Development and Evaluation of a Psychoeducation Practitioner Training Program(PPTP)

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Abstract

The objective of this study was to develop a psychoeducation practitioner training program (PPTP) and to evaluate its usefulness with regard to nursing competencies (knowledge, self-efficacy, attitude, motivation, skills). A mixed-method research design was applied in this study. Some of the quantitative data was a one-group pretest-posttest study. Forty nurses participated in the PPTP, of whom 38 (17 men and 21 women) completed a two-consecutive-day curriculum (dropout rate: 5 %). The PPTP significantly improved nurses' knowledge of, self-efficacy for, and attitude toward psychoeducation. However, the program did not lead to the acquisition of psychoeducational skills.

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In Japan, mental health care is currently undergoing a transformation, in accordance with new government policies under the slogan "from inpatient to community health care". However, the mean period of hospitalization is longer and the number of beds for psychiatric patients in Japan is greater than in other countries (mean duration of hospitalization in psychiatric departments in 2012: 291.9 days; number of beds per 100,000 in 2012: 268.4;) (Health, Labour and Welfare Statistics Association, 2014), and symptoms recur and lead to readmission of many patients.

A survey performed in Western countries showed that the cause of readmission was discontinuation of medication based on self-judgment in more than 70% of patients who were readmitted within one year after discharge (Kissling, 1991). This suggests that recurrence of mental disease is likely to be prevented by improvement of medication adherence on the part of psychiatric patients. In Japan, mental health care institutions have focused on psychoeducation and cognitive behavioral therapy as forms of psychosocial treatment, as represented by Social Skills Training (SST). Particularly in the field of psychoeducation, public perception has been low in Japan, The Japanese Network of Psychoeducation and Family Support Program was established at a national level in 2000, with the aim of its promotion in mental health institutional settings.

In review articles, it has been suggested that psychoeducation for patients with schizophrenia has a beneficial effect for the acquisition of coping skills (Holmes, Ziemba, Evans, & Williams, 1994), improvement of knowledge of illness and medication (Renri, 1995;

Aho-Mustonen, 2011), improvement of illness insights (Chien & Lee, 2013; Chien & Leung, 2013), improvement of medication adherence (Hayama et al., 2002; Pitschel-Walz et al., 2006), and improvement in symptoms (Shin & Lukens, 2002; Aguglia, Pascolo-Fabrici, Bertossi, & Bassi, 2007).

Xia, Merinder, and Belgamwar (2011) reported in a literature review related to randomized controlled trials focusing on psychoeducation for patients with schizophrenia that psychoeducation reduces relapse, readmission, and encourages medication adherence. In a literature review conducted by Pekkala and Merinder (2008), it was concluded that psychoeducational interventions could reduce relapse and readmission rates, and could also improve psychosocial functioning in people with schizophrenia. These results suggest that psychoeducation not only affects re-hospitalization rates, but also supports a higher quality of life in patients discharged from the hospital (Bechdolf, Knost, Nelson, Schneider, Veith, Yung, & Pukrop, 2010).

However, in Japan, only approximately 30% of psychiatric care facilities have adopted psychoeducation so far. This may be because no formal method for learning psychoeducation practice skills has been established, and because there is an insufficient number of psychiatric care workers (numbers of psychiatrists and nurses per 100 psychiatric beds in 2010: 3.4 and 19.2, respectively) (Meeting on Future Mental Health and Welfare, 2009). Nurse teams have the greatest manpower among the health professions and should be able to practice psychoeducation to overcome these problems. Therefore, in 2002, development and dissemination of a nurse-led version of a psychoeducation program for patients with schizophrenia, referred to as Nursing Psychoeducation (NPE) (Matsuda, 2008), was started with support from Grants-in-Aid for Young Scientists (B) and Encouragement of Scientists (C) from the Ministry of Education, Culture, Sports, Science, and Technology. In the process, we interviewed psychiatric nurses to ask their views on obstacles to the introduction of psychoeducation in mental health care settings. Among the obstacles, they cited labor shortages, the fact that its introduction does not bring about benefits, and a lack of knowledge and skills regarding psychoeducation among nurses and other medical staff. This indicates a need for taking action to improve psychiatric nurses' practice of disseminating psychoeducation.

