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Original Research Article

Community-based participatory research to improve primary mental health services

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ABSTRACT

Background: Global statistics show that mental illness is among the three most common diseases globally: about 12% to 15% of the global population suffer from mental illness, this is a rate higher than heart disease and disability and twice as high as cancer. The objective of this study was to improve public health conditions through community involvement and social action that is mental health worker knowledge and skill.
Methods: A purposive sampling of communities was undertaken in a village of Indonesia. The numbers of participants were trained about knowledge and skill as a mental health workers, then selected 15 people who have the best score and the most capable. Level of knowledge and skill were measured sequent for three times using multiple choice test questions. Periodic analysis used repeated measure ANOVA.
Results: There were differences of mental health worker knowledge of each period. The differences between the mental health workers' knowledge in each period is shown by a test of between-subjects effect to have an F score of 189.476 with a P value of 0.00; and the most remarkable improvement in knowledge as after given skill training in Wilk lambda of 248.71 by P value 0.00.
Conclusions: There were differences of mental health worker knowledge of each period. The differences between the mental health workers' knowledge in each period is shown by a test of between-subjects effect to have an F score of 189.476 with a P value of 0.00; and the most remarkable improvement in knowledge as after given skill training in Wilk lambda of 248.71 by P value 0.00.

Keywords: Community mental health services, Community participation, Mental health worker

INTRODUCTION

Global statistics show that mental illness is among the three most common diseases globally: about 12% to 15% of the global population suffer from mental illness, this is a rate higher than heart disease and disability and twice as high as cancer.[1] For example, National Alliance of Mental Illness (NAMI) reported that 18, 5% people in USA experienced mental illness.[2] Canadian Mental Health Association (CMHA) described that 20% of Canadians experienced a mental illness in their lifetime.[3] On the other hand, in developing countries like India and China, the number of mental disorder higher than develops country. India and China were accounted for 32% of the disease burden of global mental disorders; India was accounted for 15%, with depressive disorders and anxiety disorders being the most common.[4] There is therefore more mental illness in both China and India than in all of the developed countries combined.

Indonesia is one developing country that has a significant rate of mental illness. Basic health research was

conducted using survey and it was reported that the number of cases of mental illness in Indonesia was 1.7 million.[3] Based on the survey, the highest number of mental illness was located in Central Java and 18% live in the rural communities, and 14.3% people in chains.[5] According to the survey, the highest number of those suffering from mental illness were located in Central Java, 18% live in rural communities and 14.3% with shackles.[5] Indonesia had 250 million populations; it has only 48 mental health institutions. More than half of them are located in four of the country's 34 provinces. Eight provinces did not have psychiatric hospitals. Travel space and the cost of transportation hindered people to achieve appropriate treatment like mental health institutions.[6]

Increasing the number of mental disorders is not only attributed by the new cases, but also due to the low recovery rate and high recurrence rate.[7] Research conducted by Muller et al, found that a number of 380 patients who recovered had an estimated 80% recurrence.[8] Another study conducted by Melfi et al, mentions that about one of four patients had a relapse during the follow up period, one of the factors that affect recurrence included compliance in taking medication.[9] Another factor that leads to relapse in psychiatric illness is the public perception of mental illness or the stigma. Byrne defines that stigma is a negative perception and discredit from another.[10] Research conducted by Pratiwi and Nurlaily about the experience of families caring for family members suffering from chronic mental illness found that the families perceived the mentally ill as unimportant, they were not involved in daily family life and were locked and shackled when they relapsed.[11] Subu said that mentally ill patients shifting from the psychiatric hospital to the community would increase the burden of the family; the family inabilities to care for the family member with mental illness for many reasons, such as provide food. Families are often unsure of how to take care of a mentally ill family member at home.[11,12]

Rejection and public stigma, especially in the rural community were due to lack of understanding of communities how take or mental patients at home after being discharged from the psychiatric hospital. The success of family acceptance should be supported by the surrounding community life. Therefore, to reduce stigma in the rural community should be conducted local community empowerment.

This aim of this study was to empower local communities to participate in supporting the family in caring for the members with mental illness through local community training became mental health workers.

