The Effectiveness of a Coaching Program for Enhancing Family Caregivers' Knowledge, Attitudes, and Skills in Caring for Persons with Schizophrenia in Medan, Indonesia

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A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of

Doctor of Philosophy in Nursing (International Program)

Prince of Songkla University

2015

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ABSTRACT

The basic knowledge of schizophrenia, positive attitudes towards schizophrenia and necessary skills are crucial aspects for caregivers to provide sustained care for a relative with schizophrenia. Coaching can facilitate a caregiver's knowledge, attitudes, and skills. The purpose of this study was to determine the effectiveness of a coaching program for enhancing family caregivers' knowledge, attitudes, and skills in caring for persons with schizophrenia. Ninety-one primary family caregivers of persons with schizophrenia were recruited and assigned into control and experimental groups. The experimental group (n_1 = 45) received the coaching program while the control group (n_2 = 46) received routine care. Family caregivers' knowledge, attitudes, and skills data were measured with the Family Attitude Scale (FAS), the Chiang Mai Psychiatric Caregiving Skills Scale (CPCSS), the Caregiver Satisfaction Scale (CSS), and the Knowledge About Schizophrenia Test (KAST). The KAST and the CSS were checked for content validity by five experts and internal consistency were tested in 30 family caregivers of schizophrenic persons who met the same inclusion criteria as the actual sample, yielding Cronbach's alphas of .83, .82, and .83 respectively. The internal consistency of the KAST using Kuder-Richardson Formula (*KR*20) was .82. Data from baseline, two weeks after completion

of the program, and 1 month follow up were analyzed by using descriptive statistics, chi-square tests, independent *t*-test, Mann-Whitney *U* test, and a one way repeated measures ANOVA.

Repeated measures ANOVA showed that the caregivers in the experimental group had significantly higher knowledge ($F = 85.77$, $p < .001$), lower negative attitudes towards schizophrenia ($F = 13.22$, $p < .001$) and higher caregiving skills ($F = 22.94$, $p < .001$) than those in the routine care group at two weeks after completion of the program and one month follow-ups. The results also revealed that there were significant improvements in knowledge, attitudes, and skills at week 2 and 1 month follow up in the experimental group as compared with the control group ($p < .001$). The caregivers had high satisfaction rate with coaching program. Therefore, this coaching program should be regularly used in the psychiatric ward to enhance caregivers' knowledge, attitudes and skills.

ACKNOWLEDGMENTS

My deepest appreciation first goes to almighty God for giving me the power to complete my study. I would like to also express my deep gratitude to Assoc. Prof. Dr. Wandee Suttharangsee, my major thesis advisor, for her patient guidance, advice, enthusiastic encouragement, correcting my writing, and giving useful critiques of this research study. I also wish to express my heartfelt gratitude to Assoc. Prof. Dr. Aranya Chaowalit, my co-advisor for her valuable support and for challenging me to work hard. I would forever remain indebted to you and above all I could not have had any better advisors and mentors for my Ph.D study.

Aside benefitting from my advisors, I enjoyed an immense support from the rest of the members of the thesis committee: Assoc. Prof. Dr. Nongnut Boonyoung, Asst. Prof. Dr. Tasanee Nasae, and Asst. Prof. Dr. Nidtaya Takviriyanun, your candid comments and valuable contributions have perfected my work. I was very fortunate to have Assoc. Prof. Dr. Nongnut Boonyoung, Dr.Weena Chanchong, Prof. Dr. Budi Anna Keliat, Dr. Novi Helena Catharina Daulima, Rodiatul Hasanah Siregar, M.Si, psychology for their in-depth expertise related to the coaching program guideline, caregiver's booklet and questionnaires. They played a pivotal role in making this research a success.

Another tremendous amount of thanks goes to the Directorate General of Higher Education, Indonesia Ministry of Research and Technology for providing scholarship and the Graduate School, Prince of Songkla University, Thailand for funding my research study. I am grateful to Professor Dr. Syahril Pasaribu, D.T.M., & H. Sp. AK (K), the Rector of the University of Sumatera Utara, dr. Dedi Ardinata, M.

Kes, the Dean of Faculty of Nursing for granting me the chance to pursue such a breakthrough study. My sincere thanks also go to Assoc. Prof. Dr. Busakorn Punthmatharith, Dr. Idsaratt Rinthaisong, and Taruli Sinaga, M. Kes., for their help in doing data analysis of my research study.

I would also like to extend my thanks the Director of Psychiatric Hospital and the Head of Community Health Center (Puskesmas) for allowing me to conduct the pilot study and collect data. It would be unfair to leave out all the study participants who shared their time, knowledge, and experiences as primary caregivers of persons with schizophrenia. I will forever remain appreciative for assisting me through this long and painstaking process.

I wish to thank everyone for their contribution to this research study, particularly the research assistants. I would like to extend my warmest thanks to Mitch who has kindly assisted in proof reading and editing my English.

I wish to thank my beloved parents who helped me taking care of my children while I was away from home, for their support, encouragement, and prayer throughout my study. My special thanks are also extended to the Purba and Sitorus families for their prayer and support.

Finally, I dedicate this dissertation to my husband, Leonardo AB Sitorus, S. Hut for his support, prayer, and kindness throughout my study. He also provided encouragement and humor when it was greatly needed. Also, to my beloved children, Jhuan Avryganda Sitorus and Aranya Resinary Sitorus, I could not have made it this far without your constant love, and support. I hope you are now proud of your mother.

Jenny Marlindawani Purba

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CHAPTER 1

INTRODUCTION

This chapter details the study's background and significance of the problem, objectives, research questions, theoretical framework, hypotheses, definition of terms, its scope as well as significance.

Background and Significance of the Problem

Schizophrenia has been reported in all countries and cultures. The prevalence of schizophrenia is increasing worldwide and its current incidence rate is about 20 cases per 100,000 populations per year. The onset age is in early adulthood between the ages of 15 and 35. In males, it begins 4 - 5 years earlier (15-25 years) than in females (25-35 years) (Wright & Kraus, 2012). Based on a survey by the 2010 Statistics Indonesia, the countrywide prevalence of schizophrenia is estimated at 2,000,000 people. In Medan, Indonesia, there are increasing numbers of people with schizophrenia living in the community. In 2011, the number of schizophrenia patients admitted in Medan psychiatric hospital was 1,760 persons, meanwhile, the number of outpatients was 11,388. In 2012, the number of hospitalized patients with schizophrenia was 1,398, while that of patients visiting the outpatient department was 13,423. These data indicate an increasing prevalence of patients with schizophrenia, most of whom were not hospitalized. They also show that most of the schizophrenic cases presenting to the outpatient department were patients who experienced relapse (Medical Records, Medan Psychiatric Hospital, 2012).

Schizophrenia is a predominant mental health disorder characterized by auditory hallucinations, thought disorders, bizarre delusions, as well as a blunted affect and apathy (Pearson, 2009; Wright & Kraus, 2012). In people with schizophrenia, there is a progressive deterioration in the level of previous functions in the field of employment, social relationships, occupational competence, and ability to care for others and themselves (Moller, 2005; Wright & Kraus, 2012).

Schizophrenia does not cause disturbances for the patients only but also their family. Caring for a family member with schizophrenia is challenging for caregivers because it is extremely stressful and burdensome (Milliken & Rodney, 2003). Family caregivers experience a series of conflicts and tend to show emotional responses such as fear of violence, high levels of burden, stigma, frustration, sadness, feeling angry, and timelessness (Dangdomyouth, Stern, Oumtanee, & Yunibhand, 2008; Evans, 2009; Papastavrou, Charalambous, Tsangari, & Karayiannis, 2010; Sethabouppha & Kane, 2005). Family caregivers also suffer from financial problems and lack of knowledge, in particular information about schizophrenia (McDonell, Short, Berra, & Dyck, 2003; Saunders, 2003; Small, Harrison, & Newell, 2010).

In Indonesia, most family caregivers have certain negative assumptions about their experiences with this disorder. They report frequently enduring family conflicts, financial problems, feeling uneasy, upset, sad, disappointed, confused, bored, and not knowing what to do (Rafiyah & Suttharangsee, 2011; Widiastuti, 2010). The caregivers' understanding of the symptoms and causes of schizophrenia, history of the disorder, and medications used for its treatment are still inadequate (Widiastuti, 2010). These conditions cause caregivers to seek help from traditional healers known as "dukun". Most family caregivers believe that a supernatural power

is the cause of schizophrenia. Furthermore, the aforementioned situations are caused by a lack of knowledge regarding the disease and the required skills on the part of family caregivers to offer appropriate care to their loved ones (Agiananda, 2006; Hawari, 2007; Kurihara, Kato, Tsukahara, Takano, & Reverger, 2000). In addition, the belief that people with schizophrenia cannot recover from it leads toward a sense of pessimism in caring for the patients as well as a tendency to be frustrated (Mubin, Hamid, & Wiarsih, 2009). Moreover, caring for such patients would disturb the ability of those paid jobs to accomplish their work related duties (Small et al., 2010). Consequently, the limitation concerning knowledge of the disorder and inadequate skill set for offering appropriate care as well as negative attitude toward the patient's care and prognosis pose serious challenges to the ability of caregivers to provide effective care for their ill relatives which often lead to a sense of helplessness.

Ngadiran (2010) reported that the caregivers faced numerous difficulties in taking care of their ill relatives. The family caregivers felt that their schizophrenic loved ones were lazy, lacking any initiative to help them perform house chores or find a job, even when their illness statues was stable (Chang & Horrocks, 2006; Ngadiran, 2010; Widiastuti, 2010). They also reported lacking time to take care of and pay sufficient attention to the patient. Furthermore, a study conducted by Wulansih and Widodo (2008) showed that the level of knowledge regarding schizophrenia among family members of persons with schizophrenia is low. Such families were characterized by patients who had recovered and returned to the family for a few days, weeks, or months, and were readmitted to the hospital. Often this was because the families could not tolerate the patients' behaviors. The patients were, therefore, prohibited to go out of the house and always under suspicion of wrong

doing by the family. Thus, the patients tended to withdraw from the community. These conditions produce negative emotions and attitudes, and have a negative impact on the mental health of the person with schizophrenia.

Most families are not well-prepared to provide care for their loved ones with schizophrenia when the sick member is discharged from hospital (Nurjannah, Fitzgerald, & Foster, 2009). Consequently, they tend to request the hospitalization of their ill relatives. In fact, family caregivers feel more comfortable if the patient could stay longer in a mental hospital rather than live at home with the family. In fact, persons with schizophrenia who receive treatment at a mental hospital are usually readmitted to such institutions. This happens because of a lack of community mental health service provision. Rejection from the families also often occurs, as family members feel ashamed of these persons who are often seen as 'crazy' (Fitriawan, 2005; Rose, Mallinson, & Walton-Moss, 2004).

In 2008, Indonesia's mental health system changed. The Indonesian Government imposed a new policy, which in particular shortens the length of hospital stay (at least 14 days and no more than 6 weeks) and deinstitutionalizes the care for mentally-ill patients, including people with schizophrenia (Ministry of Health [MOH], 2008). In Indonesia, the deinstitutionalized care policy involves professional nursing practice models in psychiatric hospitals and community mental health nursing. The community mental health nursing purposes to detect mental health problems as early as possible, accelerate the recovery of patients, reduce the length and cost of hospitalization, promote family-based care, and encourage mentally-ill patients including persons with schizophrenia, to live with their families. However, the efficacy of the community mental health nursing program in Indonesia is not yet

optimal. Most patients who live with their family do not receive intervention support from the community mental health nursing. This further increases the stigma and burden on families, especially the primary caregivers (Rafiyah & Suttharangsee, 2011; Wijayanti, 2012).

The impacts of stigmatization and misconceptions concerning persons with schizophrenia are significant (Tyson & Flaskerud, 2009). Family caregivers face difficulties such as social stigma, lack the necessary skills and resources to deal with patient behavior while caring for a family member with schizophrenia (Dangdomyouth et al., 2008; Teschinsky, 2000). Families, particularly caregivers, need support in dealing with the chronic phase of the disease, e.g. assistance with the daily activities of the patient, decision making, and facing other difficulties (Ingkiriwang, 2010). Therefore, there is a need for having better knowledge, attitude, and skills while caring for such ill relatives.

Knowledge, positive attitudes and appropriate skills are necessary while caring for relatives with long-term schizophrenia at home (Grossman, 2005; Harrison, 2008; Huang et al., 2009). Hence, promoting a deeper level of understanding of schizophrenia, maintaining a positive attitude, and acquiring the necessary caregiving skills are essential aspects in improving the family caregivers' performance in caring for their sick family members. The caregivers should have an adequate level of knowledge of schizophrenia, caregiving skills and positive attitudes in order to be competent in providing satisfactory care for their loved ones (Magaru, 2012; Williams & Tufford, 2012).

Caregiving skills are an important aspect for caregivers of persons with schizophrenia. They encompass various skills such as making decisions in a crisis

situation, self-care training, building communication, resolving conflict, solving problems, being assertive, behavior-management, stress-management and assisting patients in their daily activities, etc (Conn & Stuart, 2005; Fulbrook, 1994). These skills can overcome or decrease the frequency and degree of caregivers' needs to obtain supplementary resources, handle the anxiety of ongoing strains, and develop a positive attitude towards situations, which are manageable and acceptable for the entire family (Saunders, 2003). Finally, a better understanding of the caregiver's capability to provide care for a sick family member would affect the development of specific interventions that can enhance the caregivers' caring performance for people with schizophrenia (Bostrom & Boyd, 2015).

Family caregivers are an important factor for the effectiveness of treatment (Milliken, 2001; Sethabouppha & Kane, 2005; Wynaden, 2007). The family caregivers' participation is essential for the optimal treatment of patients by ensuring treatment compliance, continuity of care, and social support (Agiananda, 2006; Fitriawan, 2005). If family caregivers cannot provide appropriate care, the patient will often fail to prevent relapse and readmission (Chien & Norman, 2003; Chien, Chan, Morrissey, & Thompson, 2005). Therefore, caregivers as the "primary nurse" of the sick family members require interventions that help improve their knowledge, attitude and skills in caring for people with schizophrenia (Wiyati et al., 2010). To enhance the caregivers' knowledge, attitude and skills in caring for such patients at home, psychiatric nurses who are responsible for helping caregivers, need to understand how to fulfill the caregivers' needs and share experiences related to caring for a sick family member who has been discharged early from hospital (Kertchok, Yunibhand, & Chaiyawat, 2011). Hence, a coaching program intervention can be used to improve

the family caregivers' knowledge, attitude, and skills in having an optimal caring performance for their ill relatives (Rush, Shelden, & Hanft, 2003; Thorpe & Clliford, 2003).

Coaching is one strategy that can promote an individual's performance (Thorpe & Clifford, 2003). It can increase the family caregivers' ability to care for their loved ones effectively (Kertchok, Yunibhand, & Chaiyawat, 2011). A coaching program is needed in order to assist family caregivers in recognizing and managing their resources at their disposal; hence they will be able to take better care of their schizophrenic relatives (Graham, Rodge, & Ziviani, 2009; Nelson et al., 2004). Coaching can facilitate successful caregiving through enhancing the caregiver's knowledge, attitude, and skills.

In recent years, coaching has become an important means in enhancing the caregivers' interaction with and provision of good care for children with disability (Janssen, Riksen-Walraven, Van Dijk & Ruijssenaars, 2010). By using the coaching approach, family caregivers may identify additional knowledge that is needed and facilitate their learning of new skills as well as improve the parent-child interaction (Janssen et al., 2010).

Additionally, a coaching program was used with informal caregivers of dementia patients and the results suggested that informal caregivers who received telephone coaching reported significantly less burden load compared to caregivers who received day care only (Van Mierlo, Meiland, & Droes, 2012). It is also useful in enhancing the quality of nursing care in reducing depressive and anxiety symptoms in chronic patients. A coaching program is also an effective intervention for empowering

caregivers through the acquisition of knowledge and skills in caring for patients with dementia (McGee & Tuokko, 2005).

To date, no research regarding a coaching program for family caregivers in a mental health setting in Indonesia has been conducted. Most studies in mental health nursing have focused on behavioral therapy, group-activity therapy, and educational programs (Keliat, 2003; Marchira, 2012; Widiastuti, 2010; Wiyati et al., 2010). The lack of specific nursing intervention along with the difficulties arising from the caregiver's culture does not make this kind of patient treatment an optimal one. Particularly in mental nursing practice, specific programs, procedures and activities could be used to help family caregivers learn how to take care of their relatives and enhance their capability by improving their confidence in providing good care for their loved ones. The lessons learned from such a coaching program are expected to help family caregivers to obtain a better knowledge, attitude, and skills. Therefore, they will be able to improve their performance regarding providing effective care for their sick family member.

The coaching program will benefit the family caregivers to carry out their roles in helping the patient adapt with a new environment and relieve tension (Murakami, 1999), improve relationship with the sick family member and more self-confidence to help the sick member to actively participate at home and in the community (Graham, Rodger, & Ziviani, 2009; Janssen et al,, 2010; Rush et al., 2003), which may decrease the burden associated with caring for such patients (Van Mierlo et al., 2012). Therefore, it is important to develop and test the effectiveness of a coaching program on family caregivers' knowledge, attitudes, and skills in caring for persons with schizophrenia in Medan, Indonesia.

Objectives of the Study

The objectives of the study were:

1. To compare the mean scores of knowledge between the caregivers in the experimental group and that of the control at baseline, two weeks after completion of the program and 1 month follow up.

2. To compare the mean scores of attitude between the experimental group and those of the control group at baseline, two weeks after completion of the program and 1 month follow up.

3. To compare the mean scores of skills of caregivers in the experimental group and those of the control group at baseline, two weeks after completion of the program and 1 month follow up.

.4. To examine the family caregivers' satisfaction with the coaching program.

Research Questions

The research questions of the study comprised:

1. Do the caregivers have higher scores of knowledge after undergoing the coaching program than their counterparts from the control group at two weeks after completion of the program and 1 month follow-up than before receiving the program?

2. Do the caregivers who received coaching program show lower scores of negative attitudes toward caring than those of the control group at two weeks after completion of the coaching program and 1 month follow-up than before receiving the program?

3. Do the caregivers who participated in the coaching program have higher scores of skills than those who received routine care at two weeks after completion of the coaching program and 1 month follow-up than before receiving the program?

4. Are the family caregivers satisfied with the coaching program?

Theoretical Framework

The theoretical framework of this study was based on the experiential learning theory, the coaching process, and the family caregivers' knowledge, attitude, and skills in caring for persons with schizophrenia.

Kolb's Experiential Learning Theory

Kolb's experiential learning theory was used as a theoretical framework in this study, particularly the four modes of experiential learning model, which provides support to family caregivers along with coaching (Thorpe & Clifford, 2003). The integration of the experiential learning theory into a coaching process may help the researcher to support, encourage, and help the caregiver as an expert and the person "making it happen" (Thorpe & Clifford, 2003; Williamson, 2009). Kolb's experiential learning theory provides a framework for the coach to develop the important skills required to manage situations and the coaching relationship during the coaching process.

Fazel (2013) emphasized that the Kolb learning cycle looks like guiding the process of the coaching model in every session of coaching.

Kolb (1984) stated that there are four modes that people can be involved in any given experience. These are as follows:

Concrete experience. Concrete experience is doing or having an experience of the activity (Fazel, 2013; Turesky & Gallagher, 2011). At this stage, the person experiences an event as it is (just feels, looks, and recounts the events) (Kolb, 1984).

Reflective observation. Reflective observation refers to watching what issue or situation is generated (Turesky & Gallagher, 2011). The individual has started to reflect and observe the events experienced, looking for answers, implementing reflections, developing questions regarding how it happened, and thinking why it happened (Kolb, 1984).

Abstract conceptualization. Abstract conceptualization involves thinking and learning about the issues regarding the experience (Turesky & Gallagher, 2011). At this stage, the individual is trying to make an abstraction, develop a theory with concepts and procedures about something that is the object of attention (Kolb, 1984).

Active experimentation. Active experimentation entails planning and doing something about the issue or situation associated with the experience (Turesky & Gallagher, 2011). At this point, the individual has started to experiment actively. He/she must be able to apply the concept and theory into a real situation (Kolb, 1984).

Coaching Process

Coaching is a process that helps persons by equipping them with knowledge, skills, and opportunities through a learning experience (Thorpe & Clifford, 2003). The coaching process cannot be separated from learning so that the individual can apply specific knowledge and skills to improve their performance in performing the task well. Coaching can create the condition for learning and

behavioral change. It is described as a cycle of learning and action combined together to create change (Griffiths, 2005). On the other hand, coaching is also a powerful method to develop human potential. Development is related to attaining new knowledge, skills, and behaviors. It is possible to learn from experience what individuals do, but learning only takes place when individuals deliberate and plan for the next activity (Kolb, 1984). Coaching can be given to people who already have a goal to achieve and have the knowledge to act. The strategies in a coaching program for caregivers are composed of help methods such as discussion, observation, training, simulation, telephone follow-up, and supporting caregivers to develop new knowledge, attitudes, and skills.

Guided by the coaching process, a coaching program was chosen as an intervention in this study. This program provided opportunity to achieve personal development in terms of gaining new knowledge, attitudes, and skills through six processes of the coaching program: 1) clarifying coaching needs and goals; 2) agreeing about specific development needs; 3) making a detailed plan for coaching; 4) performing a task or activity; 5) reviewing activities and planning to improve performance; and 6) ending the coaching relationship (Thorpe & Clifford, 2003). Since Thorpe and Clifford's coaching framework was derived from Kolb's Experiential Learning Theory Cycle, the program was the integration of the experiential learning cycle with caregiving content. The session of this coaching program included concrete experience, reflective observation, abstract conceptualization, and active experimentation.

The first step of the coaching process was clarifying coaching needs and goals. At this step, the coach identified an opportunity for coaching and invited

the caregivers to share their experience and be open for the coaching conversations (Rush et al., 2003). The first step involved an introduction to the coaching program, identifying the caregivers' actual need for coaching, and discussion regarding the aims of the coaching program (Thorpe & Clifford, 2003). The coach was able to perform the questioning, listening, assertiveness, interpreting information, and summarizing skills.

Agreeing to specific development needs was step two which concerned itself with building close relationships with caregivers and identifying gaps in the existing knowledge, attitudes and skills of the caregiver (Thorpe & Clifford, 2003). The coach explored what the caregiver already knew and in doing so, tried to think about specific situations or needs (Rush et al., 2003). The coach demonstrated her analytical, information provision, questioning, listening and summarizing skills.

Step three, concerned formulating an action plan. As the coaching process is related to Kolb's learning cycle, the plan included each of the modes at least once (Thorpe & Clifford, 2003). The coach worked with caregivers to develop strategies to achieve the goals of the coaching program (Williamson, 2009). In addition, the coach ensured that the formulated sessions were clear in order to achieve the development objectives. The coach also organized the coaching objectives, time, place, resources, and preliminary tasks (Thorpe & Clifford, 2003). During this step, the coach trained caregivers how to improve their knowledge, attitude and skills. The skills the coach used during this step comprised planning, decision making, problem solving, listening, questioning, prioritizing, and summarizing.

Step four involved performing tasks or activities that were already approved. Performing a task or activity provided the caregivers with an opportunity to

practice a new skill or strategy, and also improve on performing an activity of their choice. The coach collected information and proof about the performance of the caregiver throughout that practice. The coach also arranged a simulation or real life situation to illustrate the activities. The coach asked caregivers to demonstrate how to perform the activities related to the ill relative's daily living, how to communicate with them, how to manage their symptoms, how to manage medication adherence, how to manage finances, how to develop problem solving skills, and how to identify the family's resources that enable seeking professional help. The coach observed the caregivers' performance and decided what the caregivers had learned from the session (Rush et al., 2003; Thorpe & Clifford, 2003). In this step, the coach utilized the listening, observation, and summarizing skills.

Reviewing activities and planning to improve performance (step five) was associated with activities that caregivers had already performed and the discussion of the experiences that the caregivers had and how they could build upon those experiences in order to improve their performance regarding care. One of the main activities of the coaching program was reviewing all the coaching activities from the beginning until the end of the coaching session using telephone follow-up. The coach asked about the caregivers' activities and experiences barriers. Then, the coach evaluated the implementation of the coaching activities. The coach subsequently analyzed whether the action plan needed to be revised or could be carried out unchanged at the next session. After that, the coach asked the caregiver to list their strengths and level of performance regarding care and identify the areas that had experienced improvement and those that had not (Thorpe & Clifford, 2003). Here, the

coach was able to perform the listening, questioning, facilitation, planning, presenting ideas, preparing and analyzing plans, and summarizing skills.

Ending the coaching relationship (step six) was the last step of the coaching process in this study (Thorpe & Clifford, 2003). The purpose of this step was to examine how effective the coaching process would be (Rush et al., 2003). The coach evaluated the objectives of the coaching program and terminated the relationship with the caregivers when all of the learning objectives had been achieved (Thorpe & Clifford, 2003). The coach was expected to demonstrate the listening, questioning, assertiveness, and summarizing skills during this step.

According to Fazel (2013), there are several roles of the coach in the coaching process, namely, helping the coachees movement through the objectives of coaching, helping coachees set an objective, develop an action plan, start an action, observe and evaluate the coachees' performance, give and receive feedback between the coach and coachees, and close or continue the coaching program. Moreover, the coach was expected to improve the coachees' actions in the future and achieve their objectives. Whereas, the roles of coachees involved setting the time of the coaching program (Fazel 2013), agreeing on the development needs, developing an action plan, applying new knowledge, attitudes, and skills in the caring performance for their ill relatives, reviewing activities that were completed, planning to improve performance in next session, reviewing the efficacy and shortfall of the session, and analyzing the usefulness of the coaching relationship (Thorpe & Clifford, 2003).

Family Caregivers' Knowledge, Attitude, and Skills in Caring for Persons with Schizophrenia

The effective performance of tasks is related to adequate knowledge, a positive attitude and competent caregiving skills (Horvath et al., 2005). Family caregivers who have greater responsibility expect to feel capable in performing care for the patient. This capability requires proper knowledge, a positive attitude, and an adequate skill set (Stokes, 1998). Based on the literature review, knowledge of the disease and how to care for persons with schizophrenia refers to the caregivers' understanding of the nature of schizophrenia, medications of schizophrenia, mental health care service facilites, therapy modalities in the community and knowledge on how to care for persons with schizophrenia at home. The attitude toward schizophrenia refers to feelings / responses of caregivers toward living with or caring for a person with schizophrenia (Tungpunkom, Srikhachin, Napa, Chaniang, 2013).

Skills in providing care for persons with schizophrenia refers to a caregivers' ability to care for their family members with schizophrenia. It involves performing a family member's activities of daily living, communicating with them, monitoring and managing psychiatric symptoms (hallucinations, delusions, paranoiac ideas, aggressive behavior, suicidal attempts or threats, lack of motivation to carry out daily activities), managing behavioral problems, administering and managing medication therapies, managing finances, making decisions and solving problems, and seeking and obtaining resources (Chosungnoen, 2010; Kosberg & Cairl, 1992; Stokes, 1998; Tungpunkom, 2000).

Moreover, to be competent in providing effective care, family caregivers should be able to monitor and manage symptoms, and offer medication

administration, self-care promotion, management of the living environment, and psychological support (Kertchok et al., 2011). In addition to perceiving feeling confident about the application of knowledge and ability in providing care, caregivers need to be able to have sufficient time to attend to their own personal life (Riedijk et al., 2009).

Therefore, this coaching program could enhance the ability of family caregivers to help their ill relatives recognize early signs of symptoms, manage the symptoms of schizophrenia effectively, take medication regularly, perform daily living activities, improve communication, and attitude toward schizophrenia and others, make decisions and solve problems, and minimize the incidence of re-hospitalization.

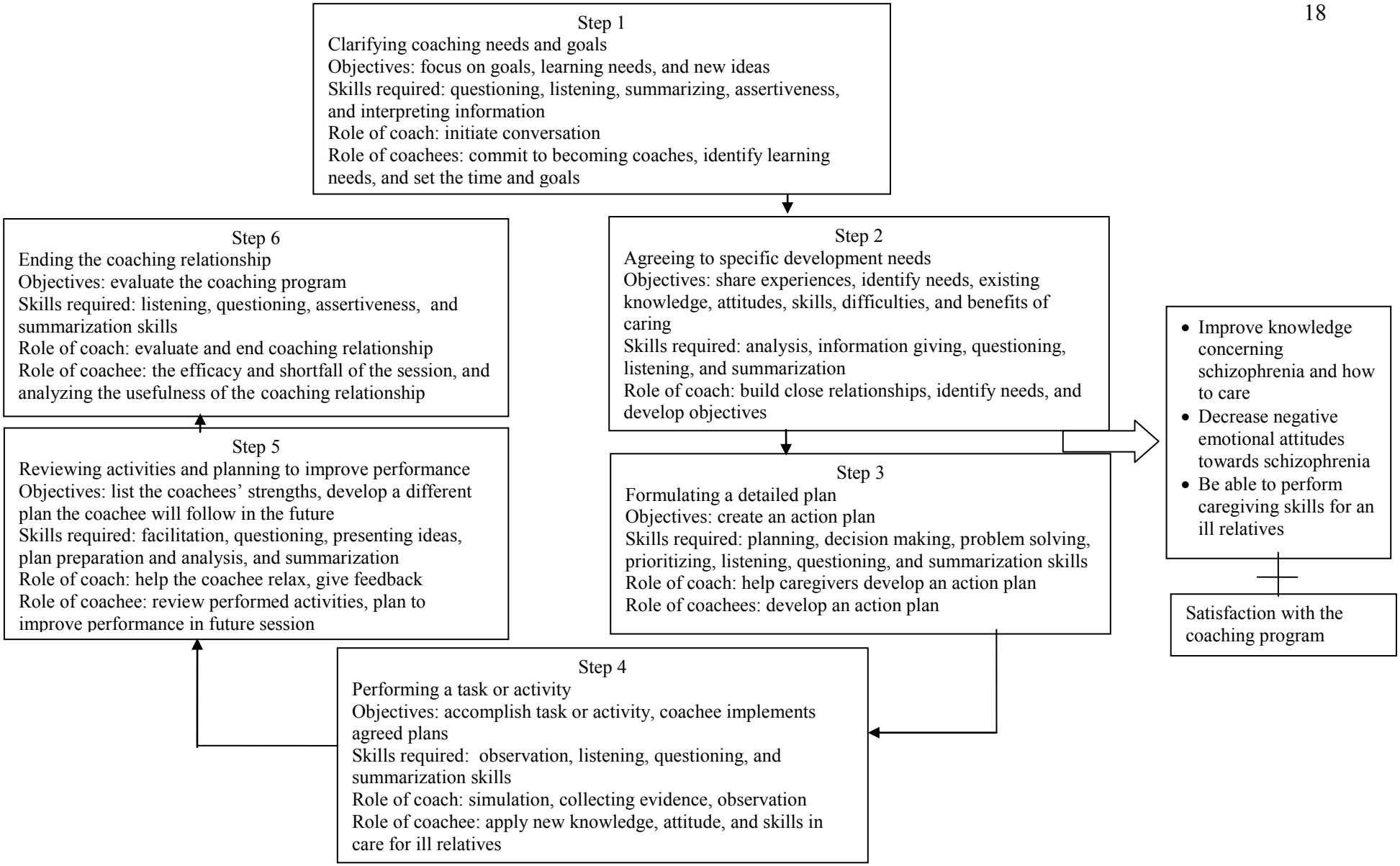


Figure 1. Theoretical Framework of the Effectiveness of a Coaching Program to Enhance Family Caregivers' Knowledge. Attitudes, and Skills in Caring for Persons with Schizophrenia

Hypotheses

The specific hypotheses of this study were as follows:

1. The mean score of knowledge related to schizophrenia of the experimental group is higher than that of the control group at two weeks after completion of the program and 1 month after 1st pos-test than before receiving the program.

2 The mean score of negative attitudes towards schizophrenia of the experimental group is lower than that of the control group at two weeks after completion of the program and 1 month after 1st pos-test than before having received the program.

3. The mean score of skills of the experimental group is higher than that of the control group at two weeks after completion of the program and 1 month after 1st pos-test than before having received the program.

Definition of Terms

Coaching Program

The coaching program was a seven weeks long and developed by the researcher to enhance the caregiver knowledge, attitudes, and skills. It was based on the coaching process derived from Thorpe and Clifford (2003) and Kolb (1984). It aimed to assist the caregivers in enhancing their knowledge, attitudes, and caregiving skills in providing effective care for their loved ones by using discussions, watching videos, providing information, training, demonstrations, role-plays, observation, and telephone calls. The program consisted of six sessions: (1) clarifying coaching needs and goals, (2) agreeing on specific development needs, (3) formulating a detailed plan

for coaching, (4) performing a task or activity, (5) reviewing activities and planning to improve performance, and (6) ending the coaching relationship. This program includes two follow-up telephone calls at five and six weeks following the program.

Knowledge

Knowledge referred to the self-reported extent of caregiver knowledge of schizophrenia and caring for the sick family members suffering from the disorder. The knowledge concerning the disease was assessed using the Knowledge About Schizophrenia Test (KAST). It was originally developed by Haladyna (1999) and was modified by Compton, Quintero, and Esterberg (2007). A higher score indicated a better knowledge level about the illness.

Attitudes

Attitudes referred to the negative feelings or opinions of family caregivers toward the sick family members that were reflected on the family caregivers' behavior. These attitudes were assessed via the Family Attitude Scale (FAS). Higher scores indicated higher levels of a negative emotional climate on the part of family caregivers.

Skills

Skills referred to the family caregiver ability to establish interpersonal relationships, provide effective communication, ensure medication compliance, monitor and manage schizophrenia symptoms, deal with crisis intervention, access mental health service, and solve problems while caring for an ill relative with schizophrenia. They were measured by means of the Chiang Mai Psychiatric Caregiving Skills Scale (CPCSS) (Tungpunkom et al., 2000 as cited in Suriyong

Tungpunkom & Chalinee, 2008). A higher score indicated higher levels of caregiving skills.

Routine Care

A routine care program referred to the regular care services that are provided by nurses at the Outpatient Department of the psychiatric hospital in Medan, Indonesia. The services comprise be-weekly and monthly medical consultation and treatment planning by an attending psychiatrist and a brief family educational program provided by a psychiatric nurse. The educational program involves a group consultation using the traditional approach after seeing a psychiatrist, and the topics generally focus on the disease, taking medications, and what the family could do for their ill relative at home.

Family Caregivers' Satisfaction

This referred to the family caregivers' satisfaction with what they received regarding the process of the coaching program. The caregiver's satisfaction with the coaching program was assessed by using the Caregiver Satisfaction Scale (CSS). A higher score indicated a higher satisfaction level with the coaching program.

Scope of the Study

This randomized controlled trial involving two groups, pre and post-test, and a repeated measures design was conducted to evaluate the effectiveness of a coaching program on family caregivers' knowledge, attitudes, and skills in caring for persons with schizophrenia. Ninety-one participants who lived with and cared for one relative with a the primary diagnosis of schizophrenia according to the DSM-IV-TR criteria and who where the primary caregiver having provided care for at least 1 year

were enrolled in the study. The participants were recruited from the psychiatric hospital, Medan Indonesia during the October, 2014 – May, 2015 period were randomly assigned using a minimization random program to either the experimental group (n = 45) or the control group (n = 46). The family caregivers' knowledge, attitude, and skills variables were measured before entering the coaching program, and after undergoing the coaching program at week 2, and 1 month follow-up.

Significance of the Study

This study was expected to make psychiatric nurses independent in providing a coaching program for family caregivers of persons with schizophrenia. The results of this study were estimated to provide empirical evidence on the positive effect of this coaching program on family caregivers' knowledge, attitude, and skills in caring for persons with schizophrenia.

The program was anticipated to also be useful in enhancing the family caregivers' knowledge, attitude, and skills in caring for their loved ones through gaining a better understanding of the nature of schizophrenia and its treatments, helping them to resolve the problems they face while providing care for their family members, making better decisions, reducing their level of burden and distress, improving their communication skills and preventing relapse. It was also hoped to serve as a clinical guideline to guide psychiatric nurses, particularly those in community health centers, and other healthcare professionals to enhance the family caregivers' knowledge, attitudes, and skills in providing independent care for persons with schizophrenia at home and in the community. In addition, the results of the study were expected to provide significant information for future research associated with

coaching programs aimed at enhancing family caregivers' knowledge, attitude, and skills related to caring for schizophrenia patients in Indonesia.

