

DEVELOPMENT OF A CARE SYSTEM FOR SCHIZOPHRENIA PATIENTS BY A COMMUNITY MENTAL HEALTH NETWORK

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Abstract: The purpose of this research was to study the outcome of the development of a care system for schizophrenia patients by a community mental health network. 25 volunteers participated in a qualitative study where a care system for schizophrenia patients in the community was organized to cover all the important aspects. The research instruments included focus group discussions and in-depth interviews carried out during the follow-up and visits to the patients' homes 1 month after the schizophrenia patient care system development activities. The data were analyzed by content analysis. The results of the research revealed that before organizing the patient care system development activities, some patients didn't have caregivers due to fear of violent behavior of the patients. Almost all patients had side effects of treatment with psychiatric drugs. The follow-up of chronic schizophrenia patients in the community 1 month after the care system development activities showed that most of the patients had no psychiatric symptoms, and most of the patients and caregivers were satisfied with the schizophrenia patient care system development activities conducted by the researchers. It is recommended that there should be a policy to promote schizophrenia patient care in accordance with the needs and context of the community as well as research on the approaches to improving the mental health of people in the community. Moreover, studies on the relationship of mental health and quality of life of the community should further be carried out.

Keywords: schizophrenia, community care, mental health network

I. Introduction

Background and Significance of the Problem

Schizophrenia is a chronic and severe mental disorder affecting 20 million people throughout the world (GBD, 2017). It is a worldwide problem with the occurrence of approximately 0.85% of the world population. The current number of 20 million people worldwide with schizophrenia is in the ratio of 7 per 1,000 in the adult population (World Health Organization, 2016). Schizophrenia is strongly associated with disabilities and may affect educational and occupational performance (Laursen et al., 2014). Therefore, the World Health Organization places great emphasis on care for people with schizophrenia. The World Health Organization designates May 24 every year as World Schizophrenia Day (World Health Organization, 2019), raising the awareness of people around the world on the importance of caring for people with schizophrenia. Schizophrenia is characterized by distortions in thinking, perception, emotions, language, self-consciousness and behavior. Typical experiences include hallucinations (hearing sounds or seeing things that are not there), and delusions. People with schizophrenia are two to three times more likely to die early than the general population (Laursen et al., 2014). More than

69% of people with schizophrenia don't receive proper care (Lora et al., 2012). The 90% of people with untreated schizophrenia live in low-income and middle-income countries, and a lack of access to mental health services is a major problem. In addition, people with schizophrenia are less likely to receive care when compared to the general population. The project also found that several low- and middle-income countries (such as Ethiopia, Guinea-Bissau, India, Iran, Pakistan and the United Republic of Tanzania) (World Health Organization, 2019) have demonstrated the possibility of caring for severely mentally ill people through the primary care system by training primary care health personnel, providing access to essential medicines, supporting families in caring for patients at home, educating the public to reduce stigma and discrimination, developing independent living skills through rehabilitative psychosocial interventions (e.g. life skills training, social skills training) for people with schizophrenia and their families and/or caregivers, and facilitating independent living, if possible, or providing housing assistance. Housing and employment support for people with schizophrenia can enable people with schizophrenia to achieve their desired goals as they often suffer from a lack of employment opportunities or a place to live.

In Thailand, schizophrenia is a psychiatric disease that continues to be a serious problem in psychiatry and public health. This disease is found in approximately 1 % of the population. It is estimated that there are about 600,000 people with schizophrenia nationwide, most of whom are in a working age. This symptom is found similarly in both men and women. Last year, 480,000 people with schizophrenia had access to services. The main symptoms of schizophrenia patients that can be observed are delusions, hallucinations, speechlessness, strange behavior, inappropriate dressing, which can be treated if they see a doctor early and receive appropriate rehabilitation care (Department of Mental Health, 2019). Caring for people with schizophrenia in order for the patients to be able to return to normal life in society requires 4 methods: having relatives to take care of, using family therapy, being ready to talk and share feelings, and observing the patients' warning symptoms before bringing them to see a doctor. It is of utmost importance to ensure that patients receive their medication regularly to have better condition. Patients should always come to receive treatment according to the doctor's appointment, and avoid the use of all kinds of intoxicants, both alcohol and narcotic drugs. Although the nature of schizophrenia is mostly chronic, if the patients are taken care of by following the above methods, it will improve the patients' condition -- no relapse, high chance of recovery, and a better quality of life (Department of Mental Health, 2019).

