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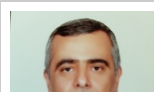
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The Culture-Based Cadre Empowerment Module on The Ability to Early Mental Health Detection: An Experimental Study in Indonesia

Abstract

Introduction: The incidence of mental disorders continues to rise annually, a trend that is exacerbated by the inability to detect early mental health issues in the community and the inadequate reporting of such conditions. The purpose of this study is to assess the efficacy of interventions that distribute culture-based cadre empowerment modules in order to improve cadres' early awareness of mental health issues.

Method: In this experimental study, 102 mental health personnel were divided into an intervention group (n=51) and a control group (n=51). Culture-based cadre empowerment training via discussion forums and modules constituted the intervention. The participants were evaluated by independent assessors both prior to randomization (T0) and in a posttest following eight weeks of intervention (T1).

Results: The posttest findings and follow-up assessments, which were analysed statistically, indicate a significant improvement in the cadres' capacity to identify, oversee, mobilise, and document mental health issues in the community. The p-value was found to be less than 0.05. In contrast to the control group, there is typically no observed increase.

Conclusions: Culturally based cadre empowerment is an effective intervention to increase mental health cadres' ability to detect mental health in the community. Culture-based cadre empowerment is a short, easy-to-use, group-based intervention and is easy to implement in various environments.

Keywords: cadre empowerment; culture-based; mental health; community, early detection.

INTRODUCTION

Mental health and psychosocial issues constitute a substantial fraction of the global population (1). The prevalence of individuals with mental health and behavioural issues is consistently increasing each year. Additionally, these disorders have a very intricate and multifaceted nature (2). In order to enhance educational and psychosocial functioning among individuals with mental health issues within the community, it is imperative to promptly identify and provide efficient treatment for these conditions (3). Early detection and prompt treatment of a disease can reduce the prevalence of the infection by shortening the duration of a disease, which is a form of secondary prevention (4). Early detection is an effort to recognize mental health conditions that are disrupted or unhealthy early (5). Early detection and immediate mental health treatment will minimize physical and psychological complications so that globally, it will have an impact on reducing cases of mental disorders.

According to Muslims in Mubarta (2011), mental health in Indonesia is 6.55%. Data from 33 psychiatric hospitals in Indonesia show that there are 2.5 million mental patients in Indonesia, with the prevalence in East Java showing a fairly high number, namely 6.5% of people with mental disorders (6). The user's text is empty. According to the Lamongan District Health Office's initial survey in March 2020, the prevalence of mental diseases has been steadily rising. In 2019, there were 2,081 individuals with mental disorders, while in 2020, the number increased to 3,051. Just 25% of mental health professionals are engaged in the early identification of mental problems (7). The level of proficiency among cadres in identifying mental diseases in society is insufficient, with just 40.3% demonstrating the ability to recognise mental illnesses. However, 53.3% of cadres possess adequate knowledge in this area (8).

The World Health Organisation (WHO) defines mental health as the state of well-being in which individuals are able to achieve their full potential, effectively cope with life's challenges, and make meaningful contributions to society. Residential location. Mental health is intricately linked to an individual's level of depression. Depression is a mood disorder characterized by a loss of feelings of control and subjective experiences of severe distress. There are currently no definitive statistics available in Indonesia pertaining to the prevalence of melancholy. In 2020, according to the World Health Organization, depression will rank second in terms of global burden of disease, following ischemic heart disease. This disorder also includes anxiety disorders in patients. Anxiety is a condition that makes a person feel uncomfortable, restless, afraid, worried, and restless, accompanied by various physical symptoms. The American Psychological Association states these physical symptoms include sweating, shaking, dizziness, and a fast heartbeat. Anxiety is a natural thing that everyone can feel. Anxiety is considered a part of everyday life (9).

Many problems with mental disorders in society have not been properly detected; this could be caused by the role of cadres not being optimal in recognizing the signs and symptoms of people with mental disorders in society (10). This issue demonstrates that cadres must be expanded in order to address the aforementioned concerns in a comprehensive manner. The early identification of mental disorders is additionally significantly impacted by cultural factors, including but not limited to language, society, and stigma. The community's approach to mental disorder cases is significantly shaped by cultural factors, including social stigma and feelings of remorse (11). In order to address this issue, it is imperative to enhance the capacity of cadres rooted in specific cultures to conduct early detection of mental disorders through empowerment. According to the findings of a study by Subba et al. (2017), a cadre demonstrates greater proficiency in early detection of mental disorders within the community. Additionally, cadres responsible for the early detection of mental disorders must assimilate into the local culture (12).

