.

Sample

The number of samples was 150 respondents selected by purposive sampling technique. Inclusion criteria were person living close to people with mental illness (maximum of 5 houses), aged ≥ 18 years, person who can read and write, and willing to be a respondent.

Measurement

This study used a questionnaire of respondents' data covering age, gender, education, occupation, marital status, income, and health information exposure. This study used the questionnaire as the instrument, namely CAMI (Community Attitudes toward the Mentally Ill), SKAPS (Schizophrenia knowledge, attitudes and perceptions scale), and SWBC (Spiritual Well-Being Scale), which has been translated into Indonesian language. Knowledge and attitude was measured using SKAPS, which was developed by (Reddy and Smith, 2006) and has been modified by the author. Spiritual well-being was measured using the SWBC which was developed by Paloutzian and Ellison in 1982, while public stigma was measured using CAMI developed by Martin Taylor and Michael Dear in the 1970s (Girma et al., 2013; Paloutzian, Bufford, & Wildman, 2012). The author has also modified it in order to adjust to the current conditions of the community in the research location. Meanwhile, mass media exposure was measured using a questionnaire sheet containing the frequency of people getting negative information about mental disorders from television / radio / internet / newspapers / magazines in the last four weeks obtained by watching or listening. At the same time, interpersonal contacts were measured using a questionnaire containing the frequency of people interacting with people suffering severe mental disorders within the last four weeks.

The validity of instrument for the data collection in this research used Pearson Product Moment for knowledge, attitude, spiritual well-being, and public stigma. The research instrument in this study was tested on 30 respondents so that the r_{table} value used was 0.361. The validity test was conducted in Bantur Village for people who met the inclusion and exclusion criteria. The validity test was performed once and the result of the questionnaire of knowledge was originally consisted of 12 questions with nine valid questions and the value of r_n was greater than 0.361. Three invalid questions were discarded because those nine valid questions mentioned before have already represented each knowledge indicator. The author performed identical treatment for the attitude, spiritual well-being, and public stigma questionnaire. The attitude questionnaire consisted of 12 valid questions and one invalid question. The spiritual well-being questionnaire was initially consisted of 20 question items. But it turned out that only 18 items of questions were declared valid because it has $r_n > 0.361$. On the other side, there were 33 items of public stigma questionnaire's questions were stated valid out of 40 question items. Similar to the knowledge questionnaire; the attitude, spiritual well-being, and public stigma questionnaire was only conducted once as well. The invalid questions from each questionnaire were discarded because each indicator in the questionnaire was already represented by the valid questions.

The reliability test of attitude, spiritual well-being, and public stigma questionnaire in this research was conducted using statistical test by comparing the value of r_n with constant value (0.6). Cronbach's alpha was set as the r_n value for the reliability test. The alpha coefficient formula used for the knowledge questionnaire was the Kuder-Richardson-20 or KR-20 formula because it was dichotomous kind of question. If the value of Cronbach's alpha and coefficient of KR-20 > 0.6 , then the instrument is declared as reliable. It is similar to the validity test where the reliability test was also conducted in Bantur Village for people who met the inclusion and

exclusion criteria. Based on the results of reliability test conducted on the 30 respondents, the coefficient KR-20 value found for the knowledge questionnaire was 0.735. Thus, the questionnaire of knowledge was declared as reliable because it has a coefficient value $KR-20 > 0.6$. Cronbach's alpha's value in the attitude, spiritual well-being, and public stigma questionnaire are 0.772, 0.734, and 0.867 respectively. All questionnaires are stated reliable and can be used as an instrument in this study because it has met the determined requirements.

Ethical consideration

This study was approved by the Ethics Committee on Faculty of Medicine, Universitas Brawijaya with letter number: 415 / EC / KEPK-S2 / 12/2017. Written informed consent was obtained from all respondents. Respondents filled in questionnaires accompanied by a researcher or research

assistant. The data collection process took approximately 30 - 45 minutes for each respondent.

Data analysis

The bivariate analysis used Spearman Rank test with $\alpha \leq 0.05$ to determine the relationship between mass media exposure, spiritual well-being, interpersonal contact, attitude, and knowledge with public stigma toward mental illness. Multivariate analysis used multiple logistic regression tests to determine the dominant factor influencing public stigma toward mental illness.

RESULTS

The result of the respondents' characteristics taken from Sukonolo Village, Malang Regency is shown in Table 1.