In Buriram province, there are still unclear guidelines on how to take care of schizophrenia patients. Most of the time patients are referred to Buriram Hospital. If the patients' condition does not improve, they will be referred to Nakhon Ratchasima Rajanagrindra Psychiatric Hospital. Therefore, the researchers were interested in studying the development of continuous care process for schizophrenia patients by a multidisciplinary team and community caregivers in Ban Dong Kathing Sub-district Health Promoting Hospital, Ban Dan District, Buriram Province in order to use the results of the study to develop an effective, concrete, and sustainable system of community mental health services in the area.

II. Research Objective

To study the outcome of the development of a continuous care system for schizophrenia patients by a community mental health team.

III. Research Framework

The development of a care system for schizophrenia patients by a community mental health network applied the guidelines created by (Rujkorakarn et al., 2018) on schizophrenia patient home care as a conceptual framework, which consists of three main components: structure, process, and outcome together with the application of social support networks in the community care. These include: 1) regular daily activities, 2) life support assistance at all times, 3) control of side effects from daily medication use, and 4) self-management in daily life, to allow patients, families and communities to participate in caring for patients to promote a good quality of life with the concept of continuous care process at home.

IV. Review of Literature and Related Studies

The World Health Organization (World Health Organization, 1994) has defined schizophrenia as a disorder in thinking and mood, which affect perception and behavior, causing abnormalities while the levels of consciousness and intellect remain normal.

The American Psychiatric Association or DSM-IV-TR (Diagnosis and Statistical Manual of Mental Disorder, Fourth Edition, Text Revision) (APA, 2000) has defined schizophrenia as symptoms and signs, which can be determined by responsibility for the job, socialization, and duration of symptoms. The symptoms should be distinguished from those caused by mood disorders or poisoning.

The International Statistical Classification of Diseases and Related Health Problems, 10th Revision, Thai Modification) (ICD-10) (Bureau of Policy and Strategy, Ministry of Public Health, 2016) has defined schizophrenia as a cognitive and perception disorder, with inappropriate or passive emotion and normal levels of consciousness and intellect. The progression of schizophrenia could be continuous, intermittent, or persistent.

According to the Bureau of Mental Health Service Administration, Ministry of Public Health (2017) schizophrenia means a mental disorder, where something goes wrong with the brain, expressing thoughts, feelings and behaviors with varying degrees of severity, and continuation of symptoms tends to be in a long-term manner. There may be periods when symptoms improve from time to time.

In summary, *schizophrenia* is defined as a mental disorder characterized by abnormal thoughts, emotions, inappropriate or inattentive moods, with normal levels of consciousness and intellect. The progression of schizophrenia could be continuous, intermittent, or persistent, which affects the perception and behavior causing abnormalities. The signs and symptoms are determined by responsibility for the job, socialization, and duration of symptoms. The symptoms should be distinguished from those caused by mood disorders or poisoning.

V. Related Studies

From the study of related research both nationally and internationally, the results are as follows

Thongsai (2015) studied the sustainable care of schizophrenia patients in the context of Thai society. It was found that to provide care for schizophrenia patients under the context of Thai society to achieve the maximum sustainable efficiency, relatives or caregivers of schizophrenia patients must be encouraged to have knowledge, understanding, and good attitudes towards providing care to patients, and a network of families and communities who provide care for

patients should be established. In addition, patients must be able to rely on themselves to a certain level. This is a way to help people with schizophrenia to live with their families, communities and society more happily under the care of Thai society. In order to adopt this information, the potential of schizophrenia patients must be promoted and a family and community network must be strengthened.

