# EFFECTS OF A CAREGIVER COACHING PROGRAM ON FAMILY CAREGIVERS' COMPETENCIES FOR PERSONS WITH SCHIZOPHRENIA: A PILOT STUDY

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**ABSTRACT:**

**Background:** Competency in caring is important for caregivers of persons with schizophrenia. Coaching can facilitate successful caregiving through the understanding of a caregiver's competencies and goals. The present study aimed to determine the feasibility and evaluate a coaching program for enhancing family caregivers' competencies in caring for persons with schizophrenia.

**Methods:** This pilot study employed a quasi-experimental study design. The measures of family caregivers' competencies data using the Knowledge about Schizophrenia Test, the Family Attitude Scale, and the Chiang Mai Psychiatric Caregiving Scale were compared at baseline and 2 weeks after completion of caregiver coaching program-, twelve family caregivers were assigned into control and experimental groups with each group 6 persons. The coaching program was a seven-week program with several implementation methods, such as discussion, watching videos, providing information, training, demonstration, role-plays, observation and telephone calls.

**Results:** The participants receiving the caregiver coaching program reported significantly more improved knowledge about schizophrenia ($p < 0.05$), decreased criticism of attitude toward schizophrenia ($p < 0.05$), and improvement of caregiving skills ($p < 0.05$) than those receiving routine care.

**Conclusions:** This study revealed that caregiver coaching program intervention is feasible to be implemented, and can enhance family caregivers' competencies including knowledge about schizophrenia, attitude, and caregiving skills.

**Keywords:** Caregiver coaching program, Competencies, Schizophrenia, Indonesia

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## INTRODUCTION

Schizophrenia is a predominant mental health disorder characterized by auditory hallucinations, thought disorders, bizarre delusions, as well as causing a blunting affect and apathy [1, 2]. In Medan, Indonesia there are increasing numbers of people with schizophrenia living in the community. In 2011, the numbers of schizophrenia patients admitted in Medan psychiatric hospital were 1.760. Meanwhile, the numbers of outpatients were 11.388. In 2012, the numbers of hospitalized patients with schizophrenia were 1.398, while that of patients visiting the outpatients were 13.423. These data indicates that there is an increasing prevalence of patients with schizophrenia. However, most of them were not hospitalized.

In people with schizophrenia, there is a progressive deterioration level of previous functions in the field of employment, social relationships, occupational competence, and in ability to care for others and themselves [2, 3]. Schizophrenia does not only cause disturbances for the patients but also for their family. Caring for a family member with schizophrenia is challenging for caregivers because it is extremely stressful and burdensome [4]. Family

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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 [5, 6].

In Indonesia, most family caregivers have certain negative assumptions about their real experiences. They frequently endured family conflict, financial problems, became uneasy, upset, sad, disappointed, confused, bored, and did not know what to do [7, 8]. Limitation of knowledge and skill, make it difficult for caregivers to provide effective care for ill relatives [8]. They also did not have time to take care and pay attention to their ill relatives. Consequently, they tend to bring the ill relatives to be hospitalized. In fact, family caregivers feel more comfortable if the patients can stay longer in a psychiatric hospital rather than live at home with the family [9, 10].

Competencies are an important aspect for caregivers of people with schizophrenia. They encompasses various skills such as making decisions in a crisis situation, building communication skills, problem-solving skills, assertiveness skills, behavioral-management skills, stress-management skills and assisting patients in their daily activities, etc. [11, 12]. The caregivers should have the knowledge, skills and shape the positive attitudes to be competent in providing effective care [13, 14].

