ORIGINAL ARTICLE

Implementation of Community Mental Health Nursing (CMHN) Model on Mental Disorder Client's Quality of Life (QoL) in the Disaster Area of West Sumatera

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ABSTRACT

Introduction: Natural disaster is an extraordinary event that causes suffering for those who experience it, including psychological or psychiatric disorders. Psychological trauma that occurs after a natural disaster will further worsen a person's condition and if not overcome can continue to become a mental disorder. The aims of this study were to determine the effect of CMHN model on mental disorder client's quality of life in the disaster area of West Sumatera. **Methods:** This study used quasi-experimental with one group pretest-posttest design. The study was conducted on 25 clients with mental disorder in the flash flood disaster area, Tanah Datar Regency (South Batipuh) which was selected with simple random sampling. CMHN model consists of: Socialization about mental health problems in the community and community leaders, making joint commitments both across programs and across sectors in efforts to handle health problems, empowering cadres (training mental health cadres), and implementing mental disorder case management. Data were analyzed with proportions and Paired T-Test. **Results:** The results showed that CMHN significantly affect quality of life in clients with mental disorder (p = 0.000, CI= 95%). **Conclusions:** CMHN can improve quality of life in clients with mental disorder. It is necessary to improve the implementation of the community mental health nursing model to make the community mental health nursing model as an effort to overcome the problem of quality of life of mental patients.
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INTRODUCTION

Indonesia is an archipelagic country that is vulnerable to potential natural disasters. This is indicated by various natural events that arise such as volcanic eruptions, earthquakes, tsunamis, floods and landslides (1). Natural disaster is an extraordinary event and cause suffering for those people who experience that events, both physical and psychological impacts (2). The impacts of physical disasters can be profound and extensive. Below are several adverse effects associated with natural disasters: loss of life, injuries, and the spread of diseases; damage to property and the destruction of assets; disruption of social and economic structures; and environmental degradation (3). This may result in a heightened likelihood of the affected population experiencing mental health issues following a disaster, including PTSD, anxiety, and depression (4). According to the previous study, psychological trauma that occurs after a natural disaster will further worsen a person's condition or psychological problems that existed before the disaster occurred (5). It was further explained that the condition will get worse and become a mental disorder if it is not detected early and treated properly.

Clients with mental disorders such as schizophrenia show the onset of cognitive, affective and psychomotor disorders, thus causing low quality of life. Previous study said that people diagnosed with schizophrenia are usually difficult to recover (6). If they can recover it takes a long time (years) and can not be like before. If

they are not careful and experience excessive pressure, it is likely to relapse again and become more severe. In addition to being at risk for relapse, the quality of life of schizophrenic patients will also have an effect. According to previous study, quality of life is a term that indicates a person's physical, social, and emotional health and his ability to carry out daily tasks (7). Explain that various mental health problems in the community can cause mental disorders that have an impact on decreasing productivity or quality of life for humans and society. For this reason, the problem of mental disorders is an important concern for health services.

Health services have their own challenges in treating schizophrenia patients. Previous studies have shown that the need to achieve recovery in schizophrenia patients requires family support, community support, and support from health workers (8). The long treatment process can cause negative emotions from the family in the form of anger, disappointment, and fear when caring for schizophrenia patients. The family also feels positive emotions in the form of hope, patience, and gratitude. Long-term care and high dependency add to the burden on the family. Family stigma and community stigma that still exist can also be obstacles to the treatment process (9). For this reason, interventions for schizophrenia patients do not only focus on the patient. But also involve the family and the surrounding community.

Mental health services start from the hospital (hospital base) moving towards the community (community base). Based on previous study, Before the tsunami in Aceh, Indonesia, there was no systematic training provided to General Practitioners (GPs) and nurses in matters related to mental health and psychosocial support during disasters. After the tsunami, Aceh Hospital trained 169 GPs and 277 nurses to deal with post-tsunami mental health issues. A total of 2,602 cases of severe mental disorders (mostly chronic psychosis) were detected and treated by Community Mental Health Nurses and GPs at Primary Health Care Centres (PHC). Community Mental Health Nurses can be an important link between patients in the community and GPs at PHC (10).

Treatment for patients with mental disorders begins at the institution or hospital. Mental health services are carried out comprehensively involving various scientific fields such as the medical/psychiatrist team, psychologists, social workers, and also by nurses. All team members interact with each other so that they can provide good care for clients with mental disorders. One of the important roles of a mental nurse in disaster conditions is to carry out psychosocial interventions which are the provision of mental health services that are not only based on mental hospitals but are more directed at community areas that are more informal in nature (11).