Kwansanit & Srisurapanont (2018) studied epidemiological measures to calculate schizophrenia burden in Thailand. The results showed that epidemiological measures for calculating schizophrenia burden in Thailand are suitable for Thai people at the moment. In order to adopt this information, it is necessary to learn more about the age of symptom onset, length of time with deficiencies in health, relapse and recovery rates, weighted value of health condition.

Butthayothi (2020) studied the process of the relapse prevention by community participation with a multidisciplinary team for schizophrenic patients at Kosumphisai Hospital, Kosum Phisai District, Maha Sarakham Province. The results showed that the community-developed prevention process for relapse of schizophrenia based on the contribution of the community that recognizes the problem and places great importance on finding solutions is effective. With the community's willingness to solve problems and get involved, a great power can be formed to help find solutions.

Wongsil (2020) studied self-care experiences of non-relapse schizophrenia patients and caregivers in Bueng Nam Rak Sub-district, Bang Nam Prio District, Chachoengsao Province. The results showed that the patients had good self-care when they were at home and were able to do daily routines by themselves, including taking care of the house. In addition, communication that created understanding in the family, participation of relatives who came to care for the patients, relatives' handling of problems, a guideline for patients to take a good care of themselves, no relapse of the symptom, and stress management of patients and their relatives all helped patients and their relatives to live in families and communities as normal. Adopting this information depends on each context. Patients must be encouraged to rely on themselves and to involve families and communities in caring for schizophrenia patients.

Aimsaart et al. (2020) studied the effects of case management on overall abilities of schizophrenia patients who were at risk of violence. The results showed that after case management, the overall level of abilities of the patients was better with reduced exacerbations and a good quality of life. In order to adopt this information, violence must be studied in context to be able to manage the risks causing such violence.

Rujkorakarn et al. (2018) studied coexistence with schizophrenia patients in rural communities in Northeastern Thailand. It was found that the researchers needed to discipline the patients and their caregivers to take care of themselves and request cooperation from the community in providing support to their basic needs.

Chan & Mak (2014) conducted a study on people living with schizophrenia patients under an outpatient care. The results showed that health care providers and administrators should eliminate or reduce the patients' self-stigmatization and ensure that they are satisfied with the required services. Moreover, management and arrangement of activities with a focus on protecting the rights of patients need to be promoted so that patients have access to treatment services and use the community as their base. Provision of services with a focus on individual needs is important and should be set as a key direction for the efforts to improve the patient care system.

Attepe & Tuncay (2018) studied individual caregivers providing care to schizophrenia patients in families in Turkey. The results revealed that to reduce the burden of families caring for

schizophrenia patients, there should be family therapy, education and psychological support for families, including provision of job opportunities, long-term care services, and individual psychological support for caregivers of people with schizophrenia.

Ashcroft et al. (2018) studied the current movements towards transformative dimensions in the treatment of individual schizophrenia patients. 18 out of 693 studies which calculated and compared CDPI and TAU results were analyzed. The CDPI-treated group was associated with a reduction in three aspects, namely length of hospital stay, relapse, and non-cooperation in treatment.

It can be summarized from the literature review and related documents and research above that a psychiatric disorder is characterized by abnormal thinking, inappropriate or passive mood, with normal levels of consciousness and intellect. The progression of schizophrenia could be continuous, intermittent, or persistent, which affects the perception and behavior causing abnormalities. The signs and symptoms can be determined by responsibility for the job, socialization, and duration of symptoms. The symptoms should be distinguished from those caused by mood disorders or poisoning. From research studies, it can be seen that encouraging schizophrenia patients to take care of themselves as well as care by families and community networks will enable people with schizophrenia, their families, and communities to live in society in a healthy way. Therefore, it led to a research study for the development of a continuous care system for schizophrenia patients by a multidisciplinary team and a network of community caregivers in Ban Dong Kathing Sub-District Health Promoting Hospital to allow patients, families and communities to participate in care to promote a good quality of life among patients.

VI. Research Methodology

This was a qualitative study that looked into the outcomes of a multidisciplinary team and a network of caregivers developing a care system for schizophrenia patients in the Ban Dan District, Buriram Province, under the jurisdiction of Ban Dong Kathing Health Promoting Hospital. Taking place between October 2019 and September 2020.