METHODS

The study was carried out in a village in Indonesia. In this study, the local community has a significant mental health problem. A longitudinal health investigator was carried out in the communities. The sample was selected in non-random sampling. There were many stages which were conducted in this research participatory. In the first stage, the researchers did a screening of mental disorder, then we presented to the community. In the second stage, we built collaboration through a community meeting; the researchers conveyed the purpose of the activities included the advantages and disadvantages. The third stages, we commenced identification of participants; each participant ranges in age from 25 to 50 years old is literate and had a minimum educational background in senior high school. A number of 30 people participated in the beginning of activities. We trained about knowledge and skill as a mental health workers included how to take care of mental illness people in community life, and then selected 10 people who have the best score and the most capable. Knowledge and skill of participants were recorded by using multiple choice questions. Reliability and validity test were conducted for another group that had similar characteristic with participants. We examined the consistency of each item on the question sheet with an applied trial, verification and validation in order to achieve the most reliable questions. For validity test, we considered each result on the answer sheet using trial and error, and then revised the questions until the final validation.

Intervention of participants was implemented for 15 participants at a village. The participants were provided 3-times training every week using a package module developed from Indonesian Health Department for health worker module. Another module was made adapted from psychiatric nursing book. Equipment of community health centre was provided by the community and a vital sign measurement tool was organised by the researchers for demonstrate the activities of a mental health worker in the primary care service. Regular trainings of these participants were carried out at the village meeting hall. Trainers were conducted by the researcher and four nursing students acted as facilitators. In the first training session, the participants were given concept of mental illness and how to take care of at home and in the community; second, the participants were taught how to implement primary care service in the community, and finally, both of these concepts were practiced with an accompaniment of trainer for one week.

The data was collected by asking the participants to circle the appropriate answer on the answer sheet. These assessments were carried out three times: before training, after the concepts were explained to the participants and after the participants were able to put their mental health worker skills into practice. The questions on the assessment were related to sociodemographic factors, concepts of mental illness, concepts of primary health care and the job description of a mental health worker. A data analysis technique was used to identify the difference between the levels of knowledge demonstrated by the community mental health workers in the periodic assessments. The level of knowledge was measured before and after training. The normality data test was

performed using a Shapiro-Wilk test. Then, to compare between the mean samples a repeated measure analysis of variance (ANOVA) test was applied. Data analysis was performed using SPSS 22.

Ethical clearance was obtained from research institute committee. Informed consent was gained from the participants. In addition, we signed memorandum of understanding between the researcher and head village as a partner. The memorandum of understanding was signed before identified the psychological problems and mental disorder in the community. The survey was conducted as determinant research set in the community. The research was focus on participatory research.

RESULTS

Prior to the training was conducted, the researchers did a survey to identify group at risk of mental disorders and psychological problem. Below is a summary of the survey data screening (Table 1).

Table 2 showed that distribution of the level of participants' knowledge in the pre-test group majority was low. The improved level of knowledge as a result of the training programme is evident in the post-test 2 group where 60% had a high level of knowledge and 40% had a medium level of knowledge. Different levels of knowledge of participants in each period utilised by using test of between-subjects effects, and the F score of 189.476 with significance <0.001. It can be concluded there were different level of knowledge between pre-test, post-test I and post-test II.

Table 1: The number of risk group and mental disorder in a village of Indonesia (N: 611).

Group name	Range of age	Frequency	%
Heart disease with mild depression	40-60	6	0.98
Diabetes with mild anxiety	30-60	24	3.92
Hypertension with mild depression	35-60	17	2.78
Diabetes with mild depression	40-60	15	2.45
Hypertension with mild anxiety	25-60	11	1.80
Psychotics	25-60	12	1.96
unidentified	15-60	526	86.1

Table 2: Level of knowledge of participants (N:15).