Coaching is one strategy that can promote an individual's competence. Coaching can increase the caregivers' performance regarding providing care effectively [15]. Kolb's experiential learning theory [16] was used a theoretical framework in this study, particularly the four modes of experiential learning, which provides support to family caregivers along with coaching. Coaching can increase the family caregivers' ability to care for their loved ones effectively [17]. Coaching has become an important means in enhancing the caregivers' interaction with and provision of good care for children with disability [18]. The integration of the experiential learning theory into a coaching process may help the nurse coach to support, encourage, and help the caregiver as an expert and the person "making it happen" [15, 19]. It provides a framework for the nurse coach to develop the important skills required to manage situations and the coaching relationship during the coaching process [19]. To date, there is no research regarding a caregiver coaching program for caregivers in a psychiatric setting in Indonesia has been conducted. Therefore, it is important to develop and test the effect of a caregiver coaching program on family caregivers' competencies including knowledge, attitude, and skills in caring for persons with schizophrenia.

## METHODS

### Research design

A pilot study was to assess the feasibility of the caregiver coaching program to enhance the quality of the real study. A two-group pretest-posttest quasi-experimental research design was employed in order to examine the effect of the caregiver coaching program on family caregivers' competencies including knowledge, attitude, and caregiving skills.

### Sample and setting

The participants were the primary caregivers of person with schizophrenia who attended the Outpatient Department in Community Health Center (Puskesmas) Medan, Indonesia. Twelve participants met the inclusion criteria: (1) age 18 to 65 years old, (2) mentally alert, (3) able to understand and read Bahasa Indonesia, (4) live with and care for a family member who at recruitment has met the DSM-IV-TR diagnostic classification for schizophrenia for at least 6 months, and (5) be able to provide access to the caregivers' telephone. The caregivers who cared for more than one relative with a chronic mental or physical illness might have different varieties and level of demands regarding patient care, which might not be addressed by the caregiver coaching program. They were excluded from the study. The psychiatric nurse who worked at the community health center introduced the researcher to the eligible participants. The researcher explained the objectives of the study, the program, benefits, the right to participate, to withdraw and confidentiality issues. The participants were matched by using a computerized minimization random program technique for controlling age, gender, educational level, and duration of care. According to Baker [20], a pilot study is often used to try out the guideline or collecting data procedure in preparation for the real study. Furthermore, Baker [20] emphasized that, a sample size of 10-20 % of the population to be considered in conducting a pilot study. Therefore, the total samples of the study were 12 participants. Then, the researcher assigned the participants either into the experimental or control groups. The experimental group (n = 6) received the caregiver coaching program from the researcher, whereas, the control group (n = 6) received the routine care from the psychiatric nurse at community health center. Participants in the experimental group were asked not to discuss the program and show the caregiver guide booklet to any other participants until the program was completed. All of participants either in

the experimental or control groups completed both baseline data and post-test. There were no participants withdrawn in this study. This study was conducted in the meeting room community health center and family caregivers' homes.

**Procedure of the caregiver coaching program**

Participants in the experimental group were intended to receive the caregiver coaching program intervention, which consisted of teaching about the nature of schizophrenia, educating on how to provide effective care for persons with schizophrenia, and a telephone contact at week 5 and week 6 to evaluate their performance regarding care, and to help improve their knowledge, attitude, and skills in the next future. Finally, the researcher assessed the participants' success of each objective. Participants were also asked if they had any questions regarding caregiver coaching program activities. Meanwhile, participants in the control group (n = 6) were not contact by the caregiver coaching program. All participants were contacted at weeks 2 after completion of the caregiver coaching program to assess their knowledge, attitude, and skills in caring for persons with schizophrenia.

**Components of the caregiver coaching program**

The major components of the caregiver coaching program were (1) teaching about the nature of schizophrenia, the kinds of symptoms, medication and the way to manage side effects, how to recognize and respond to worsening signs and symptoms using a checklist/log to record daily monitoring of activities, the family resources to address financial issues, seeking professional help, caregiver's organization in Indonesia, importance of family support, and (2) educating caregivers to perform new skills to solve problems, manage hallucination, delusion, aggressive behavior symptoms, effective communication, and how to improve medication adherence for persons with schizophrenia.