VII. Population and Sample

The population is a group of people with schizophrenia who were diagnosed with schizophrenia according to the ICD -10 system (F20.0- F20.9) and registered for treatment at Ban Dan Hospital and Buriram Hospital, and patients in the area under the jurisdiction of Ban Dong Kathing Health Promoting Hospital, totaling 25 people.

The sample consisted of schizophrenia patients diagnosed with schizophrenia according to the system of ICD -10 (F20.0- F20.9) who were registered for treatment at Buriram Hospital, Ban Dan Hospital until fiscal year 2019, aged 15 years and over, and the patients in the area under the jurisdiction of Ban Dong Kathing Health Promoting Hospital, Ban Dan District, Buriram Province, totaling 25 people who were willing to participate in this research project

The process of conducting research was divided into three phases as follows:

Phase 1: Studying data, problems and needs of the sample group.

Phase 2: Developing the continuous care process for schizophrenia patients by a multidisciplinary team and a network of community caregivers of Ban Dong Kathing Health Promoting Hospital, Ban Dan District, Buriram Province.

Phase 3: Evaluating the results within one month after the end of the continuous care process according to the guidelines.

After that, the person in charge of mental health work in the sub-district health promoting hospital together with the village health volunteers and network partners continuously followed up and visited the patients' homes according to the plan.

VIII. Research Instruments

Focus group discussions and in-depth interviews were used with people involved in community care, including patients, families, community leaders, local organizations, village health volunteers (VHVs), multidisciplinary team, a network of community caregivers and local leaders. The researchers formulated open-ended questions based on a literature review on the condition of problems and the need to support schizophrenia patient care in the community.

IX. Data Collection

In this research, the researchers conducted follow-up visits to the patients' homes in phase three of the research process mentioned above to carry out focus group discussions and in-depth interviews to obtain qualitative data. The data collection process took a total of three months from June to August 2020.

X. Data Analysis

Qualitative data obtained from focus group discussions and in-depth interviews during home visits one month after schizophrenia care system development activities were categorized into groups: care for medication administration, participation in community activities, use of drugs and narcotic substances, relapsed exacerbation, severe exacerbation for referral, and overall abilities and quality of life. Then the data were analyzed using content analysis.

XI. Research Results

From home visits, assessment of the patient's health condition, focus group discussions among community caregivers, such as village health volunteers and other network partners, and in-depth interviews with patients and their primary care relatives, the findings were as follows:

Regarding use of narcotic substances, after the research activities, most of the patients did not drink alcohol but there were more smokers than non-smokers. The reason why patients used drugs before organizing the research activities was due to the psychological stress of losing loved ones such as husbands and children, as well as family conflicts, broken family, and solicitation of someone influential to them, such as relatives and friends.

Regarding problems and obstacles in patient care prior to the research activities. It was found that there were problems in caring for patients. In other words, some patients didn't have caregivers because the caregivers were afraid of the patient's violent behavior; some patients didn't have someone to monitor their medication administration. Some patients used narcotic substances caregivers didn't want the patients to take psychiatric medication because of the side effects of movement disorders, which would prevent them from working to support the family; some caregivers had misbeliefs about patient treatment, such as believing that the illness was caused by demons, so they did not accept modern treatment from a physician, causing the

patients to come back with a relapse of mental illnesses. After the research activities, the problems and obstacles have declined.

Regarding the quality of life of schizophrenia patients after the research activities, the quality of life of most schizophrenia patients was at a moderate level. In addition, they were satisfied with their appearance; were healthy; had sexual happiness; were able to perform daily routines, help with family chores, work as usual, have appropriate recreational activities, and earn enough income to cover expenses; were satisfied with their living conditions and home environment; had a good relationship with family members and neighbors; were able to travel to do various errands and access health services from a sub-district health promoting hospital close to their home. One person stayed at the temple without being ordained, and the other one was ordained as a monk at the village temple. Both of them were content with their own lives and were equally happy even if they were not with their own family members.