With the aim of disseminating psychoeducation, we, as nurses, have provided information about research results in psychoeducation and its implementation methods through evaluation studies, workshops, and training sessions. Nurses with whom we became acquainted through these activities commented that it was difficult for mental health care institutions to introduce a new intervention program, and therefore the developer of the new

intervention program should support the training of nurses as users of the program. Consequently, we considered that it was extremely important to develop a training program of psychoeducational practice.

Objective

The objective of this study was to develop a psychoeducation practitioner training program (PPTP) and to evaluate its usefulness with regard to nursing competency. Establishment of a method for nurses to acquire psychoeducation skills may lead to improved quality of life for patients, and to the dissemination of psychoeducation to psychiatric facilities across Japan.

Methods

Study Design

A mixed-method research design was applied in this study. The PPTP was taken by psychiatric nurses as an intervention, and changes in the subjects were evaluated qualitatively and quantitatively. Some of the quantitative data was a one-group pretest-posttest study.

Conceptual Framework

The conceptual framework was modeled on the clinical nursing competences by Defloor et al. (2006). In this study, nursing competency was a construct comprised of the knowledge, self-efficacy, attitude, motivation, and skills necessary for nurses to practice psychoeducation (Fig. 1).

Participants

The participants were recruited from among nurses working in all psychiatric hospitals in A Prefecture (n= 42), Japan. The study only included nurses who expressed a desire to participate in it. The researchers provided written instruction for the participants, and obtained signed informed consent from them. Recruitment information was distributed to the nurses by the director of nursing at each hospital.

Intervention

Prior to the intervention, the need for psychoeducation (e.g., interest in psychoeducation, demand for psychoeducation workshops, months and days available to attend psychoeducation workshops) was surveyed among psychiatric nurses in A Prefecture. A curriculum to train psychoeducation practitioners was designed based on the survey results, literature associated with psychoeducation, and the principles of NPE developed by Matsuda (2008).

The contents of NPE are presented in Table 1. NPE is a four-session intervention program whose goal is to improve schizophrenic patients' acceptance of medication and illness, and to improve their medication adherence in acute psychiatric units. Two psychiatric nurses (leader, co-leader) who trained in NPE conducted the intervention.

Original learning materials (textbook and DVD) based on NPE were prepared. Table 2 outlines the contents of the textbook used for PPTP. The program was constructed on a three-step teaching strategy: lecture, audiovisual aids, and role-play (Table 3). The program took place in four seminar rooms in A prefecture, and was conducted over two consecutive days for a maximum of 30 seminar participants. It was felt that if the seminar was conducted in a small group, it could combine five areas of nursing competency for the practice of psychoeducation through discussion between participants and the PPTP developers. The lectures were given using slides and the textbook. During the viewing of the DVD, the NPE developer provided explanations on the practice techniques.

Data collection

Data were collected immediately pre- and post-intervention. The quantitative data were gathered using a structured questionnaire, and the qualitative data by semi-structural group interview. The collected qualitative data concerned the necessary nursing competencies (knowledge, self-efficacy, attitude, motivation, skills) to practice psychoeducation, while the quantitative data measured the competency expected for the skills. Data collection was conducted between May 2013 and August 2014.

Measurements

All structured questionnaires, including their characteristics, were a self-report type questionnaire. Structured questionnaires were as follows:

Characteristics

The characteristics were composed of age, gender, years of nursing, and psychiatric nursing experience.

Critical knowledge of psychoeducation practice

Nurses' critical knowledge of psychoeducation practice was assessed with the **Knowledge of Illness and Drugs Inventory (KIDI**; Maeda, Mukasa, & Ogoh, 1992). This questionnaire consists of 20 items asking participants to agree or disagree, with higher scores representing greater knowledge. The KIDI comprises two sub-scales: 10 for knowledge of illness and 10 for knowledge of drugs. This questionnaire is used to evaluate the usefulness of psychoeducation in Japan.