***Description of the caregiver coaching program intervention***

The caregiver coaching program was a seven-week program based on the experiential learning theory proposed by Kolb [16].Thorpe and Clifford [15]. The objective of the program is to enhance caregivers' competencies in terms of knowledge, attitudes, and caregiving skills in caring for persons with schizophrenia. This program covered six steps (Table 1): (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.

Each family caregiver was given program materials that included a video cassette about schizophrenia and a caregiver's guide booklet. The booklet was developed by the researcher. The booklet contained three components: (1) general information about schizophrenia, (2) knowledge for caregivers, (3) the caregivers' skills, and (4) caregivers interventions in caring for persons with schizophrenia. From a previous study, the booklet was used during the entire coaching program sessions [21].The main coaching methods were teaching and educating.

A. Teaching is composed of providing information about schizophrenia, knowledge for caregivers, appropriate caregiver's attitude toward schizophrenia, caregiving skills, caregiver's interventions in caring for sick members, and effective communication.

B. Educating caregivers on caring for persons with schizophrenia. The educating process involves teaching caregivers about how to take care of the sick members who have hallucination, delusion, and aggressive behavior symptoms, how to communicate effectively in the support system, and how to help a sick member on medication adherence.

**Procedure for data collection**

Baseline data were obtained from medical record reviews and 12 persons were assessed for eligibility to be participants. All of them met the inclusion criteria and participated in this study after obtaining written informed consent on the form. Twelve family caregivers were randomized either in to the control or experimental groups.

The program was conducted as a group and individual approach. Each group contained 6 participants. The researcher used individual coaching at week 4, week 5 and week 6. The duration of the program was 7 weeks and consisted of 6 steps. This program was held once a week. Group sessions were 1 to 2 hours long and an individual session was 1 hour long. The researcher used seven methods to provide the caregiver 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. Both participants in the control and experimental groups completed the questionnaires (about knowledge, attitude and skills) two times only–pre and post (at baseline and 2 weeks after completion of the caregiver coaching program).

**Table 1** Caregiver coaching program for family caregivers of person with schizophrenia

| Coaching sessions | Time | Objectives | Coaching activities | Evaluation |
|---|---|---|---|---|
| **Session 1**: Clarifying coaching needs and goals | 1-h | • To identify the real need for coaching | **Introduction of the coaching program**<br>• Definition, objectives, and the process of the coaching program<br>• List the objectives of the coaching program | Caregivers developed their own objectives of the coaching program |
| **Session 2:** Agreeing to specific development needs | 1.5-h | • To identify the caregivers' needs for caring<br>• To identify the caregivers' existing knowledge, attitudes, and skills | • Review the caregivers understanding about schizophrenia<br>• Discuss the needs related to caregiving<br>• Discuss the existing attitude toward schizophrenia<br>• Discuss the skills used for taking care of ill relatives at home? Does it work? | Caregivers listed specific objectives related to caregiving needs |
| **Session 3**: Formulating a detailed plan | 2-h | • To develop an action plan<br>• To develop new skills for caring | • Setting up a plan to care for sick members<br>• Teach important skills (problem solving, managing hallucination, delusion, aggressive behavior, effective communication, and medication adherence skills) | • Caregivers listed and performed new skills related to care giving needs<br>• Most caregivers received score of more than 7 for their confidence in implementing goals and action plans |
| **Session 4:** Performing activities | 1-h | • To implement the agreed plans<br>• To collect the evidence on how the caregivers performed | • Implementation of the agreed plans<br>• Identify problems in applying the plans | • Caregivers perform new knowledge, attitude, and skills<br>• Caregivers record all activities in the record form |
| **Session 5:** Review activities and planning to improve performance | 1-h | • Evaluate the strength and areas for development<br>• Revise the action plans | • Follow up the caregivers progress in achieving their goals and implementing the plans<br>• Modification of the plans<br>• Summary of all the caregivers' activities performed | • Share the completed objectives and plans |
| **Session 6:** Terminating the coaching program | 1.5-h | • Evaluate overall accomplishment of the coaching program | • Evaluation of objectives and overall performance regarding care<br>• Terminate the coaching program<br>• Summary session 6 | Caregivers completed all coaching activities |

**Measurements**

The measurements in this study were as follows:

*The Demographic Data Questionnaire (DDQ)* consisted of data about the caregiver's age, gender, educational level, ethnicity, religion, biological relationship to the patient, monthly household income, number of family members living with the patient, as well as the patient's age, gender, duration of mental illness, present medication, and mental condition (improved, stable/staying the same, or worsened/unstable) over in the previous 6 months.