Regarding community monitoring of chronic schizophrenia patients, one month after organizing the activities, the researchers conducted follow-up visits to the patients' homes to assess the outcomes of this study using focus group discussions and in-depth interviews with key people mentioned above. It was found that most of the patients had no psychotic symptoms; most of the patients and their family members were satisfied with the schizophrenia care system development activities conducted by the researchers; most of the informants said the schizophrenia process development activities were valuable and helpful. They also expressed their thanks before the research team left.

XII. Discussion

It was found that almost all of the sample living in the community received good support from social support networks because of the bonds between community members who helped each other, leading to a pattern of life in the community where schizophrenia patients were encouraged to rely on themselves in their daily activities, and social networks were strengthened to promote the cooperation of people in the community. This is consistent with the work of Thongsai (2015) who studied the sustainable care of schizophrenia patients in the Thai social context. It was found that to provide care for schizophrenia patients under the context of Thai society to achieve the maximum sustainable efficiency, relatives, or caregivers of schizophrenia patients must be encouraged to have knowledge, understanding, and good attitudes towards providing care to patients, and networks of families and communities to take care of patients should be established. In addition, patients must be able to rely on themselves to a certain level. This is a way to help people with schizophrenia to live with their families, communities and society more happily under the care of Thai society. In order to adopt this information, the potential of schizophrenia patients must be promoted and the family and community networks must be strengthened. Butthayothi, N. (2020) studied the process of the relapse prevention by community participation with a multidisciplinary team for schizophrenia patients at Kosumphisai Hospital, Kosum Phisai District, Maha Sarakham Province. The results showed that the community-developed process for prevention of schizophrenia relapse based on the contribution of the community that recognizes the problem and places great importance on the solutions was effective. With the community's willingness to solve problems and get involved, a great power can be formed to help find solutions. This result is consistent with the work of Wongsil (2020) which studied self-care experiences of non-relapse schizophrenia patients and caregivers in Bueng Nam Rak Sub-district, Bang Nam Prio District, Chachoengsao Province. The results showed that the patients had good self-care when they were at home and were able to do daily

routines by themselves, including taking care of the house. In addition, communication that created understanding in the family, participation of relatives who came to care for the patients, relatives' handling of problems, a guideline for patients to take a good care of themselves, no relapse of the symptom, and stress management of both the patients and their relatives all helped patients and their relatives to live in families and communities as normal. Adopting this information depends on each context, and patients should be encouraged to rely on themselves and to involve families and communities in caring for schizophrenia patients.

Regarding people living with schizophrenia patients, provision of support to families of schizophrenia patients and community members in the form of alternative benefits would be effective for taking care of schizophrenia patients in those communities. This is the reason why patients were still connected to the community in which they lived and did not migrate to other places. Most of the informants were patients, whose number was about the same as that of their parents. Most patients were therefore still able to take care of themselves in terms of movement and daily activities. It was found that for the problem of use of narcotic substances, most of the sample did not drink alcohol, but were smokers of cigarettes or tobacco. In the group that smoked the most, they usually smoked more than five cigarettes per day. This is consistent with the study by Rujkorakarn et al. (2018) which found that caregivers of schizophrenia patients in Northeastern communities provided good social support to patients in advising them to avoid narcotic substance abuse as well as managing their diet and medication.