Self-efficacy for psychoeducation practice

Nurses' self-efficacy for psychoeducation practice was assessed with the **General Self-Efficacy Scale (GSES**; Sakano, 1986). This scale includes 16 items, with three sub-scales: 7 items for behavioral positiveness; 5 items for anxiety about failure; and 4 items for social positioning of one's ability. Participants were asked to agree or disagree, with higher scores representing greater self-efficacy. This questionnaire is commonly used to evaluate nurses' self-efficacy in Japan.

Attitude toward psychoeducation practice

Nurses' attitude toward psychoeducation practice was assessed using the **Japanese Version of the Evidence-Based Practice Attitude Scale (EBPAS-J**; Okumura, Fujita, Noda, & Ito, 2010). Nurses' willingness to practice evidence-based nursing was evaluated using the EBPAS-J. This scale is a modified Japanese version by Okumura et al. (2010), which was originally developed by Aarons (2004), and statistically examines its reliability and validity. This scale was developed because the attitude of service providers influences the dissemination of a new treatment or intervention. The questions address feelings and the potential for adoption of the new treatment or intervention. The EBPAS was used because we believe that improvement of motivation of the nurses participating in the program is essential for the dissemination of psychoeducation. The scale uses a questionnaire consisting of 15 items with a 5-point Likert scale, from 0 (strongly disagree) to 4 (strongly agree).

Motivation toward psychoeducation practice

Nurses' motivation toward psychoeducation practice was evaluated using the **Work Motivation Measurement Scale for Nurses (WMMSN**; Sano & Yamaguchi, 2005). The scale is a questionnaire consisting of 15 items that participants rate on a 5-point Likert scale (1-5 points), with higher scores representing greater work motivation. The

reliability and validity of this scale were examined by statistical methods, but it is a lesser-known scale.

Nurses' perception of psychoeducation practice

Nurses' perception of psychoeducation practice was assessed with an original questionnaire form that consisted of 7 items with a 5-point Likert scale, from 0 (strongly disagree) to 4 (strongly agree). Because of the lack of an appropriate scale for measuring nurses' perception of psychoeducation, we devised this questionnaire. The questionnaire contained the following items: a) "I have an understanding of psychoeducation"; b) "Psychoeducation is an effective psycho-social intervention"; c) "Nurses need to acquire knowledge of psychoeducation"; d) "Nurses need to acquire implementation methods of psychoeducation"; e) "Psychoeducation should be provided by other professions"; f) "I hope to implement psychoeducation at someone's place of employment"; and g) "I hope to acquire implementation methods of psychoeducation".

Group Interview

Qualitative data were collected by performing a semi-structured group interview. The interview was conducted using an interview guide related to nursing competencies, including 'knowledge and skills of psychoeducation acquired by participating in the program'. The group interview was performed after completion of the program for approximately 1 hour and it was recorded using an IC recorder.

Data Analysis

Statistical analysis

Quantitative data were analyzed with SPSS 13.0 Version software. Descriptive statistics were used to characterize the participants. Statistical differences were detected by non-parametric Wilcoxon rank sum test. The significance level was set at $p<.05$.

Content analysis

The interview data stored on the IC recorder was transcribed verbatim. Using the inductive method, the verbatim records were analyzed based on the question of 'whether nursing competencies were increased by participation in the program', and were coded. The codes were classified into five areas of nursing competency.

Ethical Consideration

Prior to its commencement, this study was approved by the Institutional Review Board. After the study contents were explained to the participants based on documents, informed consent was obtained. The explanation covered the purpose and description of the study, the method of data collection, the method of publication of the research results, voluntary participation, freedom of refusal to participate, and the method of protecting privacy and confidentiality. Participants were asked to write their names on the informed consent form.