**Table 2** The characteristics of the caregiver in the two groups

| Variables | Control group (n = 6) | Experimental group (n = 6) | $X^2/t$ statistics | *p*-value |
|---|---|---|---|---|
| | *f* (%) | *f* (%) | | |
| **Age [year; mean (SD)]** | 56.00 (9.83) | 49.33 (12.78) | -1.01 | 0.33 |
| **Gender** | | | | |
| Male | 1 (16.7) | 2(33.3) | 0.44 | 1.00 |
| Female | 5 (83.3) | 4(66.7) | | |
| **Ethnic** | | | | |
| Bataknese | 3 (50.0) | 3 (50.0) | 1.72 | 0.63 |
| Melayunese | 1 (16.7) | 1 (16.7) | | |
| Javanese | 1 (16.7) | 2 (33.3) | | |
| Minang | 1 (16.7) | 0 (0) | | |
| **Religion** | | | | |
| Islam | 1 (16.7) | 3 (50.0) | 1.50 | 0.54 |
| Christian | 5 (83.3) | 3 (50.0) | | |
| **Education level** | | | | |
| Junior school | 2 (33.3) | 1 (4.4) | 2.26 | 0.51 |
| Senior high school | 1 (16.7) | 2 (17.8) | | |
| Diploma | 1 (16.7) | 0 (0) | | |
| Bachelor | 2 (33.3) | 3 (50.0) | | |
| **Income (per month)** | | | | |
| <Rp 1.400.000 | 1 (16.7) | 1 (16.7) | 1.72 | 0.42 |
| Rp 1.400.000 – Rp 2.000.000 | 2 (33.3) | 4 (66.7) | | |
| >Rp 2.000.000 | 3 (50.0) | 1 (16.7) | | |
| **Occupation** | | | | |
| Government employee | 1 (16.7) | 0 (0) | 1.58 | 0.66 |
| Private employee | 2 (33.3) | 2 (33.3) | | |
| House wife | 1 (16.7) | 1 (16.7) | | |
| Entrepreneur | 2 (33.3) | 3 (50.0) | | |
| **Number of family member living with the sick member at home** | | | | |
| 1 – 3 persons | 1(16.7) | 1 (16.7) | 0.00 | 1.00 |
| 4 – 6 persons | 5 (83.3) | 5 (83.3) | | |
| **Relationship with the ill relative** | | | | |
| Spouse | 1 (16.7) | 0 (0) | 2.57 | 0.27 |
| Parent (Mother/Father) | 4 (66.7) | 3 (50.0) | | |
| Sibling (Sister/brother) | 1 (16.7) | 3 (50.0) | | |
| **Duration of caring [years; mean SD)]** | 7.83 (1.32) | 8.83 (2.71) | 0.81 | 0.44 |

*The Knowledge About Schizophrenia Test (KAST)* was used to measure knowledge about schizophrenia on caregivers of persons with schizophrenia [22]. The six domains of the Knowledge About Schizophrenia Test are: causes, symptoms, diagnosis, course, treatments, and self-help. This inventory consisted of 18 items, with "true" (score = 1) or "false" (score = 0) responses to each item. The possible score ranged from 0 to 18. A higher score indicated better knowledge about the illness. The Kuder-Richardson formula (*KR*20) was used to determine the internal consistency. The internal consistency of the KAST was 0.82 and content validity was 0.8.