CHAPTER 2

LITERATURE REVIEW

In this chapter, the major variables of the study will be reviewed consisting of the coaching process and the family caregivers' knowledge, attitudes, and skills. The synthesized review encompasses both theoretical and methodological aspects.

1. Overview of Schizophrenia
    1.1 Definition of schizophrenia
    1.2 Causes of schizophrenia
    1.3 The cluster symptoms of schizophrenia
2. Family Caregivers' Needs when Caring for Person with Schizophrenia
3. Theories / Concept of Coaching and Coaching Process
    3.1 Definition of coaching
    3.2 Importance of coaching for family caregivers
    3.3 Coaching process
    3.4 Coaching skills
    3.5 Kolb's cycle of experiential learning theory and coaching process
4. Strategies for Enhancing an Effective Coaching Program for Family Caregivers
5. Coaching Program for Family Caregivers of Persons with Schizophrenia
6. The Relationships Between Coaching Program and Study Variables
7. The Study Variables
    7.1 Knowledge
    7.2 Attitudes

7.3 Skills

7.4 The factors influencing the study variables

7.5 Measurements of the study variables

8. Summary

Overview of Schizophrenia

This section presents a review of schizophrenia focusing on its definition, causes, and the cluster symptoms of schizophrenia.

Definition of Schizophrenia

Schizophrenia is a chronic mental disorder that impairs the functioning of a person's thought, personality, language, emotions, and capability to perceive rationale accurately (Herzog & Varcarolis, 2010). It is a common psychotic illness and is often considered as a serious mental illness. This is because people with schizophrenia often show poor long-term outcomes in social settings and in fields of specialization (Viron, Baggett, Hill, & Freudenreich, 2012). According to Videbeck (2011), schizophrenia is not a single disease but it can be defined as a syndrome or a disease process that consists of many different types and symptoms. Thus, most people believe that patients with schizophrenia are dangerous and need to be isolated from community surroundings.

Causes of Schizophrenia

The exact cause of schizophrenia is still not clear. However, it has been agreed that schizophrenia is caused by the interaction of several factors: biological factors, psychological and environmental factors. Biological factors include genetic predisposition, neuro-developmental abnormalities, and abnormalities in brain

structure and neuro-chemical imbalance. Schizophrenia caused by psychological factors can be explained through the theory of developmental and family theory. The developmental theory states that lack of attention and affection in early life causes a lack of self-identity, an altered interpretation of reality, and a withdrawal from the surrounding environment. Families whom express their emotions at a high level are considered too emotional, too rough and too critic. Environmental factors including a low economic status and an environment full of violence are both considered as probable causes of schizophrenia as well (Herzog & Varcarolis, 2010; Videbeck, 2011).

The Cluster Symptoms of Schizophrenia

There are six common cluster symptoms of schizophrenia as stated by Freudenreich (as cited in Viron et al. 2012): positive symptoms, negative symptoms, disorganized speech, cognitive dysfunction, affective symptoms, and motor system abnormalities. The evidence showed that at least two or more of those symptoms can be present for at least one month (Walker, Kestler, Bollini, & Hochman, 2004).

Positive symptoms. The positive symptoms of schizophrenia are an excess of ideas, formal thought disorder, altered sense of self, delusions (false beliefs firmly held by the observer in spite of contrary evidence), hallucinations (false sensory impressions that can affect any of the five senses), and bizarre behavior (Teschinsky, 2000). The positive symptoms of schizophrenia have little or no demonstrable effect on everyday functioning of schizophrenic persons (Palmer, Dawes, & Heaton, 2009).

Negative symptoms. The negative symptoms of schizophrenia include apathy, speech rarity, a blunted or flat affect in speech, and poor peer relationships.

Another symptom of schizophrenia is poor insight in which the schizophrenic person themselves don't believe they are schizophrenic (Pearson, 2009). Common behavior for persons with schizophrenia includes lack of motivation, decreased social interaction, poor speech, little attention to other people, poor speech content, blocking others from their lives, poor eye contact, poor eating behavior and sleep, difficulty in managing finances, poor personal hygiene, forgetting to do things, showing frequent violent behavior, talking to themselves, and irregular taking of medication (Foussias & Remington, 2010; Moller, 2005; Rigby & Alexander, 2008).

Disorganization of speech. Patients have disorganization of speech because there is a problem with the form and organization of speech (formal thought disorders). It may include loose associations, incoherency, tangentiality, illogical speech, circumstantiality, pressured speech, poor speech content, distractible speech, and clanging associations (Moller, 2005).

Cognitive dysfunction. Based on the empirical literature regarding the neuropsychological aspects of schizophrenia, schizophrenia is associated with a mild-to-moderate degree of cognitive dysfunction. Cognitive dysfunction is a common finding in patients with schizophrenia. It will affect memory function, processing speed and executive function. It then causes the patients to have difficulty in learning and forgetfulness, lack of compliance in performing a specific task, and solving social problems or fulfilling everyday needs (Moller, 2005; Palmer et al., 2009; Walker et al., 2004).

Affective symptoms. Affective symptoms are found in the majority of schizophrenic persons during the course of illness. These include demoralization,

major depression, or periods of manic-like behaviors, such as increased energy, excitement, irritability, and disinhibition (Freudenreich as cited in Viron et al., 2012)

***Motor system abnormalities*.** Motor system abnormalities commonly occur in patients with schizophrenia. Motor system abnormalities include posture, tone and motor compliance, abnormal movements, abnormal ocular movement, purposive movement, gait and indistinguishable/unintelligible speech/echolalia. The common symptoms of motor system abnormalities include catatonic behavior, parkinsonism (tremors), catalepsy and bradykinesia (Peralta, Campos, De Jalo´n, & Cuesta, 2010).

In addition, there are four subtypes of schizophrenia explained in DSM IV; paranoia, disorganization, catatonia, and undifferentiated schizophrenia. The characteristics of paranoid types include delusions or hallucinations, but there is no disorganized speech, catatonic behavior or flat emotions. The catatonic type is a clinical syndrome including postural or movement abnormalities, mutism or echolalia. Clinical symptoms such as disorganized speech, disorganized behavior, and flat emotions were found in the disorganized type. The undifferentiated subtype is diagnosed when the patient does not show any criteria of the previous subtypes (Walker et al., 2004).

In conclusion, schizophrenia is a chronic and serious mental illness which is characterized by recurrent typical psychotic symptoms and the deterioration of social function, work function, and self-care. Until now, the exact cause of schizophrenia is still unknown. The six common cluster symptoms of schizophrenia are positive symptoms, negative symptoms, disorganized speech, cognitive dysfunction, affective symptoms, and motor system abnormalities. Some of the

interventions that can be performed on patients are decreasing environmental stressors or enhancing the ability of people to cope with their problem, and giving family support.

Family Caregivers' Needs when Caring Persons with Schizophrenia

Caring for relatives with schizophrenia frequently causes considerable emotional distress. Family caregivers have experienced seeking help and support from others. They reported that they were in frequent contact with other family members, psychiatrists, friends, neighbors, and nurses to gain support in caring for their relatives who suffered from schizophrenia (Ferriter & Huband, 2003). This suggests that family caregivers seek assistance from others in providing care for their relatives with schizophrenia at home which involves keeping themselves healthy, seeking financial support and temporary replacement among other forms of assistance explained below (Chien & Norman, 2003; Hooi, 2002; O'Connell, 2006).

Keeping Themselves Healthy

Caring for a family member with a serious mental illness such as schizophrenia may cause one to have to considerable stress and burden. It can harm the caregivers' health and quality of life and also impact on their functioning (Zauszniewski, Bekhet, & Suresky, 2010). Most family caregivers experienced mild physical disorders such as fatigue, headache, increasing blood pressure, and sore throat (Hooi, 2002). They also were at risk of mental break downs (Kam-shing, 2004). Therefore, family caregivers need to keep themselves healthy because if they are physically sick, there will be no one to care for the sick family member (Hooi, 2002).

Support Resources

Support resources from friends, neighbors, the surrounding community, and health personnel or even from the government are very important aspects which can help the caregivers to express their feelings or solve their problems (Hooi, 2002; Sethabouppha & Kane, 2005). Yeh, Hwu, Chen, Chen, and Wu (2008) found that support from other family members and a health professional is needed by the caregivers to reduce their burden. Family caregivers often receive limited support from other family members and health professionals (Chien & Norman, 2003; Wei, Cooke, Moyle, & Creedy, 2010). The limitation of the healthcare system also can impede the provision of effective medical care to patients with schizophrenia (Viron et al., 2012). On the other hand, Yeh et al. (2008) found that the needs of family caregivers related to social support include the understanding of mental health laws, general social acceptance, occupational therapy, and sheltered work facilities.

Financial Support

Financial need was a common issue for caregivers. This need was caused by cost of expenses and treatment for the family member, and their own inadequate income (Hooi, 2002). Long therapy programs and expensive medication are some of the main reasons which prevent family caregivers from seeking medical treatment for their relatives with schizophrenia. If the need for financial support is not met, family caregivers would not be able to provide the daily care and manage the illness of the family members with schizophrenia (Hooi, 2002).

Kotrotsiou, Papathanasiou, and Kotrotsiou (2006) claimed that the main family concerns were financial difficulties which include the payment fees for the treatment, medications, mental health clinic visits and living costs of the person

with the mental illness, all of which were considered a burden for families. This problem occurred either due to lack of medical insurance or the non-existence of medical insurance for mental illness (Kotrotsiou et al., 2006; Thompson, 2007). The extended family was the only major financial support for family caregivers (Sethabouppha & Kane, 2005).

Temporary Replacement

Family caregivers have a heavy responsibility in caring for relatives with schizophrenia. They needed someone to help them out temporarily, particularly when family caregivers went out somewhere (Hooi, 2002). Family caregivers reported that neighbors and the community were very helpful and very kind when needed (Sethabouppha & Kane, 2005).

Inner Strength

Inner strength is one of the needs of family caregivers in caring for their loved ones (Hooi, 2002). During caring, family caregivers experience tiredness and frustration in their lives. They always have to remind their family members with schizophrenia to take medication regularly. This is because most schizophrenic persons are medically non-compliant and require such help (Kam-shing, 2004). However, family caregivers were able to be find satisfaction through prayer to their God (Evans, 2009).

Expression of Feelings

Family caregivers need someone to talk to especially about the difficulties experienced in caring for a family member with schizophrenia. Having someone to listen to the difficulties faced by caregivers made them feel relaxed and less stressed (Hooi, 2002).

Information Needs

Information needs are perceived as fundamental needs by caregivers involving receiving more information about schizophrenia, the medication, ways of coping with patients' illness behavior and various strategies for patient management at home (Chien & Norman, 2003; Hooi, 2002). Knowledge about the disease can help them reduce their burden and distress, and enhance the coping ability of family caregivers in caring for psychiatric patients. Sethabouppha and Kane (2005) reported that caregivers did not know the cause of their relative's illness nor the unpredictable symptoms. Such lack of knowledge led to the caregiver suffering. In fact, family caregivers wanted health education regarding schizophrenia. A better understanding of the health education needs for family caregivers can contribute towards improvement of health care services to better meet caregivers' needs. It would also reduce the burden of the caregiver and improve their quality of life (York, 2013; Lewandowski, 2009; Mohr & Regan-Kubinski, 2001). Additionally, Yeh et al. (2008) pointed out that the relevant needs of the primary caregivers include coping with medical teams, understanding diagnosis and treatment, and identifying early signs of relapse. It can be summarized that the provision of education by mental health nurses in response to the analysis of the family caregiver is the task of mental health nurses to help them in caring for schizophrenic persons.

Skill Training

Skill training is one common caregiver need. The new skills that can be acquired by the caregiver include problem solving, parenting, effective communication, coping with daily life, and caregiver stressors. They also need to be able to cope with crisis situations such as the patients' refusal to take medication and

threats of violence. A very useful skill for a caregiver is the ability to recognize early signs of symptoms so that they can prevent a relapse (O'Connell, 2006). Problem solving skills can help a caregiver to improve the parent-child interaction. The skill can be improved by a coaching relationship (Graham et al., 2009).

Theories / Concept of Coaching and Coaching Process

Definition of Coaching

Coaching is a collaborative relationship undertaken between an individual who has skill and someone who is willing to be coached, and aiming to help individuals or groups achieve their goals (Williamson, 2009). Coaching is an interactive process of observation and reflection in which the coach promotes the learner's ability to support family caregivers in being and doing. Coaching will support family caregivers to determine what they want and who they need to be with, and doing what they want and need to do (Rush et al., 2003). Moreover, Webb and Jaffe (2006) defined coaching as an interactive process between a caregiver and a nurse that provides support and encouragement, new skills development, as well as promoting self-assessment and learning.

Recently, coaching has become increasingly applied to health and education situations where adults seek to apply new knowledge and skills or alter their responses to life situations (Gale, 2007). Coaching has previously been proposed as a way for therapists to create the principles of family centered practice (Rush et al., 2003) and clearly explain the nature of the coach collaborative relationship with the family as the trainee within interventions.

Coaching consistently emphasizes a collaborative relationship between the coach and caregivers that assists caregivers to recognize and implement social and physical environment changes that support more successful performances for themselves and their children. The coach should have collaborative problem-solving skills within a coaching program in which parents are guided towards identifying and implementing effective plans, and having decision making skills to overcome their problems (Graham et al., 2009).

There is a crucial requirement for the coach to be skilled to meet the needs of those coached who in turn must be willing to participate in the coaching program. The initial task for the coach is to learn from the trainee about the particular needs of each situation and reach an agreement about what would constitute success during the program intervention (Gorringe, 2011).

Importance of Coaching for Family Caregivers

Coaching has been found to be effective in assisting adults to achieve goals related to various health and daily living situations (Gale, 2007). Coaching can provide support, develop new skills, and enhance self-assessment and learning. The main objective of coaching is to have the competence and confidence to perform self-reflection, self-correction, and apply new skills and strategies for a lifetime. The main objective is to enhance caregivers' competence and confidence to support their loved one in participating and learning their role in life (Rush et al., 2003).

Coaching can be a helpful intervention for families and children in which coaching can assist children to perform their tasks, stay on time, manage time, develop skills, and strengthen motivation. A study conducted by Sleeper-Triplett (2008) reported that the coach working with parents of very young children or with

parents and children in pre-teen years, or directly with teen clients can lead to an improvement in family life, better success in school, and optimum readiness for adult life.

Coaching has many positive outcomes particularly in early intervention of the treatment. Coaching could support and enhance caregivers' knowledge and ability to meet their needs. Coaching (process) would also help the caregivers to become active participants in providing care for their family member (Webb & Jaffe, 2006). Moreover, the coach can help caregivers to understand about their family members and to identify what they need to do and then to plan the next step (Wetzel, 2011).

In addition, Friedman-Yakoobian, Mueser, Giuliano, Goff, and Seidman (2009) reported that coaching as a method helped a family in coping with a family member's cognitive impairment and reduced the effects of cognitive impairment on the schizophrenic relative's functioning. In their study, it was found that coaching is one method used by the primary caregiver to provide family-directed cognitive adaptation treatment for relatives with schizophrenia. Another study has shown that coaching has been used to provide instruction for members with schizophrenia. Family caregivers used the coaching method to help the patients in performing their daily activities such as eating and bathing, particularly when the patients did not pay attention to their personal care (Tungpunkom, 2000).

In a randomized controlled study on the impact of in vivo feedback on parents' acquisition of skills, Shanley and Niec (2010) reported that the positive parenting skill of caregivers who received the coaching program increased significantly compared to those who did not. Moreover, there was a significant

difference in positive parenting skills between the coached group and the control group. The results showed that the effect of coaching could be a crucial factor to change the behavior of caregivers and as a predictor of skill development beyond the influence of caregivers at the initial skill level.

Graham, Rodger, and Ziviani (2013) found that improvement of children's' and mothers' performance and mothers' competency can be achieved by using coaching intervention. Kim, Putjuk, Basuki, and Kols (2003) reported that coaching process could improve patient's communication skills to talk more openly and more vigorously with nurse-midwife in East-Java Province, Indonesia; coaching provides an opportunity to learn from experience (Griffiths, 2005). Recently, Rachmawati (2012) found that coaching program was effective to help children with emotional problems in developing social and interpersonal skills such as greeting behavior, making conversation and building trusting relationships with others.

In this stage of the coaching process, the coach will ask family caregivers' experiences during interacting with members who are hallucinating or delusional. By using the coaching process approach, family caregivers would be able to maintain a good relationship with their schizophrenic relatives (Barnable et al., 2006). Family caregivers have used these effective ways to manage their members' recurrent symptomatic behavior using communication strategies and symptom control. Meanwhile, coaching can help caregivers to improve communication skills between the caregivers, the patients, and the health care providers (Drea, 2007). In the present studies, coaching has become an important means to encourage the caregivers in interacting and providing good care for their children with disability. The result showed that after attending the coaching program, family caregivers could identify the

additional information that is needed and facilitate their learning of new skills and improve parent-child interactions (Janssen et al., 2010; Shanley & Niec, 2010).

To sum up, coaching is needed by family caregivers to assist them in providing care for family members who are suffering from schizophrenia. By using the method of coaching, mental health nurses can help caregivers to enhance the ability of family caregivers to care for their family members with schizophrenia. In addition, mental health nurses can also help family caregivers to be satisfied with their roles in caring for family members with schizophrenia.

Coaching Process

The coaching process is a collaborative process between coach and coachee and uses conversations to share skills, knowledge, and experience to develop the competence and confidence of the person being coached (Rush & Shelden, 2005; Williamson, 2009). Based on the reviewed literature, several studies have presented the framework of the coaching process. Although the steps of the coaching process vary, the characteristic of the process of each study is similar. The charateristic is used to improve existing abilities, develop new knowledge, skills, and change behavior of the person being coached (Rush & Shelden, 2005). Common features include building a mutual trust relationship at the beginning, setting the time for each coaching session, identifying the need for coaching, making an action plan, reflection, and evaluation of the coaching program (Bora, Leaning, Moores, & Roberts, 2010; Rush et al., 2003; Thorpe & Clifford, 2003; Vale, Jelinek & Best, 2005).

Rush et al. (2003) used five phases of the coaching program for families and colleagues. These are: 1) initiation. In this phase the coach invites the coachee into a coaching relationship. The coach and coachee discuss developing an

action plan that includes the purpose and specific coaching outcomes. The coach and coachee also identify and solve the barriers that inhibit the coaching process. Skills that should be possessed by a coach are questionning, verbal communication, planning, prioritizing, and problem solving; 2) observation or action. The coach observe the coachee's performance of an existing practice and a new skill. The coach must demonstrate observation and verbal communicate; 3) reflection. The coach explores what the coachee already knows, is doing, has tried, and thinks about a specific situation or need. The coach should use questionning and problem solving skills; 4) evaluation. In this phase, the coach reviews the effectiveness of coaching process. The coach has to demonstrate question and verbal communication; and 5) continuation or resolution. The coach and coachee have to summarize the results and develop an action plan before and during the next coaching intervention. The coach and coachee also can continue for next session if they decide to follow-up on the action the coachee will practice between sessions. The coach must have assertiveness, analytical, and verball communication.

Vale et al. (2005) developed coaching cycle process for patients with coronary risk factors. The coaching cycle process consist of five stages, namely: 1) finding out what the coachee knows of their risk factors, targets, and treatment for their risk factors. The coach must demonstrate questioning, listening, analytical, and summarizing skills; 2) telling the coachee what they should know of their risk factors, targets, and treatment for their risk factors. The coach will provide education related to coronary risk factors, targets, and treatment. Skills required by the coach are questionning, presenting information, and verbal communication; 3) assertiveness training. The coachee is trained to be assertive in the relationship with the treating

doctor, life-style related risk-factors, and a healthier lifestyle. The coach should perform assertiveness and problem solving skills; 4) setting an action plan. The coach discusses with the coachee to set an action plan. Both coach and coachee expected that a plan of action would be achieved by the next coaching session. The coach must demonstrate planning, negotiation, and prioritizing skills; and 5) reasess at the next coaching session. This coaching cycle (stages 1-5) iterates until the target level for the risk factor is achieved.

Bora et al. (2010) stated that there are five steps in the coaching process. These are: 1) set the scene for coaching; 2) get to know the person, their present state and their desired state; 3) support the person in setting goals/intended outcomes and jointly agree with the action to be taken. In this step, the coach uses the GROW framework to set the goal of coaching. G = goals, R = reality, O = options, W = way forward. The goals must be clear and acheivable, explore the current situation, have alternative strategies; 4) review progress and learning, reflect, give constructive feedback, work out what is working, explore options; and (5) continue learning through self-coaching. The coach should have various skills such as listening, questioning, building trusting relationship, time management, and clarifying skills during the coaching process..

Thorpe and Clifford (2003) divided the process of a coaching into 6 steps: clarifying coaching needs and goals; agreeing to specific development needs; formulating a detailed plan for coaching; doing a task or activity performance; reviewing activities and planning to improve performance; and ending the coaching relationship. Each session of the coaching process will be described as follows:

Clarifying coaching needs and goals. Clarifying coaching needs and goals is the first step of the coaching program process. In this step, the coach and coachee will establish the real need for coaching and will discuss more about the overall goals of the coaching process. The goals must be real and important for the coachee (Boyle, 2004). In order to identify the needs of family caregivers the coach should consider the aspect of culture, values and beliefs of caregivers (Herzog & Shoemaker, 2010). In this stage, the coach has to demonstrate verbal and written communication skills with the coachee to clarify coaching needs and goals.

Agreeing to specific development needs. The second session of the coaching program process is agreeing to specific development needs. The main activities of the coach are identifying the needs of caregivers, the caregivers' current knowledge and skills, and feelings about the caring experience. The coach should also start with a statement that focuses on specific behaviors that will be demonstrated by the coachee by using 'SMART' objectives (Thorpe & Clifford, 2003).

In conclusion, both the coach and coachee should achieve SMART objectives in this session relating to the identified needs for the present and for future development. The coach also must demonstrate analytical and negotiation skills by questioning, listening, giving information, and establishing a close relationship with the coachee.

Formulating a detailed plan for coaching. In this step the main action of the coach is formulating a detailed plan for the coaching program after discussion with the coachee. The coach discusses with the coachee to formulate an action plan by asking what knowledge is important and which skills need to be improved by the caregivers in caring for persons with schizophrenia.

As a consequence, both coach and coachee must prepare themselves to formulate an appropriate and effective plan before the coaching program begins. This involves: reviewing overall objectives, formulating a detailed plan, writing outcomes, identifying and prioritizing actions, setting the time, place, budget, and materials. During this process the coach should be able to assist the coachee in good planning, decision making, problem solving, prioritizing, listening, questioning, and summarization skills.

Performing a task or activity. The fourth step of the coaching program is to implement the plan previously approved by the coach and coachee. This involves three main categories: 1) applying and practicing the task or activity that the coachee wants to improve; 2) collecting data and evidence about how well the coachee has done during a particular practice; and 3) considering doing a simulation or demonstration activity that is related to the real life situation based on previous experience. In this step, the coach will observe the coachee's performance, understand and listen carefully to any explanation by the coachee and decide what the coachee learned from the coaching sessions. This step requires the coach to demonstrate observation and listening skills.

Reviewing activities and planning to improve performance. This step is to review what has been done and to discuss the coachee's experience and how they can build upon this experience in order to improve performance next time the task is carried out. The main activities of the coach are reviewing all the coaching activities from the beginning until the end of the coaching session. To be successful in this stage, the coach should demonstrate verbal communication skills by facilitating,

questioning, presenting ideas, preparing and analyzing plans for the next coaching session.

Ending the coaching relationship. Ending the coaching relationship is the sixth step of the process. The coach must consider the cultural aspects of the caregivers when terminating the coaching relationship. The objectives of the coaching program will be achieved when the coachee can care for ill relatives confidently. In this session, the coach should emphasize the sustainability of the relationship with the coachee until the end of the session. It is a crucial aspect to point out the ending of the coaching session and interact with the coachee. This stage requires an interpersonal relationship, verbal communication, and assertiveness skills from a coach.

Coaching Skills

Skills are important aspects that are needed by a coach when implementing coaching programs. Several skills that a coach needs are described as follows:

Good listening skill. Good listening skill is crucial for the coach to carry out the coaching program effectively (Dosey & Luck, 2016). Marriott (2006) suggests looking for someone who can be trusted as a coach and has good listening skill. A good coach is someone who does not waste time asking the trainee about what to do to help the coachee's performance but should be someone who has knowledge and skills to help the coachee to improve their performance. The ten keys to being an effective listener are: (1) providing an opportunity for the coachee to ask questions, (2) judge content, not delivery, (3) being flexible, (4) working hard, (5) listening to the coachee's ideas and maintaining eye contact, (6) not make any assessment until the coachee understand that the coaching program has finished, (7) use critical

thinking, (8) speak softly and friendly, (9) concentrating on each session of the coaching program, and (10) thinking about the facts (Thorpe & Clifford, 2003). It is necessary for a good coach to have the ability to be a good listener in hearing the caregiver's problems and suggestions (Drea, 2007).

Analytical skill. Analytical skill refers to the ability to create a structured approach for gaining information from the trainee and making conclusions from it (Thorpe & Clifford, 2003). According to Williamson (2009), a coach must have the ability to clarify core values, beliefs and a sense of purpose to identify gaps between an individual's perception and reality.

Questioning skill. Most coaches can ask questions of the coachee. The coach need to use powerful questions during coaching conversation. Questions must be simple, short, powerful questions, clear, and non-judgmental (Dossey & Luck, 2016; Kennedy, 2009).

Assertiveness skill. Assertiveness skill refers to having the ability to say directly what the coach desires, needs or feels. The coach should honest and self-confident (Thorpe & Clifford, 2003).

Facilitation skill. Facilitation skill is the coach's effort to help the coachee to develop new knowledge and skills. As a facilitator, the coach needs to be aware of what is happening during the coaching process (Thorpe & Clifford, 2003).

Communication skill. One of the criteria that must be met by a coach is having both excellent both verbal and non-verbal communication skill (Aviram, Ophir, Raviv, & Shiloah, 1998). Communication skill is needed by the coach to ask great questions to the one being coached (Boyle, 2004).

Interpersonal relationship skill. A coach must be able to establish an interpersonal relationship with the trainee to achieve the agreed objectives (Thorpe & Clifford, 2003). If interpersonal relationships are built well between these two parties, it will be easier to encourage and motivate the trainee (Williamson, 2009).

Planning and prioritizing skill. Planning skill refers to activities that will be performed by the coach in the coaching program.

Observation skill. Observation is a skill which can be practiced. It involves looking at the activities that the coachee has performed so that the coach can draw conclusions from what has been seen (Thorpe & Clifford, 2003). The coach needs to be able to form a relationship between the patterns the coach observes, like thinking or behavior. The coach must be able to observe and identify the strengths in a particular area, which could be used in others (Kennedy, 2009).

Conflict management skill. Conflicts can occur during coaching conversation between the coach and the trainee. Therefore, the coach must have ability to deal with difficult coaching situations. The coach and coachee should establish a coaching agreement that includes a conversation about how the coach would handle difficult situations (Williamson, 2009).

Evaluation skill. Evaluation skill is needed by a coach in order to evaluate the coaching program (Thorpe & Clifford, 2003). This skill can help the coach to recognize tasks performed well by the caregiver in caring for their sick member (Drea, 2007).

To sum up, a coach must be able to demonstrate these skills in providing a coaching program for the coachee. Besides that, these skills will help the coach to achieve the objectives of the coaching program successfully.

Kolb's Cycle of Experiential Learning Theory and Coaching Process

Coaching programs have been shown to be philosophies underpinned by learning theories (Griffiths, 2005). Experiential learning has a close relationship with the coaching process. Experiential learning theory is also often used to explore the process of coaching and the effects of a coaching program (Griffiths, 2005). The Kolb's Experiential Learning Theory (Kolb, 1984) can be used as a theoretical basis to guide a coaching program for enhancing the family caregivers' competencies in caring for persons with schizophrenia. The positive outcomes from the application of experiential learning theory is the individual's feeling of satisfaction, initiative in learning and change mindsets, and their behaviors and attitudes. Furthermore, Kolb's (1984) cycle of learning describes the cyclic interrelationship between concrete experience, reflective observation, abstract conceptualization and active experimentation to produce meaningful, purposeful and self-directed learning (Griffiths, 2005).

Concrete experience. The beginning of the learning process is the ability of an individual to experience an event as it is. In this stage, individual will use feelings more than thinking (Chapman, 2006). Concrete experience provides the basis for learning, relying on open-mindedness and adaptability (Lisko & O'Dell, 2010).

Reflective observation. The second stage of the learning process is for people to be able to actively observe the events that happened over a longer time. Individuals tend to try and understand the meaning of ideas by observing (Chapman, 2006). Lisko and O'Dell (2010) emphasize that reflective observation makes sense of the concrete experience as a variety of perspective are clearly stated.

Abstract conceptualization. The third stage in the learning process begins when an individual has already begun to make abstractions, develop a theory or concept, or notice the laws and procedures of something about the object of her/his attention (Kolb, 1984). Abstract conceptualization uses logic and ideas to understand situations and problems encountered during the learning process within coaching session (Lisko and O'Dell, 2010).

Active experimentation. The last stage of the learning process according to Kolb (1984) is to actively perform an experiment. In this stage, the individual must be able to use this theory to make decisions and solve the problems.

Coaching is one of the keys to improving individual competencies. Through confrontation among the four cycles of experiential learning, new knowledge, skills, or attitudes can be achieved. The process is circular and can begin with any of the four modes (Turesky & Gallagher, 2011) so that each stage of the coaching process reflects experiential learning cycle (Kolb, 1984; Thorpe & Clifford, 2003).

In addition, Chapman (2006) has written that the coachees will usually come into the coaching session with a real problem or difficulty that they are facing (their concrete experience). The coach and coachees will then reflect on the experience (reflection-on-action) together. The coachees will be encouraged to make sense of what is happening (abstract conceptualization) and will then decide on some course of action that they will experiment with to address the issue (active experimentation). For learning to happen, it is very important that everything is structured so that the coach and coachees will discuss developing an action plan. It vets the learning experience. When the coachees have decided what they want to do

(active experimentation), they will fill in the action plan. What is my purpose? What is it that I want to achieve? They also try to measure themselves to determine whether they have been successful or not. In between coaching sessions, the coachees carry out the plans.

Strategies for Enhancing an Effective Coaching Program for Family Caregivers

A coaching program will be successful if nurses can build collaborative relationships with family caregivers. Nurses must meet the particular needs of the family caregivers during the coaching process. Nurses can use several methods such as face-to-face meetings, telephone or email communication over several sessions of the coaching process, to gauge the family caregiver's progress (Hayes et al., 2008; Rush et al., 2003).

Vale, Jelinek, and Best (2005) used telephone and mailouts as methods to provide regular coaching sessions to their trainees. They phoned the coachee during the first coaching session. Furthermore, Vale et al. (2005) suggested a coach must have extensive knowledge and experience in working with individuals. A similar study conducted by Van Mierlo et al. (2012) found that caregivers who were coached by telephone indicated statistically significant improvement in the level of burden compared with caregivers in the routine care group. This indicates that coaching combined with the principles of Dementelcoach is more effective in reducing burden and health complaints in caregivers of those with mental health problems. Furthermore, studies showed that phone calls and face to face meetings in the coaching program intervention significantly improved the family caregivers' and patients' outcome as well (Dwinger et al., 2013; Hayes et al., 2008). In addition,

others strategies that can be used by nurses are watching videos on the illness and providing a booklet containing relevant information and a list resources to the caregivers (McCusker et al., 2015). Health coaching is one strategy to help clients achieve their objectives (Williamson, 2009).

A coach must have the existing knowledge of mental illness, various ideas to deal with a crisis situation, mental health care services and skills to maintain a trusting relationship with the patient, and teach basic skills to manage psychiatric symptoms and finance of caregiver and patient (Yoshida, Ito, & Ogawa, 2011). The program has already confirmed the confidence of the researcher to develop new knowledge and skills of caregivers (Thorpe & Clifford, 2003). Coaching programs should be designed appropriately and effectively to enhance the family caregivers performance regarding care for their loved one with schizophrenia.

In addition, to improve family caregivers' performance, the coach must be able to generate the caregivers' awareness to promote learning and development and finally create the self-directed and self-regulated process for caregivers by providing coaching program intervention. Therefore, the purpose of each coaching cycle should be clear (Griffiths, 2005).

McGee and Tuokko (2005) used coaching to assist family caregivers in enhancing their strengths, strategies and specific skills in performing care for a sick member. They found that caregivers who received a coaching program showed greater increases in empowerment through the gain of knowledge and skills compared with those who did not receive a coaching program.

The general plan for the coaching session includes reviewing each objective of the coaching program, time, place, person, equipment required,

preliminary tasks, and involvement with other people for the coaching program. The coaching program should cover the issues that the caregiver wants to discuss (Van Mierlo et al., 2012). The researcher must be able to build a close relationship with caregivers, investigate caregiver readiness for coaching, plan desired outcomes, review, reflect, formulate action plans to achieve personal development and evaluate desired outcomes and goals (Dossey & Luck, 2016; Gorringe, 2011).

Coaching can be a helpful intervention for families and children in as much as it can assist them in performing their tasks, staying on time, managing their time, developing their skills, and strengthening their motivation. For example, Graham et al. (2013) found that improvement of children's' and mothers' performance and mothers' competency can be achieved by using coaching intervention. During hospitalization, mental health nurses should coach the family caregivers in order to care for persons with schizophrenia after being discharged from the hospital. The purpose of the coaching process is to empower family caregivers to optimally care for the patients at home.

Additionally, both individual and group sessions can be used to improve the outcome of the coaching program. Using individual coaching lets the coach maintain a relationship of trust, while the group sessions allow the coaches to compare their experiences regarding care and difficulties with others (Danino & Shechtman, 2012; Friedman & Woods, 2012; Moore, Barton, & Chironis, 2015).

In conclusion, there are strategies that can be used by mental health nurses in providing coaching programs to family caregivers including phone calls, watching videos, face-to-face meetings, email communication, group and individual

coaching. Psychiatric nurses must be able to select an effective strategy that is suitable with their client's condition.

Coaching Programs for Family Caregivers of Persons with Schizophrenia

There has been no research conducted in Indonesia regarding this topic. Coaching is a process of moving an individual along the illness trajectory path into a new situation (Lewis & Zahlis, 1997). The coach helps the individual identify the ways and potential barriers to determine new behaviors by using their own resources and strengths (Wongpiriyayothar, Piamjariyakul, & Williams, 2011). Therefore, it is essential to develop an effective coaching program in enhancing the family caregivers' competencies in caring for persons with schizophrenia.

Boyle (2004) has explained that the main principle for coaching in mental health is the need for the mental health professional to maintain confidence with the person who uses mental health services in order to achieve meaningful goals for themselves. Coaching programs need to begin with a strong theoretical model and use empirically tested methods that are appropriate for Indonesian caregivers.

The coaching process developed by Thorpe & Clifford (2003) was based on Kolb's Experiential Learning Theory and coaching process. Thorpe and Clifford (2003) divided the process of coaching into six steps: clarifying coaching needs and goals, agreeing to specific development needs, formulating a detailed plan for coaching, doing a task or activity performance, reviewing activities and planning to improve performance, and ending the coaching relationship. Each session of the coaching process will be described as follows:

Clarifying coaching needs and goals. In the first step of the process, the coach would establish relationship with the coachees. In this step the coach and the coachees are introduced to each other and then both can agree on whether they want to work together or not (Chapman, 2006). Then the coach and coachees identify the real learning needs for coaching. In order to identify the learning needs of coachees, the coach should consider the aspect of culture and the values and beliefs of the caregivers (Bora et al., 2010; Herzog & Shoemaker, 2010). The presence of a female nurse is more acceptable for a Muslim female caregiver rather than a male nurse (Pasic, Poeschla, Boynton, & Nejad, 2010). Both the coach and coachee discuss the overall goals of the coaching process. The coach helps the coachees define goals or issues for the coaching session (Boyle, 2004).

According to McGee and Tuokko (2005), the coach should also know the coachees' personality. The coach must be able to hear the caregivers' experiences, and reflect by clarifying those experiences. Through this session, it would be easier for the coach to clarify what coachees want to do by stating a related goal. In this step, the coach has to use questioning, listening, assertiveness, interpreting information, and summarizing skills with the coachee to clarify coaching needs and goals.