Results

Characteristics

Forty nurses participated in the PPTP, thirty-eight (17 men and 21 women) of whom completed a two-consecutive-day curriculum, while two withdrew (dropout rate: 5 %). The age brackets were as follows: 20s (n=4), 30s (n=16), 40s (n=10), 50s (n=7), and 60s (n=1). The participants had mean (±SD) nursing experience of 15.21 (±9.14) years, and mean psychiatric nursing experience of 8.47 (±6.48) years. Characteristics of the participants are presented in Table 4.

The number of participants per seminar room was 3 to 15 (mean: 8.0).

Quantitative Part

The mean KIDI total score after intervention was significantly higher than that before intervention ($Z(38) = 2.094$, $p < .05$). Furthermore, between pre- and post-intervention, the 'knowledge of drugs' subscale score had a significant difference ($Z = 3.902$, $p < .05$), but the 'knowledge of illness' subscale score had no significant difference. The total GSES scores showed no significant differences between pre- and post-intervention, whereas there was a significant difference in the 'social positioning of one's ability' subscale score. The EBPAS total scores and the 'openness' ($Z = 3.295$, $p < .001$), 'appeal' ($Z = .3.080$, $p < .05$), and 'requirements' ($Z = 1.981$, $p < .05$) of its subscale scores after intervention were significantly higher than those before intervention, but the 'divergence' subscale showed no significant change (Table 5).

On the other hand, the WMMSN fell short of statistical significance (p=n.s). Questionnaire scores on nurses' perception of psychoeducation showed significant differences in the items 'I have an understanding of psychoeducation' ($Z = 5.245$, $p < .001$) and 'Psychoeducation should be provided by other professions' ($Z = 2.707$, $p < .05$). However, the other items' scores showed no significant change.

Qualitative Part

Content analysis indicated the ways in which nursing competency was influenced by the program in the five areas of nursing competency.

Knowledge was gained through "acquisition of practice images", "acquisition of basis of practice", "understanding of basics of how to respond", and "understanding of basic psychiatric nursing"; self-efficacy was expressed as "I worry whether I can do it well" and "it seems that I can do it"; attitude was reflected in "it leads to improvement of nursing care" and "psychoeducation is necessary"; motivation was influenced based on comments, such as "I want to improve my nursing", "acquiring skills in psychoeducation is necessary", and "I want to prepare for the introduction of psychoeducation"; and necessary skills were as "trying to learn from patients", "paying attention to the strengths of patients", "improvement of basic communication", "acquisition of ability to encourage communication", "not worried about progress", and "acquisition of ability to explain".

Skills of psychoeducation were not acquired, but points emerged that could be improved, such as in daily nursing practice, nurses may not listen to patients or are unable to address open questions.

Discussion

The objective of this study was to evaluate the utility of PPTP, in that the program was developed for the purpose of supporting the implementation methods of psychoeducation for psychiatric nurses. Five areas of nursing competency to practice psychoeducation were used to assess the results of this study.

Knowledge necessary to practice psychoeducation was examined using KIDI. Results found that participants' knowledge increased by intervention as a whole. In particular, the "knowledge of Drugs" subscale score showed significant differences between pre- and post-intervention. Furthermore, knowledge was also examined by original questionnaire, and it showed improvement of knowledge. According to the interview conducted after intervention, participants gained knowledge through the materials used in the PPTP, such as "understanding of basic psychiatric nursing", "acquisition of practice images", "understanding of basics of how to respond", and "acquisition of basis of practice". Thus, the program might provide an opportunity for nurses to reaffirm basic knowledge of psychoeducation practice in mental health care settings.

In an article written by Cynthia and Garry (2012), it is argued that psychoeducation for serious mental illness is a specialized intervention that requires fairly extensive knowledge of

the associated content in biological and psychosocial areas. The PPTP was considered to help participants develop an extensive knowledge of psychoeducation in a short period of time.