Interventions that can be done to improve the quality of life of patients are in the form of individual nursing care at hospital by applying various nursing therapies such as generalist therapy according to patient problems and specialist therapies such as Cognitive therapy (CT), Cognitive Behavior Therapy (CBT), Supportive therapy etc (12). Besides what can be dome at the hospital, psychosocial interventions that are expected to increase the ability and independence of disaster victims with severe mental health problems are provided by CMHN (Community Mental Health Nursing) nurses, which are can be done in the community (13). Support from the family and the surrounding community is needed. Efforts that can be made to achieve optimal results are by involving the community, community leaders and local government officials through community mental health service activities/CMHN. Prior studies have demonstrated that the CMHN Model, which employs fundamental community mental health nursing treatments, can be utilized to enhance the life skills and productivity of individuals with schizophrenia. This will help to strengthen the patient's capacity to function in society (13).

Based on data from the West Sumatra provincial health office, the number of severe mental disorders (schizophrenia) was also found in Tanah Datar district as many as 424 people (14). Data according to the Tanah Datar district health office, the highest number of mental disorders is in the working area of the South Batipuh Health Center (120 people). According to information from the person in charge of the mental program at the Tanah Datar district health office, the condition of patients at the Public Health Centre often relapses, does not take medication regularly, in addition to the problems they experience on a daily basis as well as the impact of disasters such as floods and landslides and conflicts. between citizens.

Efforts are being made to overcome mental health problems in the Tanah Datar district, several people in charge of mental programs at the health office have received training in early detection of mental health. There has been no cross-sectoral and community involvement in dealing with mental health problems and improving the quality of life of patients with mental disorders in the Tanah Datar district. Information from the person in charge of the mental health program at the Tanah Datar district health service handling mental health services has not been optimal, and there are not many trained personnel. Community and cross-sector support and involvement are also not optimal.

CMHN program is designed to improve independent patients to maintain their health assisted by mental health cadres. Mental health services in the community apply the principles of community development and community empowerment called Desa Siaga Sehat Jiwa by empowering the potential that exists in the community. It is hoped that the involvement of

families and communities will accelerate the recovery and independence of patients. Based on the above background, the researchers conducted a study on "The Influence of the Community Mental Health Nursing (CMHN) Model on the Quality of Life of Mentally Disturbed Clients in West Sumatra".

Method

Researchers conducted screening of adults (20-59 years old) in areas affected by flash floods in Tanah Datar Regency using a Post Traumatic Stress Disorder Checklist (PSL) (15) and quality of life questionnaire (16). The results showed 120 people with a decrease in quality of life. From the 120 population, the number of samples was calculated using the two-mean difference test formula, resulting in a research sample of 25 respondents. Simple random sampling was used for this sampling. Inclusion criteria include: 1) Willing to be a respondent as stated by signing the informed consent, 2) Adult clients who experience mental disorders, 3) Domiciled at the research location. And the Exclusion criteria included: 1) Not attend when the research held. The sample selection process can be seen in figure 2.

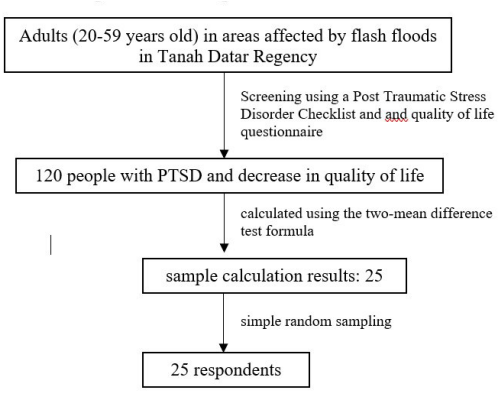

Figure 2: The sample selection process

The data in this study were collected using a questionnaire consisting of data on characteristics and quality of life using the quality of life scale (QoLS) instrument that consisting of 26 items related to quality problems. This instrument has been tested for the validity of r = 0.67 to 0.75(16). While the data were analyzed using the paired t-test.

The research was conducted for 4 weeks (1 months), researchers and enumerators introduced themselves and explained the background, objectives and benefits of the research to respondents. Researchers and enumerators conducted screening on all clients with mental disorders to determine those who experienced a decline in quality of life. Furthermore, they asked for respondents' approval to become research subjects by signing informed consent and conducting research.