Health education can be carried out in various ways, including learning media modules. Health education through the use of module media is very appropriate to be given to

families of mental disorders patients because the module can be used by families whenever needed and makes families not dependent on health workers whose numbers and abilities are limited to visit families considering the large number of sufferers who need to be seen, and the distance between them (13). In close proximity, in addition to additional responsibilities for families of individuals with mental disorders. Humans require health above all else in order to live a prosperous and fulfilling existence. Health is a determining factor in how the wheel of existence turns for each individual. A state of health encompassing the physical, mental, spiritual, and social spheres empowers an individual to lead a socially and economically fruitful existence.(14).

Early detection of mental health issues is the subject of numerous studies, but the scope is restricted to early detection via handwriting duration parameters (15), a combination of early detection and individual prevention (16); Riemannian Geometry on Electroencephalogram Brain Signals (17), detection by Deep Visual Perception(18); In addition, early detection within the athlete group was conducted (19). Nevertheless, the extent to which mental health cadres contribute to the early identification of mental disorders in the general population has not been investigated. This subject matter offers a compelling, pertinent, and practical synopsis for community managers to deliberate upon the matter of cadre empowerment, with the aim of enhancing cadres' capacity to identify mental health concerns within the community.

METHODS

This research uses an experimental study design with a pre-post method from March to May 2023. Researchers have determined respondents who do not match the inclusion and exclusion criteria set to avoid research bias. The cadres who participated in this study possessed a minimum of two years of experience in the field of early mental health detection within the community. Researchers developed the culture-based cadre empowerment module in light of the findings from phase 1 research. Community mental health professionals have reviewed and analyzed the module to ensure that it is appropriate for intervention. Effective communication, fundamental concepts of cadre empowerment based on culture, personal evaluation of cadres, and evaluation of mental health issues comprise the module's five subjects. Standard operating procedures and the flow of reports regarding mental health issues in the community constitute the ultimate subject matter. The intervention was carried out over four meetings; each discussed one issue, except the cadres received two topics at the last meeting. The duration of the intervention is 100 minutes per meeting and is carried out offline by observing health protocols. All groups filled out a pretest questionnaire providing cultural-based cadre empowerment module interventions. At the end of the session, all groups will fill out a posttest questionnaire to measure cadres' ability to detect mental health in culturally based communities.

This study included mental health cadres from the Lamongan region as participants. 102 cadres comprise the participant pool, of which 51 comprise the control group and 51 comprise the intervention group. Participants had to have been mental health cadres with the Lamongan district health service for a minimum of one year in order to meet the inclusion criteria for this research. The exclusion criteria, on the other hand, were cadres who exhibited physical health issues. Respondents who attend the module training for a single session will be considered for inclusion in the research, as per the dropout criteria.

This research used a purposive sampling technique by including mental health cadres from the Lamongan area as participants. The participant group consisted of 102 cadres, of which 51 were the control group, and 51 were the intervention group. Participants must have been in mental health care at the Lamongan District Health Service for at least one year to meet the inclusion criteria for this study. Meanwhile, the exclusion criteria are cadres who show physical health problems. According to the dropout criteria, respondents who attended the module training for one session will be considered for inclusion in the study.

The data collection technique in this study used a questionnaire to assess culturally rooted mental health problems through a survey consisting of 25 multiple-choice questions that evaluated early detection capabilities. (a) Supervision, (b) mobilization, (C) referral and (d) documentation. with standard deviation values based on the following:

$$s = \sqrt{\frac{n \sum_{i=1}^n x_i^2 - (\sum_{i=1}^n x_i)^2}{n(n-1)}}$$

Information:

s² : Variant

n : Sample size

s: Standard deviation

x : Average

x_i : The i-th value of x

The standard deviation value is a value used to determine the distribution of data in a sample and see how close the data is to the mean value. The greater the standard deviation value, the more varied the values on the item or the less accurate they are with the mean, conversely, the smaller the standard deviation, the more similar the values on the item or the more accurate they will be with the mean.