Nurses' self-efficacy was assessed with GSES. According to the results, the 'social positioning of one's ability' subscale score indicated a statistically significant difference. These positive results were found in GSES as well as in the original scale. Furthermore, the results of the qualitative study showed positive self-efficacy, such as "it seems that I can do it", whereas the program had a negative influence on self-efficacy, as expressed by the statement 'I worry whether I can do it well'. These results imply that the nurses who participated in the PPTP exhibited affective ambivalence, and they could not improve their self-efficacy toward the implementation of psychoeducation. Although efficacy beliefs contribute significantly to human motivation and attainment (Bandura, 1995), if the nurses who participated in the PPTP have a successful experience of conducting psychoeducation, this may improve their self-efficacy, which may help them to introduce psychoeducation in several mental health care settings.

The results obtained for nurses' attitude toward psychoeducation were as follows:

The scores for the EBPAS subscales of 'openness', 'appeal', and 'requirements' significantly improved. These results were supported by qualitative research, such as "psychoeducation is necessary" and "it leads to improvement of nursing ability". In particular, improvement of the subscales of openness and appeal showed that the PPTP provided not only satisfaction with the contents of the program (lectures, DVD, and role-play) but also increased interest in psychoeducation for the participants. These results are consistent with our previous study, namely, that to develop new psychosocial intervention programs it was necessary to demonstrate the effectiveness the intervention, to develop a curriculum to train practitioners using the intervention, and to develop a training method to acquire intervention skills (Matsuda & Kono, 2011).

Nurses' motivation toward psychoeducation was assessed with WMMSN, and the results showed no significant change. However, the interview indicated a positive change in nurses' motivation, such as "I want to improve my nursing" and "I want to prepare for the introduction of psychoeducation". This indicates that the program improves the motivation to prepare for the introduction of psychoeducation, but that it does not increase nurses' work motivation as a whole. If nurses are able to become aware of the positive changes in patients with schizophrenia through the practice of psychoeducation, this may lead to improvement in nurses' work motivation. In the future, it will be necessary to conduct a longitudinal study on the PPTP.

As a result of the group interview, the nurses recognized the need for skill improvement,

such as "improvement of basic communication", "acquisition of ability to encourage communication", and "acquisition of ability to explain"; thus, the program did not lead to the acquisition of psychoeducational skills. In a study conducted by Chadzynska and Chaizynska, (2011), it was demonstrated that the qualities necessary for a therapist in psychoeducation are “able to listen and talk”, “trustworthy”, and “communicating in a clear straightforward way”. Thus, nurses using psychoeducation are required to have high communication skills, therapeutic skills, and education skills.

Donna (2011) described that effective communication to enhance patient adherence includes specific teaching and communication strategies, such as relationship skills, building trust, nonverbal communication, responding to patients’ verbal cues, and establishing goals for communication in patient teaching. Therefore, these communication skills might be essential to implement psychoeducation for patients with schizophrenia.

It was suggested that the contents of the PPTP should be modified, and follow-up training be added to the program in order to strengthen the acquisition of psychoeducational practices.

Limitations and Future Studies

Some limitations of this study are worth noting.

First, the research design of this study was a one-group, pre-test/post-test study design aimed at psychiatric nurses in one prefecture, and the sample size was small. Thus, the findings of this study might not be generalizable to nurses who work in psychiatric hospitals across the country. In the future, the evaluation of the PPTP should be conducted using a larger sample and employing a viewpoint about long-term effects. Second, the PPTP is designed to improve fundamental nursing competency in the process of development from a nurse to a psychoeducation practitioner, but it does not allow direct acquisition of psychoeducation practice skills. Thus, it will be necessary to modify the program to strengthen the acquisition of these skills. We have to obtain further evidence on psychoeducation for patients with schizophrenia, and to continue organizing and implementing workshops using the PPTP, because psychoeducation may prove to be a useful nursing intervention for improving psychiatric patients’ quality of life.