Table 1 Respondents' Characteristics (N = 150)

Characteristics	Frequency (n)	Percentage (%)
Age		
20 - 30	40	26.7
31 - 40	69	46
41 - 50	36	24
51 - 60	5	3.3
Total	150	100
Gender		
Male	72	48
Female	78	52
Total	150	100
Education		
Primary School	10	6.7
Junior High School	41	27.3
Senior High School	79	52.7
University	20	13.3
Total	150	100
Occupation		
Unemployed	22	14.7
Labor	56	37.3
Civil servant	17	11.3
Entrepreneur	55	36.7
Total	150	100
Marital Status		
Married	145	96.7
Single	5	3.3
Total	150	100
Income		
< 1,500,000.00 IDR	66	44
1,500,000.00 IDR - 2,500,000.00 IDR	63	42
2,500,000.00 IDR - 3,500,000.00 IDR	21	14
Total	150	100

Characteristics	Frequency (n)	Percentage (%)
Health Information Exposure		
Never	124	82.7
Once	26	17.3
Total	150	100

The survey result presented in Table 1 showed that the majority of the respondents were female (52%) aged 31-40 years old (46%) with their most recent education being at senior high school (52.7%). Most of them were labor with an income less than 1,500,000.00 IDR and never get health

information about mental illness. The result of bivariate analysis between mass media exposure, spiritual well-being, interpersonal contact, attitude, and knowledge with public stigma toward mental illness are shown in Table 2.

Table 2 Results of Bivariate Analysis

Variables	Public stigma	
	r	p
Exposure to mass media	0.653	0.000
Spiritual well-being	0.548	0.000
Interpersonal contacts	0.353	0.011
Attitudes	0.688	0.000
Knowledge	0.543	0.000

Table 3 Results of Multivariate Analysis

Variables	p-Value	OR	Hosmer and Lemeshow	Pseudo R Square
Moderate Knowledge	0.033	5.290	$\chi^2 = 3.629$ df = 8	0.588
Adequate Knowledge	0.012	8.518		
Moderate Spiritual Well-being	0.025	6.829	Sig.= 0.889	
Adequate Spiritual Well-being	0.014	8.150		
Moderate Exposure to Mass Media	0.006	14.673		
Low Exposure to Mass Media	0.001	26.744		
Moderate Interpersonal Contact	0.495	1.434		
Adequate Interpersonal Contact	0.001	17.130		
Moderate Attitudes	0.083	4.743		
Favorable Attitudes	0.001	22.142		

The result of bivariate analysis presented in Table 2 showed that the exposure of mass media, spiritual well-being, interpersonal contact, attitudes, and knowledge have a value of $p \leq 0.05$ so that H_0 is rejected. It can be concluded that there is a relationship between exposure to mass media, spiritual well-being, interpersonal contact, attitudes, and knowledge with the public stigma toward severe mental illness in Sukonolo Village, Malang Regency. The result of multivariate analysis is shown in Table 3.

The result of multivariate analysis presented in Table 3 showed that the variables with a value of $p \leq 0.05$ is variable of knowledge, exposure to mass media, and spiritual well-

being. The statistical value of Hosmer and Lemeshow's goodness of fit test was 3.629 with probability-significance at 0.889 which was bigger from p -value = 0.05. From this result, regression model was considered suitable to be used to predict public stigma towards severe mental disorders. R Square value shows the value of 0.588 or equal to 59% which means that public stigma variable can be explained 59% by independent variable namely exposure to mass media, spiritual well-being, interpersonal contact, attitudes, and knowledge, while 41% is explained by other variables outside this research model. Low exposure to mass media has the highest OR value of 26.744. Based on the results of multiple logistic regression

analysis, it can be concluded that exposure to mass media variable is the most dominant independent variables associated with the public stigma toward severe mental illness in Sukonolo Village, Malang Regency based on sunrise model approach.

DISCUSSION

The results of this study indicated that most respondents with high exposure to mass media category tend to have a high stigma as well. Only two respondents with high exposure to mass media have a low stigma. There are several respondents with moderate exposure to mass media who are found to have a low stigma toward severe mental illness. It can certainly be influenced by many factors, including the level of education and age of respondents ([Sulistiyani, Pamungkas, & Sutarjo, 2015](#)). Based on the univariate analysis result in this research, 52.7% respondents participated from Sukonolo Village are high school graduate while 13.3% of them are college graduate. Compared to people who received higher educational level, those who received lower educational level might tend to stigmatize severe mental disorders. People who received higher educational level tend to have wider knowledge and to be more open-minded toward new information they received from the media ([Nawkova et al., 2012](#)). High school as the majority of the educational level of the respondents is responsible to the result obtained from this research that the public stigma towards severe mental disorders in Sukonolo Village is considered high at 59.3% of the overall community. Another factor such as respondents' age also had an impact to the result. The older someone is, the more mature his or her mental age development would usually be. Thus, there would a bigger probability for them to receive the information better. Most of the respondents' age in this research was ranged from 31 to 40 years old.