Agreeing to specific development needs. This constitutes the second steps. The main activities of the coach are identifying the caregivers' needs, current knowledge and skills, and feelings about the caring experience. The coach should also start with a statement that focuses on specific behaviors that will be demonstrated by the coachee by using 'SMART' objectives (Thorpe & Clifford, 2003). Agiananda (2006) investigated the unmet needs of caregivers in caring for patients with schizophrenia which involve the needs of health improvement (improvement of

schizophrenia's symptoms), the needs of mental health care (schizophrenic patient group meeting and occupational training, sharing groups for caregivers, the low-price of drugs, continuing treatment, convenience with health care provider. Also the needs for dynamic treatment from the health care team (recent information about schizophrenia, involving the patient into their treatment plan, regular evaluation of the treatment result by the physician and treatment plan associated with the patients' needs) was investigated.

A coach must have an existing knowledge of schizophrenia, various ideas to deal with a crisis situation, maintain trusting relationship with caregivers, and provide skills training to manage psychiatric symptoms for caregivers (Yoshida, Ito, & Ogawa, 2011). In this step, the coach also support partnership related to caregiver needs for social, financial, or mental health counseling (Piamjariyakul, Smith, Russell, Werkowitch, & Elyachar, 2013).

Marchira (2012) reported that a cultural approach was needed to assess caregivers' knowledge of schizophrenia, regular control, medication adherence, and relapse' rate of psychotic patients in Yogyakarta. The researcher used a Javanese cultural approach to inquire about caregivers' experiences and knowledge of schizophrenia and their needs in caring for psychotic patients. Therefore, the coaching program should fit and be relevant with the family caregiver's culture. The coach also has to consider that the coaching program developed has to be applied to all primary caregivers in Indonesia. It should also support mental health policy development in Indonesia. One of the main targets of policy on mental health development is to decrease the prevalence and incidence of mental disorders, thus minimizing the

burden of mental disorders on the individual, family and community in Indonesia (Ministry of Health, 2001)

In conclusion, the coach and coachees should achieve SMART objectives in this session relating to the identified needs for the present and for future development. The coach also must demonstrate analytical and negotiation skills by questioning, listening, giving information, and establishing a close relationship with the coachee, and be able to summarize skills.

Formulating a detailed plan for coaching. In this session the main role of the coach is formulating a detailed plan for the coaching program after discussion with the coachee. The coach should consider the beliefs, norms, customs, and family resources (Stevens & Carson, 2010). This is because the coach usually explores the experience of caregivers in caring for and interacting with patients' feelings, responses, and needs. In formulating a detailed plan, the assessment should be done in advance to gather information about the caregivers' knowledge and their understanding of illness, the impact of illness on family life, the skills already possessed by the caregivers from caregivers' perspective (Widiastuti, 2010). Family caregivers are often burdened with their tasks to monitor patient's symptoms, help the sick family member, physical health problems, and facing financial problem. On the other hand, they also experience a subjective burden during living and interacting with patients, for example feeling angry, anxiety, sad, upset, confused, boredom, and sometimes do not want to continue (Papastavrou et al., 2010; Rafiyah & Suttharangsee, 2011; Small et al., 2010; Widiastuti, 2010). Therefore, the coach would assist the coachees to formulate an action plan by asking what to be improved by the caregivers in caring for persons with schizophrenia.

Consequently, coachees should prepare themselves in order to formulate an appropriate and effective plan before the coaching program begins. This involves: reviewing overall objectives, formulating a detailed plan, writing outcomes, identifying and prioritizing the action, setting the time, place, money, and materials. During this process the coach should be able to assist the coachees into good planning, decision making, and problem solving. In this step the coach should exhibit planning, decision-making, problem solving, prioritizing, listening, and summarizing skills.

Performing a task or activity. The fourth session of the coaching program is to implement the plan previously approved by the coach and coachee. This involves three main categories: 1) applying and practicing the task or activity that the coachee wants to improve; 2) collecting data and evidence about how well the coachee has done during a particular practice; and 3) considering doing a simulation or demonstration activity that is related to the real life situation based on previous experience. The coach would demonstrate how to communicate with the ill relatives, how to take care of such relatives with schizophrenia at home, how to remind them in order to perform their duties at home and in the community, and how to prevent a relapse. The coach would provide guidance for applying all the circumstances in caring for persons with schizophrenia. However, the coach should consider a few factors when creating a simulation such as equipment, people, place, strategy, information, time, and elements of simulation. Furthermore, the coachee should demonstrate each session of the coaching program under the supervision of the coach. In this stage, the coach will observe the coachee's performance, understand and listen carefully to any explanation by the coachee and decided what they have learned from

the coaching sessions. Additionally, the coach would collaborate with the coachee about specific knowledge or skills that need to be performed in order to improve performance without blaming the coachee. This stage requires the coach to demonstrate observation, listening, questioning, and summarizing skills.

Reviewing activities and planning to improve performance. This session is to review what has been done and to discuss the coachee's experience and how they could build upon this experience in order to improve performance next time the task is carried out. The main activities of the coach are reviewing all the coaching activities from the beginning until the end of the coaching session. The coach then discusses with the trainee about areas that have to be improved and prepare a good plan of activities for the next coaching session. The coach will evaluate the coachee's performance, give feedback and analyze the output of the activities. The coach would list the coachee's strengths and specific areas for further development. The coach can also help coachee to set a plan for other activities that they should do in the next future. In this step, the coach would use a phone call to follow up the activities that have been performed by the coachee during the coaching process. Coaching by telephone is one teaching method to decrease a caregiver's burden, improve the caregiver's confidence and prepare for home care management (Piamjariyakul et al., 2013).

Research on coaching studies has found that the most effective program should use effective strategies in providing coaching programs for patients and their families. Most of the studies used face-to-face meetings and telephone coaching (Hayes et al., 2008; Vale et al., 2005; Van Mierlo et al., 2012; Wongpiriyayothat et al., 2011). The reason why the coach uses the telephone is to evaluate to what extent

the coachee has run through the program. The coach also uses the telephone as an alternative way of having direct contact with coachee (Van Mierlo et al., 2012). Moreover, to be successful in the implementation of this stage, the coach should demonstrate verbal communication skills by facilitating, questioning, presenting ideas, preparing and analyzing plans and summarizing skills for the next coaching session.

Ending the coaching relationship. Ending the coaching relationship is the sixth session of the coaching program process. The coach must consider the cultural aspects of the caregivers when terminating the coaching relationship. The objectives of the coaching program will be achieved when coachees could perform their ability in caring for ill relatives confidently. In this session, the coach should emphasize the sustainability of relationship with the coachees until the end of the session. It is a crucial aspect to point out the end of the coaching session and interact with the trainee. The coach also has to support the coachees to continue independently. Objective assessment can be conducted after all those goals have been achieved and the coaching relationship is terminated. This stage requires an interpersonal relationship, questioning, assertiveness, and summarizing skills from a coach.

Therefore, it is necessary to develop a program for enhancing family caregivers' competences so that they can understand the nature of schizophrenia which involve the signs and symptoms of schizophrenia, causes of schizophrenia, how to manage the symptoms of schizophrenia, and how to care performance for ill relatives at home. By this process, mental health nurses are able to improve the caregiver's knowledge, attitudes, and skills when caring for their family member with schizophrenia.

The Relationships between Coaching Program and Study Variables

Coaching is a process of helping persons by equipping them with knowledge, skills, and opportunities through a learning experience (Thorpe & Clifford, 2003). Thus, they can apply important knowledge and skills to improve their performance in performing their task well. The coaching process is expected to enhance the skill which is needed by the family caregivers in caring for schizophrenic patients effectively and optimally. A previous study showed that family coaching program has positive effect to overcome the lack of skills among parents of children with difficulty in learning (Young, 2007).

According to Barnable et al. (2006), in this stage of the coaching process, the coach will ask family caregivers' experiences during interacting with members who are hallucinating or delusional. By using coaching process approach, family caregivers would be able to maintain a good relationship with their schizophrenic relatives. The coaching process can help caregivers to improve their communication skills between the caregivers, the patients, and the health care providers (Drea, 2007).

In the present studies, coaching has become an important means of encouraging the caregivers to improve their attitudes and skills in providing good care for their children with disability. The result showed that after attending the coaching program, family caregivers could identify additional information that is needed and facilitate their learning of new skills and improve parent-child interactions (Janssen, Riksen-Walraven, van Dijk, & Ruijssenaars, 2010; Shanley & Niec, 2010). Another study has shown that coaching had been used to provide instruction for members with schizophrenia. Family caregivers used the coaching method to remind their relatives

to perform daily activities such as eating and bathing, particularly when the sick family members did not pay attention to their personal care (Tungpunkom, 2000). In addition, research has shown that family coaching program had a tremendous impact on parents' attitudes after the completion of the intervention program (Young, 2007).

The Study Variables

Knowledge, positive attitudes, and skills are needed while caring for ill relatives during the long term, particularly in times of crisis such as violent and bizarre behavior, when there is lack of support, and inability to maintain medication management (Evans, 2009; Grossman, 2005; Huang, Hung, Sun, Lin & Chen, 2009).

Knowledge Regarding Schizophrenia

A substantial knowledge is an essential aspect as perceived by family caregivers (Chien & Norman, 2003). According to the reviewed literature, the family caregiver must have knowledge to improve the effective care for their loved ones with schizophrenia at home (Grossman, 2005; Yildiz, Yazici, Cetinkaya, Bilici, & Elcim, 2010).

Knowledge of schizophrenia and its treatment is useful for caregivers to help them deal with schizophrenia illness (Bostrom & Boyd, 2005). It can influence their acceptance and their techniques in providing care for persons with schizophrenia after discharge from the hospital.

Komarudin, Hamid and Mustikasari (2012) found that the knowledge needed by the families caring for patients with schizophrenia which recognizing the problem of schizophrenia such as meaning, signs and symptoms, and the causes and the effects of schizophrenia on family functioning. A better understanding of

schizophrenia will help family caregivers and other family members in the detection of early signs and symptoms of a relapse, and prevent re-hospitalization, and help families to make decisions in caring for patients.

Knowledge about the neurological basis of schizophrenia is complex, and for caregivers this is an important aspect to help them in understanding schizophrenia and reduce the burden of care (Friedman-Yakoobian, Mueser, Giuliano, Goff, & Seidman, 2009; Wuerker, 2000). Knowledge about schizophrenia has helped family caregivers to understand the cause of the illness and the strategy of providing care for their loved one with schizophrenia. It also has reduced their worries, burden and improved the quality of life (Lewandowski, 2009; Vanaleesin, 2007). On the other hand, if caregivers did not know enough information regarding schizophrenia, they may become frustrated with the patients' lethargy and inactivity, thus attributing that to patient laziness.

Knowledge of medical treatment includes the effect of medication, types of medication, medication compliance, coping with the side effects. there are two categories of antipsychotic drugs for treating schizophrenia: traditional and atypical drugs (Pearson, 2009). The traditional drugs are including haloperidol, perphenazine and chlorpromazine. Atypical drugs are: risperidone, aripiprazole, clozapine, and olanzapine. Medication adherence can reduce the symptoms of schizophrenia, provide an early cure, improve social functioning, and prevent a relapse (Herzog & Shoemaker, 2010). Non-adherence to medication is one of the causes of relapses, thus, family caregivers are expected to remind the patients to take medication voluntarily, continuously, actively and correctly, as prescribed (Magura, Rosenblum, & Fong, 2011; Vuckovich, 2010). Knowledge of side effects also needs

to be known by family caregivers. Based on my experiences, side effects of medication are the main reason for non adherence to medication in patients with schizophrenia.

In addition, it was found in the literature that a knowledge of mental health care services is important (Sanseeha, 2008). They should know what mental health services are available, particularly when faced with violent behavior of the sick member with schizophrenia (Keliat, 2006; Vanaleesin, 2007). The family wanted to know the sources of health care services (Komarudin et al., 2012). It was estimated that only 50% of the caregivers brought their family members with schizophrenia to the hospital

In conclusion, a better knowledge of schizophrenia, medication, and resources in the community would also help family caregivers and other family members to clarify the erroneous beliefs about the causes of schizophrenia that may mislead the family. Misleading is due to limited knowledge of schizophrenia, medication, resources, and the stigma towards patients with schizophrenia.

Attitudes Toward Schizophrenia

Attitudes refer to state of mind about an object, fact or situation. It's associated with kinship, age, level of education, and years living with the sick member Attitude is also related to certain kinds of responses. The responses are classified as affective (assessing feelings as pleasant or unpleasant), cognitive (concerning beliefs, opinions, and ideas about the attitude object) and behavioural (concerning behavioural intentions or action predispositions) (Caqueo-rizar et al., 2011).

It is common for families to have an emotional response when caring for sick members in the long term period. The attitude of families of persons with schizophrenia is closed to feelings of frustration, anxiety, fear, guilt, stigma, anger, and sadness (Caqueo-rizar et al., 2011). In contrast, a previous study found that family members expressed a positive attitude toward ill relatives with schizophrenia. The family members showed concern and willingness to help the ill relatives (De Sousa, Marques, Curral, & Queiros, 2012). Furthermore, a positive attitude encompasses respect, tolerance, empathy, responsibility, willingness to learn, willingness to cooperate, trust commitment, collaboration with other health professionals, being patient, being helpful, and confidentiality (Adult Learners Integrated Care Enhancement, 2012). Family caregivers can modify their home environment by reducing the expression of high emotion toward persons with schizophrenia (Tungpunkom et al, 2013). Moreover, when family caregivers knew that the symptoms were due to the nature of schizophrenic illness, they would tolerate their ill relatives' behavior (Yildiz et al., 2010). This acceptance includes dealing effectively with the illness (hallucinations, delusions, poor hygiene, physical limitations, paranoia, and aggression).

Skills in Providing Care for Persons with Schizophrenia

The important skills for Indonesian caregivers of schizophrenia persons which need to be improved by the coaching process are the activity of the patient's daily life, communicating with the patient, monitoring and managing psychiatric symptoms (both positive symptom: hallucinations, delusions, paranoia ideas, aggressive behavior, suicide attempts or threats and negative symptoms: lack of motivation to carry out daily activities), managing behavioral problems, administering

and managing medication, managing finance, making decision and problem solving, and seeking and obtaining resources.

The family caregiver has a responsibility to help the patient in performing their daily activities such as, bathing, eating, cooking, dressing, taking medication, sleeping well, and encouraging work (Chang & Horrocks, 2006; Vanaleesin, 2007). To meet the patient's personal care needs, family caregivers are expected to help the sick family member to look after themselves and take the initiative to carry out routine daily activities. Family caregivers also always taught the patient to interact with others (Tungpunkom, 2000). Even though the patients are incapable of carrying out their daily routine and are lazy, the caregivers strive to provide encouragement to the patient to assist in carrying out household chores (Hooi, 2002). Family caregivers should involve other family members to participate in caring for the sick members. They are expected to explain to other family members to support and facilitate the social function of patients which are the activities of daily living and socialization. In Indonesia, most people are Muslim. Muslim people believe that illness, suffering and dying are part of life and a test from Allah. Muslim people have a responsibility to care for the sick with compassion and voluntary (Rassool, 2000). Vanaleesin (2007) found that Muslim caregivers performed several activities regarding care for persons with schizophrenia. These are: (1) seeking appropriate treatment for Islamic schizophrenic relatives by praying to Allah, taking folk and modern treatment; (2) controlling inappropriate behavior through talking nicely and providing support, responding to relatives desire and avoiding provoked desire; (3) protecting other relatives from harm by keeping the sick member at home, following and finding the sick relatives when

they left home; and (4) protecting their loved ones with schizophrenia from sin by encouraging them to pray, make merit, and forgiving relatives when making mistakes.

Communicating with ill relatives is an essential skill for family caregivers to increase the quality of the family relationship (Grossman, 2005). Caregivers who had a long-term and good relationship with the patients also needed constructive communication to overcome the problems and reduce the expressed emotion in the family (O'Brien et al., 2009; Puspasari, 2012). Tungpunkom (2000) reported that effectice communication could help family caregivers to mediate interpersonal conflicts between the care recipient and others. Communication skill also was benefitial for caregivers in negotiationg with health care providers in relation to medication adjusment, hospitalization or home visits.

Managing psychiatric symptoms is the caregiver's ability to help the patient to minimize the symptoms such as delusion, hallucination, and aggressive behavior, bizarre behavior, mood swings, thinking and socialization. Caregivers became involved in symptom management and are then able to help patients control their symptoms. When the patients have severe symptoms, caregivers are not as negative about each symptom and experience less distress per symptom (Given, Sherwood, & Given, 2008). The family caregiver has to support and motivate to the patient to perform their tasks in taking medication. Effective monitoring from the caregiver can ensure that the patient takes medication and improve their ability to identify early signs of relapse.

Making decisions and problem solving is important in assisting family caregivers to adapt to stressors such as schizophrenia. Caring for patients in the long time is a stressful situation for family caregivers. They are expected to develop

problem solving skills to strengthen their ability to cope with major life stressors and traumatic events (Jusuf, 2006; Lewandowski, 2009). According to Graham et al. (2009), problem solving is an integral part of the coaching process. By using coaching methods nurses can improve caregivers' ability to assist the sick member to be actively involved in the daily activities at home and in the community. The caregiver also should play a part to help the patient to identify their problems and help the patient to make decisions and solve problems in their life. Moreover, caregivers also need to develop the skill for coping to cope with the burden experienced in carrying out their role of caregiver (Jusuf, 2006).

Administration and managing medication are one of the caregiving skills to provide care for patient with schizophrenia. Prescribed medications for the patients are important and require monitoring by the caregiver to ensure effectiveness and evaluate symptoms (Scholler-Jaquish, 2008). In relation to patient's medication, the caregivers need administering medication skill to perform their activity of handling out the medication to their loved ones directly. Administration of drugs to patients with schizophrenia is a challenge for the caregiver because schizophrenic patients who experience hallucinations or delusions often refuse to take medication (Given, Sherwood, & Given, 2008; Tungpunkom, 2000). Family caregivers have to remind the patient to take medication and know the positive and negative effects of medication for schizophrenia, and the importance of drug compliance and maintenance (Chien, 2008). Besides, caregivers also should help the patient to deal with problem or any side effects which can occur.

Family caregivers must be able to protect the sick member to maintain their health such as reducing smoking and avoiding alcohol (Tungpunkom, 2000).

Family caregivers should be aware they have an obligation to care for their relative particularly when dealing with aggressive and threatening behavior or a period of homelessness (Rodehaver, 2008).

On the other hand, when caring for a family member with schizophrenia in long term, family caregivers experience economic hardship due to medical cost and to the sick member's economic dependency (Rungreangkulkij, Chafetz, Chesla, & Gilliss, 2002). Therefore, family caregivers have to use home management strategies such as managing finance and budgets (Chien, 2008).

Moreover, seeking and obtaining resources include seeking social support from others, seeking available mental health services and rehabilitation program (Chien, 2008). The caregivers tried to find someone who could provide an explanation and assist in dealing with the disturbing behaviors of their children (Evans, 2009). This indicated that family caregivers were able to seek help and obtain resources when they faced a crisis intervention (Tungpunkom, 2000). Moreover, Wilkinson (2005) found that caregivers brought their child to a therapist's office once or twice a week regularly.

In conclusion, caregivers can develop their knowledge, positive attitudes, and skills through coaching from the mental health nurses (Given et al., 2008). By having these skills, they are being able to provide effective care for persons with schizophrenia at home.

The Factors Influencing the Study Variables

From previous studies, there are two main factors that influence the study variables as follow:

Internal factors

Age. Age affects the caregivers' ability to provide care for sick family members. In a quasi experiment study regarding the effect of a psychoeducation program on caregivers' ability, Wiyati et al. (2010) reported that the ability of family caregivers caring significantly increased during middle adulthood. In contrast, children also would provide care for their parents with the mental illness. In his study on the experiences of children living with and caring for parents, Aldridge (2006) has identified that the average age of children who cared for sick parents was 12 years old. Children also provide important intervention for their parents including observing and evaluating parents' emotional health, wellbeing, and giving medication regularly. Attitude also relates to a caregiver's age particularly the older caregiver who had spent more time with the sick member had a more negative attitudes towards schizophrenia. A study conducted by Caqueo-Urizar et al. (2011) revealed that elderly caregivers had a more negative attitude towards schizophrenia ($r = .55$; $p = .000$).

Gender. Women are the major caregivers who provide care for family members with schizophrenia. Mothers often used a religious reason in caring for sick family members who have schizophrenia (Huang et al., 2009). On the other hand, Wancata et al. (2009) investigated caregiving and its consequences among fathers and mothers of the same patients suffering from schizophrenia. They found that fathers and mothers spent an equal amount of time caring for the sick member with schizophrenia. However, mothers faced a lot of problems when caring for the sick member. Therefore, mothers need intervention help more than fathers.

Values. Values influence caregivers' knowledge and caregiving skills. This is because this factor directs and promotes caregiver action. Values also

influence caregiver behavior because they reflect what is substantial in an individual's life (Horvath et al., 2005). Wiens and Daniluk (2009) reported that caregivers have positive values in performing their roles to provide care for their child's illness. .

Education level. Educational levels also influence family caregivers' competencies. Chien and Norman (2003) found that family caregivers with a higher education level have a closer relationship with schizophrenic relatives. In their study, family caregivers who have high education levels are expected to take care of schizophrenic relatives and perform the tasks for every family member. On the other hand, a lower level of education could influence the family caregivers' understanding about the nature of schizophrenia. A study conducted by Yildiz et al. (2010) showed that from 332 family caregivers who participated in the study, more than half of the subjects (62%) referred to the disorder as schizophrenia or psychosis, and 17.5% did not know the name of the disorder. Family members thought schizophrenia was a brain disorder (87.7%), a psychological disorder (95.9%), or a personality disorder (67.5%). In addition, Caqueo-Urizar reported that negative attitude of family towards schizophrenia associated with a low level of education ($t = 3.27$; $p < .003$).

External factors

Experience. Family caregivers reported that experiences in caring for a sick family member made them more confident and more happier in their caring. Experience also influences the caregiver's skills in controlling aggressive behaviors and functional levels of a sick member (Hooi, 2002). Caregivers who had cared for their relative for less than 10 years reported more problems than those who had cared for 10 years or more. These included severe multiple problems and stress. Those who had cared for 10 years or above were seen to work through the problems more,

finding solutions and compromises (Harrison, 2008). The experiences of caregivers in caring for sick members can influence them to make lifestyle changes. With the experiences approach, caregivers can gain personal growth and build a close relationship with their ill relative. Similarly, Caqueo-Urizar (2011) found that the caregivers who lived with the sick member for more years were associated with negative attitudes towards the sick member and their schizophrenia ($r = .38$; $p = .01$).

*Resource**s.*** Resources are a direct factor that support a caregiver's action. Resources involve both socioeconomic status and social support. The amount and adequacy of resources helps organize knowledge and skills in providing evident support to cope with the tasks of caregiving (Horvath et al., 2005). Social support from both other family members and the community can influence a caregiver's capability to provide well for ill relatives (Ngadiran, 2010).'

Measurement of the Study Variables

Several instruments have been developed to measure caregivers' knowledge, attitude, and skills. These instruments are the Family Caregiving Factors Inventory (FCFI), the Caregivers Attitude Scale on Home Care of Schizophrenics (CASHS), the Attitudes Towards Schizophrenia Questionnaire for Relatives (ATSQR), the Knowledge Questionnaire on Home Care of Schizophrenics (KQHS), The Knowledge About Schizophrenia Test (KAST), The Family Attitude Scale (FAS), The Chiang Mai Psychiatric Caregiving Skills Scale (CPCSS), and The Caregiver Satisfaction Scale (CSS).

.***The Family Caregiving Factors Inventory (FCFI).*** The FCFI is used to assess the family caregiving resources, the caregiver's self-expectations, caregiving task difficulty, and the knowledge of the care receiver. The FCFI contains 25 items: seven items in the caregiving resources scale, five items in the caregiver self-expectations scale, six items in the caregiving task difficulty scale, and seven items in the knowledge of the care receiver scale. The caregiving resources scale of the Family Caregiving Factors Inventory (FCFI) included seven items and the scores on each item could range from 1 (lack of help) to 3 (adequate help). The caregiver self-expectations scale included five items and the item scores could be 0 (unrealistic) or 1 (realistic). The caregiving task difficulty scale included six items and the item scores could range from 1 (not difficult at all) to 5 (very difficult). The knowledge of the care receiver scale included seven items and the item scores could range from 1 (very poor) to 5 (very well). Each subject can complete the inventory in five to ten minutes (Shyu, 2000). The strength of this instrument was a new Cronbach's alpha of 0.88 for the caregiving resources scale, 0.70 for the caregiver's self-expectations scale, 0.73 for the caregiving task difficulty scale and 0.88 for the knowledge of the care receiver scale. It's means that the FCFI had acceptable internal consistency reliability. However, the FCFI was fit to Chinese/Taiwanese caregivers of elderly with dementia only.

The Caregivers Attitude Scale on Home Care of Schizophrenics (CASHS). The CASHS was developed to assess the attitude of primary caregivers on home care of schizophrenics. It consists of a 31-item self-reported instrument that quantifies three aspects of home care, that is, attitude towards patient (seventeen items), towards treatment (eight items), and towards social interaction (seven items).

A five-point Likert scale was used to evaluate the attitude of the caregivers (1 = strongly agree, 2 = agree, 3 = uncertain, 4 = disagree, and 5 = strongly disagree). There were 15 positively stated items and 16 negatively stated items. The negatively stated items had reverse scoring (Balasubramanian, Rao, & Linnette D'Sa, 2014).

The Knowledge Questionnaire on Home Care of Schizophrenics (KQHS). It was developed by Balasubramanian, Linnette D'Sa and Rao (2013) to determine the knowledge of primary caregivers on home care of schizophrenics' patients. The questionnaires consisted of four aspects of home care, namely, meaning, cause, signs and symptoms of schizophrenia, and care of schizophrenics. The KQHS had 32 MCQs in four areas, namely, meaning, causes, signs and symptoms, and care of schizophrenic patients. The fourth area was divided into eight sub areas that are personal hygiene, nutrition, medication, social involvement, management of delusion and hallucination, recurrent admission and expressed emotions. One mark was scored for a correct answer, and no marks for an incorrect answer. There was no negative marking. The score for this scale ranged from 0-32 which was classified as levels of knowledge, that is very good (27-32), good (19-26), average (13-18), poor (7-12), and very poor (0-6). The strength of this instrument was checked by seven experts to test content validity. The weakness of this instrument was the total number of primary caregivers was 21. It means that the ratio was less that the criteria of Munro (2005). Munro (2005) proposed a ratio of at least 10 participants for each item is desirable for instrument development. Following required sample size suggested above, a minimum of 320 participants would be required for examination of the KQHS's validity (i.e., 32 items x 10 participants per item).

The Knowledge About Schizophrenia Test (KAST)

A multiple-choice knowledge test, termed the Knowledge About Schizophrenia Test (KAST), was used to measure knowledge about schizophrenia on family caregivers of people with schizophrenia. The instrument was originally developed by Haladyna (1999) and then modified by Compton, Quintero, and Esterberg (2007). This inventory consists of 18 items with 6 subscales: 3 items of causes (1, 2, 3), 2 items of symptoms (4, 5), items of diagnosis (6, 7), 1 item of course (8), 5 items of treatment (9, 10, 11, 12, 13) and 5 items of self-help (14, 15, 16, 17, 18). The format of this questionnaire is "true" (score = 1) and "false" (score = 0) responses to each item. The possible score ranged from 0 to 18. A higher score indicates a better knowledge about schizophrenia. The strength of this instrument was the KAST demonstrated a KR-20 reliability coefficient of 0.82. This instrument demonstrated that the KAST was reliable and valid. It was simple, clear, concise, and reflect the construct of interest (knowledge about schizophrenia).

The Family Attitude Scale (FAS)

The FAS is self-reporting questionnaire for measuring the emotional climate of the family caregiver in relation to a relative with schizophrenia, developed by Kavanagh et al. (1997). This questionnaire consists of 30 items with 10 positive statements (1, 9, 12, 15, 16, 20, 21, 24, 28, 30) and twenty negative statements. The answer was rated on a 5-point Likert scale (4 = every day, 3 = most days, 2 = some days, 1 = very rarely, and 0 = never). Positive statements were reverse scored. The total score ranges from 0 to 120. A higher score indicates a higher level of negative emotional climate for caregivers' families. The strength of all items in this instrument were simple, clear, concise, and reflect the construct of interest (family attitudes

toward schizophrenia). The items in the scale development were both positive and negative worded items. The researcher also used Likert scale and this format was appropriate for measurement in this scale development. Coefficient alpha values were 0.95, 0.94 and 0.96 respectively (Kavanagh et al., 1997).

The Chiang Mai Psychiatric Caregiving Skills Scale (CPCSS)

The Thai version of CPCSS was developed by Tungpunkom et al. 2000 as cited in Suriyong et al., 2008). It was used to measure the caregivers' skills in caring for the schizophrenia patients at home. The Thai version was translated by Prasertsri (2014) and was edited by an English native. The CPCSS is composed of a 50 items list of caregiving skills, using a Likert-type scale of 0 to 3 (do all the times = 3, know and do but not sure = 3, don't know how to do = 1, and if the patient can do it by himself or no condition occurs = 0). A higher score indicates higher level of caregiving skills. The weakness of this instrument is the numbers of items is too much (50-items). The participants will feel boring when the items read and take time to fill out. However, there is no redundancy of item in this scale development. The strength of this instrument is the researchers have a clearly ideas of what to be measured. Besides, the items of the instrument were simple, clear, concise, and reflect the construct of interest (caregiving skill). But, all items of the scale development were positive words.

The Caregiver Satisfaction Scale (CSS)

This questionnaire was a modified version of the one originally developed by Bakas et al. (2009) and aimed to evaluate the degree of caregivers' satisfaction with the coaching program. The modification was created and applied by the researcher. The dimensions of the instrument were: usefulness, ease of use, and

acceptability. It is a 9-item self-reporting instrument with 3 subscales: 4 items of usefulness (1, 2, 3, 4), 3 items of ease of use (5, 6, 7) and 2 items of acceptability (8, 9). Each item is rated on a 5-point Likert scale, ranging from 1 to 5, strongly disagree = 1, disagree = 2, neither agree nor disagree = 3, agree = 4, strongly agree = 5. An overall mean score of caregiver' satisfaction from 1.00 to 1.66 indicated a low level of satisfaction, 1.67 to 3.33 indicated a moderate level of satisfaction, and 3.34 to 5.00 indicated a high level of satisfaction. There is no redundancy of item in this scale of development process. The strength of this instrument is the numbers of items are small. It's indicated that respondents are not feel bored when read and selects the appropriate items.

Summary

In summary, the literature review in this study provides fundamental knowledge for the development of a coaching program to enhance caregivers' knowledge, attitudes, and skills in caring for persons with schizophrenia. Coaching is beneficial for family caregivers in performing their specific tasks, particularly when providing care for patient sick members. The success of coaching can be seen an improvement in family caregiver performance. In order to develop family caregivers' knowledge, attitudes, and skills, several factors, both internal or external, need to be considered and those contribute to such a coaching program. A coaching intervention program is needed to improve the competency of family caregivers in caring for their loved ones with schizophrenia.

Despite the above, a coaching program intervention has never been given to family caregivers with schizophrenia in Medan, Indonesia. However,

findings from the literature reviews found that a coaching program was effective in improving the family caregivers' interaction with their sick loved ones. Therefore, it is important to conduct a study to examine the effectiveness of a coaching program for enhancing the family caregivers' knowledge, attitudes, and skills in caring for persons with schizophrenia in Medan, Indonesia.

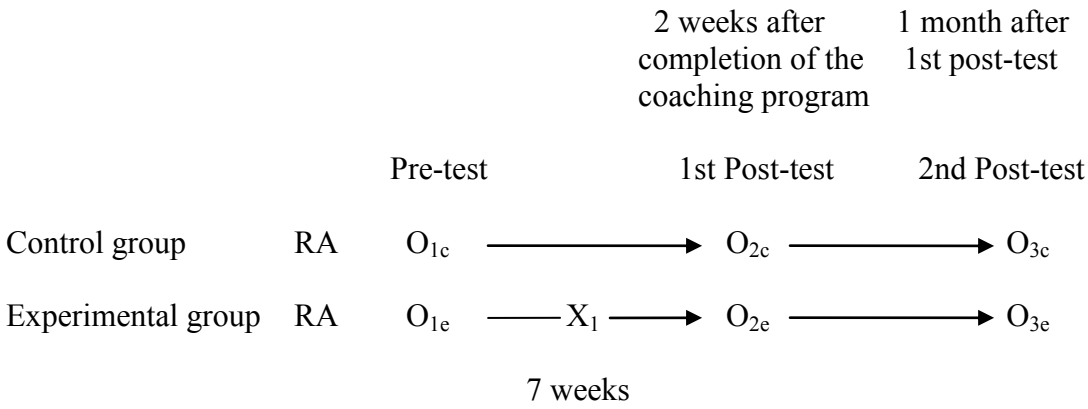
CHAPTER 3

RESEARCH METHODOLOGY

This chapter presents the research methodology including the research design, variables, setting, population, sample, instrumentation process, intervention, ethical consideration, data collection methods and data analysis. This study was an experimental study thus the researcher has been controlling and managing the threats to internal validity.

Research Design

A randomized controlled trial with a repeated-measures design was used to examine the effectiveness of a coaching program on family caregivers' knowledge, attitudes, and skills at 2-weeks after completion of program and then 1-month after 1st post test at the Outpatient Department (OPD) of the psychiatric hospital Medan, Indonesia. The reason to conduct 1st post-test at two weeks after completion of the coaching program was to determine the positive effect of coaching program on knowledge, attitudes, and skills. Besides, the participants need time to learn more about schizophrenia and reviewed what they have learned from the coaching program. It can be concluded that all dependent variables need time to be reviewed and maintained. In this hospital, family caregivers attended the OPD for regular check-ups of their family members with schizophrenia. The participants were randomly assigned into two groups: an experimental group and a control group. The research design is described below.



Where:

RA refers to the randomization of family caregivers at the outpatient department

$O_{1c}O_{1e}$ refers to the baseline data (pre-test scores) of family caregivers' knowledge, attitude, and skills.

X_1 refers to the 7-weeks coaching program intervention

$O_{2c}O_{2e}$ refers to post-test scores of family caregivers' knowledge, attitudes, and skills and satisfaction with the program (in O_{2e} only) at week-2 (1st post-test)

$O_{3c}O_{3e}$ refers to 1st post-test scores of family caregivers' knowledge, attitudes, and skills at 1 month of follow-up (2nd post-test scores)

Variables

The study variables consisted of independent and dependent variables. The independent variable of this study was the coaching program. The dependent variables were the family caregivers' knowledge, attitudes, skills, and satisfaction.

Setting

The randomization assignment, either into the experimental group or the control group, was conducted in the OPD of the psychiatric hospital Medan,

Indonesia. This psychiatric hospital was selected for the study because it was a public and referral psychiatric hospital for Northern Sumatera and several districts around Aceh Province. This was also a teaching hospital for the professions of medicine, nursing, and psychology. The psychiatric hospital was accredited by the Ministry of Health, Republic of Indonesia. The coaching program was conducted in the discussion room of the psychiatric hospital and the meeting room of Faculty of Nursing, Sari Mutiara Indonesia University, Medan Indonesia. Family caregivers were those who had family members with schizophrenia, and the members had visited the OPD for regular check-ups and received the patients' medication from the psychiatrist. In the OPD, psychiatric nurses measured blood pressure and body weight, as well as provided a brief health education associated with the disease, medication, and re-scheduled follow up. In general, persons with schizophrenia came to see the psychiatrist every month. However, some cases required the schizophrenic person to come to the OPD every 2 weeks particularly for the sick member who did not regularly come to a check-up.

Population and Sample

Target Population

The target population in this study was the primary caregivers of persons with schizophrenia who attended the OPD in the psychiatric hospital Medan, Indonesia. The primary caregivers who met the inclusion criteria were approached and informed of the study. Written informed consent was obtained from those who verbally agreed to participate.

Sample Size

The sample size of this study was estimated using power analysis and the effect size was obtained from a meta-analysis. The average effect size (*d*) from a meta-analysis of 18 studies of the effect of coaching on individual level outcomes is 0.60 (Theeboom, Beersma, & Van Vianen, 2014). According to Cohen (1988, p. 54 in two-tailed table), the required sample size for a significant criterion is 0.05, for power = 0.80, and for effect size (*d)* = 0.60. Therefore, the effect size from the *F*-test on mean in the analysis of variance and covariance was computed by using the equation (Cohen, 1988):

$$N\frac{n.05}{400\ f2} + 1$$

Whereas *n*.05 is the necessary sample size to detect f (for significant level of = .05, with power = .80), the sub table of Table 8.4.4 illustrates *n*.05 = 1571 (Cohen, 1988).