Researchers developed a questionnaire referring to Kanter's fundamental ideas about cadre empowerment. A five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) was used. The interprofessional collaboration measure demonstrated internal consistency, as indicated by Cronbach's alpha values of 0.79 for the pretest and 0.83 for the posttest.

The initial data analysis technique used was descriptive statistics. The Pearson correlation was also used to investigate the relationship between the study variables. To ensure the normality of the data, the Kolmogorov – Smirnov test was carried out, and results were produced indicating that the data did not conform to normality. Thus, potential differences between groups before intervention were analyzed using the Mann-Whitney test. Primary analysis is the second data analysis. This study aimed to examine the impact of the intervention from two perspectives. The Wilcoxon test was carried out on each group to ascertain whether there were intragroup differences in the data collected before and after the test. In addition, after the intervention, group differences between the two groups were analyzed using the new Mann-Whitney test. SPSS 24.0 software was used for data processing.

RESULTS

Table 1. Qualities of the populace

Characteristics	Category	Treatment		Control	
		n	%	n	%
Gender	Female	43	84.3	35	68.6
	Male	8	15.7	16	31.4
Long time as a cadre	< 2 years	4	7.8	22	43.1
	> 2 years	47	92.2	29	56.9
Age	25-35 y.o	5	9.8	6	11.8

	36-45 y.o	24	47.1	24	47.1
	46-60 y.o	21	41.2	21	41.2
	>60 y.o	1	2	0	0
Education	Elementary School	3	5.9	1	2.0
	Junior High School	10	19.6	7	13.7
	Senior High School	31	60.8	26	51.0
	College	7	13.7	17	33.3
	Total	51	100	51	100

Table 1 shows that most respondents were female and had been cadres for more than two years, with the highest age being 36-45 years old and the highest educational level of cadres being high school graduates.

Table 2. Mental Health Cadre Ability Variable Category

Indicator	Category	Pretest				Posttest			
		Intervention		control		Intervention		control	
		n	%	n	%	n	%	n	%
Risk Detection Ability for Psychosocial Problems	Not enough	3	5.9	39	76.5	0	0	36	70.6
	Enough	40	78.4	1	2.0	5	9.8	4	7.8
	Good	8	15.7	11	21.6	46	90.2	11	21.6
Ability to detect behavior or signs of mental symptoms	Not enough	2	3.9	29	56.9	0	0	25	49.0
	Enough	48	94.1	12	23.5	2	3.9	16	31.4
	Good	1	2.0	10	19.6	49	96.1	10	19.6
Supervision Ability	Not enough	12	23.5	35	68.6	0	0	33	64.7
	Enough	34	66.7	5	9.8	1	2.0	7	13.7
	Good	5	9.8	11	21.6	50	98.0	11	21.6
Driving Ability	Not enough	11	21.6	36	70.6	0	0	34	66.7
	Enough	30	58.8	4	7.8	10	19.6	6	11.8
	Good	10	19.6	11	21.6	41	80.4	11	21.6
Referral Capabilities	Not enough	4	7.8	37	72.5	0	0	34	66.7
	Enough	46	90.2	3	5.9	2	3.9	6	11.8
	Good	1	2.0	11	21.6	49	96.1	11	21.6
Documentation Capabilities	Not enough	14	27.5	40	78.4	0	0	34	66.7
	Enough	37	72.5	0	0	0	0	6	11.8
	Good	0	0	11	21.6	51	100	11	21.6

Table 2 shows that out of 51 respondents in each group. The intervention group could detect risks of psychosocial problems, the ability to see behavior or signs of mental symptoms, the ability to supervise, the ability to mobilize, and the ability to document in the sufficient category, while the control group at the pretest was in the poor class. The pretest results of the intervention group exhibited sufficient diversity. Subsequently, on the posttest conducted subsequent to the intervention, all indicators exhibited an improvement to the satisfactory level. Conversely, upon conducting the assessment or posttest on the control group, no substantial alterations in the competencies of the cadres were observed.