Level of knowledge	Pre -test		Post-test I		Post-test 2		F	P-value	Wilks' Lamda	P-value
	Frequency	%	Frequency	%	Frequency	%				
Low	6	40	0	0	0	0	189.476	<0.001	248.71	<0.001
Medium	8	53	7	47	6	40				
High	1	7	8	53	9	60				

In this study, we intend to search the effectiveness of repeated interventions. The level of the knowledge's effect of repetition through cognitive and psychomotor activities were changed which was proved by using multivariate test. The Wilks's lambda test showed an F score of 248.71 for the knowledge level with a significance of 0.000. It was concluded that there were differences the participants' level of knowledge after given the repetition methods. Partial eta-squared in each test was 0.861 where the strength was close to the value 1, so the participants' level of knowledge more effective after practising the psychomotor activities.

DISCUSSION

Community based participatory research should be designed focus on community problem solving. In this study, the survey should be conducted to identify the research setting. Hacker described that in community based participatory research, setting of the study must be based on the community and the researcher need.[13] Study found the research place with the significant number of people with psychosocial problem included mental illness. Hereafter, between the researchers and the communities planned an action to solve the problem. Train the community become health volunteers constitute an activity to be mutually agreed. To assess the efficacy and readiness of the participants as a mental health worker, the researchers then analyzed their level of knowledge periodically.

Level of knowledge mental health workers increased in all post-test groups compare to prior to the initial training (pre-test). The majority participants had the low grade of knowledge. And then, there was significant higher than pertest the level of participants' knowledge after got health education about how to care of mental illness patients living at home and practiced the role of mental health worker in the primary service. The results might be influenced by the type of intervention (Practical) which

contributed to achieve a significant improvement in participants' knowledge. The findings showed that the level of participants ' understanding gradually increased and that the training was most effective after applying the skills practically. According to Song, Bij, and Weggeman the enhancement of level of knowledge might be effective when involved three stage activities, these are the generation of knowledge, dissemination of knowledge, and the application of knowledge.[14] And then, Sarin and McDermott explained that explicit transferring knowledge or uncover knowledge (in this study the knowledge was practiced) would be easier to be understood than implicit transferring strategy.[15] In fact, the participants' level of knowledge increased after practiced their role as primary service that be held by the researcher, so the participant had experience about how to take care of the mental illness patients in the community . Berends, Bij, and Weggeman argued that level of knowledge would increase if an individual obtained experience such as application of knowledge.[16]

The increase in the participants' level of knowledge was not only associated with the practical experience, but was also related to several other factors. First, the educational background of the participants. The information showed that the majority of the participants had completed senior high school. Yahya and Goh argue that the level of education and experience affects the mind-set of an individual and how that individual adopts knowledge and science.[17] The second factor is the participants' occupation: the participants who made an active contribution in the training sessions until the end of journey were all employed. On the one hand, a place of work can be used by an individual to develop discourse and thought, but, on the other hand, work can also interfere with any other roles held by the individual that made the two goals are not effective. Nonetheless, Mujiyono in his research on the dual role of women found that women who had multiple roles were capable solving family problems effectively.[18]

It might be claimed that the quality of participant's knowledge in the end of activity was caused by the researcher and the community interaction. In my opinion, Community trust created motivation to learn and develop in improving the informal educational status of participants. The transfer process was conducted through lecture, discussion and health care service practiced as a mental health worker. This primary health service then was continued by the community independently and sustainable. The researchers would carry out following up sustainability the primary mental health care in the community. Community based participatory research activity before evaluation step should be monitored, maintained, and identified the influence within the partnership.[19]

This pilot project constitutes the success of community based participatory research that involved community based on their needs. The study investigated by Kakuma concluded that engagement of social worker such as a mental health worker is important to improve local community health.[20] Some volunteers need to train for improving the knowledge and skill in order to participate in helping health staff in the community. Caplan explained that it is important to build the cooperation between various types of health professionals to handle mental health problems in the community and develop mutual support in community life.[21] In this study the mental health workers as the spearhead successfully activated in helping the community.

The pilot projects similar to this study should involve social agencies and health department in carrying out training of social health workers, thus it can be built a policy that could be developed elsewhere. The health department could also be involved as a strategic conduction role that possibly continue and expand the program by using the modules and handouts were made in this study.

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