F is the standard deviation of standardized means translated from d (ES index for the t-test), which is equal to d/2 (Cohen, 1988). Thus, f = 0.60/2 = 0.30.

Substituting in the equation:

$$N\frac{1571}{400\ (0.09)} + 1 = 45$$

Using this equation, it was determined that forty-five participants in each group was required. To prevent attrition (Grove, Burns, & Gray, 2013), the researchers added a number of participants equal to 10% of each group. Thus, 50 participants were required for each group. A total of 100 participants were enrolled in this study. However, during data collection, nine participants withdrawn from the study; five participants in the experimental group and four participants in the control

group. They withdrawn for several reasons; two participants in the experimental group moved to another hospital and three participants were too busy. Meanwhile, three participants in the control group reported that their sick family members' conditions were getting better and one participant moved to another province. In total, 91 participants completed the full program (up to the 2nd post-test for data collection) and their data were used in the statistical analysis (Figure 2).

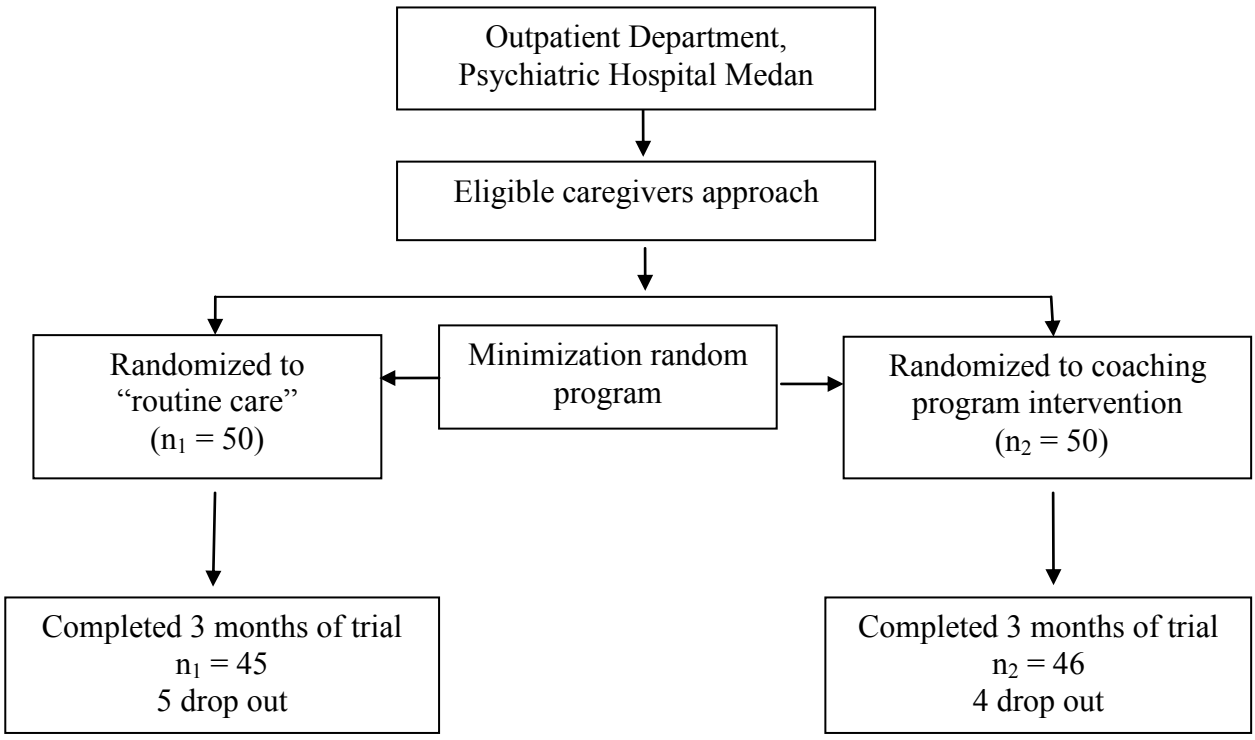


Figure 2. Flow diagram of participants through the study

Inclusion Criteria

The sample of this study was selected using the following inclusion criteria: (1) age 18 to 65 years (recent evidence has indicated that 18 years old was the minimal age to provide verbal or written consent according to Indonesian law), (2)

mentally alert, (3) able to understand and read Bahasa Indonesia, (4) living with and caring for one relative who at recruitment has met the DSM-IV-TR diagnostic classification for schizophrenia for at least 1 year, and (5) to be reached by telephone.

Exclusion Criteria

Family caregivers were excluded based on the following criteria: (1) cared for more than one relative with a chronic mental or physical illness (they might have different varieties and levels of demands regarding patient care, which might not be addressed by the coaching program) and (2) did not complete the full program (up to the post-test data collection).

Sampling and Group Assignment Procedure

A mental health nurse who worked at the outpatient department introduced the researcher to eligible participants. The researcher obtained the first caregivers' data from the OPD in the psychiatric hospital Medan, Indonesia. The participants who met the inclusion criteria had been approached by a mental health nurse. The caregivers were asked to give their consent to participate in this study. The researcher assigned the family caregivers either into the experimental group or the control group using the minimization random program method version 2.01. There were 50 participants assigned into either the experimental or the control group.

Randomized Assignment

The research assistant introduced herself to the caregivers of persons with schizophrenia. The participants who met the inclusion criteria and came to the OPD were approached by the research assistants. Then the research assistants explained the details of the study: the objectives, benefits, the program itself, and the right to participate and withdraw from the study at anytime and without any consequence and

confidentiality issues. Participants who were asked to participate in the study provide both verbal and written informed consent. The eligible participants who came on the first day of data collection were assigned either into the experimental or control group using the minimization random program (Zeller, 1997). Age, gender, education level, and duration of taking care were entered into the minimization random program version 2.01 to help balance potentially confounding variables in randomized controlled trials (Punthmatharith, 2002). Hence, controlling confounding variables through the minimization random program to assign the participants into either the control or the experimental group helped increase the internal validity of the study findings.

Instrumentation

The instruments in this study were classified into two categories as follows: (1) an intervention the coaching program and (2) instruments for data collection. In order to ensure the construct validity of the study variables, each variable was discussed in detail how it had been developed, implemented, and measured. Moreover, the instruments developed in the English language were translated into the Indonesian language using the back translation technique, then content validated, and reliability tested. The detailed descriptions were presented as follows:

Coaching Program

The coaching program was developed by the researcher based on the experiential cycle of learning theory proposed by Kolb (1984) and Thorpe and Clifford (2003). The objective of the program was to enhance caregivers' knowledge,

attitudes, and skills in caring for persons with schizophrenia. This program has six steps, comprising: 1) clarifying coaching needs and goals; 2) agreeing to specific development needs; 3) formulating a detailed plan for coaching; 4) performing a task or activity; 5) reviewing activities and planning to improve performance; and 6) ending the coaching relationship. The researcher provided coaching program intervention to the groups of caregivers of persons with schizophrenia during the implementation phase. Each step of the coaching process linked with the four different kinds of ability sessions of the experiential learning theory. The duration of the program was 7 weeks and consisted of 6 steps. This program was held once a week and each meeting consisted of 1 to 2 hours per session.

In this study, the program was conducted with both group and individual approach. Each group contained 5 to 6 participants. The researcher used individual approach when visiting the participant's home at week 4, reviewing activities and when planning to improve performance of the participants at week 5 and week 6. Meanwhile, the group sessions were conducted at weeks one, two, three and seven. The researcher gave time about 10 to 15 minutes for each caregiver to participate in the group sessions of coaching process. The researcher used eight methods to provide the coaching program: discussions, watching videos, providing information, training, observation, role-plays, demonstration, and phone-calls. The researcher also demonstrated various skills in performing each step.

Step 1. Clarifying coaching needs and goals. *S*tep one was conducted in the first week in the discussion room of the psychiatric hospital Medan, Indonesia. The researcher established a trusting relationship with the caregivers and engaged in open and honest communication. After the researcher and caregivers were introduced,

the researcher asked for the caregivers' readiness to actively participate in the coaching program. Then both parties agreed on a set available time to conduct the coaching program together. The researcher explained the coaching program including the definition, objectives, and the process of the coaching program. In this step, the caregivers came from various ethnic groups in the Northern Sumatera Province. They were from Batak, Melayu, Java, Minang, Tionghoa, and Aceh ethnics; therefore, the researcher considered the aspect of culture, values and beliefs of caregivers in order to identify their needs in the coaching program. The researcher assisted the caregiver's real needs and shared any ideas for coaching by using open-ended questions. During this week, the caregivers received a caregiver's guide booklet with topics covering general information of schizophrenia, the type of medication, side effects of medication, the management of side effects, the caregiver's knowledge in caring for a person with schizophrenia, resources, the caregiver's attitude toward schizophrenia, and caregiving skills in taking care of a sick member who has hallucinations, delusions, aggressive behavior symptoms, and also effective communication skills. In order to conduct this step, the researcher used questioning, listening, assertiveness, interpreting information, and summarizing skills.

Step 2. Agreeing to specific development needs. Step two was conducted in week two in the discussion room of the psychiatric hospital Medan, Indonesia. In this week, the researcher and caregivers watched videos together. The researcher reviewed the caregiver's understanding about schizophrenia after watching the video. Then the researcher clarified the caregivers' understanding/misperceptions about schizophrenia, the importance of medication adherence and family support for recovery of their ill relatives' symptoms. A DVD about schizophrenia and importance

of family support for people with schizophrenia was given by the researcher to each caregiver as a self-material study to understand more about schizophrenia at home. The researcher asked the caregivers to share their needs, existing attitudes and skills in previously performing care for sick members with open-ended questions. The researcher also asked caregivers to perform existing skills in overcoming both hallucination and aggressive symptoms. The researcher explained briefly about the resources for seeking professional help and caregivers' organization in Indonesia (i.e. Community Health Centers that offer community mental health services, the Indonesia Government Program associated with health insurance, and schizophrenia community care of Indonesia at the Medan branch). Then the researcher asked caregivers to list any new knowledge, attitude, and skills that they want to improve from the coaching program intervention. The researcher also assisted the caregivers to set up specific objectives by using 'SMART' (specific, measurable, attainable, realistic, and timely) objectives related to their needs. At the end of this session, the researcher reminds caregivers to bring the paper that contains their specific goals to the next session and summarize session 2. The skills used in this step include analysis, questioning, providing information, active listening, and summarizing skills.

Step 3. Formulating a detailed plan for coaching. Step three was held in week three in the meeting room at the University Sari Mutiara Indonesia Medan, Indonesia. The researcher helped family caregivers develop an action plan. It consisted of reviewing overall objectives that were already written by caregivers in the previous step. The researcher asked the caregivers what they wanted to do to help ill relatives each day. The researcher encouraged caregivers to make decisions related to that they wanted to make in the future. They were asked to write the action plans,

resources, timeliness, and indicators of success in the action plan form that was given to them. The researcher as a coach ensured that the formulated steps were clear and could be conducted in order to achieve the development objectives. The researcher considered a strategy to achieve the goals of the coaching program. The researcher also gave the scenario to be discussed so that they understood more about schizophrenia. During this step, the researcher educated caregivers on how to care for sick members, manage the symptoms of schizophrenia, and monitor the sick members in terms of medication therapy management, communication, financial management, seeking help, and identifying family resources, problem solving, and managing patient behavior. The researcher also demonstrated how to solve hallucination, delusion, and aggressive behavior related schizophrenia symptoms. Then the researcher gave opportunity to each caregiver to re-demonstrate the new skills. The researcher assessed the caregivers' confidence in implementing the goals and action plan by using a confidence level indicator from 0 (no confidence at all) to 10 (total confidence). There were five participants who had a confidence level score of less than 7 In responses the researcher discussed the difficulties in performing the new attitude and skills with their sick members. The researcher asked other caregivers to help caregivers who had difficulties in performing new attitude and skills. At the end of this program, the researcher summarized the contents and made a contract with the caregivers about an appropriate time for a home visit in the next session. During this session, the researcher used planning, decision making, problem solving, prioritizing, listening, questioning, and summarizing skills.

Step 4: Performing a task or activity. Step four was conducted in week four and week five in the caregiver's home. During week four, the researcher

visited the caregiver's homes to observe caregiver's performing activities. During this week, the researcher discussed the performance of caregiver implementation of the action plan, objectives and any needed changes. The researcher also asked them to implement the agreed plans and perform new knowledge, attitudes and skills. The caregivers were asked to demonstrate their skills in providing care for their sick family members including how to teach the an ill relative to monitor and manage schizophrenic symptoms, make decisions while dealing with a crisis situation, solve problems, perform effective communication with an ill relative, financial management, adherence to the prescribed medication therapy, seeking help from others, and obtaining family resources. The researcher observed the caregivers' performance caring for their ill relatives. In this step, the researcher also trained caregivers again on how to treat hallucination, delusion, and aggressive behavior symptoms. The researcher reminds caregiver to read again the caregiver booklet to understand more how to manage schizophrenic symptoms. The researcher provided opportunities for the caregivers to use the information discussed with the researcher or practice newly learned skills. During this session, the researcher had a chance to observe the caregiver interacting with their sick member. For example, the caregiver explained the benefits of medication when the sick member was taking the medication. Then the researcher asked the caregiver to reflect on his/her implementation of the new skills. The researcher and caregiver made a daily activity schedule for the sick member together. The caregiver was asked to remind sick member to fill out a daily activity schedule every day. The researcher asked caregiver to explain back the new knowledge, attitude, and skills that they had learned and implemented in this week. The researcher also evaluated the symptoms on the

schizophrenia checklist and medication record form. In this step, the researcher used observing, questioning, active listening, and summarizing skills during week four.

The fifth week coaching program intervention. In this week, the researcher used phone-calls to monitor caregivers self-practice at home. The researcher asked caregivers to reflect on his/her implementation of the new knowledge, attitude, and skills during the two weeks. The researcher asked whether the goals had been achieved by the caregiver in carrying out the action plan. The researcher also discussed with the caregiver together to solve the problems in implementing the new skills and then provided feedback on the caregiver's implementation. The researcher asked caregiver to remind sick family member to fill out a daily activity schedule every day. Then, asked them to evaluate the symptoms on the schizophrenia checklist and medication record form. At the end of this session, the researcher made an appointment for the next session. During this session, the researcher used active listening, questioning, and summarizing skills by phone calls.

Step 5: Reviewing activities and planning to improve performance. The sixth week of the coaching program intervention. The researcher employed telephone calls to follow-up the caregivers' performance during the three weeks. The researcher asked the caregiver to share their experience in implementation of the planned tasks from the beginning until the end of the coaching session. The researcher asked the caregiver to explain the activities that had been improved and analyzed whether the plans needed to be revised or continued. Then the researcher prepared a good plan of activities for the next coaching session. The researcher also evaluated the caregivers' performance, gave feedback and analyzed the outcome of the activities. The researcher asked each caregiver to list any strengths and improved performances.

At the end of this session, the researcher asked the caregiver to summarize all the activities he/she performed in this step. The researcher used verbal communication skills by facilitating, listening, questioning, presenting ideas, preparing and analyzing plans, and summarizing skills using phone-calls.

Step 6: Ending the coaching relationship. The week seven, the researcher employed face-to-face follow-up meetings and supporting methods with caregivers in the discussion room of the psychiatric hospital Medan, Indonesia. The researcher as coach evaluated the effectiveness of the coaching program including overall caring performance, the objectives of the coaching program and terminated the relationship with the caregivers. The researcher asked the caregivers to explain again the goals that had been achieved from beginning until the end of this program. The researcher guided the caregivers to explore the alternatives and preparations needed to overcome their difficulties. Then the researcher encouraged the caregivers to share their new knowledge and attitude and to perform the new skills as well without the researcher' monitoring. Again the researcher also assessed the confidence level of caregivers in providing effective care for sick members after completing the coaching program. In this step, only one caregiver complained of not being too confident to provide effective care for her sick member. She had difficulties in performing care. The researcher tried to help her by sharing other caregivers' experiences with her. Other caregivers tried to help her from their own experiences and by offering solution to overcome the problems. Finally, the researcher gave a positive reinforcement for the success that had been achieved by caregivers before terminating the session. At the end of this session, the researcher made a summary of the coaching program

intervention. In this step, the researcher used listening, questioning, assertiveness, and summarizing skills.

Data Collection Instruments

In order to ensure the stability of the experimental intervention, a coaching program guideline, a caregiver's guide booklet, and a DVD about schizophrenia was provided for the subjects and used for reference with instructions to follow. Details of the booklet and the DVD were as follows.

The guideline for the coaching program consisted of information regarding the coaching program that encompassed the steps of the coaching process, coaching activities, and caregiver activities. The caregiver' guide booklet consisted of general information of schizophrenia, caregiver' knowledge in caring for persons with schizophrenia, caregiver' attitudes towards ill relatives with schizophrenia, the caregivers' skills in caring for persons with schizophrenia, how to take care of an ill relative who has hallucination, delusion, and aggressive behavior symptoms, and how to use effective communication with ill relatives and others.

A DVD about schizophrenia and the importance of family support was also provided. By using a DVD, it was expected that caregivers would understand more about the nature of schizophrenia and how to reduce the stigma from the community. The DVD focused on real-life situations and problems faced by people with schizophrenia. The DVD could help caregivers how to recognize the signs and symptoms of schizophrenia, the kinds of medication, how to treat the positive symptoms of schizophrenia, and the importance of family support for people with schizophrenia.

The instruments used for data collection were as follows: the Demographic Data Questionnaire (DDQ), the Knowledge About Schizophrenia (KAST), the Family Attitude Scale (FAS), and the Chiang Mai Psychiatric Caregiving Skills Scale (CPCSS). Additionally, the caregivers' satisfaction of the coaching program was measured by the Caregiver Satisfaction Scale.

The Demographic Data Questionnaire (DDQ)

This questionnaire was developed by the researcher to collect the caregivers' demographic data. The format was a combination of forced choices and fills in the blank questions. Several kinds of data were collected via this questionnaire. Data was collected about the caregivers' age, gender, educational level, ethnicity, religion, biological relationship to the sick family member, monthly household income, number of family members living with the patient at home, length of caring time, and also the patient's age, gender, duration of mental illness, number of hospitalizations, type of medication, and patient condition (improved, stable/staying the same, or worsened/unstable) in the previous 6 months (Appendix B).

The Knowledge About Schizophrenia Test (KAST)

A multiple-choice knowledge test, termed the Knowledge About Schizophrenia Test (KAST), was used to measure knowledge about schizophrenia on family caregivers of people with schizophrenia. The instrument was originally developed by Haladyna (1999) and then modified by Compton, Quintero, and Esterberg (2007). This inventory consists of 18 items with 6 subscales: 3 items of causes (1, 2, 3), 2 items of symptoms (4, 5), items of diagnosis (6, 7), 1 item of course (8), 5 items of treatment (9, 10, 11, 12, 13) and 5 items of self-help (14, 15, 16, 17, 18). The format of this questionnaire is "true" (score = 1) and "false" (score = 0)

responses to each item. The possible score ranged from 0 to 18. A higher score indicates a better knowledge about schizophrenia.

The Family Attitude Scale (FAS)

The FAS is self-reporting questionnaire for measuring the emotional climate of the family caregiver in relation to a relative with schizophrenia, developed by Kavanagh et al. (1997). This questionnaire consists of 30 items with 10 positive statements (1, 9, 12, 15, 16, 20, 21, 24, 28, 30) and twenty negative statements. The answer was rated on a 5-point Likert scale (4 = every day, 3 = most days, 2 = some days, 1 = very rarely, and 0 = never). Positive statements were reverse scored. The total score ranges from 0 to 120. A higher score indicates a higher level of negative emotional climate for caregivers families.

The Chiang Mai Psychiatric Caregiving Skills Scale (CPCSS)

The Thai version of CPCSS was developed by Tungpunkom et al. 2000 as cited in Suriyong et al., 2008). It was used to measure the caregivers' skills in caring for the schizophrenia patients at home. The Thai version was translated by Prasertsri (2014) and was edited by an English native. The CPCSS is composed of a 50 items list of caregiving skills, using a Likert-type scale of 0 to 3 (do all the times = 3, know and do but not sure = 3, don't know how to do = 1, and if the patient can do it by himself or no condition occurs = 0). A higher score indicates higher level of caregiving skills.

The Caregiver Satisfaction Scale (CSS)

This questionnaire was a modified version of the one originally developed by Bakas et al. (2009) and aimed to evaluate the degree of caregivers' satisfaction with the coaching program. The modification was created and applied by

the researcher. The dimensions of the instrument were: usefulness, ease of use, and acceptability. It is a 9-item self-reporting instrument with 3 subscales: 4 items of usefulness (1, 2, 3, 4), 3 items of ease of use (5, 6, 7) and 2 items of acceptability (8, 9). Each item is rated on a 5-point Likert scale, ranging from 1 to 5, strongly disagree = 1, disagree = 2, neither agree nor disagree = 3, agree = 4, strongly agree = 5. An overall mean score of caregiver' satisfaction from 1.00 to 1.66 indicated a low level of satisfaction, 1.67 to 3.33 indicated a moderate level of satisfaction, and 3.34 to 5.00 indicated a high level of satisfaction.

Translation of Instruments

The guidelines of the coaching program intervention, the DDQ, the KAST, the FAS, the CPCSS, and the CSS were translated using the back translation method. This method consisted of three phases. Firstly, the English version questionnaire was translated into Bahasa Indonesia by a bilingual translator to check its cultural relevance with the local context. Secondly, the Bahasa Indonesia version was translated back into English by a bilingual translator. Thirdly, the original questionnaire and the English back-translated questionnaire were evaluated by a bilingual English expert for discrepancies (Carlson, 2000; World Health Organization, 2006). Any discrepancies between the two versions were found on the FAS questionnaire: item no 4 "it is difficult to approach her/him" and the CPCSS questionnaire: item no 4 "you count the number of drugs of your sick family member until the next appointment". Based on the discussion from the experts, the researcher revised the Indonesian version and the discrepancies were revised.

Validity and Reliability of the Instruments

Validity of the instruments. Five experts assessed the content validity of the coaching program guideline, the caregiver guide booklet, the Indonesian version of the Knowledge About Schizophrenia Test (KAST) and the Caregiver Satisfaction Scale (CSS) to clarify and to prove its adequacy in terms of construct validity and appropriateness. The five experts included an expert in coaching and one in psychiatric care. One was a psychiatric lecturer who was an expert in psychiatric caregiving from the Department of Psychiatric Nursing of the Faculty of Nursing, Prince of Songkla University, Thailand. One expert was a clinical psychology lecturer who was an expert in coaching from the Faculty of Psychology, University of Sumatera Utara, Medan-Indonesia. One expert was a professor who was an expert in coaching mental health nurses and families of people with schizophrenia from the Faculty of Nursing, University of Indonesia, Jakarta, Indonesia. The fourth expert was a psychiatric lecturer who was an expert in schizophrenic caregiving from the Faculty of Nursing, University of Indonesia, Jakarta, Indonesia. The fifth expert was an administration lecturer who was an expert in nursing administration from the Department of Nursing Administration and Nursing Services, Faculty of Nursing, Prince of Songkla University, Thailand. The instruments of the Knowledge About Schizophrenia Test and the CSS had a good content validity index (.98 and 1.00, respectively). For the KAST, the experts suggested to provide evidence of family history of schizophrenia on item 14 “A 19-year-old begins to hear voices and act paranoid several months after graduating from high school. The most likely cause of his symptoms is (originally item)”. The researcher revised the questionnaires and coaching program guideline and caregivers’ guide booklet as well based on comments

and suggestions of the experts. The objectives for agreeing to specific development needs were also revised. In the coaching program training, the activities of the researcher as coach and the scenario were revised. The duration of the coaching program for performing activities was also revised. The activities of caregiver for reviewing activities and planning to improve performance were summarized and revised. In the family caregiver' guide booklet, the contents of the side effects from medication and the caregivers' skills in caring for persons with schizophrenia were revised too.

Reliability of the instrument. The researcher examined the internal consistency reliability of the instruments conducted on 30 family caregivers of persons with schizophrenia. Cronbach's alpha was used to determine the internal consistency reliability of the FAS, the CPCSS and the CSS. Cronbach's alpha for: the FAS = .83, for the CPSS = .82, and for the Indonesian version of CSS = .83. For the KAST, Kuder-Richardson's formula (*KR*20) was used to determine the internal consistency. The internal consistency of KAST was .82.

The researcher also examined the internal consistency reliability of the instruments conducted on 91 family caregivers of persons with schizophrenia who participated in this study. Cronbach's alpha was used to determine the internal consistency reliability of the FAS, CPCSS and CSS. Cronbach's alpha for FAS = 1.00, for CPCSS = .85, and for the Indonesian version of CSS = .87. For the KAST, the internal consistency of KAST was 1.00.

Pilot Study

This was a small-scale version of the study, which can serve as a preparation before conducting a major study. Its purpose was to test the feasibility of a study (Polit & Beck, 2012, p.195). The pilot study was conducted for 12 family caregivers who met the inclusion criteria at the Community Health Center Medan, Indonesia. Twelve caregivers were assigned into either the control group or experimental group. Each group contained six persons. The subjects in the experimental group received 7 weeks of the coaching program, which included the following methods: discussion, watching videos, providing information, training, demonstration, role-plays, observation, and telephone calls. Implementation of the program included a 1 to 2 hours coaching session and distribution of the materials the program to the six participants.

The researcher collected the data before and after the coaching program intervention. The findings of the pilot study showed that the participants receiving the coaching program reported significant increase in knowledge about schizophrenia scores ($U = 3.5$, $p < .05$, $p = .02$), decrease in attitude scores ($U = 5$, $p < .05$, $p = .04$), and increase in caregiving skills scores ($U = 4$, $p < .05$, $p = .03$).

In summary, the coaching program was applicable in the present pilot study. There was no difficulty in understanding and applying the coaching program and the caregiver booklet. Family caregivers reported that they were happy they could join in the coaching program. They have learned from others how to provide effective care for sick family members. They also learnt how to solve problems when the sick family members refused to take medication and helped them in managing the schizophrenic symptoms. The caregivers frequently reported improved self-confident

in caring for their sick members. They also expressed greater knowledge about schizophrenia care. However, the difficulty was found in terms of finding appropriate time for caregivers. Therefore, the researcher discussed with the participants what time was appropriate for them to meet up until the end of this program.

Data Collection Procedures

Data collection consisted of the preparation phase and the intervention phase. The preparation phase comprised obtaining permission from the Director of the psychiatric hospital Medan, and the Head of Education and Training at the psychiatric hospital Medan, Indonesia, as well as preparing the materials and the questionnaire packages including obtaining informed consents, testing the validity and reliability of the instruments, recruiting of research assistants, and conducting the pilot study.

Preparation Phase

The researcher attended a 2-day coaching training tutorial at the Faculty of Psychology University of Sumatera Utara Medan, Indonesia. In addition, the researcher practiced coaching under supervision of a clinical psychologist following the guidelines and reviewing caregiver booklet one time in order to gain experience and skill in delivering the coaching program. The researcher also engaged in a one day workshop, with the theme, “Nursing Care for Patients with Chronic Mental Illness and Their Families”. The researcher also joined a one day workshop for family empowerment in caring for people with mental illness in communities. The researcher also received a certificate as a community mental health nurse from the Department of Health.

The researcher employed two research assistants who had a bachelor degree and who worked at the psychiatric hospital Medan. They were responsible for data collection at pre-test, 1st post-test and 2nd post-test as well as explaining to the participants how to properly fill in the questionnaire. There were three steps in the research assistants training.

1. The researcher explained the objectives, protocol, and their role and responsibility as data collectors.

2. The researcher explained the instruments used in the study and reviewed each item of the instruments, as well as explaining how to fill out the questionnaires and discussed and clarified any unclear matters.

3. Lastly, the researcher trained the research assistants how to collect the data at pre-test, 1st post-test, and at the 2nd post-test as well as discussed and clarified problems. The researcher also reminded the research assistants to check that data was complete.

Implementation Phase

The process of intervention was described as follows:

1. The researcher contacted the director of the psychiatric hospital Medan, Indonesia. The purpose and procedure was explained to the head of training and education.

2. The researcher asked the director of nursing for permission to start contact with primary caregivers of persons with schizophrenia who met the inclusion criteria.

3. A complete verbal explanation of the study was given to the primary caregivers who agreed to participate in this study, and the primary caregivers were asked to sign the consent form (Appendix A).

4. The experimental group was led by the researcher to ensure the step ran effectively. The program was conducted with a group and individual approach. Each group contained 5 to 6 participants. Each participant was given a DVD and the caregiver' guide booklet to study and for use in the coaching program process. The researcher used individual coaching approach when visiting the participant's home at week 4, reviewing activities and planning to improve performance of the participants at week 5 and week 6 by using phone calls. The program was held once a week. Group sessions were 1.5 to 2 hours long and the individual session was 1 hour long.

5. The experimental group received a coaching program for seven weeks, which consisted of 6 steps. The researcher used eight methods to provide the coaching program: discussion, watching videos, providing information, training, observation, demonstration, role-plays, and telephone calls. The researcher also demonstrated various skills in performing each step.

6. The KAST, FAS, CPCSS, and CSS were evaluated following the protocol by the trained data collector. The data collection for the outcomes were carried out at three time-points: before the intervention (T0); weeks 2 after the intervention (T1), and then again after another 1 month period follow up (T2).

The Experimental Group

***Before intervention*.** Participants who agreed to participate in the experimental and control groups were asked to respond to the KAST, FAS, and

CPCSS by the data collectors (T0). Demography data were collected for the participants in both the experimental and control groups. The researcher set the appointment dates for the experimental group to participate in the program (5 to 6 primary caregivers of persons with schizophrenia per group).

In week 1. The researcher performed session 1 (clarifying coaching needs and goals).

In week 2. The researcher performed session 2 (agreeing to specific development needs).

In week 3. The researcher performed session 3 (formulating a detailed plan for coaching).

In week 4. The researcher performed session 4 (performing a task or activity) at the participant's home.

In week 5. The researcher performed session 5 (reviewing activities and planning to improve performance by using phone calls).

In week 6. The researcher performed session 6 (reviewing activities and planning to improve performance by using phone calls).

In week 7. The researcher performed session 7 (terminating the coaching relationship).

Two weeks after intervention. The research assistants distributed the KAST, FAS, CPCSS and CSS questionnaires to conduct the first post-intervention test on the caregivers' knowledge, attitude and skills (T1).

One month after the first post-test. One month after the first post-test, the research assistants were to follow-up the improvement of the caregivers' knowledge, attitude, and skills by conducting the second post-test (T2).

The Control Group (Routine Care)

The participants of both the experimental and control groups received the same routine care from mental health nurses at the psychiatric hospital. The routine nursing care for the caregivers in the outpatient department included providing a brief family education about relapse prevention, regular every 2 weeks or monthly check-ups, promoting self-care for daily living, and a medication program. Participants in the control group received the routine care provided by the mental health nurse and the psychiatrist at the outpatient department. Each participant participated in the routine care program for a period of 7 weeks.

Before and after the interventions of routine care, the research assistants assessed the knowledge, attitude, and caregiving skills of the participants in the control groups by using the KAST, the FAS, the CPCSS before the intervention, and at 2 weeks after the intervention for follow up before a second follow up 1 month following.

Figure 3 described the data collection in the experimental group at the intervention phase. The research assistants delivered the DDQ, the FAS, and the CPCSS before intervention (at baseline). Then the researcher conducted the coaching program intervention to caregivers of people with schizophrenia in the experimental group. Each session took approximately 1 to 2 hours. The research assistants conducted the first post-test by assessing the family caregivers' knowledge, attitudes, caregiving skills in the both groups and satisfaction with the coaching program (in the experimental group only) at two weeks after the end of the coaching program intervention. Furthermore, the research assistants assessed the caregivers' knowledge, attitude, and skills at one month after the first post-test. In the control group, the same

procedure of data collection was followed as in the experimental group. The reason for using research assistants to collect data was to minimize the threat of experimenter bias.

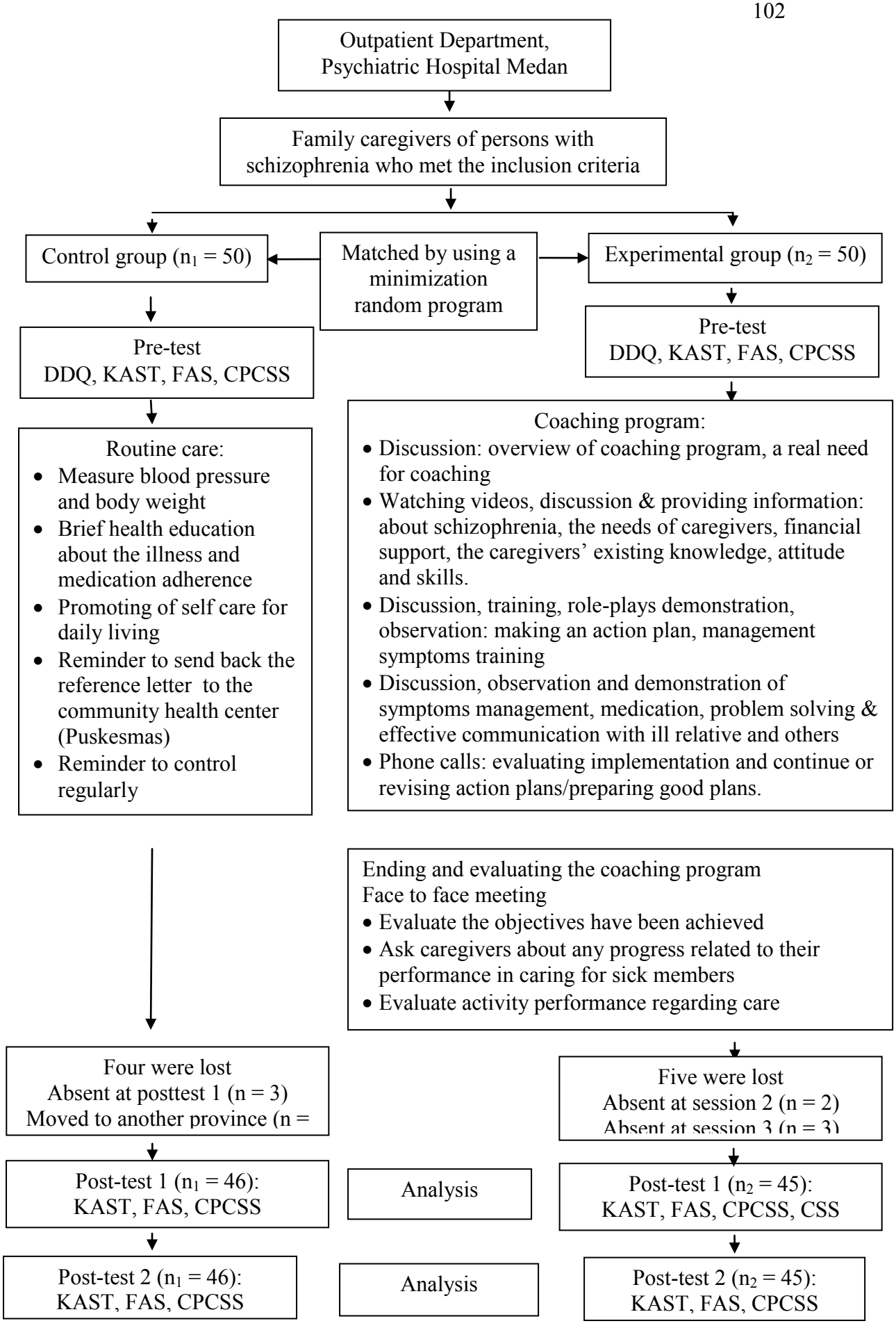

Outpatient Department, Psychiatric Hospital Medan
Family caregivers of persons with schizophrenia who met the inclusion criteria
Control group (n_1 = 50)
Matched by using a minimization random program
Experimental group (n_2 = 50)
Pre-test DDQ, KAST, FAS, CPCSS
Pre-test DDQ, KAST, FAS, CPCSS
Routine care:
• Measure blood pressure and body weight
• Brief health education about the illness and medication adherence
• Promoting of self care for daily living
• Reminder to send back the reference letter to the community health center (Puskesmas)
• Reminder to control regularly
Coaching program:
• Discussion: overview of coaching program, a real need for coaching
• Watching videos, discussion & providing information: about schizophrenia, the needs of caregivers, financial support, the caregivers' existing knowledge, attitude and skills.
• Discussion, training, role-plays demonstration, observation: making an action plan, management symptoms training
• Discussion, observation and demonstration of symptoms management, medication, problem solving & effective communication with ill relative and others
• Phone calls: evaluating implementation and continue or revising action plans/preparing good plans.
Ending and evaluating the coaching program
Face to face meeting
• Evaluate the objectives have been achieved
• Ask caregivers about any progress related to their performance in caring for sick members
• Evaluate activity performance regarding care
Four were lost
Absent at posttest 1 (n = 3)
Moved to another province (n =
Five were lost
Absent at session 2 (n = 2)
Absent at session 3 (n = 3)
Post-test 1 (n_1 = 46): KAST, FAS, CPCSS
Analysis
Post-test 1 (n_2 = 45): KAST, FAS, CPCSS, CSS
Post-test 2 (n_1 = 46): KAST, FAS, CPCSS
Analysis
Post-test 2 (n_2 = 45): KAST, FAS, CPCSS

Figure 3. The implementation phase for data collection procedure

Ethical Consideration

Approval was obtained from the Institutional Review Board (IRB) Faculty of Nursing, Prince of Songkla University, Thailand (code: MOE 0521.1.05/2804), and the ethics committee of the Faculty of Nursing, University of Sumatera Utara, Medan Indonesia. Permission from the Head of the OPD before recruiting the participants was also sought. The necessary information was provided to the participants via the informed consent form. From the caregiver who agreed to participate in this study, verbal or written consent was obtained. The researcher informed the caregivers on their rights to withdraw from the study at any time without any repercussion. If the caregiver developed any problems such as getting sick or being unable to attend the program during intervention and data collection, the activities with them were discontinued. The caregivers' information was kept confidentially and with anonymity. All of the obtained data were used only in this study (Appendix A).