*The Family Attitude Scale (FAS)* is a self-reporting questionnaire for measuring the emotional climate of a caregiver in relation to a relative with schizophrenia [23]. This questionnaire consisted of 30 items. The answer was rated on a 5-point Likert scale from 0 (never) to 4 (every day). The total score ranged from 0 to 120. A higher score indicate higher levels of criticism. The reliability of the scales was 0.83 and content validity was 0.8.

*The Chiang Mai Psychiatric Caregiving Scale (CPCSS)* was used to measure the caregivers' skills in caring for the schizophrenic psychiatric patient at home [24]. The CPCSS composed a 50 items list of caregiving skills, using a Likert-type scale of 0 to 3: do all the time = 3, know and do but not sure = 3, don't know how to do = 1, and the patient can do it by himself or no condition occurs = 0. This scale was translated into Indonesian and validated on Indonesian caregivers with content validity of 0.8 and reliability of 0.82.

**Table 3** The characteristics of the person with schizophrenia in the two groups

| Variables | Control group (n = 6) *f* (%) | Experimental group (n = 6) *f* (%) | $X^2/t$ statistics | *p*-value |
|---|---|---|---|---|
| **Age [year; mean (SD)]** | 37.83 (9.64) | 31.33 (5.27) | -1.45 | 0.18 |
| **Duration of illness [year; mean (SD)]** | 8.20 (4.78) | 9.04 (5.25) | 0.53 | 0.61 |
| **Number of hospitalization [year; mean (SD)]** | 2.67 (0.81) | 2.17 (0.75) | -1.10 | 0.29 |
| **Type of medication** | | | | |
| Antipsychotic typical | 1 (16.7) | 1 (16.7) | 0.00 | 1.00 |
| Antipsychotic atypical | 5 (83.3) | 5 (83.3) | | |
| **Patient condition** | | | | |
| Improve | 4 (34.8) | 3 (50.0) | 0.34 | 1.00 |
| Stable | 2 (41.3) | 3 (50.0) | | |

**Table 4** Mean rank and sum of rank of all the outcomes of the caregivers' participants

| Outcome | Experimental group | | | | Control group | | | | *p*-value |
|---|---|---|---|---|---|---|---|---|---|
| | Pre-test | | Post-test | | Pre-test | | Post-test | | |
| | *MR* | *SR* | *MR* | *SR* | *MR* | *SR* | *MR* | *SR* | |
| Knowledge about schizophrenia | 8.00 | 48.00 | 9.50 | 57.00 | 5.00 | 30.00 | 3.50 | 21.00 | 0.01* |
| Attitude | 8.08 | 48.50 | 4.25 | 25.00 | 8.08 | 48.50 | 8.75 | 52.50 | 0.03* |
| Caregiving skills | 7.67 | 46.00 | 9.33 | 56.00 | 5.33 | 32.00 | 3.67 | 22.00 | 0.01* |

Note: MR = Mean Rank, SR = Sum of Rank, *p < .05

### Ethical considerations

Ethical approval for the study was granted by the Institutional Review Board (IRB) of the Faculty of Nursing, Prince of Songkla University, Thailand (code: MOE 0521.1.05/2804), and the Ethics Committee from Faculty of Nursing, University of Sumatera Utara, Indonesia. Signed informed consent was obtained from 12 participants before intervention, and confidentiality was maintained.

### Data analysis

The demographic data, both caregivers' and schizophrenic persons' information were analyzed and described with frequency, mean, and standard deviation. The Chi-square and Mann Whitney *U*-test were applied to test the differences of demographic characteristics and to ascertain whether there was a significant difference pre and post-intervention between the groups.

## RESULTS

The results of this study showed that the two groups (6 participants in the experimental and 6 participants in the control group) were not significantly different in characteristics of caregivers (Table 2). Similarly, the results showed that there were no significant differences regarding the schizophrenic persons' characteristics in both groups (Table 3).