The mass media is part of the technology, which is included as one of the socio-cultural

factors in Madeleine Leininger's sunrise model with a quite strong impact in shaping public judgment or opinion. Public perception is shaped by information submitted in mass media both print and electronic media containing negative information about severe mental illness. Information delivered through various print and electronic media can be easily accepted by the public. Negative information forms the stigma of people with severe mental illness so that people have a fear to interact with people with severe mental illness and have difficulty in receiving health information about mental health ([Waddell & Taras, 2012](#)).

Most people in Sukonolo Village receive information from television because it is the most common media owned by people of Sukonolo Village. The respondents of Sukonolo Village are often received information that mental disorders are predominantly presented as a dangerous disorder. The information is often received from the news related to violence committed by people with mental disorders to their family and to the closest people around the patients. People in Sukonolo Village have watched the news related to violence committed by people with mental disorders around two until three times in the average of the past four weeks. The news covered some violence such as harming the family member with sharp object, damaging the house by throwing stones, and the news about people with mental disorders going on rampage on the public street. Those kinds of information have made people in Sukonolo Village concern when dealing with people who suffer from mental illness.

When associated with the sunrise model in Madeleine Leininger's Culture Care: Diversity and Universality Theory, the aspect of mass media as part of technology factors certainly plays a role in shaping a view of health conditions. Information technology allows individuals to acquire, transmit, and exchange information with other individuals. Technological factors are one of the factors that influence the individual cultural-based

opinion. Mass media becomes one means to disseminate information from a different culture to other cultures to form a new view ([Leininger & Mcfarland, 2002](#)). From the analysis of exposure to mass media indicators, the result shows that information related to detrimental mental illness become the most information obtained by the public through the mass media. Other studies have also mentioned that mass media tend to show the negative side of mental illness ([Owen, 2012](#)). Based on the explanation, it can be concluded that exposure to mass media is a factor associated with public stigma toward severe mental illness in Sukonolo Village, Malang Regency.

This study shows that spiritual well-being has a significant relationship with public stigma toward severe mental illness in Sukonolo Village, Malang Regency with $p\text{-value}=0.000$. These results are in line with several studies conducted to determine the relationship between spiritual well-being and stigma toward severe mental illness. Research conducted by Azarsa et al. states that the higher the level of spiritual well-being is, the more positive the view for people with severe mental illness will be ([Azarsa, Davoodi, Markani, Gahramanian, & Vargaeei, 2015](#)). Consequently, people with high spiritual well-being tended to have a lower stigma. Spiritual well-being as one socio-cultural factor is one of the most important factors in human health and healthy lifestyle. A person with high spiritual well-being is capable of using inner resources and strengths such as anger, denying, guilt, shame, or confusion. An individual is able to improve coping mechanisms, overcome depression and emotional distress, and most importantly is able to improve healthy behaviors and feelings of peace to avoid negative attitudes ([Young & Koopsen, 2007](#)).

Interpersonal contacts are found to have a significant relationship with public stigma toward severe mental illness as can be seen from $p= 0.011$. The results in this study are consistent with studies conducted in the United States involving 605 respondents that

a contact record with people with mental illness through the activities carried out together or have a neighbor with mental illness is a factor that affects the stigma toward severe mental illness ([Brown, 2012](#)). Contact as one of the socio-cultural factors has an influence in reducing prejudice that occurs between groups primarily through direct contact. Interacting with people with mental illness through positive activities can make one knows the condition of mental illness directly and sees mental illness from a different perspective by listening to stories or experiences directly from the patient ([P. W. Corrigan & Bink, 2016](#); [Nelson, 2016](#); [Okpaku, 2014](#)).