Data Analysis

Data Screening and Cleaning

This study's data was checked for accuracy and completeness. The researcher prepared data coding for data entry. The data was entered daily at each data collection point and analyzed to examine the accuracy of the data entry.

Missing data. The research assistants checked all questionnaires. If data were missing unintentionally, participants were asked to add more data to

complete their submissions. Each day the researcher checked the data collection instruments for accuracy, and coded all data. During data entry, the researcher 'cleaned' them to decrease errors. Descriptive statistics were used to assess and note the characteristics of the data and any missing data to ensure the validity of the research findings. The means, standard deviations, frequencies, and percentages were computed to describe the characteristics of the participants including demographic characteristics, schizophrenic persons' data, and participants' satisfaction with the coaching program. An independent t-test for the interval data and a chi-square analysis for nominal and category data were used to determine personal data group differences.

Outliers. The Boxplots showed that there were no univariate outliers found for these sub variables.

Preliminary Data Analysis

Univariate assumptions of dependent variable data were analyzed for normality and homogeneity of variance. The assumptions of normality were examined using skewness and kurtosis divided by its standard error values. Testing assumptions of repeated measures ANOVA were normally distributed and determined values were in the range of ± 3 at 0.05 significance levels (Runyon, Haber & Coleman, 1994). Assumption of linearity also was met. However, Levene's test for equality of variances presented homogeneity of variance between groups in the FAS only ($p >$ .05). The Mauchly's test of sphericity was significant ($p < .05$). It also indicated a violation of sphericity assumption. Therefore, the researcher used the multivariate table to see the Wilk's lambda value. The homogeneity of variance-covariance matrices was determined through Box's M test. The repeated measures of ANOVA

were structured with the between subjects factor for the experimental and control group. Within-subjects factors were the 3 time levels of the KAST, FAS, and CPCSS. In order to produce a valid F ratio, the estimates of sphericity used to correct the degrees of freedom were the Huynh-Fieldt correction when $\varepsilon > .75$ or the Greenhouse Geisser correction when $\varepsilon < .75$ (Field, 2012).

Inferential statistics

Test of Hypotheses 1. Repeated measure ANOVA was used to examine the differences of the knowledge means scores at different time points within participants in the experimental group and the participants in the control group. Pairwise comparisons using Bonferroni was conducted to assess which means of knowledge differed from each other. An Independent *t*-test was used to test the differences of mean scores of knowledge between the two groups.

Test of Hypotheses 2. Repeated measure ANOVA was used to test the differences of attitude mean scores at different time points within the participants in the experimental group and the participants in the control group. Pairwise comparisons using Bonferroni were employed to assess the differences of actual mean scores of attitude at different time points. An Independent *t*-test was used to compare the mean scores of attitudes between the participants in both groups.

Test of Hypotheses 3*:* Repeated measure ANOVA was used to test the differences of mean scores of skills at different time points within the participants in the experimental group and the participants in the control group. Pairwise comparisons using Bonferroni were conducted to assess which means of skills differed from each other. An Independent *t*-test was used to compare the mean scores of skills between the experimental and control groups.

Statistical Analysis for Satisfaction of the Coaching Program. The caregiver's satisfaction of the coaching program's effectiveness after receiving the intervention was computed to describe both means and standard deviations.

CHAPTER 4

RESULTS AND DISCUSSION

This study was aimed at examining the effectiveness of a coaching program on family caregivers' knowledge, attitude, and skills in caring for persons with schizophrenia. The research findings are presented as follows:

Part I: Demographic characteristics of participants

Part II: Demographic characteristics of schizophrenic persons

Part III: Studied hypotheses

Part IV: Satisfaction of caregivers with the coaching program

Furthermore, a discussion highlighting the major findings of the present study according to its three hypotheses it also detailed.

Results

Part I: Demographic characteristics of participants

Ninety-one participants were assigned randomly to the experimental (n = 45) and control (n = 46) groups. In the control group, the average age was 47.24 years (SD = 13.17), ranging from 21 to 65 years. The majority was female (65.2%). Just over half were Bataknese ethnics (52.2%) and Christian (52.2%). Only 36.9% of them had graduated from high school. An income of < USD 100.67 per month (was found in 34.8.0% of them). Their occupation were entrepreneurs, house wives, and private sector employees at rate of (47.8%, 26.0%, and 11.1%) respectively. The majority of them lived with 1 to 3 family members at home (67.3.0%). Most of them were the parent, sibling, or spouse of the patient (50.0%, 34.8%, and 10.9%,

respectively). The average length of caring time was 7.13 years (SD = 3.70), with a ranged from 1 to 12 years.

The average age of the experimental group was 45.73 years (SD = 13.66) and range 23 to 65 years. A larger percentage of participants were female (66.7%) compared to males. Again, their majority was Bataknese (52.0%) and Christian (53.3%), and 46% of them had graduated from high school. In addition, among 51.1% of them, the median income was more than USD 143.81. Their occupations were entrepreneur, house-wife, and private sector employee at a rate of (48.9%, 24.4%, and 17.8%, respectively). Most of these participants (53.3%) lived with 1 to 3 family members at home. They were either the parent, sibling, or spouse of the schizophrenia affected person (42.2%, 37.8%, and 13.3%, respectively). The average length of caring time was 7.49 years (SD = 3.68), ranging from 1 to 12 years.

When comparing between the groups, no statistically significant difference in terms of the demographic characteristics was found (Table 1).

Table 1

Frequency, Percentage, Mean, and Standard Deviation of the Demographic Characteristics of Participants in the Control and Experiment Groups (N = 91)

Variables	Control group (n = 46)	Experimental group (n = 45)	Statistical value	*p*-value
	n (%)	n (%)		
Age (years)	47.24 (13.17) *M (SD)*	45.73 (13.66) *M (SD)*	-.53[a]	.59
Gender				
Male	16 (34.8)	15 (33.3)	.02[b]	1.00
Female	30 (65.2)	30 (66.7)		

Note. [a] = *t*-test, [b] = Fisher's Exact test, [c] = Likelihood Ratio

Table 1 (continued)

Variables	Control group (n = 46) n (%)	Experimental group (n = 45) n (%)	Statistical value	*p*-value
Ethnicity				
Bataknese	24 (52.2)	24 (52.0)	2.44[c]	.79
Melayunese	10 (21.7)	7 (14.0)		
Minangnese	4 (8.7)	5 (10.0)		
Javanese	6 (13.0)	7 (20.0)		
Acehnese	0 (0)	1 (2.0)		
Others (Tionghoa, Tamil)	2 (4.4)	1 (2.0)		
Religion				
Islam	21 (45.7)	20 (44.5)	2.79[c]	.43
Christian	24 (52.2)	24 (53.3)		
Buddhism	0 (0)	1 (2.2)		
Other (Hinduism)	1 (2.1)	0 (0)		
Educational level				
Primary school	8 (17.4)	2 (4.4)	4.49[c]	.34
Junior high school	7 (15.2)	8 (17.8)		
High school	17 (36.9)	21 (46.7)		
Diploma	5 (10.9)	4 (8.9)		
Bachelor Degree	9 (19.6)	10 (22.2)		
Income (per month)				
< USD 100.67	16 (34.8)	7 (15.6)	5.98[c]	.11
USD 100.67 – USD 143.81	14 (30.4)	15 (33.3)		
> USD 143.81	16 (34.8)	23 (51.1)		
Occupation				
Government-sector employee	4 (8.6)	4 (8.8)	4.89[c]	.29
Private-sector employee	5 (11.1)	8 (17.8)		
House-wife	12 (26.0)	11 (24.4)		
Farmer	3 (6.5)	0 (0)		
Entrepreneur	22 (47.8)	22 (48.9)		
Number of family members living with the patient at home				
1 – 3 persons	31 (67.3)	24 (53.3)	2.98[c]	.23
4 – 6 persons	15 (32.7)	20 (44.5)		
7 – 9 persons	0 (0.0)	1 (2.2)		

Note. [a] = *t*-test, [b] = Fisher's Exact test, [c] = Likelihood Ratio

Table 1 (continued)

Variables	Control group (n = 46)	Experimental group (n = 45)	Statistical value	*p*-value
	n (%)	n (%)		
Relationship to the ill relative				
Spouse	5 (10.9)	6 (13.3)	1.88[c]	.76
Parent (Mother/Father)	23 (50.0)	19 (42.2)		
Sibling (Sister/Brother)	16 (34.8)	17 (37.8)		
Grand parent	0 (0)	1 (2.2)		
Other (son/daughter)	2 (4.3)	2 (4.5)		
Length of caring time (years)	7.13 (3.70)	7.49 (3.68)	.46[a]	.64
	M (SD)	*M (SD*)		

Note. [a] = *t*-test, [b] = Fisher's Exact test, [c] = Likelihood Ratio

Part II: Demographic characteristics of the schizophrenic persons

In the control group, the average age of the schizophrenic persons was 34.80 (SD = 9.47), with a range between 20 and 57 years. The duration of illness was 7.20 years (SD = 3.64). The number of hospitalizations was 3.26 times, ranging from 1 to 10 times. Predominantly, antipsychotics of the atypical type were mostly used to treat the persons with schizophrenia in this study (54.3%). As for patients' disease condition, 41.3% of them were of a stable condition.

In the experimental group, the average age of persons with schizophrenia was 36.82 years (SD = 8.60), ranging from 21 to 61 years. Our participants had been diagnosed with schizophrenia for on average of 7.56 years (SD = 3.67). The average number of hospitalization times was 2.91 (SD = 2.41 and range from 1 to 10 times). Most of them took antipsychotic atypical (57.8%) and their disease conditions were improved (40%). Once more, there were no statistically significant differences in terms of demographics between the control and experimental groups (Table 2).

Table 2

Frequency, Percentage, Mean, and Standard Deviation of the Demographic Characteristics of Persons with Schizophrenia in the Control and Experiment Groups (N = 91)

Variables	Control group (n = 46)	Experimental group (n = 45)	Statistical value	*p*
	n (%)	n (%)		
Age (years)	34.80 (9.47) *M (SD)*	36.82 (8.60) *M (SD)*	1.06[a]	.29
Duration of illness (years)	7.20 (3.64) *M (SD)*	7.56 (3.67) *M (SD)*	.47[a]	.64
Number of hospitalizations (times)	3.26 (2.84) *M* (SD)	2.91 (2.41) *M* (SD)	-.28[d]	.77
Type of medication				
Typical antipsychotic	21 (45.7)	19 (42.2)	.10[b]	.83
Atypical antipsychotic	25 (54.3)	26 (57.8)		
Patient condition				
Improved	16 (34.8)	18 (40.0)	.36[c]	.83
Stable	19 (41.3)	16 (35.6)		
Worsened / Unstable	11 (23.9)	11 (24.4)		

Note. [a] = *t*-test, [b] = Fisher's Exact test, [c] = Likelihood Ratio, [d] = Mann-Whitney *U* test

Part III: Studied Hypotheses

It was found that, in the experimental group, at week 2 after completion of the program and 1 month after 1st post-test, the mean scores of knowledge regarding schizophrenia (13.82 ± 1.64, and 14.62 ± 0.94, respectively) had increased from those of the baseline (9.56 ± 2.74). Meanwhile, in the control group, the results showed that there was a slight increase in knowledge at the week 2 after completion of the coaching program, and 1 month follow-ups after 1st post-test (9.65 ± 2.48 and 10.09 ± 2.08, respectively) compared with the baseline (8.91 ± 2.22) score (Table 3 and Figure 4).

Table 3

Actual Means and Standard Deviations between the Control (n = 46) and Experimental Groups (n = 45) at the baseline, week-2 after Completion of the Coaching Program and 1-month follow-ups

Time	Control group	Experimental group
	M (SD)	*M* (SD)
Knowledge (10 items: 0 – 18)		
Baseline	8.91 ± 2.22	9.56 ± 2.74
Week 2	9.65 ± 2.48	13.82 ± 1.64
1 month	10.09 ± 2.08	14.62 ± 0.94
Attitude (30 items: 0 – 120)		
Baseline	35.85 ± 14.66	39.00 ± 17.64
Week 2	36.24 ± 14.85	23.00 ± 11.98
1 month	34.41 ± 12.40	19.16 ± 8.70
Skills (50 items: 0 – 150)		
Baseline	99.22 ± 21.79	96.51 ± 17.69
Week 2	97.54 ± 20.78	116.04 ± 12.36
1 month	101.39 ± 17.34	120.67 ±7.96

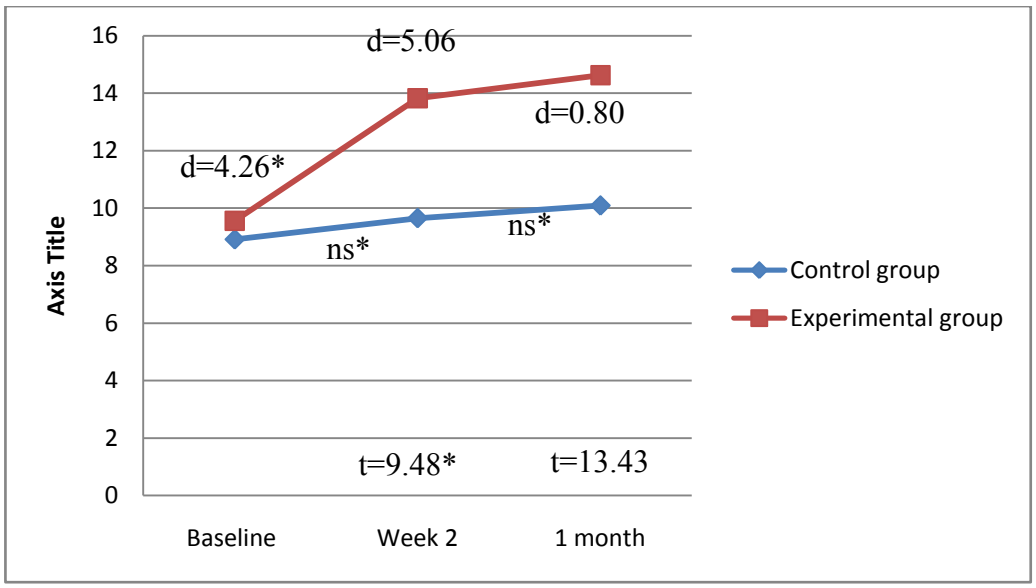


Figure 4. Line graph showing mean of differences between scores of knowledge regarding schizophrenia at baseline, weeks 2 after completion of the program, and 1 month follow-ups (N = 91)

For caregiver attitudes, mean scores in the experimental group at week 2 after completion of the program and 1 month after 1st post=test, (23.00 ± 11.98 and 19.16 ± 8.70, respectively) had decreased from those of the baseline (39.00 ± 17.64). On the other hand, in the control group, the results revealed a slight increase in the mean scores of attitudes (36.24 ± 14.85) at the week-2 after completion of the program and a little decrease (34.41 ± 12.40) at the 1-month follow-ups compared with the baseline scores (35.85 ± 14.66) (Table 3 and Figure 5).

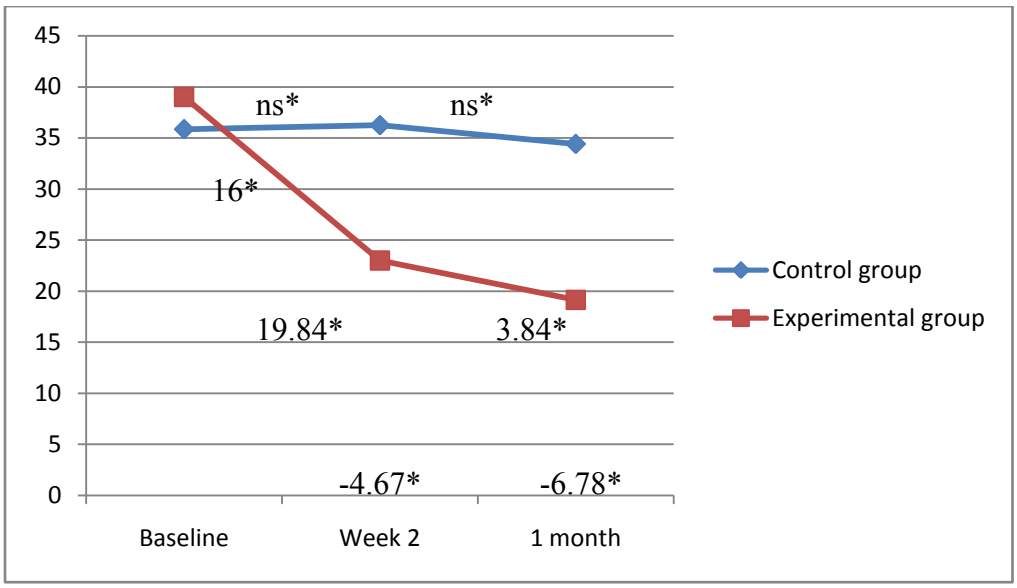


Figure 5. Line graph showing differences in mean scores of attitudes at baseline and weeks- 2 after completion of the coaching program and 1-month follow-ups (N = 91)

Moreover, the mean scores of skills in the experimental group (116.04 ± 12.36 and 120.67 ± 7.96, respectively) at week-2 and 1-month follow-ups had increased compared with those of the baseline (96.51 ± 17.69). Whereas, in the control group, the mean scores of skills (99.22 ± 21.79) experienced a slight decrease (97.54 ± 20.78) at week 2, but increased (101.39 ± 17.34) at the 1-month follow-ups compared with the baseline ones (99.22 ± 21.79) (Table 3 and Figure 6).

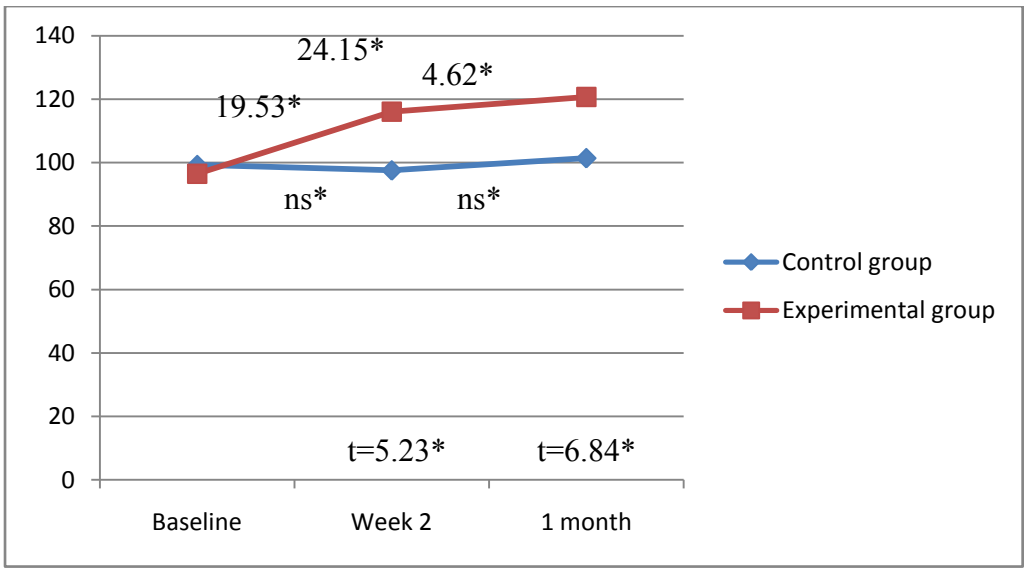


Figure 6. Line graph showing differences in mean scores of skills at the baseline, week 2 after completion of the coaching program and 1-month follow-ups (N = 91)

Independent t-test revealed that there were no significant differences of mean scores of knowledge, attitudes, and skills between the experimental and control groups at the baseline ($p > .05$) (Table 4).

Table 4

Comparisons of the Mean Differences of Knowledge, Attitude and Skills between the Two Groups at Baseline (N = 100)

Variables	Control Group (n = 50)		Experimental Group (n = 50)		*t*	*p*
	M	SD	M	SD		
Knowledge	8.91	2.22	9.56	2.74	1.23	.22
Attitude	35.85	14.66	39.00	17.64	.93	.36
Skills	99.22	21.79	96.51	17.69	-.65	.52

Hypotheses Testing

Hypothesis 1. As regards schizophrenia, the mean score of knowledge of the experimental group were statistically higher than those of the control group. A One-way repeated measure ANOVA was used to test of between-subject effect of the mean differences in knowledge at three times. Then a post-hoc analysis using the modified Bonferroni *t* test was conducted to assess which knowledge score means differed from each other at baseline and week-2 after completion of the program and 1-month follow-ups after 1st post-test.

The study revealed statistical differences that were significant between the groups in terms of knowledge ($F = 85.77$, $p < .001$) and time ($F = 89.78$, $p < .001$) were detected, and there was an interaction effect between time and knowledge (Table 5).

Table 5

Analysis of Variance for Knowledge within the Experimental Group (n = 45) and Control Group (n = 46)

Source	Sum of Squares	df	Mean Square	F	η^2	Power
Between-Subject Effects						
Intercept	33684.98	1	33684.98	4360.81***	0.98	1.00
Group	662.57	1	662.57	85.77***	0.49	1.00
Error	687.48	89	7.72			
Within-Subject Effects						
Time	496.86	1.55	321.31	89.78***	0.50	1.00
Time*group	210.26	1.55	35.97	37.99***	0.29	1.00
Error(Time)	492.53	137.62	3.58			

Note. ***$p < .001$

A post-hoc analysis via a modified Bonferroni *t* test was conducted to analyze the mean score differences in knowledge at baseline and week-2 after completion of the coaching program, and 1-month after 1st post-test. In this study, the alpha level was set at .05 and three separate tests were conducted. The pairwise comparisons indicated that the participants in the control group had no significant differences from baseline to week-2 after completion of the program and two weeks after finishing the program to a month follow-ups after 1st post-test ($p > .05$, Table 5); however, a significant difference was observed after the 1-month follow-up from the baseline ($p < .01$, Table 5). These results indicate that the scores of knowledge at the 1-month follow-up were significantly higher than those of both the baseline and week-2 after completion of the program (Table 6). Meanwhile, the participants in the experimental group demonstrated a significantly higher score of knowledge from baseline to week 2 after completion of the program, two weeks after completion of the program to 1 month after 1st post-test, and baseline to 1 month after 1st post-test ($p < .001$, $p < .01$, $p < .001$, respectively) (Table 6).

Table 6

Pairwise Comparison of Knowledge between Baseline and Week 2 after Completion of the Coaching Program, and 1-Month after 1st Post-test within the Experimental (n = 45) and Control Groups (n = 46)

Group	(I) Time	(J) Time	Mean Difference	*p*-value	95 % CI	
					LL	UL
Control group	Baseline	Week 2	-0.74	.20	-1.72	0.24
		1 month	-1.17	.008	-2.08	-0.26
	Week 2	Baseline	0.74	.20	-0.24	1.72
		1 month	-0.43	.23	-1.03	0.16
	1 month	Baseline	1.17	.008	0.26	2.08
		Week 2	0.43	.23	-0.16	1.03
Experimental group	Baseline	Week 2	-4.27	.000	-5.29	-3.24
		1 month	-5.07	.000	-6.06	-4.07
	Week 2	Baseline	4.27	.000	3.24	5.29
		1 month	-0.80	.004	-1.38	-0.21
	1 month	Baseline	5.06	.000	4.07	6.05
		Week 2	0.80	.004	0.21	1.38

Note. CI = confidence interval, *LL* = lower limit, *UL* = upper limit

Table 6 shows that the participants in the experimental group experienced a higher knowledge score at the week- follow-up than the participants in control group. This mean difference in knowledge between the two groups at week 2 after completion of the program was statistically significant ($t = 9.48$, $p <. 001$). The mean score of knowledge at the 1-month after 1st post-test was significant higher than the baseline one in both groups ($t = 13.43$, $p <. 001$) (Table 7).

Table 7

Comparisons of the Mean Difference of Knowledge at Week-2 after Completion of the Coaching Program and 1-Month Follow- Ups between the Two Groups (N = 91)

Variables	Control Group (n = 46)		Experimental Group (n = 45)		*t*	*p*
	M	SD	M	SD		
Knowledge						
Week 2	9.65	2.48	13.82	1.64	9.48	.000
1 month	10.09	2.08	14.62	.94	13.43	.000

In conclusion, the hypothesis that the experimental group had a higher mean score of knowledge oregarding schizophrenia than those of the control group was supported.

Hypothesis 2. The mean scores of negative attitudes towards schizophrenia of the experimental group is lower than those of the control group. As indicated in Table 7, the experimental group had a lower mean score of attitude than those in the control group. Concerning the mean score of attitude, the statistical analysis demonstrated also that there was a significant overall improvement in attitude between the groups ($F = 13.22$, $p < .001$), and time ($F = 28.80$, $p < .001$) and the interaction between attitude and time was statistically significant ($p < .001$, Table 8).

Table 8

Analysis of Variance for Attitude within the Experimental (n = 45) and Control Groups (n = 46)

Source	Sum of Squares	df	Mean Square	F	η^2	Power
Between-Subject Effects						
Intercept	267011.86	1	267011.86	724.95***	0.89	1.00
Group	4870.49	1	4870.49	13.22***	0.13	0.95
Error	32780.48	89	368.32			
Within-Subject Effects						
Time	5524.49	1.75	3163.88.24	28.80***	0.24	1.00
Time*group	4637.89	1.75	2656.13	24.18***	0.21	1.00
Error(Time)	17070.89	155.40	109.85			

Note. ***$p < .001$

Regarding the pairwise comparisons of negative attitudes in the control group between baseline and week-2, and 1-month follow-ups after receiving the program, the findings revealed no statistically significant difference over time.

In the experimental group, however, the findings showed statistically significant lower mean scores of negative attitudes between the baseline and week 2 ($p < .001$), week 2 and 1 month ($p < .05$), and baseline and 1 month ($p < .001$). This can attest that the experimental group had a higher improvement in attitude at these three times than those in the control group (Table 9).

Table 9

Pairwise Comparison of Attitude at Baseline and Week-2 after Completion of the Coaching Program, and 1-Month Follow-Ups within the Experimental (n = 45) and Control Groups (n = 46)

Group	(I) Time	(J) Time	Mean Difference	*p*-value	95 % CI	
					LL	UL
Control group	Baseline	Week 2	-0.39	1.00	-7.23	6.45
		1 month	1.43	1.00	-3.79	6.66
	Week 2	Baseline	0.39	1.00	-6.45	7.23
		1 month	1.83	1.00	-2.89	6.54
	1 month	Baseline	-1.43	1.00	-6.66	3.79
		Week 2	-1.83	1.00	-6.54	2.89
Experimental group	Baseline	Week 2	16.00	.000	11.87	20.13
		1 month	19.84	.000	14.16	25.53
	Week 2	Baseline	-16.00	.000	20.13	-11.87
		1 month	3.84	.01	0.69	6.99
	1 month	Baseline	-19.84	.000	-25.53	-14.16
		Week 2	-3.84	.01	-6.99	-0.69

Note. CI = confidence interval, *LL* = lower limit, *UL* = upper limit

Table 10 shows that the participants in the experimental group had lower scores of negative attitudes at week two than did those in the control group. The mean difference of negative attitudes at week two was significantly lower between the experimental and control groups (t = -4.67, p <. 001). The mean score of negative attitudes at the 1- month follow-up was significantly lower than at the other two times (t = -6.78, p <. 001).

Table 10

Comparison of the Mean Differences in Attitude at Week-2 after Completion of the Coaching Program and 1-Month Follow-Ups between the Two Groups (N = 91)

Variables	Control Group (n = 46)		Experimental Group (n = 45)		*t*	*p*
	M	SD	M	SD		
Attitude						
Week 2	36.24	14.85	23.00	11.98	-4.67	.000
1 month	34.41	12.40	19.16	8.70	-6.78	.000

To sum up, the hypothesis that the mean scores of negative attitudes of the experimental group is lower than that of the control group was supported.

Hypothesis 3. In terms of skills the experimental group had mean scores that were higher than those of the control group. In relation to the mean skills scores, calculated using the one-way repeated measure of ANOVA, the analysis demonstrated also that there were significant statistical differences between the groups in terms of skills scores ($F = 22.94$, $p < .001$), and time ($F = 17.65$, $p < .001$); moreover, the interaction between skills and time was also found (Table 11).

Table 11

Analysis of Variance for Skills within the Experimental (n = 45) and Control Groups (n = 46)

Source	Sum of Squares	df	Mean Square	F	η^2	Power
Between-Subject Effects						
Intercept	3022606.63	1	3022606.63	7435.95***	0.98	1.00
Group	9325.68	1	9325.68	22.94***	0.20	0.99
Error	36177.24	89	406.48			
Within-Subject Effects						
Time	8218.89	1.87	4386.56	17.65***	0.16	1.00
Time*group	7078.48	1.87	3777.90	15.19***	0.15	0.99
Error(Time)	41454.11	166.75	248.59			

Note. ***$p < .001$

The post-hoc pairwise comparisons of skills in the control group revealed that no significant differences were found between the means for these three times ($p > .05$). However, the experimental group had a significant improvement in caregiving skills from baseline to week 2 ($p < .001$), and baseline and 1-month follow-up ($p < .001$), but an insignificant difference between week-2 and 1-month follow-ups ($p > .05$, Table 12).

Table 12

Pairwise Comparison of Skills at Baseline and Week-2 after Completion of the Coaching Program and 1-Month Follow-Ups within the Experimental (n = 45) and Control Groups (n = 46)

Group	(I) Time	(J) Time	Mean Difference	*p*-value	95 % CI	
					LL	UL
Control group	Baseline	Week 2	1.67	1.00	-8.30	11.65
		1 month	-2.17	1.00	-11.46	7.11
	Week 2	Baseline	-1.67	1.00	-11.65	8.30
		1 month	-3.85	.77	-12.15	4.46
	1 Month	Baseline	2.17	1.00	-7.11	11.46
		Week 2	3.85	.77	-4.46	12.15
Experimental group	Baseline	Week 2	-19.53	.000	-26.77	-12.29
		1 month	-24.16	.000	-30.75	-17.56
	Week 2	Baseline	19.53	.000	12.29	26.77
		1 month	-4.62	.09	-9.76	0.52
	1 Month	Baseline	24.16	.000	17.56	30.75
		Week 2	4.62	.09	-0.52	9.76

Note. CI = confidence interval, *LL* = lower limit, *UL* = upper limit

The *t*-test revealed statistically significant higher mean caregiving skills scores between the two groups at both the week-2 after completion of the coaching program ($t = 5.23$, $p <. 001$) and 1-month ($t = 6.84$, $p <. 001$) follow-ups after 1st post-test (Table 13).

Table 13

Comparison of Mean Differences in Skills at Week-2 after Completion of the Coaching Program and 1-Month Follow-Ups between the Two Groups (N = 91)

Variables	Control Group (n = 46)		Experimental Group (n = 45)		*t*	*p*
	M	SD	M	SD		
Caregiving skills						
Week 2	97.54	20.78	116.18	12.15	5.23	.000
1 month	101.39	17.34	120.67	7.96	6.84	.000

In summary, the hypothesis that the experimental group had higher mean scores of caregiving skills than those of the control group was supported.

Part IV: The Satisfaction of Caregivers with the Coaching Program

The sub-scales of caregiver satisfaction with the coaching program comprised the aspect of its: (1) usefulness, (2) ease of use, and (3) acceptability. The description of caregiver satisfaction with the coaching program is presented in Table 13. The mean total score of satisfaction with the coaching program was 4.25 (*SD* = 0.58). The highest score of the three sub-scales of satisfaction (*M* = 4.41, *SD* = 0.55) was that of acceptability and the lowest one (*M* = 4.14, *SD* = 0.59), that of usefulness. The results showed that the participants had a high level of satisfaction after completing the coaching program intervention.

Table 14

Mean Scores, Standard Deviations, Maximum and Minimum Scores, and Level of Caregiver Satisfaction with the Coaching Program at 2 Weeks after Completion of the Coaching Program (n = 45)

Satisfaction	Mean	SD	Min	Max	Level
Usefulness	4.14	0.59	2.25	5.00	High
Ease of use	4.20	0.60	2.33	5.00	High
Acceptability	4.41	0.55	3.00	5.00	High
Overall satisfaction	4.25	0.58	2.53	5.00	High

Discussion

This research study aimed to test the effectiveness of a coaching program in enhancing the family caregivers' knowledge, attitudes, and skills related to caring for persons with schizophrenia. Its findings will here in be discussed and compared with those of previous studies. The researcher will discuss the results in relation to the study's hypotheses. The coaching program will also be addressed in the discussion part.

Hypothesis 1: The mean scores of knowledge regarding schizophrenia of the coaching group would be higher than those of the routine care group. This study showed that the participants in the coaching group had significantly higher score of knowledge than those of the routine care group (Tables 5-7, Figure 4). The pairwise comparisons showed that the mean scores of knowledge regarding schizophrenia at the week-2 after completion of the coaching program and 1-month follow-ups changed significantly from the baseline in both groups. The family caregivers in the

coaching program group were invited to attend four group sessions and three individual sessions at their home. Knowledge of schizophrenia and how to care were the topics of discussion in this study. The nurse coach explored the participant's current knowledge about schizophrenia and its treatment, medication use and compliance, and the community mental health services available. The nurse coach also provided important information about schizophrenia and its treatment, available community services, and the organization of schizophrenia community care in Indonesia. A DVD and Caregiver's Guide Booklet were given to each caregiver who participated in the coaching program. There is evidence that DVDs and booklets can be used as additional resources in a coaching program (McCusker et al., 2015). The DVD included testimonies from individuals who had experienced the illness as well as medical professional information. In addition, the booklet contained information for caregivers who provide emotional support to patients, and included a list of resources for caregivers who need support themselves (McCusker et al., 2015; Piamjariyakul et al., 2013).

Furthermore, in this study, a case scenario about schizophrenia and symptoms of schizophrenia checklist were also given to each caregiver. The coach asked them to fill out it. These strategies allowed the nurse coach to validate the caregiver's knowledge about the nature of schizophrenia (Piamjariyakul et al., 2015).

However, we observed, from the baseline a slightly significant score increase in the 1-month follow up after the 1st post-test in knowledge was seen in the routine care group. This knowledge score increase might have been due to several factors. First, the mental health nurse provided routine care for the caregivers in the control group. It consisted of providing a brief family education about relapse

prevention, regular every two week or monthly check-ups, promotion of self-care for daily living, and a medication program. The psychiatric nurses explained the side effects of the medications to each caregiver. They also encouraged the caregivers to consult the psychiatrist if the side effects of the medication were intolerable. Second, the psychiatrist informed each caregiver and the sick family member about the illness and its medication therapy. The routine care facilitated by psychiatric nurses involved both social skill intervention and biological treatment - both would improve the participants' schizophrenia knowledge level. Consistent with the findings of this study, literature review indicates that these interventions could also help the caregiver better understand the nature of schizophrenia, recognize early symptoms of relapse and how to manage schizophrenic symptoms, and prevent the relapse rate as well (Amelia & Anwar, 2013).