Regarding administration of medication, most of the sample administered oral medication on their own and most of them received regular medication. This is consistent with the study by Rujkorakarn et al. (2018) which found that caregivers of schizophrenia patients in Northeastern communities provided good social support to patients in caring and helping patients in 4 aspects: 1) regular daily activities, 2) life support assistance at all times, 3) control of side effects from daily medication use, and 4) self-management in daily life. Self-medication is also included in the care and support by families and communities. This is in line with the work of Thongsai (2015) which studied the sustainable care of schizophrenia patients in the context of Thai society. It was found that to provide care for schizophrenia patients under the context of Thai society to achieve the maximum sustainable efficiency, relatives or caregivers of schizophrenia patients must be encouraged to have knowledge, understanding, and good attitudes towards providing care to patients, and a network of families and communities caring for patients should be established. In addition, patients must be able to rely on themselves to a certain level. This is a way to help people with schizophrenia to live with their families, communities and society more happily under the care of Thai society. In order to adopt this information, the potential of schizophrenia patients must be promoted and the family and community networks must be strengthened. Butthayothi (2020) studied the process of the relapse prevention by community participation with a multidisciplinary team for schizophrenia patients at Kosumphisai Hospital, Kosum Phisai District, Maha Sarakham Province. The results showed that the community-developed process for prevention of schizophrenia relapse based on the contribution of the community that recognizes the problem and places great importance on the solutions was effective. With the community's willingness to solve problems and get involved, a great power can be formed to help find solutions. This corresponds to the work of Wongsil (2020) which studied self-care experiences of non-relapse schizophrenia patients and caregivers in Bueng Nam Rak Sub-district, Bang Nam Prio District, Chachoengsao Province. The results showed that the patients had good self-care when they were at home and were able to do daily routines by themselves, including taking care of the house. In addition, communication that created

understanding in the family, participation of relatives who came to care for the patients, relatives' handling of problems, a guideline for patients to take a good care of themselves, no relapse of the symptom, and stress management of patients and their relatives all helped patients and their relatives to live in families and communities as normal. Adopting this information depends on each context, and patients should be encouraged to rely on themselves and to involve families and communities in caring for schizophrenia patients.