The research process was carried out starting from looking at the quality of life of respondents through questionnaires distributed before the activity was carried out (pre test). After that the community mental health nursing (CMHN) model is carried out by researchers and research assistants. Researchers were developed a community mental health nursing (CMHN) model which consists of: Disseminating mental health issues to the community and community leaders in the first week, making joint commitments both across programs and across sectors in an effort to handle mental health problems in the second week, empowering cadres (training mental health cadres) in the third week, and carry out case management of mental disorders in the fourth week. Each activity is carried out with an allocation of 4 hours. In order for the implementation of the community mental health nursing (CMHN) model to be standardized, the researchers made an activity SOP in the form of a community mental health nursing (CMHN) module. The module is a modification of the Community Mental Health Nursing Management Module (CMHN) which contains 4 Pillars Of Community Mental Services, namely Mental Health Nursing Management, Community Empowerment Management or Cadres, Cross-Sector Partnerships and Programs, and Case Management which will be implemented by CMHN nurses and health cadres (17). After all of the section, the researcher will distributed a questionnaires to all the respondent to see the improvement in the respondents' quality of life (pos-test). The post test measure the changes experienced by the client which is carried out directly after the completion of the intervention, the results are compared with the pre-test results (Figure 1).

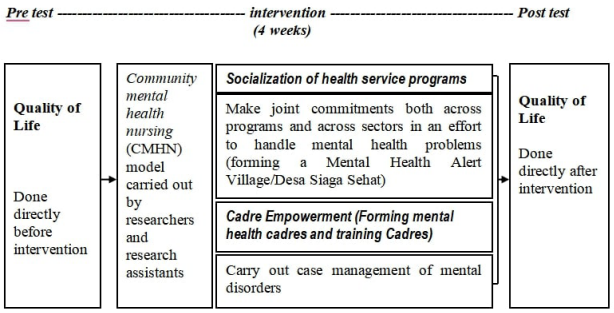

Figure 1: Community Mental Health Nursing (CMHN) Model

In this study, univariate analysis was conducted to explain the characteristics of clients with mental disorders (age, gender, education and marital status). The presentation of data for each variable is in the form of a table and interpreted based on the results obtained. And equality test using mean difference test, namely paired t-test. Differences in quality of life before and after intervention were analyzed using 2 mean difference test, namely dependent T-Test.

Result

Result of the research "The Influence of the Community Mental Health Nursing (CMHN) Model on the Quality of Life of Mentally Disturbed Clients in West Sumatra" which was conducted on October 9 - November 28, 2020. The sample obtained was in accordance with the initial planning, namely 25 respondents who participated in the research activities in full starting from the pre-test, during the intervention and post-test.

Table 1 Shows the average age of patients with mental disorders is 44.32 (95%: 39.36 – 49.28), with a standard deviation of 1.20.

Table I: Socio-demographic characteristics of respondents

Characteristics	Mean	SD
Age	44,32	1,20
Characteristics	**Frequency**	**Percentage**
Gender		
a. Men	19	76
b. Women	6	24
Education Level		
a. Low Education	15	60
b. High Education	10	40
Marital Status		
a. Married	2	8
b. Single	17	68
c. Widowed	6	24

*Standard Deviation

Table 2 shows the gender of the respondents showed that the largest proportion of patients' sex was male (76%), more than half of the patient's education (60%) was low, the marital status of patients with mental disorders was more than half (68%) with unmarried status.

Table II: Results of the paired t-test of Mental Disorder Patients's Quality of Life Before - After Implementation of Community Mental Health Nursing Model in South Batipuh

Variable	Before		After		Mean Difference	p value
	Mean	SD	Mean	SD		
QoL	62,64	10,31	77,48	11,27	14,84	0,000

Table 2 Shows the average quality of life of patients with mental disorders before the implementation of the Community Mental Health Nursing Model is 62.64 with a standard deviation of 10.31. Measurements after the Implementation of the Community Mental Health Nursing Model obtained an average quality of life is 77.48 with a standard deviation of 11.27. It can be seen that the average increase between the quality of life of mentally ill patients before and after the intervention was 14.84 with a standard deviation of 8.05. The results of statistical tests obtained P value <0.05, it can be concluded that there is a significant improvement between the quality of life of mental patients before and after the implementation of the Community Mental Health Nursing Model in South Batipuh District, Tanah Datar Regency.

Discussion

The average age of patients with mental disorders is 44.32 with the youngest age being 20 and the oldest being 80. Based on the data, the highest prevalence of schizophrenia is in the 35-44 year age range, followed by the 30-34 and 45-49 year ranges (18). It can be concluded that the incidence of schizophrenia can occur in productive age. The number of years a person has passed is not the only factor that can influence a person's behavior. Under normal conditions, the older one is, the higher the level of maturity and strength of a person, both in thinking and in work (19). That means the older a person is more constructive his attitude in dealing with the problems that occur to him which will affect a person's quality of life.