In the current study, there was an improvement in knowledge among caregivers after entering the coaching program, which employed the video-watching and home-visit strategies. Consistent with the findings of this study, previous research indicates that participation in a coaching program consisting of video watching and conducting home visits can improve the knowledge of caregivers caring for a relative (Friedman, Woods and Salisburry, 2012). Indeed, such coaching programs can also lead to a significant improvement in the knowledge of ways to help the relative with learning at home (Young, 2007).

In conclusion, watching video, providing a caregiver guide booklet which includes of case scenario, medication form, and symptoms checklist and home visits as well were helpful in improving caregivers' knowledge regarding schizophrenia.

Hypothesis 2: The mean scores of negative attitudes of the experimental group would be lower when compared to the control group. The participants in the experimental group had significantly lower scores of negative attitudes at the three times of measurement (Tables 8-10, Figure 5) compared with those in the control group. This might be a result of the effect of the different type of intervention after a period of time. The primary caregivers in the experimental group received the coaching program integrated with the routine care, while, those in the control group received the routine care only. As a result, in this study, a significantly lower score of negative attitudes was seen at the week-2 after completion of the coaching program and 1-month follows-ups after 1st post-test. The outcomes of this study indicated that the family coaching program had an affirmative impact in improving the attitudes of the caregivers towards schizophrenia. Similarly, in a previous study, a family coaching program for parents of children with learning difficulty demonstrated positive effects at 6 months after the completion of the program. A child care book and telephone calls were the strategies used by the coach to led parents to spend more time helping their child learn at home, change the way to help their child succeed in school, and increase the parent-child interaction (Young, 2007).

The results of this study highlight the positive effect of the coaching program at hand on attitude among caregivers of persons with schizophrenia. This concurs with other studies' findings (Cortell, Wagner, Jobes, & Goeke-Morey, 2009). It is stated in the literature that positive emotions were associated with decreased child aggressive behavior.

To sum up, this study supports the view that a caregiver guide book and telephone calls were the appropriate strategies that had positive effect on the coaching program of family caregivers' attitudes.

Hypothesis 3: The mean scores of skills of the coaching group would be significantly higher than those of the routine care group. This study's findings indicated that the caregivers in the experimental group had significantly higher skills scores at both the week-2 after completion of the program and 1-month follow-ups after 1st post-test compared to the baseline than did caregivers in the control group. Nevertheless, the mean scores of skills of the same group between the week-2 after completion of the program and 1-month follow-ups after 1st post-test had similarities. Conversely, the mean scores of caregiving skills at the week-2 and 1-month follow-ups among caregivers in the experimental and control groups were statistically significant different (Tables 11-13, Figure 6). With practice, skills become integrated and implemented with ease in caring for family members (Farran et al., 2011). Thus our results clearly indicate better outcomes on caregiving skills in the coached group. These results were in line with those of a previous RCT study involving coaching parents on parenting skill acquisition. Shanley and Niec (2010) reported that the positive parenting skills of caregivers who underwent the coaching program increased significantly compared to those who did not. Moreover, there was a significant difference in positive parenting skills between the coached group and the control one. The results showed that the effect of coaching could be a crucial factor in changing the behavior of caregivers and a predictor of skill development beyond the influence of caregivers at the initial skill level.

Furthermore, a coaching program could increase perceived social support and reduced both stress and negative coping response on parents as the primary caregivers. This condition helps parents respond more positively to their children with learning diasabilities (Danino & Shechtman, 2012). In addition, coaching has been a method used by caregivers to provide instruction for sick members with schizophrenia. A study conducted by Tungpunkom (2000) showed that the caregivers used coaching as a method to help their sick members in performing daily activities such as eating and bathing, particularly when the sick members did not pay attention to their personal care.

The coaching intervention program could be a supportive tool for families and children by assisting them in performing their tasks, being on time, scheduling their time, enhancing their skills, and strengthening their motivation. For example, Sleeper-Triplett (2008) reported that a coach working with parents of children in pre-teen years or directly with adolescent clients can lead to an improvement in the lives of the families, improve success in school, and equip them to be prepared for adult life. Graham, Rodger, and Ziviani (2013) found that the improvement of the children's and mothers' performance and the mothers' competency can be achieved via a coaching intervention.

This study's findings were also consistent with those of a previous investigation that followed a one-group time-series design for a coaching program among caregivers. Those results affirmed that the effectiveness of coaching in improving the caregivers and sick family members' occupational performance, and the caregivers' parenting self-competence. These improvements were sustainable and could be generalized to other areas of performance (Graham et al., 2013).

Coaching is an interrelated procedure that involves observing and reflecting methods in which the coach could use to enhance the learner's ability to support the sick members in terms of "being and doing". Coaching is applicable to both health and educational affairs where people seek to make use of new ideas and skills or modify their reaction to life situation (Gale, 2007). Coaching has also been shown to provide support, enhance self-assessment and learning, and develop new skills. It can also help caregivers become active participants in providing care for their family member (Rush et al., 2003; Webb & Jaffe, 2006).

In this study, the control group, receiving only routine care, showed no significant change over time compared to the baseline. This may owe to the fact that the routine mental health services in Indonesia psychiatric hospitals are not provided in a comprehensive and systematic manner that relates to the caregivers' needs. It was observed that the psychiatric nurses also never educated caregivers on how to help the sick relative to manage their schizophrenic symptoms or solve their problems regarding schizophrenia care. The most important reason for this was the lack time on the part of most psychiatric nurses in the outpatient department to educate caregivers concerning managing the symptoms of schizophrenia.

Moreover, the findings of the study also revealed that providing information, training, role plays, and observation were the effective strategies that have positive impacts for improvement caregivers' skills. Consistent with the findings from previous study on coaching program (Chaiwongnakphun, Butpunya, Duendao, & Munmor, 2012), coaching program with several implementation strategies, such as providing information, training, role plays, and observation could gain quality of caregivers' skills in providing care for patients with head injury.

Generally, in the present study, the coaching program for family caregivers of persons with schizophrenia demonstrated positive effects on caregivers' knowledge, attitude, and caregiving skills at weeks 2 after the completion of the coaching program. A further follow-up of the caregivers was conducted at 1 month to see if these effects are were sustained. These positive changes were reatined at a slight rate at the 1- month follow-up after 1st post-test, and were more significant than for the control group (routine care).

Collaborative relationship is the essence of a coaching program. It is focused and uses conversation to help caregivers achieve their goals in caring performance (Williamson, 2009). In this study, the participants in the experimental group received both individualized and group approach. Group sessions were conducted at weeks one, two, three, and seven, whereas, individual sessions at weeks four, five, and six. The nurse coach used conversation to build collaborative relationship in both individual and group approaches. To facilitate these coaching conversation, the nurse coach used various skills such as listening, questioning, assertiviness, information giving, problem solving, decision making, observation, analysis, facilitation, and summarization skills.

Previous research supports these approaches with caregivers. During the group sessions, they met other caregivers with similar experiences. This allowed participants to compare their experiences and difficulties regarding care with others. The most important factor here might have been the interpersonal interaction within the group, which provided space and time to share ways of support of sick family members (Danino & Shechtman, 2012; Friedman, Woods, & Salisbury, 2012; Moore, Barton, & Chironis, 2015).

Moreover, the present study employed the individual coaching approach when conducting home visits. It could be help the coach to observe the implementation of the agreed plans and the accomplishment of activities related to care, and also collect the evidence on the caregivers performance regarding care. Friedmann et al. (2012) has presented similar findings. They reported that because of the individual approach to coaching, the coach during these session was able to spend most of the time either talking with the caregiver personally or observing the caregiver and sick member interact and/or the caregiver's level of newly-acquired knowledge or capacitiy for reaching their goals.

The coaching program at hands was modified based on Kolb's cycle of experiential learning theory and the coaching process developed by Thorpe & Clifford (2003). In order to implement a coaching program intervention, there are several skills that the researcher as a coach must possess. A good coach must have the skills of active listening, good communication, good planning, situation analysis, asking good questions, being assertive, able to facilitate the performance of other coaches, able to build a therapeutic relationship, able to observe the other coaches' performance, able to provide conflict management, and evaluate objectives and the overall performance from the beginning until the end of the coaching program (Aviram et all., 1998; Boyle, 2004; Drea, 2007; Kennedy, 2009; Marriot, 2006; Thorpe & Clifford, 2003; Williamson, 2009).

The coaching program used in this study involved six steps: making clear coaching needs and goals, approving specific developmental needs, creating a comprehensive plan for coaching, performing a task or activity, evaluating activities and scheduling in order to improve performance, and ending the coaching

relationship. The participants were assisted by the researcher throughout the six steps of the coaching program in order to enhance their knowledge, skills and improve their attitude as well.

1. Clarifying coaching needs and goals was the first step of the coaching program process. In this step, the researcher as the coach and caregivers established the real need for coaching and discussed in detail the overall objectives of the coaching process. The objectives needed be real and important for the coaches (Boyle, 2004). In this step, most of the participants identified several needs regarding care including the need of information about medications and the sick relative condition, symptom management, finances/health insurance, and other physical needs. Concerning psychotic symptoms, the caregivers identified this as the most important one of all. This was because the patient's positive symptoms (e.g., hallucination, delusion, and aggressive behavior) were ongoing and risked relapse. The findings regarding this step were similar with those of a study conducted by Dewi, Elvira, and Budiman (2013), which emphasized that the needs of caregivers were more numerous than the schizophrenic person's needs. Moreover, the caregivers who participated in and received the coaching program came from various ethnics groups in the North Sumatera Province. They were Batak, Melayu, Java, Minang, Tionghoa, and Aceh ethnics. Therefore, in order to identify the needs of caregivers the researcher had consider the aspects of the culture, values and beliefs of the caregiver (Bora et al., 2010; Herzog & Shoemaker, 2010). At this stage, the researcher employee the questioning, listening, assertiveness, interpreting information, and summarizing skills with caregivers to clarify the coaching needs and goals.

2. Agreeing on specific development needs was the second step of the coaching program. The main activities of the researcher here were identifying the needs of caregivers, their current level of knowledge and skills, and feelings about their caregiving experiences. The researcher also assisted the caregivers to set up specific objectives regarding their needs by using 'SMART' objectives (Thorpe & Clifford, 2003). The researcher watched a video with the participants about schizophrenia and the important aspects of family support for people with schizophrenia, while employing the discussion, questioning, active listening, and information giving skills. The use of video has been noted as a way to facilitate the relationship between researcher and participants (Stefen & Gant, 2015).

3. Formulating a detailed plan for coaching was the main action of the researcher as a coach after the discussion with the caregivers. In order to formulate an action plan, the coach discussed with caregivers by asking them to identify important knowledge and skills needed for the improvement of the caregivers' performance in caring for persons with schizophrenia. As a consequence, both the researcher and coaches needed to prepare themselves in order to be able formulate an appropriate and effective plan before the coaching program began. This involved: reviewing the overall objectives, formulating a detail plan, writing down outcomes, identifying and prioritizing actions, arranging time, places, money and materials, and evaluation. The researcher provided case scenarios to be discussed in order to enhance their understanding about schizophrenia. In this step, the researcher also trained the caregivers on how to care for their sick family members, manage the symptoms of schizophrenia, and monitors the patient in terms of medication therapy management, communication, financial management, seeking help and identifying family resources,

problem solving, and managing patient behavior. The researcher also encouraged the caregivers to fill out the form of schizophrenia case scenario. They were also asked to analyse the case scenario. Then the researcher assessed the caregivers' confidence in implementing plans and achieving goals using a confidence level from 0 (not confident at all) to 10 (totally confident). During this step, the researcher used the planning, decision making, problem solving, listening, questioning, prioritizing, and summarizing skills.

4. Performing a task or activity was the fourth step of the coaching program. This step concerned the implementation of plans previously approved by both the researcher and caregiver. These involved three main categories of action: 1) applying and practicing the task or activity that the caregiver identified for improvement; 2) collecting data and evidence about how well the caregiver performed during a particular practice; and 3) considering doing a simulation or demonstration activity related to the real life situation based on previous experience. In this step, the researcher observed the caregiver's performance, tried to understand and listened carefully to any explanation by the caregiver and determined what the caregiver had learned from the coaching sessions. The researcher also evaluated the symptoms of schizophrenia checklist and the medication record form. In this step, the researcher utilized the observation, active listening, questioning, and summarizing skills.

5. Reviewing activities and planning to improve performance entailed with the caregivers going over what had been done and discussing the caregivers' experiences and how they could build upon them in order to improve their performance the next time the task was carried out. The main activities of the coach here were reviewing all the coaching activities during the previous two weeks.

During this week, the researcher used phone-calls to monitor the participants' self-practice at home. Follow-up sessions, both over the phone and face to face were also important methods for achieving the outcomes. The researcher evaluated the implementation of action plans, progress toward objectives, and performance by a phone call follow-up at weeks five and six and a face-to-face follow-up at the seventh week. Then the researcher discussed any difficulties in implementing the plans during the fifth and sixth weeks and helped in finding alternative strategies to solve the difficulties related to the performance of new skills. Previous studies have shown that using telephoning and face-to-face meetings in the coaching program intervention leads to significant improvements in the family caregivers' and patients' outcomes as well (Dwinger et al., 2013; Garbut et al., 2015; Hayes et al., 2008). The use of the telephoning strategy had many benefits. First, the calls were realistic for the caregivers who lacked resources. Second, the phone calls offered privacy which may facilitate the sharing of detailed information and make the caregivers comfortable in revealing and discussing values, approach, and concern. Interacting with caregivers while they feel at ease in their home may also develop their ability to share their feelings and way of life regarding the sick family member's illness. In addition, the use phone calls in the coaching program may also be less costly in some settings depending on reimbursement and time constrains. During this session, the researcher used the active listening, questioning, facilitation, presenting ideas, preparing and analyzed plans and summarizing skills via phone calls.

6. Ending the coaching relationship was the sixth step of the coaching program in this study. The researcher considered the cultural aspects of the caregivers when terminating the coaching relationship. The objectives of the coaching program

were considered achieved when the caregivers felt confident, knowledgeable, and satisfactorily skilled in their ability to care for their sick family member (Rush et al., 2003). However, the researcher helped the caregiver who still did not feel confident enough to provide effective care by encouraging the sharing of experiences with other caregivers. It was expected that sharing experience regarding care could help overcome the problems faced by caregivers. During this step, the coach emphasized the sustainability of the relationship with the caregivers until the end of the program. It was crucial aspect of the coaching program to point out the end of coaching and interaction with the caregivers (Thorpe & Clifford, 2003).

The Satisfaction of Caregivers with the Coaching Program

The satisfaction of caregivers with the coaching program was rated at two weeks after the program was completed. It was measured by means of self-reporting through a questionnaire.

The resulting scores revealed that the participants in the experimental group had a high level of satisfaction after completing the coaching program intervention. The findings of this study showed a high level sub scale of satisfaction in terms of acceptability, ease of use, and usefulness at 2 weeks after the completion of the coaching program intervention. The total mean scores of caregiver satisfaction were of a high level. Most participants reported that the coaching program's guidelines, action plans, and booklet were easy to use and helped them solve their problems regarding care. Besides, over a half of the participants agreed that the telephone calls from the researcher helped them and increased their confidence level in offering care.

Findings from previous research also support the fact that satisfaction with the coaching program is associated with the strategy used in the program. Coaching programs using telephone calls have been reported to improve the health status of participants and help patients manage their chronic conditions (Adams et al., 2013; Ovbiosa-Akinbosoye & Long, 2012). Another study has pointed out the caregiver satisfaction with the occupational performance of a coaching program. The participants in that study were also satisfied with their child's performance on the goals addressed during the occupational coaching performance session in the intervention phase (Graham et al., 2013). McCusker et al. (2015) also found that participants who received a toolkit and a coaching program were highly satisfied with the intervention.

Besides being satisfied with the program, most participants considered the program interesting and useful. This indicates that the coaching program was successful. The findings of this study also revealed that the coaching intervention program was effective in improving the knowledge, attitude, and skills among caregivers regarding caring of persons with schizophrenia. This is strong evidence for the use of a coaching program as an effective nursing intervention for caregivers of persons with schizophrenia.

Summary

Based on the results of this study, it can be asserted that the caregivers who participated in the coaching program had higher knowledge scores over time than those who were did not. They also experienced fewer negative emotions or attitudes over time. The post-hoc comparisons using the Bonferroni *t* test showed higher

knowledge and lower negative attitudes scores in the experimental group. In relation to the knowledge of participants an interaction between the groups by time, and an interaction between attitudes and time was found. In addition, the experimental group's mean caregiving skills scores increased significantly from the baseline at both the week-2 after completion of the coaching program, 1-month follow- ups, but not any meaningful way between the week-2 after completion of the coaching program and 1-month follow-ups. This result clarified that the outcome regarding the caregiving skills was stable one month later after the intervention. The participants in this study also exhibited high levels of satisfaction with the coaching program.

To sum up, a coaching program could be an effective nursing intervention in enhancing knowledge, attitudes and skills among caregivers of persons with schizophrenia. It can be implemented successfully among caregivers of persons with schizophrenia either in the community or psychiatric hospital setting.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

This chapter discusses the conclusions of the study's findings as well as its strengths, limitations and recommendations for further research.

Conclusions of the Study

This randomized controlled trial aimed to examine the effectiveness of a coaching program in enhancing family caregivers' knowledge, attitudes and skills involved in caring for persons with schizophrenia. It also compared the family caregivers' knowledge, attitudes, and skills between the experimental and control groups before entering the coaching program and at the week-2 and 1-month follow-ups.

The intervention was conducted during a seven-month period, from October, 2014 to May, 2015. The primary caregivers of persons with schizophrenia were matched using a minimization random program to control potential confounding variables such as age, gender, education level, and duration of caregiving. One hundred participants agreed to and enrolled in this study. The final number of participants for analysis was 91.

Four instruments were employed in the process of data collection: (1) the Knowledge About Schizophrenia Test (Haladyna, 1999) modified by Compton, Quintero, and Esterberg (2007), (2) the Family Attitude Scale (Kavanagh et al., 1997), (3) the Chiang Mai Psychiatric Caregiving Skills Scale (Tungpunkom et al., 2000), and (4) the Caregiver Satisfaction Scale (Bakas et al., 2009).

Data from the baseline and week-2 and 1-month follow-ups were analyzed using descriptive statistics, chi-square test, independent *t*-test, mann-whitney *U* test, and one-way repeated measures ANOVA

The conclusions of the main hypotheses are as follows:

1. The mean scores of knowledge regarding schizophrenia of the experimental group were statistically higher than those of the control group ($p < .001$). This supported the corresponding hypothesis.

2: The mean scores regarding negative attitudes of the experimental group were lower than those of the control group ($p < .001$). This also supported the corresponding hypothesis.

3: The mean scores of skills of the experimental group had higher scores from those of the control group ($p < .001$).

In addition, a high satisfaction rate with the coaching program in the coaching group was observed.

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Recommendations of the study

The results of this study would be beneficial for nursing in the fields of practice, education, and management. Those benefits are as follows:

Nursing practice

This study provides evidence that a coaching program is a kind of nursing intervention that can enhance the caregivers' knowledge of schizophrenia, attitudes towards the disease and its treatment and caregiving skills. The program consisted of clear intervention guidelines and methods to be applied by psychiatric nurses who have specialized in the field of mental health nursing to assist family

caregivers in providing effective care for their loved ones. However, a psychiatric nurse must take a coaching course to get certificate as nurse coach. The psychiatric nurse can use this coaching program either in both the hospital and community settings. Using a coaching program intervention, the psychiatric nurses and caregivers can jointly develop an appropriate plan of care to increase the caregivers' ability to manage the symptoms of schizophrenia. In working with caregivers over time, the use of a coaching program intervention can yield positive outcomes regarding the caregivers' knowledge, attitudes, and skills in providing care for a sick family member. The use of the coaching method integrated with phone calls also helps the caregivers improve the sick relative's adherence to the medical treatment. In addition, in order to provide a coaching program intervention, the psychiatric nurse must have an understanding of the caregiver's ethnic and cultural background. This is because both caregivers and their sick family members who present to the outpatient department of a hospital or community health center are from various ethnic backgrounds.

Nursing education

The coaching program is a new type of intervention in the psychiatric nurses setting, particularly in Indonesia. The purpose of a coaching program is to enhance individual performance in terms of knowledge, attitudes, skills, and problem solving. Therefore, the coaching program as a form of intervention should be introduced into curricula for Bachelor's degree. The coaching program that should be taught for bachelor degree including the conceptual basis of coaching program, the important of coaching program for family caregivers in caring performance, coaching

process and coaching skills. However, it must be more in-depth into psychiatry nursing curricula for Master's degree in the field of psychiatric nursing specialty.

Nursing management

Since the introduction of the new mental health policy in psychiatric hospital setting by the Ministry of Health in the Republic of Indonesia, each psychiatric hospital must now have a mental health nursing clinic. Therefore, the recruitment of psychiatric nurses who are experts in interventions related to giving care to schizophrenia persons is recommended. Administrators should provide more training concerning this form of intervention to all nurses in psychiatric hospitals. This would enable them to be more skilled providing professional care for both family caregivers and their sick relatives. .

Furthermore, this approach improves the quality of care for schizophrenia patients cared for by their family members in a home setting by strengthening the knowledge and skills of caregivers through a professional nursing intervention. Professional nursing interventions should focus on transmitting knowledge related to health education and training. Coaching can be implemented as a strategy to support the application of teaching or caregiving practices. Therefore, the coaching program as an approach to improving the quality of schizophrenic persons care and education avails itself in improving the sick family members' treatment outcomes. However, to be a good coach, psychiatric nurses need to take coaching course before using coaching program intervention.

Additionally, nursing management should also consider the coaching program as an important tool/form of intervention program in the mental health

nursing practice. Thus, using the coaching program approach is in line with achieving the vision of an Indonesia free from “pasung”.

Strengths and Limitations

Strengths

Firstly, the theoretical framework of this study was based on the experiential cycle of the learning theory, the coaching process concept, and relevant to literature regarding care for both caregivers and persons with schizophrenia. The integration of the experiential learning theory into a coaching process enabled the researcher to support, encourage, and help the participants become experts in the future. Integrating the experiential learning theory with coaching program, made it possible for the participants to share and learn experiences regarding care from each other which aided them in achieving their objectives. Moreover, the researcher as a coach was able to identify the needs of the participants and help them to set up specific objectives, develop action plans together, and offer training with respect to new skills regarding schizophrenia care.

Secondly, the study was a randomized controlled trial with repeated measures at the baseline and week-2 after completion of the coaching program and 1-month follow-ups post intervention. This is a powerful design for testing the hypotheses of a cause-effect relationship.

Thirdly, the intervention consisted of both the individual and group coaching approaches. In this study, both individual and group coaching fit with the characteristics of the participants. During group coaching, the participants shared and learned from each other’s experiences related to caring for their sick loved ones with

schizophrenia. Whereas, an individual approach offer privacy that may facilitate the sharing in-depth information and made caregivers' comfort in discussing any barriers in implementing the action plans.

Fourthly, the experimental design followed a minimization random protocol, which controlled extraneous variables and minimized threats to both internal and external validity. This is important for the reliability of the findings.

Limitations

The present program was designed for primary caregivers who lived with and cared for a sick family member for at least 1 year, and had access to a telephone. Therefore, it would have limited application for caregivers who live with and cared for more than one ill relative at home. Also, this program may not be applicable to caregivers who have cared for a sick relative for less than one year and do not have access to a telephone.

Lastly, this study cannot offer any insight on the long-term effectiveness of this program as the follow up period was only 1 month long. The efficacy of a long-term coaching program intervention should be studied further.

Implication for Future Research

Firstly, future studies are needed to measure the caregiver skills utilizing a fit instrument that truly measures the skills level of caregivers of persons with schizophrenia in the home setting. This way, the caregiver need not spend time to fill out questionnaires.

Secondly, since this study used repeated measures only at the baseline and the week-2 after completion of the coaching program, and 1-month follow-ups,

future research with a longer follow-up is necessary to determine the sustainability of the outcomes of this study. Besides, effective strategies and good ideas and adaptation for changing are keys in the coaching process. As nurse coach, we must identify the needs of caregivers in caring performance. Therefore, psychiatric nurse coach is needed to conduct the coaching booster to enhance caregivers' knowledge, attitudes, and skills and maintain the sustainability of caring performance as well. According to Ronen-Harel and Woinowski (2015), the caregivers need to understand what needs to be changed and they also need to learn how to maintain their positive attitudes toward schizophrenia.

Studies employing large sample sizes and in different settings e.g. the community health centers are also highly recommended.

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APPENDICES

APPENDIX A
Informed Consent Form

My name is Jenny Marlindawani Purba. I am a Doctor of Philosophy student at the Faculty of Nursing, Prince of Songkla University, Hat Yai Thailand. I am also a lecturer at the Faculty of Nursing, University of Sumatera Utara, Medan Indonesia. I am conducting a research study on the effectiveness of coaching program for enhancing family caregivers' knowledge, attitudes, and skills in caring for persons with schizophrenia.

The objective of the study is to examine the effectiveness of coaching program in enhancing family caregivers' knowledge, attitudes, and skills in caring for persons with schizophrenia. This study will be conducted within seven weeks and the findings of this study are expected to enhance the family caregivers' knowledge, attitudes, and skills in providing care for the sick family member with schizophrenia.

You have the rights to participate voluntarily and you can withdraw from this study without any consequence. If you agree to participate in this study, please kindly sign this informed consent form. There is no known risk or harm for participating in this study. Nevertheless, this program will make require you to spend time with us. I will also explain the benefits and confidentiality, and the following procedures of the study:

A. The beneficence and confidentiality

This study will help the family caregivers to enhance their performance in caring for persons with schizophrenia. The findings of this study will strengthen the evidence based nursing for mental health nurses in the application of an effective

nursing care for family caregivers and for the patients. The findings of this study would provide information for further research in the related phenomena.

The researcher will keep the confidentiality and anonymity of the data. Neither your name nor any identifying information will be used in the report. The data can be only assessed by the researcher, advisors, and research committee at PSU Hat Yai, Thailand.

B. Procedures of the study

You will be assigned either in the experimental or the control group. In the experimental group, you will be trained about coaching program and required to perform the implementation of the program. You also will be required to follow the coaching program procedure and activities subsequently. The rules of the coaching program will be explained in the first meeting of the program and you are asked to abide it. On the other hand, at the same time, if you are assigned in the control group, you will only receive the routine care from psychiatric nurses at the hospital. Then, if you are interested, there will be a chance for you to join the coaching program at the end of this study.

C. Evaluation

You will be asked to complete the Demographic Data Form, the Knowledge About Schizophrenia Test, the Family Attitude Scale, and the Chiang Mai Psychiatric Caregiving Skills Scale at the baseline. For the experimental group, there is one additional questionnaire must be completed at the week 2 after intervention. At the 1 month follow up, both experimental and control groups will be asked to complete the Knowledge About Schizophrenia Test, the Family Attitude Scale, and

the Chiang Mai Psychiatric Caregiving Skills Scale. This evaluation activity will spend time around 20 - 30 minutes.

If you have any question, please do not hesitate to contact me by phone +6281376112528 or the research assistance. Thank you for your participation in this research study.

The participant	The researcher
(Your signature)	(Jenny Marlindawani Purba)

APPENDIX B

Part I. Demographic Data Questionnaire (DDQ)

Code : ----------
Date : ----------

Instruction: Below is the form to obtain information about your current demographic data and health-related information

I. Demographic Data

1. Age : …… years
2. Gender : ☐ 1. Male ☐ 2. Female
3. Ethnicity : ☐ 1. Bataknese ☐ 2. Melayunese ☐ 3. Minangnese
   ☐ 4. Javanese ☐ 5. Acehnese ☐ 6. Others, please specify ...
5. Religion : ☐ 1. Islam ☐ 2. Christian
   ☐ 3. Buddhist ☐ 4. Others, please identify ….
6. Educational level: ☐ 1. Elementary school. ☐ 4. Diploma
   ☐ 2. Junior high school. ☐ 5. Bachelor
   ☐ 3. High school ☐ 6. Master
   ☐ 7. Others, please specify …
7. Relationship with to ill relative: ☐ 1. Spouse
   ☐ 2. Parent (Mother / Father)
   ☐ 3. Sibling (sister/brother)
   ☐ 4. Grand parent
   ☐ 5. Others (relatives), please specify …
8. Monthly household income (IDR) :
   ☐ 1. < Rp. 1.400.000,00
   ☐ 2. Rp. 1.400.000,00 – Rp.2.000.000,00
   ☐ 3. >Rp. 2.000.000,00

9. Occupation : ☐ 1. Government-sector employee ☐ 4. Farmer
☐ 2. Private-sector employee ☐ 5. Entrepreneur
☐ 3. House wife ☐ 6. Others, please specify ...

10. Number of family members living with the patient at home: …… persons

11. Length of caring time …… years

12. Patient's age: …….

13. Duration of illness: …….. years

14. Number of hospitalizations: …… times

15. Type of medication ……..……...

16. Patient's mental health condition over the past 3 months:

☐ 1. Improved

☐ 2. Stable/staying the same

☐ 3. Worsened/unstable

Part II. Knowledge About Schizophrenia Test (KAST)

Code : ----------

Date : ----------

Instruction: Please fill the statement by marking (x) next to the choice of answer which indicates the true answer.

1. Schizophrenia is most likely caused by:
   A. Brain problem
   B. Drug use
   C. Evil spirits
   D. Pollution
   E. Stress

2. A common symptom of schizophrenia is:
   A. Being overly happy and having extra energy
   B. Overeating and weight gain
   C. Sudden anxiety attacks
   D. Thinking that others are watching or following
   E. Violence, theft, or physical attacks toward others

3. The best person to decide if someone has schizophrenia is a(n):
   A. Emergency room doctor
   B. Family member
   C. Preacher or Minister
   D. Psychiatrist
   E. School teacher

4. With treatment, the most common long-term outcome for schizophrenia is:
   A. Complete cure
   B. Dementia
   C. Mild to moderate mental retardation
   D. Relief of symptoms, with possibility of relapse
   E. Severe mental deterioration

5. Medicines that are used for hearing voices are called:
   A. Antibiotics
   B. Anti-depressants
   C. Anti-psychotics
   D. Sedatives
   E. Tranquilizers

6. The best place to get information about schizophrenia is from:
   A. Books or websites
   B. Friends
   C. Neighbors
   D. Newspapers
   E. Preachers or ministers

7. To help deal with stress, most patients with schizophrenia benefit from:
   A. Alcohol use
   B. Counseling or psychotherapy
   C. Cutting back on social activities
   D. Pain-relief medications
   E. Physical therapy

8. The cause of schizophrenia is most likely related to:
   A. Biology
   B. Environment
   C. Family
   D. Personality
   E. Society

9. A person strongly believes that a policeman has put a computer chip in his/her body. This symptom is called a:
   A. Daydream
   B. Delusion
   C. Hallucination
   D. Phobia
   E. Worry

10. A doctor usually makes a diagnosis of schizophrenia by a(n):
   A. Blood test
   B. CAT scan
   C. Interview
   D. Reading test
   E. Urine test

11. Most people who have schizophrenia need to be in some sort of treatment for:
   A. Days
   B. Weeks
   C. Months
   D. Years
   E. Not at all

12. The best treatment for the symptoms of schizophrenia is:
   A. Medicine
   B. Operation
   C. Relaxation
   D. Strict diet
   E. Vitamins

13. People with schizophrenia benefit most from:
   A. Being put into a hospital for years
   B. Having fun or exercising
   C. Strict schedules with full-time employment
   D. Support from family/friends and low stress
   E. Vitamins, minerals, or herbs

14. A 19-year-old begins to hear voices and act paranoid several months after graduating from high school. Her mother said that his grandfather also suffered from mental illness. The most likely cause of his symptoms is:
   A. Drinking alcohol
   B. Genetic tendency toward developing an illness
   C. Graduating high school
   D. Personality weakness
   E. Puberty and adolescence

15. The symptoms of schizophrenia usually begin in which stage of life?
    A. As a baby
    B. Elementary school years
    C. Late teen-age years or young adulthood
    D. 40–50 years old
    E. 60–70 years old

16. Which of the following is one of the new "atypical" medicines for schizophrenia?
    A. Chlorpromazine (Thorazine)
    B. Haloperidol (Haldol)
    C. Fluphenazine (Prolixin)
    D. Trifluoperazine (Stelazine)
    E. Clozaril (Clozapinl)

17. Which group is the best source of information and support for family members of people with schizophrenia?
    A**.** Indonesia Psychiatrist Association (PDSKJI)
    B. Indonesian Mental Health Nursing Association (IPKJI)
    C. Schizophrenia Community Care of Indonesian (KPSI)
    D. Indonesian Doctors Association (IDI)
    E. Indonesian Clinical Psychology Association (IPK)

18. After hospitalization, a patient with schizophrenia would benefit most from:
    A. Constant observation by family
    B. Eating more meats and breads
    C. Follow-up with a preacher or minister
    D. Follow-up with an outpatient psychiatrist
    E. Getting a full-time job and staying busy

Part III. The Family Attitude Scale (FAS)

Code : ----------

Date : ----------

Instruction: This assessment contains a number of statements about your opinion and feeling related to how often each statement is true at the moment. Please circling the numbers below:

Note

- Never: if you feel the statement is not true at the moment
- Very rarely: if you feel the statement is very rarely true at the moment
- Some days: if you feel the statement is true at the moment on some days
- Most days: if you feel the statement is true at the moment on most days
- Every day: if you feel the statement is true at the moment every day

No	Items	Never	Very rarely	Some days	Most days	Every day
1	It is good to have his/her around	0	1	2	3	4
2	She/he makes me feel drained	0	1	2	3	4
3	She/he ignores my advice	0	1	2	3	4
4	She/he is really hard to take	0	1	2	3	4
5	I shout at her/him	0	1	2	3	4
6	I wish she/he were not here	0	1	2	3	4
7	I feel that she/he is driving me crazy	0	1	2	3	4
8	I lose my temper with her/him	0	1	2	3	4
9	She/he is easy to get along with	0	1	2	3	4
10	I am sick of having to look after her/him	0	1	2	3	4
11	She/he deliberately causes me problems	0	1	2	3	4

The Family Attitude Scale (cont.)

No	Items	Never	Very rarely	Some day	Most day	Every day
12	I enjoy being with her/him	0	1	2	3	4
13	She/he is a real burden	0	1	2	3	4
14	I argue with her/him	0	1	2	3	4
15	I feel very close to her/him	0	1	2	3	4
16	I can cope with her/him	0	1	2	3	4
17	Living with her/him is too much for me	0	1	2	3	4
18	She/he is infuriating	0	1	2	3	4
19	I find myself saying nasty or sarcastic things to her/him	0	1	2	3	4
20	She/he appreciates what I do for him/her	0	1	2	3	4
21	I feel that she/he is becoming easier to live with	0	1	2	3	4
22	I wish she/he would leave me alone	0	1	2	3	4
23	She/he takes me for granted	0	1	2	3	4
24	She/he can control himself	0	1	2	3	4
25	She/he is hard to get close to	0	1	2	3	4
26	I feel that she/he is becoming harder to live with	0	1	2	3	4
27	I feel very frustrated with her/him	0	1	2	3	4
28	She/he makes a lot of sense	0	1	2	3	4
29	I feel disappointed with her/him	0	1	2	3	4
30	She/he tries to get along with me	0	1	2	3	4

Part IV. The Chiang Mai Psychiatric Caregiving Skills Scale (CPCSS).

Code : ----------

Date : ----------

Instruction

This evaluation tool of the psychiatric patient's caregiver at home composes of 50 items. This tool asks you as the caregiver who is caring for the patient at home. Please read each item carefully and answer the actual choice that you use when are caring for the patients. The answer is no right or wrong and has no negative effect on you.

Thank you for your corporation.

1. You can assess the symptoms situation before the patient shows aggressive behavior.

_____ I can't assess. _____ I can assess sometimes.
_____ I can assess every time _____ The patient does not have aggressive behavior.

2. You know the symptoms that indicate that the patient should be taken to the hospital.

_____ I don't know. _____ I know but I am not sure that correct.
_____ I know and can advice to other.

3. You know how to evaluate patient's thoughts to suicide, and you closely monitor.

_____ I don't know how to evaluate. _____ I know but I am not sure if I am correct
_____ I know and evaluate every time _____ The patient does not have this condition.

4. You check if the patient's medication is enough until his/her next appointment.

_____ No _____ Sometimes
_____ Every time _____ The patient does it unsupervised.

5. You check if the patient is taking medication after meals as per doctor's orders.

_____ No _____ Sometimes
_____ Every time _____ The patient does it unsupervised.

6. You can assess the patient's condition and adjust medicine accordingly.

_____ I do not know how to assess. _____ I am not sure if I am correct.
_____I can assess and do every time.

7. If the patient cannot take care themselves, you take care of the patient and make sure they eat 3 meals a day.

_____ No, I don't know how to
_____ I do all the time.
_____ I do sometimes.
_____The patient can take care of themselves.