The result of analysis carried for each interpersonal contact indicator showed that doing activities all together as the highest contact indicator. People in Sukonolo Village come from two different cultures: Madurese and Javanese. Based on the contact with people who suffer from mental disorders, the differences on those two different cultures are not really apparent. Most of the respondents in this research made contacts with people who suffer from mental disorders by doing some activities together such *arisan* (rotating savings and credit association which are usually performed by women association in a community), doing a community service around Sukonolo Village, having a communal Quran reading and taking a part in preparing Posyandu (the neighborhood health center) of Psychiatry (Posyandu Jiwa) every Monday on the third week of the month. There are two people who suffer from mental disorders in Sukonolo Village working as farm workers in which they are hired by their own neighbor. Unfortunately, there are also two people with severe mental disorders who are put in "*pasung*" or physical restraint. That action needed to be taken by the family because they are afraid that the patients would go on rampage and frightened people around the village. People in the village are rarely seen to make contact with people who suffer from mental disorders who are put in *pasung* because most of them are frightened.

In Sukonolo Village, there is a relationship between attitudes and public stigma toward severe mental illness with p -value = 0.000. From the result of the univariate analysis, 43.4% of respondents have attitude level in a moderate category related to mental illness. The results of this study are in line with research conducted in the United States that attitudes are one of the factors that determine the stigma of mental illness ([P.W. Corrigan, Powell, & Michaels, 2014](#)). Fripp & Carlson study, which involved 129 Africans and Americans, states that people's attitudes toward severe mental illness are related to the public stigma toward severe mental illness ([Fripp & Carlson, 2017](#)). This statement is reinforced by research conducted in India, which stated that attitudes toward severe mental illness had a close connection with stigma. The more positive or better the attitudes of someone about the condition of mental illness is, the more positive the person's views related to mental illness will be ([Kathryn et al., 2016](#)). Consequently, the stigma will be lower as well. Conversely, if someone has negative or bad attitudes about mental illness, it will cause higher public stigma which in the end can cause a negative impact for people with mental illness ([Upadhyay, Srivastava, Singh, & Poddar, 2016](#)).

Society knowledge about severe mental illness has a significant relationship with public stigma toward severe mental illness in Sukonolo Village, Malang Regency. The results of this study are in line with research conducted on 111 societies in Greece that there is a relationship between knowledge about severe mental illness with public stigma especially on authoritarianism aspect which is one of stigma indicator ([Tzouvara & Papadopoulos, 2014](#)). Another study in China involving 1,016 respondents suggests that knowledge about mental illness is an important factor affecting stigma. The lack of society knowledge about severe mental illness is related to the high stigma of mental illness in the society ([Chan et al., 2015](#)).

The result of the multivariate analysis shows that exposure to mass media is the most correlation factor with public stigma toward severe mental illness in Sukonolo Village, Malang Regency with OR value of 26.744 compared to four other variables: spiritual well-being, interpersonal contact, attitudes, and knowledge. The results of this study are in line with Sampogna et al. study which states that mass media is one of the most influential factors on society's view of the severe mental illness ([Sampogna et al., 2017](#)).

Ma argues that mass media is a major factor in the formation of stigma toward severe mental illness in the community ([Ma, 2017](#)). Mental health has become one of the most common public health issues in the community and the mass media is the most abundant source of information about mental health. These research results are in line with the theory by Moncrieff et al. that the mass media greatly affect the perspective of society toward mental illness ([Moncrieff et al., 2012](#)). The role of mass media is enormous in the stereotype's construction. Mass media tend to display the figure of mental illness as a very dangerous threat. More often frequency of a person exposed to negative information will make the view of people tend to be negative so that the stigma will be higher. Thus, it can be concluded that exposure to mass media is the most associated factor related to public stigma toward severe mental illness.

As the most dominant factor toward public stigma regarding mental disorders in Sukonolo Village, mass media should have been able to deliver more positive information about mental disorders. Mass media is considered as the main source for the community to get information about mental disorders. Most people in Sukonolo Village stated that they have never received any of health education regarding mental disorders. Posyandu Jiwa is open every Monday on the third week of the month but unfortunately the center has not established the program for mental health education even though it is assisted by midwives and nurses from Puskesmas Bululawang (Bululawang's

Community Health Center). The current health center is still focused on treating the sick patients and it has not covered those people who are vulnerable to particular risk or even the healthy people yet. The lack of information regarding mental disorders obtained by people in Sukunolo Village leads most of them to be exposed to the information from media such as television.

CONCLUSION

There was a significant relationship between exposure to mass media, spiritual well-being, interpersonal contacts, attitudes, and knowledge with public stigma toward severe mental illness in Sukunolo Village, Malang Regency, Indonesia. Exposure to mass media is the most dominant factor related to public stigma compared to other factors. Further research is expected to analyze the differences between public stigmas about mental illness from different areas (urban and rural) based on sunrise model approach.

Declaration of Conflicting Interest

None declared.

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Author Contribution

All authors contributed equally in this study.

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