XIII. Recommendations

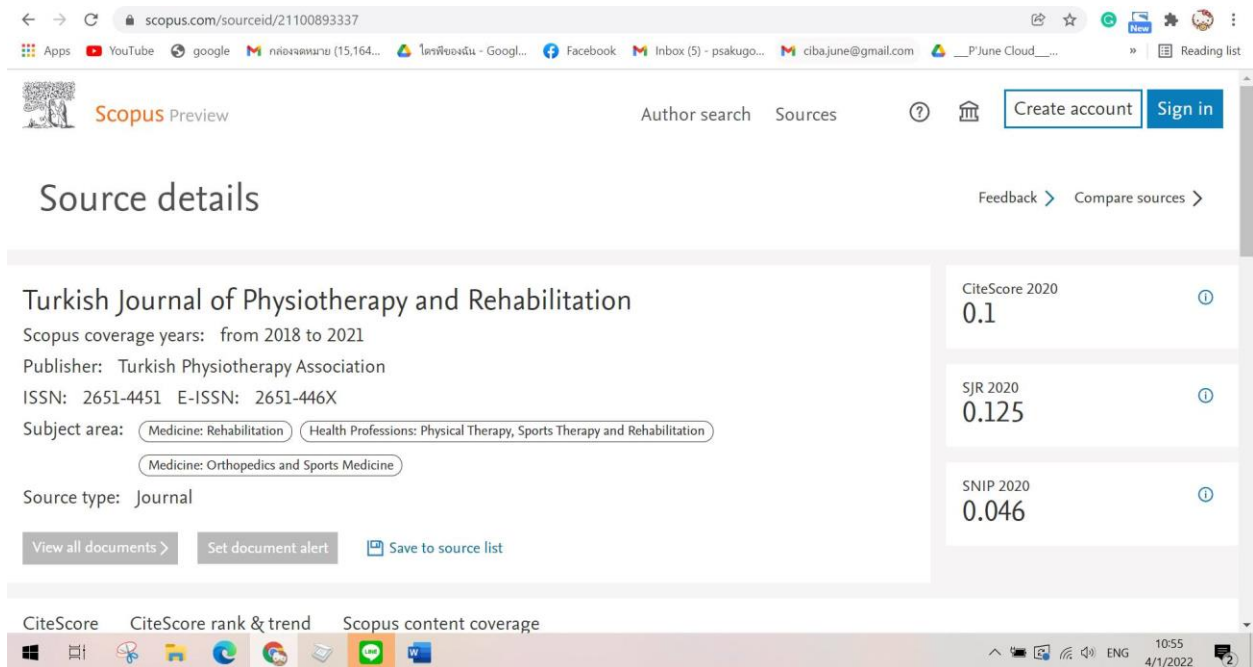
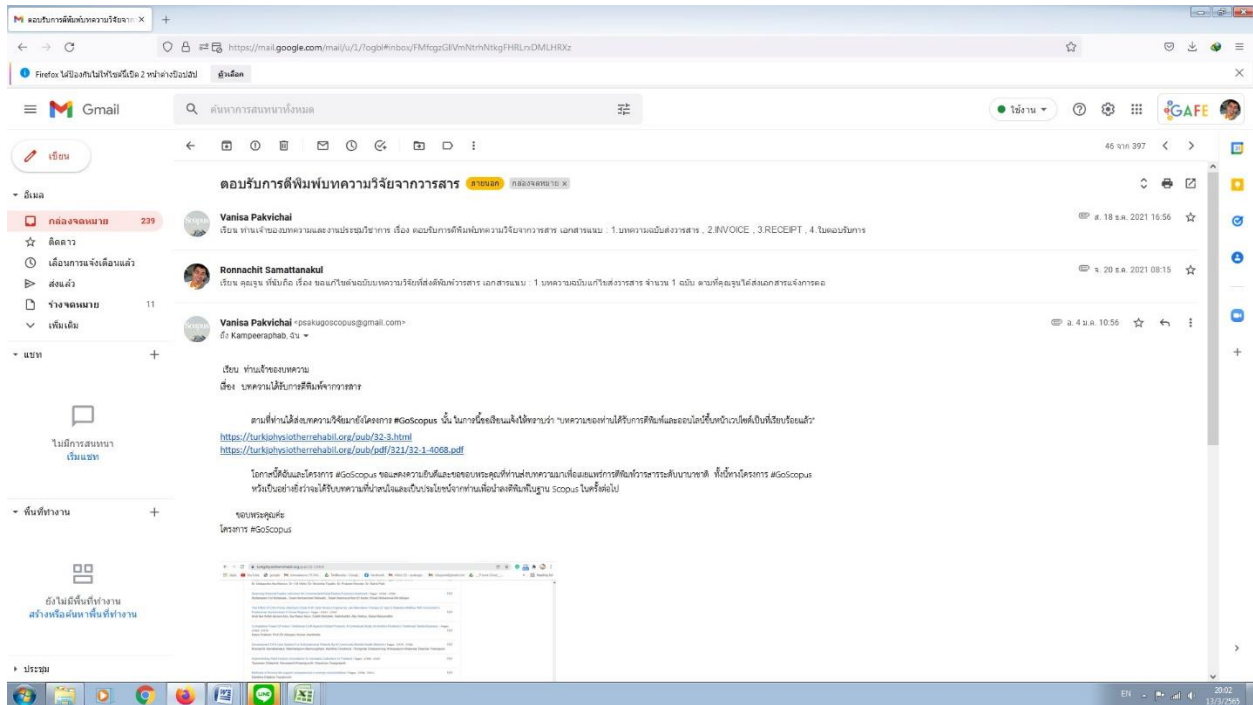
From the results of this research, the researchers have some important recommendations as follows:

1. Recommendations for applying the research results
 - 1.1 There should be a policy to promote care for schizophrenia patients in accordance with the needs and context of the community.
2. Recommendations for future research
 - 2.1 There should be research studies on community mental health development approaches.
 - 2.2 There should be research studies on the relationship of mental health and quality of life in the community.

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Dear Author (s)

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It's my pleasure to inform you that, after the peer review, your paper, "**DEVELOPMENT OF A CARE SYSTEM FOR SCHIZOPHRENIA PATIENTS BY A COMMUNITY MENTAL HEALTH NETWORK**" has been ACCEPTED to publish with **Turkish Journal of Physiotherapy and Rehabilitation** (ISSN 2651-4451; e-ISSN 2651-446X) (Scopus & ESCI Indexed). It will be published in Volume 33 Issue 3.

I believe that our collaboration will help to accelerate the global knowledge creation and sharing one step further. Please do not hesitate to contact me if you have any further questions.

Sincerely,

Deniz Inal Ince

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