8. If the patient cannot care themselves, you remind them about daily activities such as taking a bath, and brushing teeth.

_____ No, I let the patients follow their usual habits
_____ I am not sure how to remind the patient
_____ I remind the patient every time
_____ The patient is able to care for themselves.

9. When the patient has symptoms, you help them in daily activities such as taking a bath, and brushing teeth.

_____ No, I let the patients follow their usual habits.
_____ I do sometime but do not know how to approach the patient.
_____ I do all the time.
_____ The patient is able to care for themselves.

10. If the patient cannot take care of themselves, you remind the patient to change their clothes when you see it appropriate.

_____ No, I let the patient's follow their usual habits.
_____ Sometimes when I see it's very dirty.
_____ I often remind them.
_____ The patient is able to take care themselves.

11. You remind the patient to wash their clothes when it's time to do so.

_____ No, I let the patient's follow their usual habits.
_____ I am not sure how to remind them.
_____ I remind the patient all the time.
_____ The patient is able to take care of themselves.

12. You teach the patient for take care of their personal hygiene and dressing.

_____ No, I let the patients follow their usual habits.
_____ I am not sure how to teach them.
_____ I teach the patient all the time.
_____ The patient is able to take care of themselves without teaching.

13. You remind the patient to sleep at least 6 to 8 hours every night

_____ No, I let the patients follow their usual habits.
_____ I am not sure how to remind them.
_____ I remind the patient all the time.
_____ The patient is able to sleep.

14. You support/encourage the patient to exercise regularly?
    _____ No, I let the patients follow their usual habits.
    _____ I support/encourage sometime.
    _____ I often support/encourage sometime.
    _____ The patient exercise regularly.

15. You support the patient in recreational time or hobbies for example watching TV, listening to music, or reading.
    _____ No, I let the patients follow their usual habits.
    _____ Sometimes
    _____ All the time
    _____ The patient is able to self-care themselves.

16. You let the patient take their medication while you supervise.
    _____ I never supervise. _____ I supervise sometimes.
    _____ I supervise every time. _____ The patient is able to self-care themselves.

17. You remind the patient to take medication right dose and time as doctor's order.
    _____ I never remind them. _____ I remind them sometimes.
    _____ I remind them every time. _____ The patient is able to self-care themselves for medication.

18. You explain the patient why taking medication is important.
    _____ I don't know how to explain.
    _____ I tell the patient that it will help with a quick recovery.
    _____ I describe the action of drugs and the importance of taking the drug.
    _____ The patient perceive the importance of medication and can take medication by themselves.

19. You encourage the patient to socialize to prevent their isolation.
    _____ No, I let the patients follow their usual habits.
    _____ Sometimes.
    _____ I always try to find opportunities for the patient to meet others.
    _____The patient has friends and does not isolate themselves.

20. You advise the patient to greet others appropriately.
    _____-___ No, I let the patients follow their usual habits.
    _____-___ I advise sometimes but not sure that is right or wrong.
    _____ I advise every time.
    _____ The patient can greet others well.

21. You explain the reason to do an activity and that you want to motivate the patient.
    _____ I never give the reason.
    _____ I am not sure that the reason is right.
    _____ I tell them the reason every time.
    _____ The patient has motivation and can do activities by themselves.

22. When the patient becomes suicidal, you encourage and help them change their thoughts and advise them on the value of life.
    _____ I don't know how to talk about that.
    _____ I comfort but I don't know how to persuade.
    _____ I persuade them to think and conform.
    _____ The patient has no suicidal behaviors.

23. You let the patient help with your housework that helps them feel useful.
    _____ No.
    _____ They help sometimes unless they don't want to.
    _____ I let them help regularly and give reason.
    _____ The patient has a regular job or hobby already.

24. You encourage the patient by consoling and pointing out their good qualities to give them courage and help them feel proud of themselves.
    _____ No
    _____ I encourage sometimes but not sure if its right.
    _____ I encourage them regularly.

25. You listen to the patient's feelings and thoughts but tell them the reality of the situation when they have delusions / hallucinations.
    _____ I ignore them
    _____ I try to stop and explain to them that they are hallucinating
    _____ I accept and tell them what's the reality.
    _____ The patient does not have delusions / hallucinations.

26. You teach or train patients to do activities of which he has no experience such as working in the garden or in the house.
    _____ I do not know how to teach.
    _____ I teach only when the patient cooperate.
    _____ I am always teaching and complimenting or giving award whenever possible.
    _____. The patient has his own work or hobby.

27. You teach patients to express themselves when others mock.
    _____ I do not know how to teach
    _____ I teach Sometimes
    _____ I teach every time when others mocked.
    _____ The patient has never been mocked by others.

28. You teach social etiquette to the patient such as greeting others, saying thank you and apologizing.
    _____ I do not know how to teach.
    _____ Not sure but teach sometimes.
    _____ Teaching every time when go out social.
    _____ The patient can do by herself without teaching.

29. You teach the patient to control the psychotic symptom such as paranoid, hallucination
    _____ I do not know how to teach.
    _____ I teach sometimes
    _____ I teach regularly
    _____ The patient has no symptoms

30. When the patient is irritable and aggressive, you evaluate the risk.
    _____ You have assessed when the patient is irritable, or aggressive.
    _____ You can assess sometime, sometimes you fight with the patient verbally/physically.
    _____You always avoid the situation to be safe.
    _____ The patient is never irritable, or aggressive

31. You negotiate with the patient when you want the patient behave appropriately.
    _____ I never negotiate; I do not know how to talk.
    _____ I negotiated unsuccessfully
    _____ I do that every time.
    _____ The patient has appropriate behavior.

32. You always compliment or give award whenever the patient present appropriate behavior.
    _____ Never
    _____ Sometime
    _____ Always

33. Whenever the patient shows inappropriate behavior to others you apologize and explain the patient's symptom.
    _____ I do nothing
    _____ I apologize to others but do not know how to explain.
    _____ Apologize and explain to others so they can understand the situation.
    _____ I never have this situation.

34. You protect the rights of patients.
    _____ Never
    _____ Sometime, but I am not sure of the rights of the patient.
    _____ Always, and I teach the rights of the patient to him.
    _____ There is no situation that involve the rights of the patient.

35. When patients stop taking medication without consulting a doctor.
    _____ I allow the patient
    _____ I place the medication in the food or drink because the patient must comply with the prescription.
    _____ I negotiate and explain the importance of medication to the patient before consulting a doctor.
    _____ This situation never happens.

36. You have reduced or added medication according the patient's symptoms without consulting a doctor.
    _____ Never
    _____ Sometime
    _____ Always

37. You tell the patient to stop taking the medication when you see that the patient has healed.
    _____ Never
    _____ Sometime
    _____ Always when I see that the patient has healed, and start medication again when the patient has symptoms.

38. When you find a patient's condition changes that may result from the side effects of the drug, you tell the patient to stop taking it and go to hospital.
    _____ Never
    _____ I persuade the patient to continues medication until the follow up date.
    _____ I explain the cause and encourage the patient before taking him to the hospital.
    _____ This situation never happens.

39. You provide an opportunity for the patient to participate in family activities such as the New Year' festival.
    _____ Never
    _____ Only occasionally
    _____ Every time to facilitate the patient's participation but under supervision.
    _____ The family never has family activities.

40. You provide an opportunity for patients to participate in community events such as weddings or New Year's Eve.
    _____ Never, I am afraid to ruin the atmosphere
    _____ Only occasionally
    _____ Every time to facilitate the patient's participation but under supervision

41. You try to control the patient to meet up with friends, limit the use of money and monitor visually to prevent the patient's access to drugs or alcohol.
    _____ Never
    _____ I give permission to drink on some occasion
    _____ I ask cooperation from friend to explain the disadvantages to the patient.

42. Your keep a safe home and environment by keeping potentially harmful objects in a safe place (weapons, pesticides and rope).
    _____ Never.
    _____ I collect these items only during the patient's symptoms
    _____ All the time (prevention is better than fix it later).

43. You can seek help from the village / community, such as the village headman, policeman, and rescue services to assist in patient care when needed, such as aggressive behavior.
    _____ Never, I am ashamed.
    _____ I need to ask but do not know how to do.
    _____ I ask for help every time in this situation.
    _____ This situation never happens.

44. You know the location of mental health services in order to help or ask for services.
    _____ I do not know.
    _____ I know some places.
    _____ I know more than 2 places.

45. You are familiar with social support in order to seek help when necessary, such social workers and lawyers.
    _____ I do not know.
    _____ I know some places.
    _____ I know more than 2 places.

46. You take the patient for treatment in another place for confidentiality.
    _____ No, I explain to others and they can accept.
    _____ No, but I tell others that the symptoms are physical.
    _____ Yes, I do not want people in the community know that I have a sick family member with a psychological disorder.

47. You teach the patients to tell others about their disease for acceptance.
    _____ I do not know how to teach.
    _____ I teach telling the truth regardless of the reactions.
    _____ I teach the patient to explain the symptoms instead of the disease.

48. You know what to tell others about the illness of a relative.
    _____ I do not know.
    _____ I am not sure
    _____ I know and explain without shame and it makes it more acceptable for the patient.

49. You know how to protect yourself when the patient is aggressive.
    _____ I do not know
    _____ I do know and have been abused.
    _____ I know and have never been abused.
    _____ The patient is never aggressive.

50. You know how to control or limit the patient in order to prevent self-harm and harming others.
    _____ I do not know.
    _____ I am not sure.
    _____ I know and can do it well
    _____ The patient's does not harm themselves and others.

The Caregiver Satisfaction Scale (CSS)

Code : ----------

Date : ----------

Instruction: This assessment contains a number of statements about your opinion and feeling after completing the coaching program. I need your feedback about my program as a whole. Please tell me how much you agree or disagree with the following statements by circling the numbers below:

Note

- Strongly disagree: if you feel the program you received was poor
- Disagree: if you feel the program you received was fair
- Neither agree nor disagree: if you feel the program you received was good
- Agree: if you feel the program you received was very good
- Strongly agree: if you feel the program you received was excellent

No	Items	Strongly disagree	disagree	Neither agree nor disagree	Agree	Strongly agree
1	The (coaching program guideline, action plan, and booklet) addressed the problems I was having as a caregiver	1	2	3	4	5
2	The (coaching program guideline, action plan, and booklet) worked well for me	1	2	3	4	5
3	The nurse addressed things I wanted to know	1	2	3	4	5
4	The calls from the nurse helped me	1	2	3	4	5
5	The (coaching program guideline, action plan, and booklet) were ease to use	1	2	3	4	5
6	I plan to use the (coaching program guideline, action plan and booklet) as a reference for the future	1	2	3	4	5
7	The calls from the nurse were convenient	1	2	3	4	5

The Caregiver Satisfaction Scale (Cont.)

No	Items	Strongly disagree	disagree	Neither agree nor disagree	Agree	Strongly agree
8	I liked the (coaching program guideline, action plan, and booklet)	1	2	3	4	5
9	I liked getting calls from the nurse	1	2	3	4	5

APPENDIX C

Coaching Program for Family Caregivers of Persons with Schizophrenia Guideline

Step	Time	Objectives	Method	Media	Duration	Content	Activities	
							Caregiver	**Coach**
1 **Setting:** Discussion room psychiatric hospital **Group activity:** 5-6 participants	Week 1	- **Clarifying coaching needs and goals** • To Establish relationship between the coach, research assistants and caregivers • To understand the goal of the program • To identify a real need for coaching	Discussion Information giving	Pen Paper	15 minutes	- Trust relationship - Introduction of the coaching program: • Definition of the coaching program • Objectives of the coaching program • The process of coaching program	- Establishing a trusting relationship with other caregivers, the coach and the research assistants: • Acquainted with each other by asking the name, address and relationship with ill relative and write it on a paper that has been given • List the name, address, and relationship with the ill relative in the paper is given	- Establishing a trusting relationship: • Greetings • Introduce the researcher and the research assistant to family caregiver • Provide the game "build relationships "to create a more intimate atmosphere (the coach will give a sheet of paper that contains 3 questions, i.e., names, address, and relationship with others. • Ask the caregiver to get acquainted with other participants by asking his/her name, address, and their relationship with ill relative. • Ask the caregiver to write down the name, address, and relationship with the ill relative of each participant on the paper that has been given.

Step	Time	Objective	Method	Media	Duration	Content	Activities	
							Caregiver	**Coach**
							• Mention the name, address, and relationship with ill relative of each participant without seeing the introductory paper ➢ Family caregivers expressed a readiness and commitment to attend the coaching program intervention from beginning until the end (fill inform consent form) ➢ The caregiver set the time/schedule for coaching program session	• Ask the caregiver to mention again the name, address, and relationship with ill relative of each participant without seeing the introductory paper. • Ask the caregiver to express his/ her feeling after they know each other ❖ Please tell me how you feel - Briefly introduce the coaching program: definition of coaching program, the objective of coaching program, and the process of coaching program - Ask the caregivers' readiness to participate in the coaching program: • Are you ready and committed to attend this activity from beginning until the end? What do you think? - Make an agreement for available time (schedule) of family caregivers to conduct the program • How should our time be organized?

Step	Time	Objectives	Method	Media	Duration	Content	Activities	
							Caregiver	**Coach**
		• To develop the goal of coaching program			45 minutes	➢ The real need for coaching ➢ The developed goals of the coaching program	- Explain what he/she wants from the coaching program - Explain the reason why he/she thinks the coaching program can help them provide good care for ill relative and decide to attend the coaching program intervention - Share his/her ideas for coaching program - Discuss with the coach to develop their own objective of the coaching program - List the objectives of the coaching program - Explain what they have learned from this step	➢ Ask the caregiver their real needs in this activity: • What do you want from this program? • What do you need most from me during our coaching? - What is it that made you decide that a using a coaching program can help you with your need/wants? - Ask the caregivers to share any ideas for coaching: • Do you have any ideas that you wants to share in this activity? - Assist the caregivers to develop their own objective of the coaching program: • What do you want to achieve from the coaching program? • What are you expecting from the coaching? - Provide the caregiver' guide booklet to each caregiver and remind them to read carefully at home. The caregivers are asked to bring this book in the next session.

Step	Time	Objective	Method	Media	Duration	Content	Activities	
							Caregiver	**Coach**
								- Summary of session 1 Skills required: questioning, listening, interpreting information, assertiveness, and summarizing skills.
2 **Setting:** Discussion room psychiatric hospital **Group activity:** 5-6 participants	Week 1	➢ **Agreeing to specific development needs** • To identify the caregivers' needs for caring • To learn about schizophrenia from video	Discussion Watching videos Discussion	No media is required Computer, projector	15 minutes 15 Minutes	- The needs of caregivers ➢ Watching videos on schizophrenia and the importance of family support	➢ Reflect their important needs in caring for ill relative - Watching videos about schizophrenia and the importance of family support - Explain what they have learned from video • Share their understanding about schizophrenia, signs and symptoms, medication, early signs and symptoms of relapse by their words ➢ Caregivers promise to watch the video again at home and learn more about schizophrenia from video	- Ask the needs of caregivers in caring for ill relatives • How do you really want us to help you in providing care for your ill relative • What are the most important things related to your caregiving that I can do to help you? - Show a video about schizophrenia and the importance of family support - Review the caregivers understanding about schizophrenia after watching videos • What have you learned after watching the video? • What does schizophrenia mean to you? • What kind of symptoms was he/she showing that let them to diagnose

Step	Time	Objective	Method	Media	Duration	Content	Activities	
							Caregiver	**Coach**
		• To identify the caregivers' existing knowledge related to schizophrenia			15 minutes	- The caregivers' existing knowledge related to schizophrenia		schizophrenia? • What medication was used in treatment of schizophrenia? • How to recognize and respond to worsening signs and symptoms - Provide a DVD related to schizophrenia to each caregiver as a guideline for them to understand more about schizophrenia and the importance of family support for the recovery of their ill relatives. - Remind caregiver to keep and learn about schizophrenia and the importance of family support by watching videos at home
		- To identify the caregivers' existing attitudes towards ill relative			10 minutes	➢ Caregiver attitudes towards ill relative	- Explain he/she attitudes towards ill relative behavior	➢ Ask the caregivers to explain their attitudes towards ill relative" • What is your respond when your ill relative show bizarre behavior such as talking to him/her self, laughed, suspicious of others, and get angry for no reason.

Step	Time	Objective	Method	Media	Duration	Content	Activities	
							Caregiver	**Coach**
		- To identify the caregivers' existing skills in providing care for ill relative	Discussion	No media is required	15 minutes		• He/she will report what they did to cope with the problems of ill relative's behavior - Share his/her existing skills to others and coaches • Each caregiver perform one skill they may have	• What do you do when that happens? • Can you remember one or two specific time(s) when you felt like you have suddenly found a new way to handle a problem with your relative? Tell me what happened? What did you do? • What did you do when your ill relative stop taking medication? • Is there anything else I should know? - Ask caregivers' existing skills: • What skills do you use to take care of him/her at home? Does it work? • Can you show me what you did when an ill family member said that he heard voices, angry for unclear reason or suspicious of others?
		- To help caregivers identify which resources to access or seek professional help	Discussion Information giving	Pen Paper	5 minutes	- Information about professional help and caregiver' organization in Indonesia	➢ Recognize the resources to access or seek professional help such as going see the psychiatrist regularly at psychiatric hospital or discuss with community mental health nurse in community health center	➢ Ask caregiver the resources for seeing professional help and caregiver's organization? • Do you know the professional help and caregiver' organization in Indonesia?

Step	Time	Objective	Method	Media	Duration	Content	Activities	
							Caregiver	**Coach**
		➢ Briefly discuss the self-help group for caregiver website					➢ List caregiver' organization in Indonesia such as self-help group that can find on the website www.peduliskizofrenia.org	• The coach will introduce the resources and explore information regarding professional help and caregiver organizations • The coach recommend each caregiver to join a caregiver organization
						➢ Financial issue	➢ Discuss financial issues and how to get health insurance from Government	- What resources do you have to address the financial issue? • Provide information about Indonesia Government Program associated with health insurance for lay persons such as people with schizophrenia
		➢ To identify the new knowledge, attitude and skills the caregivers want to improve	Pen Paper		15 minutes	➢ The new knowledge, attitude and skills for improving caregivers performance care	- He/she list the new knowledge, attitude and skills that they wants to improve from coaching program intervention - Review step 2 by their own words	- Ask the caregivers what he/she wants to improve or develop related to the knowledge, attitude and skills in this activity: • What kind of knowledge, attitude and skills you want to improve and develop? .

Step	Time	Objective	Method	Media	Duration	Content	Activities	
							Caregiver	**Coach**
2	Week 2	• To set up the objectives of coaching program	Discussion	Pen paper	15 minutes	Specific objectives related to caregiver's needs by using 'SMART' objectives	• List the detail objectives of the coaching program related to his/her needs in the given paper	- Ask the caregiver to set up specific objectives that relates to their needs. • What are your objectives to achieve your needs in caring for ill relative? You can write in the paper "having completed this coaching program you will be able to …". You can start each objective with this statement and focus on the specific behavior that you will demonstrate as a result of the coaching. • Why is this goal important to you? • What will happen when you get your goal? - Remind the caregiver to bring the paper that contains their specific goals in the next session - Summary of session 2 Skills required: analytical, information giving, questioning, listening, and summarizing skills.

Step	Time	Objective	Method	Media	Duration	Content	Activities	
							Caregiver	**Coach**
3 **Setting:** Meeting room University of Sari Mutiara Indonesia **Group activity:** 5-6 participants	Week 3	- **Formulating a detailed plan** • To develop an action plan • To learn to use a checklist log for monitoring the ill relative's symptoms • To develop new skill for caring	Discussion Training Role-plays Demonstration Observation	Pen Action plan form Caregiver' Guide Booklet	15 minutes	- Action steps - Resources required - Indicators of success - The time available for implementing the plans	- List the goal related to their needs and his/her plans to take care of the ill relatives in the given action plan form - Setting up a plan of care for ill relative with schizophrenia - Write the resources that he/she will use to reach the goals - Write the indicators of success in the action plan form - Set the timelines to implement the planning ➢ Practice how to use checklist to record daily monitoring of activity, medication usage, worsening schizophrenia sign/symptoms (e.g., aggressive behavior, hallucinations, delusions)	➢ Provide an action plan form to each caregiver ➢ Ask the caregiver to write down his/her goals related to their needs in the given action plan form ➢ Ask the caregiver to write down her/his action plan in the given action plan form • What do you plan to do to accomplish this goal? • What else do you want to improve or develop? • Which knowledge and attitude do you want to improve during this week • What new skills do you want to develop? ➢ Ask caregiver to write the resources that they will use to reach the goals ➢ Ask caregiver indicators of success in implementing the plans - Ask caregivers commitment to follow the goals • How committed are you to follow through on that goal?

Step	Time	Objective	Method	Media	Duration	Content	Activities	
							Caregiver	**Coach**
				Medication record form Symptoms of schizophrenia checklist				• What could you do to become more committed? ➢ Ask caregivers to set the timeline • When will you do that? ➢ Ask the caregivers to share their goals and action plans with each others ➢ Instruct the caregivers on how to use checklist/log to record daily monitoring of activity such as medication usage, worsening schizophrenia sign/symptoms (e.g., aggressive behavior, hallucinations, delusions)
						New skills for caring	- Listen carefully to the coach's instruction - Write the new skills related to their needs in providing care for ill relative	- Give a brief lecture about important skills for caring: ❖ Problem solving skill ❖ Managing hallucinations skill ❖ Managing delusions skill ❖ Managing aggressive behavior skill ❖ Communication skill ❖ Medication adherence skill

Step	Time	Objective	Method	Media	Duration	Content	Activities	
							Caregiver	**Coach**
				Scenario			- Demonstrate how to solve the problems - Demonstrate how to help the ill relative to manage hallucinations symptoms - Demonstrate how to help the ill relative to manage delusions symptoms - Demonstrate how to help the ill relative to manage aggressive behavior - Demonstrate how to help the ill relative to adherence to medication - Demonstrate how to communicate with the ill relative - Answer the coaches questions - Re-demonstrating the skills are newly trained	- Ask the caregiver to demonstrate the skill needed to be improve through role-play on the given scenario - Look for the gap/weak point of each caregiver when they demonstrate. ➢ Provide more suggestions on that gap and give feedback • What would you like to achieve from demonstrating these skills? • What did you notice about your performance regarding demonstrating these skills? • If you could do it again, what would you do differently? • What will you do in the next steps? • Give reinforcement for caregivers' action in the demonstration of these skills ➢ Ask the caregiver to re-demonstrate.

Step	Time	Objective	Method	Media	Duration	Content	Activities	
							Caregiver	**Coach**
					15 minutes	➢ Training how to solve the problem		The techniques are as follows: **Problem solving:** • Discuss with the ill relative a problem that create conflict • Avoid conflictual communication during problem solving discussion, such as angry criticism of the other, uncooperativeness, withdrawal, and off-task behavior, are associated with an increase in positive symptoms • Use relaxation techniques (breathing in, breathing out) • Try to think of more things when feeling hopeless (Chien& Lee, 2010; Gerkensmeyer et al., 2013; O'Brien et al., 2009)
					15 minutes	➢ Training how to manage hallucination symptoms		**Managing hallucinations symptoms:** • Encourage ill relative to share experiences related to hallucination symptoms. • Teach and encourage ill relative to say stop and ignore the voices • Encourage the ill relative to talk to others while hearing voices

Step	Time	Objective	Method	Media	Duration	Content	Activities	
							Caregiver	**Coach**
					15 minutes	➢ Training on how to manage delusion symptoms		• Speak with ill relative while he/she is hearing voices • Encourage ill relative to record their hallucination symptoms daily at home by using schizophrenia symptoms checklist • Monitor ill relative in taking medication • Remind the ill relative time for follow-up to see the psychiatrist • Encourage the ill relative to seek help from psychiatrics or community mental health nurse if hallucinations can't be controlled at home (Cole, 2012; Kanungpairn et al., 2006; Tsai & Chen, 2006). **Managing delusion symptoms:** ➢ Encourage the caregiver to use Guided-Self Determination: Share decision making and problem solving) to help ill relative manage the delusion symptoms.

Step	Time	Objective	Method	Media	Duration	Content	Activities	
							Caregiver	**Coach**
								The Guided-Self determination can help the ill relative change his delusional thinking ❖ Help the ill relative to list their problems currently worked on ❖ Help the ill relative to identify the important events and periods in their life ❖ Help the ill relative to find difficulty living with delusion symptoms ❖ Encourage the ill relative to identify the ways of living ❖ Help the ill relative to develop plans for changing their way of life ❖ Encourage the ill relative to share their reality living with delusion symptoms ❖ Help the ill relative to identify what they did to solve the problem (Jorgense, Hansson, & Zoffmann, 2012).

Step	Time	Objective	Method	Media	Duration	Content	Activities	
							Caregiver	**Coach**
					15 minutes	➢ Training how to manage aggressive behavior		**Managing aggressive behavior:** ❖ Physically: use relaxation technique (breathing-in, breathing-out) and hit a pillow or mattress ❖ Verbal: express feeling that she/he was annoyed with others ❖ Social: refuse correctly, ask properly, and expressing feelings correctly. ❖ Spirituality: encourage ill relative to run to the religious practices in accordance with the ill relative religions such as reading religious writings (e.g., Bible, Torah, Qur'an), listening to religious music, prayer/shalat, zikir, and meditation ❖ Encourage the ill relative to select the way to express the feeling of anger. ❖ Encourage the ill relative to take medication regularly and continuously (Cole, 2012; Gearing et al., 2011; Keliat, 2006)

Step	Time	Objective	Method	Media	Duration	Content	Activities	
							Caregiver	**Coach**
					15 minutes	➢ Training how to administer medication adherence		**Administer medication adherence:** • Remind the ill relative to take medication regularly and continuously as prescribed. • Discuss with the ill relative about the important of taking medication in managing symptoms and preventing relapse • Explain to the ill relative the kind of medication (drug name, color, form of the drug), dose, time, how to use the drug, and side effects that will be felt by the ill relative • Provide information on how the side effects of medication can be reduced by eating candy or ice or taking medication as prescribed • Monitor the ill relatives to medication as prescribed • Explain to ill relative the medication dosage should not be reduce or stopped without a psychiatrist's permission (Amelia & Anwar, 2013; Cole, 2012).

Step	Time	Objective	Method	Media	Duration	Content	Activities	
							Caregiver	Coach
					15 minutes	➢ Training how to communicate with ill relative (strategies for communicating with ill relative)		**Communication:** • Display of affection such as smiling, positive eye contact, mutual laughter, or hugging • Be positive listener: ❖ Listening emphatically ❖ Making efforts to elicit the others' point of view ❖ Nodding head ❖ Asking follow-up questions to gather other's perspective • Be positive speaker: ❖ Agreeing ❖ Proposing compromises ❖ Bringing up concerns in a neutral manner ❖ Making positive remarks about the other person's behavior ❖ Clarifying one's own point of view ❖ Expressing oneself clearly when asked to do by the other ❖ Offering remarks that moves the conversation forward in a constructive direction (Tanriverdi & Ekinci, 2012; O'Brien et al., 2009; Wuryaningsih, Hamid, Helena, 2013)

Step	Time	Objective	Method	Media	Duration	Content	Activities	
							Caregiver	**Coach**
				Pen Confident level form	15 minutes		➢ The caregiver will report their confidence after they develop an action plan for enhancing knowledge, attitude and skills	- What kind of change, if any, do you want to make this next week? - Asses the caregiver's confidence in implementing goal and action plan which can be measured on a scale ranging from 0 (totally not confident) to 10 (totally confident). If score is less than 7, it is needed to discuss problem solving to make the plans more realistic and easy to achieve it. - Ask the caregivers easier questions of the beginning of this session in the action plan form. - Ask the caregiver the needed skills they want to improve • What do you want to revise/rewrite the needed skills you want to improve? ➢ Motivate and remind the caregiver to implement their agreed action plans at home - Summary of session 3. Skills required: planning, decision making, problem solving, listening, questioning, prioritizing, and summarizing skills

Step	Time	Objective	Method	Media	Duration	Content	Activities	
							Caregiver	**Coach**
4 **Setting:** Caregiver' home **Individual activity**	Week 4	➢ **Performing activities:** • To implement the agreed plans • To accomplish the tasks or activities regarding care	Discussion Demonstration Observation	Pen Action plan form Caregiver' Guide Booklet Medication record form Symptoms of schizophrenia checklist	Depend on caregiver goals in the planned activities	- Implementation the agreed plans	- Discuss the priority activities that he/she did to meet their goals - Explain their new attitude toward ill relative - Demonstrate the skills that have been trained according his/ her needs in providing care for ill relative - The caregiver will record their activities in the action plan form - Express his/her feeling after implementing agreement plans - Make appointment with coaches for telephone coaching on caring performance in the next step	- Briefly review topics in the previous step - What did you do as the first step towards meeting your goal? - What would you do to help ill relative to manage the symptoms of schizophrenia • How many minutes do you think you could successfully complete in a week - Ask the caregiver to demonstrate the skills that have been trained related to their needs - Ask the caregiver to identify problems in applying the plans that have been developed • Please tell me what problems you faced in implementing the plans • What is your decision to overcome the problems? • What did you do to solve the problems? Did it work?

Step	Time	Objective	Method	Media	Duration	Content	Activities	
							Caregiver	Coach
								➢ Ask the caregiver to evaluate themselves on what is right and what still needs to be improved → if caregivers are not aware, the coach will provide feedback and a more precise example - Give reinforcement to caregiver' performance regarding care that have been done properly - Make appointment with coaches for telephone coaching on caring performance in the next step - Summary of session 4. Skills required: observation, questioning, listening, and summarizing skills

Step	Time	Objective	Method	Media	Duration	Content	Activities	
							Caregiver	**Coach**
4 **Setting:** Caregiver' home **Individual activity**	Week 5	➢ **Performing a task or activity:** - To collect the evidence of how the caregivers have done caring performance	Self practice Discussion and supporting by phone calls	Telephone calls	Depend on caregivers' need	- Implementation an agreement plans	- The caregiver will reflect his/her performance regarding their new knowledge, attitude and skills during two weeks through the goals setting and action plan form - Listening carefully and answer the coach's questions by telephone calls ➢ Caregivers will do several things they are taught initially at the meeting room and read Caregiver' Guide Booklet at home - The caregiver will record their activities in the record form - Set the time for next step by telephone calls	- Ask the caregiver to reflect his/her performance regarding their new knowledge, attitude and skills during the two weeks through the goals setting and action plan form - Asking the questions: ♦ The goals • Did you apply the plans that we develop together in the previous time? • Please tell me whether you can achieve your goals by using these plans? • Give reinforcement to caregiver' achievement ♦ The action plan • Could you tell me your progress during last week regarding your new knowledge, attitude and skills in providing care for your ill relative • Did the action plans work to achieve your goals (to enhance knowledge, attitude and skills)? • What problems have you experienced since you use the plans?

Step	Time	Objective	Method	Media	Duration	Content	Activities	
							Caregiver	Coach
								• What did you do to solve the problems? Did it work? - Ask for the times that caregiver need to re-run the plans - Provide feedback • What have you learned here today, can you take it forwards? • So, what have you learned from this session? - Make appointment for next step by telephone call - What time are you available for the next step? Skills required: questioning, listening, and summarizing skills

Step	Time	Objective	Method	Media	Duration	Content	Activities	
							Caregiver	**Coach**
5 **Setting:** Caregiver' home **Individual activity**	Week 6	- **Reviewing activities and planning to improve performance** • To evaluate caregiver strengths and areas for development • To revise the action plans to achieve their goals	Self practice Discussion and supporting by telephone calls	Telephone calls	Depend on caregivers' need	- Review caregiver' progress ➢ Caregivers' strength to perform new knowledge, attitude and skills ➢ Revise or continue action plans	➢ Share the goal and plan that he/she has completed ➢ Report his/her strengths after perform new knowledge, attitude and skills for ill relative ➢ Caregiver phone to consult the coach any time whenever they have any problems - Caregivers will continue the plan that they already demonstrated and practiced during the initial training session (step 2) - He/she sets a plan on how they will perform the activities differently to achieve their goals ➢ Report his/her confidence in caring for ill relatives and enjoy living with schizophrenia	- Ask the caregivers progress in achieving goals and implementing their plans • What has worked so far, and what has not? - Ask the caregivers whether he/she accomplished the goal and action plan • How you attempting to accomplish your goals and agreement plan? Did it happen? - What did you learn from that? - Ask the caregiver's strengths after implementing the plans • What are your strengths after applying the new knowledge, attitude and skills to care for the ill relative • How do you feel about your progress? • What was helpful? What was not helpful? • How would you rate your progress? • Why the new knowledge, attitude and skills are so important for you? • What benefits do you personally get from those exercise

Step	Time	Objective	Method	Media	Duration	Content	Activities	
							Caregiver	**Coach**
							➢ Summary of all activities they performed in this step to the coach	- Encourage the caregivers to talk about the difficulties to perform new attitude and skills • Did you find difficulty to perform new attitude and skills in caring for ill relative? • What do you think is hindering you most? Why? • Are able to solve it? • What did you do to solve the problems? Does it work? ➢ If the same difficulty came up again, what would you do? ➢ If the caregivers cannot accomplish the goal and action plan or fail to achieve the goal, discuss with them to identify caregiver barriers such as: • Communication when the ill relative get angry, boredom • Non-compliant taking medication • Fear of schizophrenia behavior • The ill relative couldn't perform personal activity without caregivers' monitoring - How would you know if the improvement is successful or if you reached your goals?

Step	Time	Objective	Method	Media	Duration	Content	Activities	
							Caregiver	**Coach**
								• Ask the caregivers whether he/she revised or not continue it. • Do you need to modify on the plans to enhance your knowledge, attitude and skills for caring? What do you think? • What else do you need more in order to reach your goal? ➢ Make positive comments about caregivers' goals completion and provide encouragement on difficult task • Congratulation on your progress this week ➢ Summary session 5 • What have you learned here today, can you take it forwards? • So, what have you taken from this session? Skills required: facilitating, listening, questioning, presenting idea, preparing and analyzing plans, and summarizing skills.

Step	Time	Objective	Method	Media	Duration	Content	Activities	
							Caregiver	**Coach**
6 **Setting:** Discussion room psychiatric hospital **Group activity:** 5-6 participants	Week 7	➢ **Terminating the coaching program** • To evaluate overall accomplishment of the coaching program • To prepare caregivers to continue self-development plans	Discussion	Pen Paper	30 minutes	➢ Evaluation of objectives of the coaching program ➢ Evaluation of overall performance regarding care	➢ Caregivers report successes and accomplishments of objectives of the coaching program and overall caring performance that has been done ➢ He/she lists successes and accomplishments of objectives of the coaching program and overall caring performance that has been done	➢ Evaluate objectives and overall performance of the coaching program, • What are your accomplishments? • What are you most proud of? What was your overall impression of your coaching experience? • What lessons can you draw from this coaching program? • What is your overall learning experience? • How can you apply the information that you got from this activity? For example, what one thing do you currently do that will be influenced by what you have learned? ➢ What was the most helpful thing that the coach did during the coaching process?

Step	Time	Objective	Method	Media	Duration	Content	Activities	
							Caregiver	**Coach**
					30 minutes		➢ Caregivers reflect on their feeling after accomplishing the coaching program session such as helping ill relative to perform his/her daily activities, taking medication as prescribed, .managing the symptoms, coping with the problems, and participating in the community's activities.	➢ What do you consider the most significant thing that occurred during the coaching experience that led to changes in how you did or in your attitude? • How did the change occur ➢ What did you do to contribute to this change? ➢ Encourage the caregivers to continue teach and educate the ill relative • What will you do in the next future? ➢ Encourage the caregivers to continue the plans ➢ Encourage the caregiver to contact the coach by using telephone anytime if they wants to discuss about caring performance for ill relative ➢ Terminate the coaching relationship ➢ Summary of the coaching program: Skills required: listening, questioning, assertiveness and summarizing skills

APPENDIX D

Action Plan for Enhancing Family Caregivers' Knowledge, Atittude, and Caregiving Skills

Action Plan Form

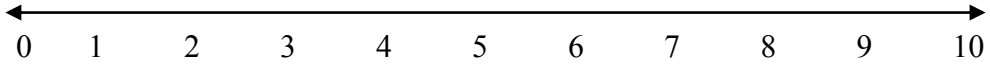
Goal:			
Action Steps	**Resources**	**Timelines**	**Indicators of Success**

Please circle or check (√) the response that most closely similar how you feel about making changes or improvements to your caregiving.