Productive age is the age at which individuals are able to work and produce something to meet their needs (20). Schizophrenic clients experience drastic changes in behavior and experience failure in carrying out social functions, the inherent societal stigma contains schizophrenic clients tend not to have opportunities and lose opportunities in work so that it affects their quality of life. Other study stated that age is one of the factors that affect the quality of life of schizophrenic clients (21).

The results of the study of 25 patients with mental disorders showed that the sex characteristics of mental patients with the largest proportion were male (76%). Previous studies have shown that men are more likely to be diagnosed earlier than women, with an incidence rate ratio of approximately 1.7 (95% CI, 1.46–1.97)(22). While the research conducted from 104 outpatients with schizophrenia at RSJ Prof. Dr. HB Saanin Padang showed that 65.4% of schizophrenic clients were male (23). It can be concluded that the incidence of schizophrenia is more common in men than women.

Based on the hypothesis in previous study of maturity of brain function affects the level of vulnerability of a person in his soul(24). Men experience puberty later than women, meaning that men have a greater susceptibility to mental disorders than women. Other studies have shown that men typically exhibit earlier disease onset, poorer body function before the disease becomes apparent, more pronounced negative symptoms, and a higher incidence of alcohol and substance use disorders (25). Another study also said that gender is one of the factors that affect the quality of life where men feel lonelier, more stressed, and have more suicidal thoughts than women (26).

Judging from the educational status of more than half of the respondents with low education (60%). Previous studies have also shown that most schizophrenia patients have a low level of education, namely 31.73% primary education and 30.77% secondary education (27). Low education levels, however, have a negative impact on

the quality of life of schizophrenia patients. Positive affect and a sense of personal control and empowerment tend to improve quality of life, while perceived stigma is associated with lower quality of life. Three things are identified here that may contribute to the difficulty of schizophrenia patients in achieving adequate quality of life related to education levels. First, schizophrenia patients living in the community have additional needs and fewer personal and environmental resources than healthy people. Second, they have serious dilemmas regarding participation in social engagement due to the stigma attached to schizophrenia. Third, they sometimes have difficulty in identifying and exploiting their needs adequately. So, so that to improve the quality of life requires a higher level of education (27).

The results of the univariate analysis showed that more than half of the respondents were unmarried (68%) and widowed (24)%. Several studies have shown similar results where most respondents do not have a partner. Previous studies have shown that 2.7% are unmarried, 20% are divorced, and 76.2% are widowed (26). Similar things also happened in other studies where 60% were single and 30% were divorced (28).

Regarding the issue of marriage, several study sought to find out how living with schizophrenia affects participants' experiences in marriage and marital relationships. Study showing that married individuals have a higher quality of life than individuals who are not married, divorced, or widowed or widowed due to the death of a spouse (27). Survey findings revealed that two out of nine participants were married and living happily with their partners (29). A similar study found that marital status had a relationship with the quality of life of schizophrenic clients (p=0.003), marital status and having a partner had an effect on increasing the quality of life of schizophrenic clients related to the source of coping and counseling (29)(30).

In this study, researchers attempted to improve the quality of life of mentally ill patients by optimizing the role of community leaders and the community in improving the mental health status of the community in particular. The results of the study showed that the average score of quality of life of mental disorder patients before the intervention was 62.64 and after 77.48. Quality of life is a terminology that indicates a person's physical, social, and emotional health and their ability to carry out daily tasks.

Quality of Life means a good life, a good life is the same as living a high-quality life (31). It is described in happiness, fulfillment of needs, function in a social context. Each individual has a different quality of life depending on each individual in responding to the problems that occur in him, if he faces positively, his quality will also be good, but it is different if he faces negatively, his quality of life will also be bad. Quality of life is related to the achievement of an ideal human life or as desired.

According to previous study, quality of life is defined as the perception of individuals as men or women in life, viewed from the cultural context and value system in which they live, and relates to their standard of living, expectations, pleasures, and concerns (32). It is a concept of levels, summarized in a complex manner including physical health, psychological status, level of freedom, relationship to the characteristics of their environment. This is in line with the research conducted.

There are several research results related to the quality of life of patients saying schizophrenia patients who have been previously treated are related to community stigma and feelings of hopelessness and are closely related to the environmental domain on quality of life (33). According to similar research also states that one of the factors affecting the quality of life of schizophrenia clients is a history of violence, either as a victim or as a perpetrator of violence (32).