Table 3. Mann Whitney Test Results

Variable	Group	Mean Rank	P-value	Std.Deviation
Risk Detection Ability for Psychosocial Problems	Treatment	65.26	0.025	13.06±81.62
	Control	37.74		

Variable	Group	Mean Rank	P-value	Std.Deviation
Ability to detect behavior or signs of mental symptoms	Treatment	60.41	0.897	
	Control	42.59		
Supervision Ability	Treatment	59.58	0.070	
	Control	43.42		
Driving Ability	Treatment	61.16	0.372	
	Control	41.84		
Referral Capability	Treatment	63.07	0.244	
	Control	39.93		
Documentation Capabilities	Treatment	60.51	0.816	
	Control	42.49		

DISCUSSION

The findings of the study indicated that the majority of participants were female and possessed a standard high school diploma. Consistent with the findings of Marlita et al. (2022), the majority of cadres involved in early detection of mental health issues are female. Consistent with the findings of Swain et al. (2020), which suggest that female health cadres contribute significantly to initiatives aimed at enhancing physical and mental health in the general population, it is anticipated that cadres will possess the knowledge and competencies necessary to conduct early detection of mental health issues (20).

This research is consistent with the findings of Marlita et al., 2022, which indicate that the majority of cadres engaged in initiatives to identify early mental health care have completed secondary education. Nevertheless, the results of this study do not align with the cadres' age, which tends to be younger or within the early adulthood range (20-30 years) as opposed to the late adulthood period (21). However, the duration of one's tenure in a cadre significantly impacts their capacity to implement preventive and promotive measures for psychosocial issues; this is correlated with the level of expertise possessed by health workers and cadres (22).

The capability of cadres to conduct early detection in this study is consistent with the findings of Grant et al. (2021), who found that early mental disorder detection improved following intervention; furthermore, the community can accept intervention methods tailored to cultural and contextual mental health issues (23). Moreover, the participation of mental health cadres in program implementation is a crucial element that must be reinforced through training initiatives (21). An additional study found a noteworthy correlation between cadre training and their involvement in the implementation of mental health programmes. Additionally, the attitudes and knowledge of the cadres regarding the early detection of mental disorders in the Tanjungsari District must be incorporated (24).

Monitoring or supervision, according to Marlita, is the most influential or dominant factor regarding the function of cadres in implementing the mental health early detection programme (21). Emotional support for individuals with mental disorders can be rendered through management supervision through home visits, attentive hearing to patient grievances and apprehensions, and provision of moral fortitude and encouragement (25). One way in which cadres' capacity to fulfil their responsibility as mobilizers can be evaluated is through their participation in the provision of counselling services to social groups that are at a heightened risk of developing mental disorders. Cadres actively participate in community-level initiatives aimed at enhancing mental health and diminishing the social stigma surrounding mental disorders in Indonesia. This is attributed to the formidable drive that mental health cadres possess (26). When it comes to the treatment and rehabilitation of patients with mental disorders, psychoeducation is vital. Psychoeducation provides guidance to family members and individuals with mental illnesses regarding the characteristics, trajectory, and outlook of the illness (27).

It is increasing the ability of cadres to make referrals after being given intervention. This is confirmed by previous research, which states that the power of cadres to refer patients with mental disorders will increase after cadres receive mental health training from health workers from northern Uganda. This also affects expanding the ability to identify mental health problems (28). This research shows an increase in cadres' capabilities in documentation after being given intervention. This is confirmed by previous research that cadres have an active role in reporting cases in community health center areas, conducting home visits, healthy community movement efforts, providing social support for families and the environment, and, most importantly, documenting mental cases and helping clients when needed (29).

CONCLUSION

Assembling mental health cadres is crucial for early detection of mental illness in the community; this is contingent on their capacity to engage with the community. The culture-based cadre empowerment module yields noteworthy outcomes in terms of cadres' awareness and capacity to identify mental health issues in their nascent stages, as assessed by means of monitoring, coordinating, referring, and documenting capabilities. It is incumbent upon the government to enhance the capabilities of cadres, particularly with regard to early detection and reporting procedures.

Limitations

This research used a purposive sampling technique of mental health cadres from the Lamongan area as participants. The participant group consisted of 102 cadres, of which 51 were the control group, and 51 were the intervention group. Participants must have been in mental health care at the Lamongan District Health Service for at least one year to meet the inclusion criteria for this study. Meanwhile, the exclusion criteria are cadres who show physical health problems.

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