My readiness for improving is:

☐ Now ☐ Within 2 weeks ☐ Next month ☐ In 3 months

Confidence level (0-10)



Not at all confident Very confident

My priority for making improvement is:

☐ Highest priority ☐ Priority ☐ Medium priority

☐ Very low priority ☐ Never a priority

Possible barriers to perform action plans:

…….....

Possible problem solving

…….....

Scenario

Mrs. R is a 33-year-old married homemaker, and mother of two children, ages seven and four. She was brought to the psychiatric hospital for the second time by her family. This was because for about 3 months she has been behaving strange. She accused her mother of poisoning her food, spending all her money, telling bad stories about her to neighbors. Her mother noticed that Mrs. R sometimes suddenly gets angry and irritable. Her mother have been trying to provide a prescribed drug from the community health center, but Mrs. R did not want to take medication. She displayed no facial expressions during her initial interview and become quite argumentative when questioned about her job. She said that she hate her mother. At the end of the interview, Mrs. R confided in the interviewer that she have been hearing voices that her mother was the cause of her husband leaving her and getting married another woman.

Questions:

1. What should be Mrs. R's diagnosis?
2. What will you do to solve the symptoms of Mrs. R?
3. How do you communicate with Mrs. R?
4. If you work with Mrs. R's mother what will you do to solve the problem of living with ill relative with schizophrenia?

Medication Record Form

Purposes:

- The family caregiver should remind the ill relative to fill each column by putting mark (√) in the form for every medication taken as prescribed by doctor.
- The family caregiver must be able to identify how many tablet the ill relative takes at a time.

Notes:

M : taking medication in the morning

A : taking medication in the afternoon

E : taking medication in the evening

B : taking medication in the night (bed time)

Medication record form for 1 month

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1 ☐ M …tab ☐ A … tab ☐ E … tab ☐ B … tab	2 ☐ M …tab ☐ A … tab ☐ E … tab ☐ B … tab	3 ☐ M …tab ☐ A … tab ☐ E … tab ☐ B … tab	4 ☐ M …tab ☐ A … tab ☐ E … tab ☐ B … tab	5 ☐ M …tab ☐ A … tab ☐ E … tab ☐ B … tab	6 ☐ M …tab ☐ A … tab ☐ E … tab ☐ B … tab	7 ☐ M …tab ☐ A … tab ☐ E … tab ☐ B … tab
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22 ☐ M …tab ☐ A … tab ☐ E … tab ☐ B … tab	23 ☐ M …tab ☐ A … tab ☐ E … tab ☐ B … tab	24 ☐ M …tab ☐ A … tab ☐ E … tab ☐ B … tab	25 ☐ M …tab ☐ A … tab ☐ E … tab ☐ B … tab	26 ☐ M …tab ☐ A … tab ☐ E … tab ☐ B … tab	27 ☐ M …tab ☐ A … tab ☐ E … tab ☐ B … tab	28 ☐ M …tab ☐ A … tab ☐ E … tab ☐ B … tab
29 ☐ M …tab ☐ A … tab ☐ E … tab ☐ B … tab	30 ☐ M …tab ☐ A … tab ☐ E … tab ☐ B … tab					

Symptoms of Schizophrenia Checklist

Instruction:

Please identify the ill relative's symptoms to help you to recognize the sign and symptoms of schizophrenia. Please check list (√) in the column below:
P = Present

A = Absent

Symptoms of schizophrenia checklist for 1 month

Symptoms	Week							
	1		2		3		4	
	Date		Date		Date		Date	
	P	A	P	A	P	A	P	A
Hear voices or inappropriate laughter								
Seeing monsters or image that are not actually present								
Feels like he or she is surrounded by spider webs								
Refuse to eat because food seems to smell or taste bad								
Believe that one is a famous or important figure, such as an angel or a movie star or a general								
Perception of unrealistic power								
Perception than someone is out to harm or kill the individual								
Rapidly shifting from topic to topic, with no connection between one thought and the next								
Aggressive behavior								
Neglect self-care such as hygiene, clothing or appearance								
Repetition of words or phrases that only have meaning to the patient								

Symptoms	Week							
	1		2		3		4	
	P	A	P	A	P	A	P	A
Increased withdrawal, spending most of the days alone								
Dropping out of activities and life in general								
Inability to carry out a conversation; short and sometimes disconnected replies to questions, speaking in monotone								
Behaviors that appear bizarre and have no purpose								
Unable to complete a task								
Difficulty in dealing with stressful situations								
Forgetful; unable to concentrate								
Unable to understand his/her own illness								
Suicidal tendency								

APPENDIX E

Family Caregiver's Guide Booklet

in Caring for Persons with Schizophrenia

Jenny MarlindawaniPurba
Doctoral Student

Faculty of Nursing
Prince of Songkla University, Thailand
2014

Caregiver's name :

Address :

Phone Number :

Introduction

This booklet aims to help caregivers to enhance their knowledge, attitude, and caregiving skills in caring for persons with schizophrenia at home. It consists of five components: 1) general information about schizophrenia, 2) the knowledge of caregivers, 3) the attitudes towards schizophrenia, 4) caregiving skills and 5) caregiver interventions in caring for persons with schizophrenia. Please read the booklet carefully in order to help you provide good care for relative with schizophrenia.

Contents

Introduction

Contents

1. General information of schizophrenia
2. The caregiver knowledge on caring for person with schizophrenia
3. The caregiver attitudes towards ill relative with schizophrenia
4. The caregiver skills in caring for person with schizophrenia
5. Caregiver interventions in caring for person with schizophrenia
6. Effective communication with ill relative

General Information of Schizophrenia

What is schizophrenia?

- Schizophrenia is a chronic mental disorder that impairs the functioning of a person's thought personality, language, emotions, and capability to perceive rationale accurately (Herzog &Varcarolis, 2010).

What causes schizophrenia?

Schizophrenia is caused by the interaction of several factors: biological, genetic, psychosocial, and environmental factors.

- Biological factors include an imbalanceindopamine. Dopamine is one of thechemicals in thebraincells. Abnormalities in specific brain function, including decreased metabolic activity in some brain regions can lead to schizophrenia.
- Genetic factors. Children who have one biological parent with schizophrenia have a 15% risk; the risk rises to 35% if both biologic parents have schizophrenia. The identical twins have a 50% risk for schizophrenia. If one twin has schizophrenia, the other has 50% chance of developing schizophrenia as well.
- Psychosocial factors. Schizophrenia is more prevalent among lower socioeconomic groups. This is because its disabling effects often lead to unemployment and poverty. It's also more common among single people. This may reflect the effects of the illness or its precursors on the person's social functioning.
- Environmental factors. Families with high expressed emotions are considered too emotional, too rough and full of criticism. Environmental factors including low economic status and an environment full of violence are both considered

as probable cause of schizophrenia as well (Herzog &Varcarolis, 2010; Videbeck, 2011).

What are the symptoms?

- Positive symptoms reflect the presence of distorted behavior. These include hallucinations (false sensory perceptions that do not exist in reality), the symptoms of hallucinations include hearing the voices or inappropriate laughter or seeing a monster, may feel like he or she is surrounded by spiderwebs, may refuse to eat because food seems to smell or taste bad; delusions (unusual ideas that are not reality), the symptoms of delusions include perception of unrealistic power, perception that someone is out to harm or kill the individual, being controlled by an outside force, and bizarre behavior (aggressive). Positive symptoms are often seen early in the onset of the illness and often precipitate hospitalization. These symptoms usually respond to antipsychotic medications (Bynum-Grant & Travis-Dinkins, 2011).
- Negative symptoms reflect a loss of normal functions. These symptoms develop over a long period of time, and most interfere with the schizophrenic person's ability to initiate and maintain relationships, conversations, make decisions, maintain a job, manage the finance, take regular medication, and attend to their own personal grooming and hygiene (Bynum-Grant & Travis-Dinkins, 2011; Foussias & Remington, 2010; Moller, 2005; Rigby & Alexander, 2008).
- Disorganization of speech. It may include rapidly shifting from topic to topic, with no connection between one thought and the next; repetition of words or phrases that only have meaning to the patient; inability to carry a conversation; short and

sometimes disconnected replies to questions, and speaking in monotone (Moller, 2005).

- Cognitive dysfunction include difficulty in learning, forgetfulness, difficulty sustaining attention, unable to complete task, unable to understand his/her own illness (Moller, 2005; Palmer et al., 2009; Walker et al., 2004).
- Affective symptoms. These include demoralization, major depression, and period of manic-like behaviors such as increased energy, excitement, irritability, and disinhibition.
- Motor system abnormalities include posture tone and motor compliance, abnormal movements, repetition of words, rigidity, parkinsonism (tremors), excessive motor activity that is purposeless (Peralta, Campos, De Jalo'n, & Cuesta, 2010).

Symptoms Management Techniques for People with Schizophrenia

Category 1: Distraction
- Listen to the music
- Concentrate on my hobby
- Watch TV
- Read book, magazine, newspaper
- Go to interest places (beach, park)
- Use humor
- Work
- Write

Category 2: Fighting Back
- Talk to myself (self-talk)
- Don't pay attention to the thoughts
- Shout back at the voices
- Try to think positively
- Avoid situations that can cause the symptoms to get worse
- Deal with problem solving

Category 3: Isolation

- Stay home
- Go to bed
- Try to live with my symptoms

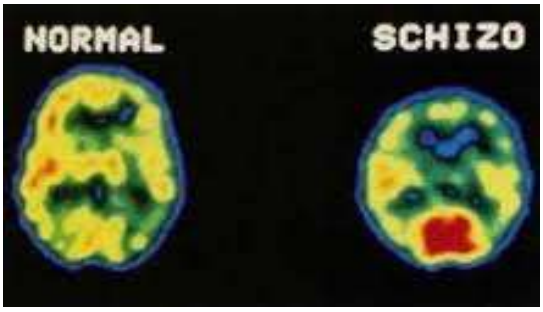
Category 4: Attempts to Feel Better

- Pray
- Eat
- Take medication regularly as prescribe
- Use relaxation technique (breathing in, breathing out)
- Take a shower/bath
- Hug pillow

Category 5: help Seeking

- Talk to my family members/friend(s)
- Go to hospital
- Go to community mental health service (Puskesmas)
- Talk to the psychiatrist/nurse
- Talk to a Community Mental Health Nurse
- Talk to Kader

(Source: Moller, 2009, *Neurobiological responses and schizophrenia and psychotic disorders,* St. Louis: Mosby Elsevier).



How is schizophrenia treated?

- Schizophrenia can be treated using a combination of medication and psychosocial treatment such as psycho-education, social skills training, family and community support.

- **Typical Antipsychotic Medications**

Generic/brands names	Side effect	Management
Chlorpromazine (Thorazine)	Sedation, dry mouth, blurred vision, constipation, urinary retention, orthostatic hypotension	Requiring patient to be fully alert, provide ice chips, hard candy, increase fluid and dietary fiber intake, instruct patient to rise slowly from sitting or lying position
Trifluoperazine (Stelazine)	Neck muscles spasms, eye muscles spasms, protrusion of the tongue, dysphagia, laryngeal and pharyngeal spasm, dystonic, akathisia	Taking tryhexyphenidyl (artane) as prescribed, increased fluid and fiber intake

- **Typical Antipsychotic Medications (cont.)**

Generic/brands names	Side effect	Management
Haloperidol (Haldol) 	Neck muscles spasms, eye muscles spasms, protrusion of the tongue, dysphagia, laryngeal and pharyngeal spasm, dystonic, akathisia	Taking tryhexyphenidyl (artane) as prescribed, increased fluid and fiber intake

- **Typical Antipsychotic Medications**

Generic/brands names	Side effect	Management
Clozapine (Clozaril)	Sedation, orthostatic hypotension, dry mouth, blurred vision, constipation, urinary retention,and low white blood cell	Requiring patient to be fully alert, instruct patient to rise slowly from sitting or lying position, provide ice chips, hard candy, increase fluid and dietary fiber intake, encourage patient to report any frequency or burning with urination. Consults with doctors when having signs of infection such as fever, sore throat
Risperidone (Risperdal) 	Sedation, orthostatic hypotension	Requiring patient to be fully alert, encourage patient to rise slowly from sitting or lying position
Olanzapine (zyprexa) 	Sedation, orthostatic hypotension	Requiring patient to be fully alert, encourage patient to rise slowly from sitting or lying position

The caregiver knowledge on caring for person with schizophrenia

The substantive knowledge is essential aspect as perceived by family caregivers (Chien& Norman, 2003). The family caregiver must have the following knowledge to improve the effective care for their loved ones with schizophrenia at home (Grossman, 2005; Yildiz, Yazici, Centikaya, Bilici, &Elcim, 2010).

- Understanding schizophrenia, includes; the definition, cause, sign and symptoms, and prognosis of illness
- Medications for schizophrenia include management of medication (using medication with the principles of true six rights (right drug, right patient, right technique, right time, right dose, and continuously), impact of non-compliance to medication, the type of medication and common side effects, management of common side effects, strategies to manage medication, and the need for continuing medication and follow up.
- Early signs and symptoms of schizophrenia
- Symptoms management
- Mental health services include psychiatric hospital and community health center

What are the resources caregiver can use?

The caregiver should be able to identify which resources to contact for information. The important thing is family caregiver being able to recognize the resources. There are sources that can be used by caregiver to get information about schizophrenia these include:

- Psychiatric hospital: to seek the professional help. Caregiver can go to see the psychiatrist regularly for follow up
- Community Health Center. Caregiver can discuss with community mental health nurses in community health center. Caregiver can also bring their ill relative to join a rehabilitation program that is provided by nurses in the community health center.
- Schizophrenia Community Care of Indonesia (KPSI). The caregivers can joint with schizophrenia community care of Indonesia branch Medan. The caregivers can access this group through website www.peduliskizofrenia.org. Family caregivers can share experience about caring for ill relatives with schizophrenia in this group activity. This group can help caregivers to understand more about schizophrenia and what caregivers do to solve the problem regarding care.

The caregiver attitudes towards an ill relative with schizophrenia

Caring for an ill relative with chronic mental illness such as schizophrenia is challenging for family caregiver. Most family caregivers encounter challenges while living with and caring for people with schizophrenia. However, the caregiver should accept the ill relative's illness and try to have patience in providing care for their loved ones. He/she must be aware of their roles in their relationship with the person with schizophrenia or others family members.

On the other hand, the ill relative whose caregiver is under pressure is most likely to be neglected and the ill relative is most likely to relapse. This is because the caregiver who is under pressure cannot develop her/his ability to help ill relative.

Attitude refers to individual values and reflect his/her behavior. Positive attitude consist of respect, tolerance, empathy, responsibility, willingness to learn,

willingness to cooperate, trust commitment, collaboration with other health professional, be patience, being helpful, and confidentiality (Adult Learners Integrated Care Enhancement, 2012). Positive attitudes toward schizophrenia can influence family caregivers' appropriate role of caregiving and improve their communication skill to the ill relative. Thus, they dealt more effectively with the ill relatives' symptoms, and it prevented relapse of schizophrenia.

The caregiver skills in caring for persons with schizophrenia

These are important skills for Indonesian caregivers of schizophrenic persons which need to be improved by the coaching process. These are:

- Communicating with the ill relative
- Monitoring and managing psychiatric symptoms (both positive symptom: hallucinations, delusions, paranoia ideas, aggressive behavior, suicidal attempts or threats and negative symptoms: lack of motivation to carry out daily activities)
- Managing behavioral problems

- Administering and managing medication. Family caregivers have to remind the patient to take medication, know the positive and negative effects of medication for schizophrenia, and the importance of drug compliance and maintenance (Chien, 2008).Besides, caregivers also should help the patient to deal with problem or any side effect which can occur in taking medication.
- Managing finance. when caring for a family member with schizophrenia for a long period, family caregivers experience economic hardship due to medical cost and to the sick member's economic dependency (Rungreangkulkij, Chafetz,

Chesla, & Gilliss, 2002). Therefore, family caregivers have to use home management strategies such as managing finance and budgeting strategies (Chien, 2008).

- Making decision and problem solving/coping with schizophrenia. They are expected todevelop problem solving skill to strengthen their ability to cope with major life stressors and traumatic events including schizophrenic illness (Jusuf, 2006; Lewandowski, 2009).
- Seeking and obtaining resources. seeking and obtaining resources may include seeking social support from others, available mental health services, rehabilitation program (Chien, 2008). The caregivers tried to find someone who could provide an explanation and assistance for the disturbing behaviors of their children (Evans, 2009). This indicated that family caregivers were able to seek help and obtain resources when they faced with a crisis intervention (Tungpunkom, 2000).

How to take care my ill relative who has hallucination symptoms

1. Encourage ill relative to share experiences related to hallucination symptoms
2. Discuss about precipitating causes and negative consequences of hallucination symptoms
3. Teach ill relative and practice how to use the schizophrenia symptoms checklist in order to record their own hallucinations
4. Encourage ill relative to record their hallucinations daily at home by using schizophrenia symptoms checklist
5. Teach and encourage ill relative to handle their hallucination by using these techniques:

5.1 Talking with others to distract him/her from the hallucination

5.2 Say stop and ignore the voices

5.3 Watching the television or use headphone to listen to the music or reading a book/magazine/newspaper of their choice while hearing the voices

5.4 Choose one of their favorite songs and start singing, and allowing ill relative to verbalize feelings

5.5 Use abdominal breathing relaxation (breathing in-breathing out)

6. Remind the ill relative that it is time for his or her follow-up visit to see the psychiatrist
7. Encourage the ill relative to seek help from psychiatrists or community mental health nurses if hallucinations can't be controlled at home
8. Give reinforcement to the ill relative after he/she is able to control hallucinations (Cole, 2012; Kanungpairn, Sitthimongkol, Wattanapailin, &Klainin, 2007; Tsai & Chen, 2006).

How to take care of my ill relative who has delusion symptoms

1. Be sincere and honest when communicating with the ill relative. Avoid vague or evasive remarks
2. Don't argue with the ill relative or try to convince the ill relative that the delusions are false or unreal
3. Use Guided-Self Determination (share decision making and problem solving) to help ill relative manage the delusion symptoms. The Guided-Self Determination can help the ill relative change his delusional thinking

❖ Help the ill relative to list of their problems currently worked on

- ❖ Help the ill relative to identify the important events and periods in their life
- ❖ Help the ill relative to find difficulty living with delusions symptoms
- ❖ Encourage the ill relative to identify the ways of living
- ❖ Help the ill relative to develop plans for changing their way of life
- ❖ Encourage the ill relative to share their reality about living with delusion symptoms
- ❖ Help the ill relative to identify what they did to solve the problem

4. Remind the ill relative about taking medication with fifth principles of true (right name, drug, dose, technique, and time)
5. Remind the ill relative the importance of medications in managing symptoms and preventing relapse
6. Encourage the ill relative to discuss side effect of medication
7. Seeking assistance to avoid or manage stressful situations
8. Remind the ill relative about regular follow up
9. Give positive feedback for success of the ill relative

How to take care of my ill relative who has aggressive behavior

1. Identify the cause of ill relative's violent behavior
2. Assist the ill relative to express feelings of anger
3. Observe the sign of ill relative's aggressive behavior
4. Encourage the ill relative to express violent behavior usually used by him/her
5. Discuss with the ill relative whether by doing things his/her way, the problems are solved?

6. Explain to the ill relative the impact of violent behavior on self, others and environment.
7. Don't make the ill relative feel punished or shunned for inappropriate behavior
8. Train the ill relative to perform physical exercise (deep breathing exercise) and hit a pillow or mattress
9. Assist the ill relative to control violent behavior in verbal/social: refuse correctly, ask properly, and expressing feelings correctly.

   Spiritually: encourage ill relative to run the religious practices in accordance with his/her religions such as reading religious writings (e.g., Bible, Torah, Qur'an), listening to religious music, prayer/shalat, zikir and meditation (Gearing et al. 2011).
10. Remind the ill relative to take medication regularly and continuously as doctor prescribed. Discuss with the ill relative about the importance of taking medication in managing symptoms and preventing relapse, and taking medication with principles of 5 true.
11. Seeking assistance to avoid or manage stressful situations
12. Remind the ill relative about regular follow up
13. Give positive feedback for the ill relative's successes

How do I use effective communication with an ill relative and others?

Good communication between and among the caregiver and the ill relative is very important. Lack of effective communication lead to most problem in care-giving experience. Explaining the care as we go will eliminate misunderstanding and

confusion. Although we can't change the continuing progress of the disease we can make the best of a difficult situation through clear communication.

Good communication skills go hand in hand with solid information about the condition of ill relative. Whether it is a short-term or a long-term care commitment, open communication and compassion are essential.

High-quality communication depends on a give and take between all parties and most often is reflected in how well we listen, in what we say or do not say to others, and in how respectful we are of an individual's ability.

Listening: At the heart of good communication is listening with an open mind. Respecting opinions of others that differ from ours will indicate the depth of our caring since it gives us a view of their feelings and outlook. When a caregiver become tired it is hard to be a good listener, especially if he/she is hearing the same story for the tenth time that day. The caregiver needs, like hunger or exhaustion, can become barriers to their conversations with ill relative and others. These barriers along with caregiver overall attitudes could reduce her/his ability to listen.

Communication involves the speaker and the listener. Careful listening is just as important as the right to be heard, both can be done well by expressing her/him self clearly (Narum & Transtrom, 2003).

The effective communications are as follows:

1. Displays of affection such as smiling, positive eye contact, mutual laughter, or hugging.

2. Positive listener behavior such as listening empathically, making efforts to elicit the others' point of view, nodding head in a way that indicates listening, reflecting back to

the other person what was heard, asking follow-up questions to gather other's perspective, or voicing understanding of the other's position.

3. Positive speaker behavior such as agreeing, proposing compromises, bringing up concerns in a neutral manner, offering suggestions in a way that takes the other's viewpoint into consideration, building on the suggestions of another, keeping the conversation on track, making positive remarks about the other person's behavior, clarifying one's own point of view, expressing oneself clearly when asked to do so by the other, or offering a remark that moves the conversation forward in a constructive direction.

Medication Record Form

- The family caregiver should remind the ill relative to fill each column by putting mark (√) in the form for every taking medication as prescribed by doctor.
- The family caregiver must be able to identify how many tablet the ill relative take in each time.

Notes:

M : taking medication in the morning

A : taking medication in the afternoon

E : taking medication in the evening

B : taking medication in the night (bed time)

Example of medication record form for 1 month

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1 ☐ M …tab ☐ A … tab ☐ E … tab ☐ B … tab	2 ☐ M …tab ☐ A … tab ☐ E … tab ☐ B … tab	3 ☐ M …tab ☐ A … tab ☐ E … tab ☐ B … tab	4 ☐ M …tab ☐ A … tab ☐ E … tab ☐ B … tab	5 ☐ M …tab ☐ A … tab ☐ E … tab ☐ B … tab	6 ☐ M …tab ☐ A … tab ☐ E … tab ☐ B … tab	7 ☐ M …tab ☐ A … tab ☐ E … tab ☐ B … tab
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Symptoms of Schizophrenia Checklist

Please identify the ill relative's symptoms when ill relative how bizarre behavior to help you to recognize the sign and symptoms of schizophrenia. Please check list (√) in the column below.

Symptoms	Present	Absent
Hearing voices or inappropriate laughter		
Sees monsters or image that are not actually present		
Feeling like he or she is surrounded by spiderwebs		
Refuse to eat because food seems too smell or taste bad		
Believe that one is a famous or important figure, such as angel or movie star or general		
Perception of unrealistic power		
Perception than someone is out to harm or kill the individual		
Being controlled by outside force		
Rapidly shifting from topic to topic, with no connection between one thought and the next		
Aggressive behavior		
Neglect self-care such as hygiene, clothing or appearance		
Repetition of words or phrases that only have meaning to the patient		
Increased withdrawal, spending most of the days alone		
Dropping out of activities and life in general		
Inability to carry out a conversation; short and sometimes disconnected replies to questions, speaking in monotone		
Behaviors that appear bizarre and have no purpose		
Difficulty in dealing with stressful situations		
Unable to understand his/her own illness		
Unable to complete a task		
Forgetful; unable to concentrate		
Suicidal tendency		

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APPENDIX F
Testing Assumptions

1. Normal Distribution

The assumption of normality was examined using skewness divided by its standard error values. Testing assumption showed that the data sets of knowledge, attitude, and skills in the experimental group were normally distributed. The values showed normal distribution if the range of ± 3.

Variables	Group	Statistic (a)	Std. Error (b)	Z value = a / b
KAST pretest	Experimental	.23	.35	.66
	Control	.30	.35	.86
KAST week 2	Experimental	-.44	.35	1.26
	Control	.19	.35	.54
KAST 1month	Experimental	-.02	.35	.06
	Control	.63	.35	1.8
FAS pretest	Experimental	.60	.35	1.71
	Control	.39	.35	1.11
FAS week 2	Experimental	.76	.35	2.2
	Control	-.09	.35	.25
FAS 1month	Experimental	.64	.35	1.82
	Control	-.04	.35	.11

Variables	Group	Statistic (a)	Std. Error (b)	Z value = a / b
PCS pretest	Experimental	.11	.35	.31
	Control	-.19	.35	.54
PCS week 2	Experimental	-.28	.35	.8
	Control	-.16	.35	.46
PCS 1month	Experimental	-.32	.35	.91
	Control	.20	.35	.57

2. Test of Homogeneity of Variances

The homogeneity of variance was examined using Levene's test. The variable was met the assumption only in attitude (FAS) ($p > .05$)

	Levene Statistic	df1	df2	Sig.
KASTpretestcoaching	3.301	1	89	.73
KAST2week	7.495	1	89	.00
KAST1month	15.729	1	89	.00
FASpretestcoaching	**1.148**	**1**	**89**	**.29**
FAS2week	**2.545**	**1**	**89**	**.11**
FAS1month	**3.139**	**1**	**89**	**.08**
PCSpretestcoaching	1.095	1	89	.33
PCS2week	9.331	1	89	.00
PCSpost2afterposttest1 coaching	24.720	1	89	.00

APPENDIX G

Permission of Using the Study Instruments

Part 1: Permission of using the Knowledge About Schizophrenia Test

Asking Permission

Purba Jenny
4/2/2014

To: mcompton@mfa.gwu.edu

Dear Professor Michael T. Compton

Good evening,

I would like to say sorry so much if I disturb you with my email.
Firstly, I would like to introduce myself. My name is Jenny. I am a lecture from Department of Community and Mental Health, University of Sumatera Utara, Medan Indonesia. Now, I am PhD student at Faculty of Nursing, Prince of Songkla University, Hat Yai, Thailand. Currently, I am preparing the thesis proposal entitled the effectiveness of coaching program for enhancing family caregivers' competencies in caring for persons with schizophrenia in Indonesia.

I would like to use the Knowledge About Schizophrenia Test (KAST) for measuring family caregiver's knowledge about schizophrenia.
What should I do to get permission to use the Knowledge About Schizophrenia Test (KAST).
Could you help me please.

Thank you so much for your help and kindly attention to me. I am waiting for further good news.

Sincerely yours,

Jenny
PhD Student
Faculty of Nursing, Prince of Songkla University,
Hat Yai, Thailand

Part 2: Permission of using the Family Attitude Scale

RE: Asking permission
David Kavanagh
Add to contacts
4/2/2014

To: Jenny Purba

You are very welcome. All the best with your research.

David Kavanagh

From: Jenny Purba [mailto:jhuan_702@hotmail.com]
Sent: Wednesday, 2 April 2014 10:15 AM
To: David Kavanagh
Subject: RE: Asking permission

Dear Prof. David Kavanagh,

Good morning,

Again, I would like t say thank you very much for your help and kindly attention to me.
I will sent the Family Attitude Scale (FAS) back to you after back-translation and reliability.

Sincerely yours,

Jenny
PhD Student
Faculty of Nursing, Prince of Songkla University,
Hat Yai, Thailand

From: david.kavanagh@ut.edu.au
To: jhuan_702@hotmail.com
Subject: RE: Asking permission
Date: Tue, 1 Apr 2014 21:42:32 +0000
Of course. See attached.
Several people have translated it over the years into other languages. If you want to do that, and want me to look over the independent back-translation for accuracy, I can do that. Happy also to collaborate on a publication on it if you wish.

David Kavanagh

From: Jenny Purba [mailto:jhuan_702@hotmail.com]
Sent: Wednesday, 2 April 2014 3:12 AM
To: David Kavanagh
Subject: Asking permission

Dear Prof. David Kavanagh

Good evening,

I would like to say sorry so much if I disturb you with my email.
Firstly, I would like to introduce myself. My name is Jenny. I am a lecture from Department of Community and Mental Health, University of Sumatera Utara, Medan Indonesia. Now, I am PhD student at Faculty of Nursing, Prince of Songkla University, Hat Yai, Thailand. Currently, I am preparing the thesis proposal entitled the effectiveness of coaching program on family caregivers' competencies in caring for persons with schizophrenia in Indonesia.

I would like to use the Family Attitude Scale (FAS) for measuring family caregiver's attitudes toward schizophrenia.
What should I do to get the FAS.
Could you help me please.

Thank you so much for your help and kindly attention to me. I am waiting for further good news.

Sincerely yours,

Jenny
PhD Student
Faculty of Nursing, Prince of Songkla University,
Hat Yai, Thailand

Part 3: Permission of using the Chiang Mai Psychiatric Caregiving Skills Scale

Re: Asking permission
ohpatra (ohpatra@gmail.com)
Add to contacts
2/15/2014

To: Jenny Purba

Hi Jenny,
Thanks for your interesting to use my instrument. I m not sure I have English version??i did the translation a long time ago I need to check about that and will get back to you soon,
Cheers,

Sent from my iPad

On 15 ก.พ. 2557, at 20:31, Jenny Purba <jhuan_702@hotmail.com> wrote:
Dear Ajarn Patraporn,

Good evening Ajarn,

I would like to say sorry so much if I disturb you with my email.
Firstly, I would like to introduce myself. My name is Jenny. I am a lecture from Department of Community and Mental Health, University of Sumatera Utara, Medan Indonesia. Now, I am PhD student at Faculty of Nursing, Prince of Songkla University, Hat Yai, Thailand. Currently, I am preparing the thesis proposal entitled the effectiveness of coaching program on family caregivers' competencies in caring for persons with schizophrenia in Indonesia.

I would like to use family caregiver competency scale / family caregiving skills questionnaire for measuring family caregiver's competencies of persons with schizophrenia and ask permission from you.
Furthermore, what should I do to get permission using this instrument for my study? I hope that I would have permission from you.

Thank you so much for your kindly attention to me. I am waiting for further good news.

Sincerely yours,

Jenny
PhD Student
Faculty of Nursing, Prince of Songkla University,
Hat Yai, Thailand

Part 4: Permission of using the Caregiver Satisfaction Scale

RE: Asking permission
Jessup, Remzonette M
Add to contacts
2/15/2014

To: Jenny Purba

Great! Good luck with your thesis!

Nenette

From: Jenny Purba [jhuan_702@hotmail.com]
Sent: Friday, February 14, 2014 11:43 AM
To: Jessup, Remzonette M
Subject: RE: Asking permission
Dear Nenette,

You're welcome.
I would like to inform you that Professor Bakas has sent me an instrument to measure caregiver satisfaction with the program.

Thank you so much for your attention to me.

Regards,

Jenny

From: ramercad@iu.edu
To: jhuan_702@hotmail.com
Subject: RE: Asking permission
Date: Fri, 14 Feb 2014 15:45:14 +0000
Hello Jenny,

I left a voicemail on Dr. Bakas' cell phone and hope to hear from her today I'm glad to hear you got approval from Dr. Bakas, but as Dr. Bakas' Project Manager, I cannot send any instruments she has created until she first tells me it's okay.

Thank you for your patience.

Nenette

From: Jenny Purba [jhuan_702@hotmail.com]
Sent: Thursday, February 13, 2014 7:23 PM
To: Jessup, Remzonette M
Subject: RE: Asking permission
Dear Ms. Nenette,

Good morning,

I would like to inform you that I got approval from Professor Bakas to use her instrument for measuring caregiver satisfaction with the program.

I would like also to say thank you so much for your attention to me.

Sincerely yours,

Jenny Marlindawani Purba
PhD Student
Faculty of Nursing, Prince of Songkla Univesity,
Thailand

From: ramercad@iu.edu
To: jhuan_702@hotmail.com
CC: ramercad@iu.edu
Subject: RE: Asking permission
Date: Thu, 13 Feb 2014 15:44:09 +0000
Dear Ms. Purba

Thank you for contacting me and for your interest. Dr. Tamilyn Bakas, the Principal Investigator for the Telephone Assessment Skill Building Intervention is currently in San Diego California attending the International Stroke Conference and will return Monday, February 17. I would like to know more about what instruments you are interested in incorporating for your thesis and discuss your request with Dr. Bakas when she returns. Is it just the Satisfaction Survey that you're interested in, or is it the BCOS, which measures life changes of the caregiver, or the OCBS, which measures task difficulty of the caregiver?

Sincerely,

Nenette M. Jessup MPH, CCRP
Research Associate/Project Manager TASK II
1111 Middle Drive NU 235
Indianapolis, IN 46202
(317) 274-7549 tel (317) 278-2021 fax

From: Jenny Purba [mailto:jhuan_702@hotmail.com]
Sent: Tuesday, February 11, 2014 8:47 PM
To: ramercad@iupui.edu
Subject: Asking permission

Dear Dr. Nenette Jessup

Good morning,

I would like to say sorry so much if I disturb you with my email.
Firstly, I would like to introduce myself. My name is Jenny. I am a lecture from Department of Community and Mental Health, University of Sumatera Utara, Medan-Indonesia. Now, I am PhD student at Faculty of Nursing, Prince of Songkla University, Hat Yai, Thailand. Currently, I am preparing the thesis proposal entitled the effectiveness of coaching program on family caregivers' competencies in caring for persons with schizophrenia in Indonesia.

I would like to use satisfaction relative to the telephone assessment and skills-building kit (TASK) instrument and ask permission from you.
Furthermore, what should I do to get permission using this instrument for my study?
I hope that I will have permission from you.

Thank you so much for your kindly attention to me. I am waiting for further good news.

Note: I already contact with Professor Bakas through email. He suggests me to contact with you for seeking assistance.

Sincerely yours,

Jenny
PhD Student
Faculty of Nursing, Prince of Songkla University,
Hat Yai, Thailand

APPENDIX H

List of Expert Participants

This study involved five experts to evaluate the content validity of research instruments, as follows:

1. Assoc. Prof. Dr. Nongnut Boonyoung

   Department of Nursing Administration and Nursing Services, Faculty of Nursing, Prince of Songkla University, Thailand.

2. Dr. Weena Chanchong

   Department of Psychiatric Nursing, Faculty of Nursing, Prince of Songkla University, Thailand.

3. Prof. Dr. Budi Anna Keliat, S.Kp., M.AppSc

   Faculty of Nursing, University of Indonesia, Jakarta, Indonesia.

4. Dr. Novi Helena Catharina Daulima, S.Kp., M.Sc

   Faculty of Nursing, University of Indonesia, Jakarta, Indonesia.

5. Rodiatul Hasanah Siregar, M.Si, psychology

   Faculty of Psychology, University of Sumatera Utara, Medan-Indonesia.

VITAE

Name : Jenny Marlindawani Purba

Student ID : 5410430012

Educational Attainment:

Degree	Name of Institution	Year of Graduation
Diploma of Nursing	Sari Mutiara	1996
Bachelor of Nursing	University of Indonesia	1999
Master of Nursing Science	Prince of Songkla University, Thailand	2007

Scholarship Award during Enrolment

Directorate General of Higher Education, Ministry of Research and Technology Republic of Indonesia

Work Position and Address:

Lecturer, Department of Community and Mental Health Nursing, Faculty of Nursing, University of Sumatera Utara, Medan, Indonesia

Jl. Prof. T. Ma'as No. 3 Medan 20155

Mobile: +6281376112528

Email: Jhuan_702@hotmail.com

List of Published Paper and Proceeding:

Purba, J. M., & Suttharangsee, W. (2013). *Psychoeducation Intervention for Enhancing Family Caregivers Ability in Caring for Persons with Schizophrenia: A Literature Review*. Oral presentation at the 2013 International Nursing Conference on Health, Healing, & Harmony: Nursing Values. Thailand.

Purba, J. M., & Suttharangsee, W. (2014). Family caregiver's competencies of patient with schizophrenia: A concept analysis. *The Malaysian Journal of Nursing, 6*(1), 27-31.