The *U*-test analyses revealed that there were no significant differences regarding knowledge ($p > 0.05$), attitude ($p > 0.05$), and caregiving skills ($p > 0.05$) in their baseline measurements (Table 4). However, there were significant differences in knowledge ($p < 0.05$), attitude ($p<0.05$), and caregiving skills ($p < 0.05$) in the coaching group compared to the routine care group.

## DISCUSSION

There were no statistically significant differences in knowledge, attitude, and caregiving skills between the experimental and control group before receiving the coaching program. However, the present study found significant differences between the two groups in the posttest for knowledge, attitude, and caregiving skills. The finding presented that the caregiver coaching program was effective for improving family caregivers' competencies including knowledge, attitude, and caregiving skills in caring for persons with schizophrenia. Improvement of knowledge and attitude may help to improve the ability of caregivers to monitor their sick members' symptoms and to more actively make collaboration interactions with psychiatrist in their treatment.

This finding is congruent with a previous study [25]. They reported that family caregivers receiving coaching had higher parenting skills than family caregivers in the control group. 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 [26].

In the present study, the researcher asked the caregivers to identify their needs for caring, existing knowledge, attitude, and skills, and to help caregivers identify the resources for seeking professional help. The group caregiver coaching helped the caregivers to learn experiences regarding care for one another and how to solve the problems that they faced in providing care for their loved ones with schizophrenia. Each caregiver was encouraged to share their knowledge about schizophrenia, attitude toward schizophrenia, and strategies in dealing with schizophrenic symptoms, medication, and relapse prevention. The researcher also asked them to develop the objectives related to caring needs, set a plan of action, and educating and implementing new skills regarding care. Finally, the researcher evaluated their accomplishment objectives and overall performance, and encouraged continuing self-development plans without researcher monitoring. All of these processes were based on a caregiver coaching program process [15]. A collaborative relationship between the researcher and caregivers brought them to find the best way to provide effective care at home.

On the other hand, individual coaching using phone calls and face to face follow up were important methods for achieving the outcome. The researcher evaluated the implementation of the objectives by action plans and performance by follow up phone calls at week five and week six and the face to face follow up at week seven. The researcher also discussed any difficulties in implementing the plans and helped them to find alternative strategies to solve the difficulties regarding care. Studies showed that using telephone and face to face meetings in the coaching intervention program significantly improved the family caregivers' outcome [17, 27]. The researcher also gave positive reinforcement for successful caregivers in performing new positive attitudes and skills. Most caregivers reported feeling satisfied with the caregiver coaching program. They were more knowledgeable and were able to practice the new skills after entering the caregiver coaching program.

The study was conducted at he "Community Health Center (Puskesmas)" since a new health policy encouraged sychiatric person to live in a normal environment. However, there were some limitations found. This study was conducted in a community where the participants in the experimental and control groups lived in the same area which could lead to interaction between the participants. The generalization of the findings of this study may be limited by the small sample and the short-term follow up. Therefore, future studies of similar intervention should consider strategies for maintaining the therapeutic relationship, longer follow up and different settings.

## CONCLUSIONS

In conclusion, the pilot study supports the feasibility and acceptability of implementing a caregiver coaching program. A quasi-experimental study aimed to examine the effectiveness of a caregiver coaching program for enhancing family caregivers' competencies including knowledge, attitude, and skills in caring for persons with schizophrenia.

## IMPLICATIONS

This study provides evidence that a caregiver coaching program that utilizes nursing intervention can enhance caregivers' knowledge about schizophrenia, attitude, and their caregiving skills. The program consists of clear intervention guidelines and a method to be applied by nurses to assist both nurses and family caregivers providing effective care for their love ones with schizophrenia. The nurse can use the caregiver coaching program either in a hospital or community setting. The health policymakers should consider the coaching program to be one of the important programs in the Department of Mental Health. Thus, using the caregiver coaching program to fulfill the vision of Indonesia to be free from being "pasung" can be achieved. The results also suggest that the caregiver coaching program should be further used with a larger sample size and longer follow up to evaluate the sustainability of caregivers' competencies.

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