Someone who experiences mental disorders will feel dissatisfied, feel unable to enjoy life, feel meaningless, feel insecure, feel unable to accept their appearance and unable to move and fulfill their daily needs. With good management, it will be able to improve the quality of life by optimizing three things that concern the internal components of individuals in improving quality, namely physically, psychologically, and spiritually. Physically, which consists of physical health, personal hygiene, nutrition, exercise, clothing, and general physical appearance. Psychologically consisting of psychological health and adjustment, awareness, feelings, self-esteem, self-concept, and self-control. Spiritual health consists of personal values and spiritual beliefs (33).

So complete are the things that will affect the quality of life according to the internal individual, therefore it needs more conflict handling involving various parties such as health workers, local government, community and especially family. Nursing services carried out need to be implemented through nursing management by involving many people. One approach that can be done is with community-based mental health services or what is known as Community Mental Health Nursing (17).

Community mental health is a community-based mental health service approach, where all the potential in the community is actively involved. Efforts to improve the level of community mental health starting from early detection of mental health activities so that healthy individuals will remain healthy, individuals at risk do not experience mental disorders and individuals who experience mental disorders get the right services so that they can be independent and productive in society (13). To improve the level of community mental

health, the participation of the central government, local government, community leaders, cadres, and the community through the Desa Siaga Sehat Jiwa program is needed.

The mental health alert village program is expected to actively involve all personnel in the community in an optimal service effort. Activities that can be carried out through this service mechanism are: socialization of mental health programs to community and government leaders, mobilizing commitment to implement the program properly including the activity plan for the formation of a mentally healthy alert village (13). To help extend the hand of health workers in the implementation of mental health programs in the community, there needs to be a mental health cadre. So as to optimize the function of cadres, it is necessary to train mental health cadres.

In this study, researchers sought to improve the quality of life of patients with mental disorders through optimizing the role of community leaders and the community in improving the mental health status of the community, especially. Therefore, researchers created a model to help reduce the burden on patients and improve the quality of life of patients known as the community mental health nursing model which includes socialization of community mental health, forming mental health cadres, training mental health cadres (early detection of mental health problems, home visits, mobilizing the community to participate in counseling both healthy, at risk, and mental disorders, making referrals).

This modeling is made in the form of modules that are applied to community leaders and mental health cadres. After mental health cadres are trained, cadres provide assistance to patients and families, so that it is expected to improve the quality of life of mental patients. The results of previous research explain that there is an increase in knowledge scores between before and after training. The increase in knowledge of the Ranjeng Village community total average, and the increase in knowledge of the Cilopang Village community (34). Empowerment of mental health cadres as potential personnel in the community is expected to be able to support the CMHN program implemented in the community (35). The development of mental health cadres in Desa Siaga Sehat Jiwa is carried out through cadre refresher activities or advanced training aimed at increasing the understanding and skills of cadres in providing assistance to families and patients.

It is hoped that after attending the training, mental health cadres will be able to understand mental health nursing in the community, understand mental health policies in the community, understand the Desa Siaga Sehat Jiwa in the community, conduct early detection of mental health problems, mobilize individuals, families, mental health groups, risk groups and mental disorder groups, refer cases of psychosocial problems or mental disorders to CMHN (Community Mental Health Nursing) nurses at the Puskesmas, and record and report on mental health cadre activities (13).

The quality of life of mentally ill patients is highly dependent on the support provided by the family. This is in accordance with the results of research conducted that most of the family support is a poor category as many as 29 respondents (58.0%), most quality of life among patients with schizophrenia is a poor category as many as 29 respondents (58.0%). And there is a relationship between family support and quality of life in schizophrenic patients at the Lampung Provincial Mental Hospital in 2022 with a p-value = 0.000 (< 0.05) (36). The quality of life of patients is also caused by self-stigma. The results showed that there was a relationship between self-stigma and the quality of life of patients with schizophrenia with a negative correlation (r = -0.568, p = 0.00). The level of self-stigma is included in the high stigma classification and low quality of life classification (35).

So the quality of life of patients with mental disorders depends on the individual himself and also by the surrounding environment. A negative view of the self will result in a decreased quality of life, whereas if the patient views the self positively, then the self feels useful and of course also affects the patient's quality of life. Thoughts, feelings and behavior will show acceptance of self and others that have the potential to be negative if a person is unable to respond to each stimulus properly. This will certainly affect the quality of life of these mental illness patients.

Conclusion

The results of the analysis of the quality of life of patients with mental disorders before and after the intervention showed an increase, it can be concluded that there was an effect of the implementation of the community mental health nursing model on improving the quality of life of patients with mental disorders.

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