Conclusions

The PPTP was developed to train nurses as psychoeducation practitioners. The PPTP was not able to directly support the acquisition of particular skills of psychoeducation for psychiatric nurses; however, the quantitative and qualitative data in this study indicated that

the program generally improved those nursing competencies required to provide psychoeducation. Additionally, the program only supported the acquisition of fundamental psychoeducation practice skills. Thus, in a future study, it will be necessary to consider a methodology of the program to reinforce these skills.

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Table 1
Contents of the NPE

Goals:
The aims of NPE are to encourage schizophrenic patients to accept medication and illness, improve their medication adherence, and protect against the relapse of symptoms.
Time:
60-90 minutes/day, one day/week, total 4 days
Group structure:
A closed group with 5-7 participants
Method:
Information based on a textbook and sharing of experiences
Learning materials: Textbook
1. Types of symptoms of psychogenic illness
2. Association between psychogenic illness and stress
3. Primary effects and side effects of medication
4. How to adjust to living with illness in the community

Table 2

Contents of textbook used for PPTP

Fundamentals of psychoeducation
A summary of NPE
Basic knowledge of illness (causes of schizophrenia, stress-vulnerability model, symptoms of schizophrenia, factors affecting patients' daily living, prognosis of patients with schizophrenia)
Basic knowledge of treatment (pharmacological treatments, psychosocial treatments)
Basic knowledge of nursing (nursing theory, communication skills, necessary perspective for psychiatric nurses)
Practice of NPE
・**Therapist attributes in psychoeducation** (waiting for patients, finding patients' strengths, improving patients' self-efficacy, helping patients to recognize universality, helping patients to solve problems, learning about patients' experiences with illness)
・**Skills required to provide psychoeducation** (positive feedback, reframing, coping question, dry run, modeling)

Table 3

Methods of the PPTP

Learning materials: Prepared textbook and DVD
Time: 8 hours/day for 2 consecutive days
Group structure: A closed group with not more than 30 participants
Methods:
・ Lectures: Basic psychoeducation principles (Summary of NPE; basic knowledge of diseases, treatment, and nursing. Lectures were given by the NPE developer.)
・ DVD: Showing simulated psychoeducation practices
・ Content of the DVD: a simulation with the NPE developer playing the leader role and nurses with experience in NPE practice playing co-leader and patient roles
・ Role-play: These activities were followed by role-play of NPE among the participants. (Participants played nurse and patient roles. Other participants and PPTP developers provided feedback, comments, and advice.)

Table 4

Demographic Characteristics of the Study Sample (N=38)

Characteristic		N or Mean (% or SD)	
Gender	Male	17	(45%)
	Female	21	(55%)
Age	20s	4	(11%)
	30s	16	(42%)
	40s	10	(26%)
	50s	7	(18%)
	60 and over	1	(3%)
Years of experience as a clinical nurse		15.21	(±9.14)
Years of experience as a psychiatric nurse		8.47	(±6.48)

Table 5

Changes in pre-post scores on nursing competency (N=38)

Scale	Median (Range)		Pre-Post Positive Ranks	Pre-Post Negative Ranks	*Z*-value	
	Pre	Post				
KIDI						
Total	17.5(13-20)	18(16-20)	21	6	2.094	*
Illness	9(6-10)	9(7-10)	18	8	1.671	
Drugs	9(6-10)	10(8-10)	13	1	3.092	*
GSES						
Total	7.5(0-15)	7(0-16)	14	8	1.082	
Behavioral positiveness	3(0-7)	3.5(0-7)	17	7	1.682	
Anxiety about failure	3.5(0-5)	3(0-5)	5	11	-1.586	
Social positioning of one's ability	1.5(0-4)	2(0-4)	12	4	2.134	*
EBPAS						
Openness	9(3-16)	10(4-16)	24	9	3.295	**
Divergence	13(7-16)	13(7-16)	20	12	1.070	
Appeal	11(4-16)	12(6-16)	22	9	3.080	*
Requirements	6(1-12)	6(2-12)	17	8	1.981	*
WMMSN						
Total	57(33-73)	56(30-73)	16	15	-.344	
Current work motivation	36(12-49)	35(10-49)	16	18	.456	
Future work motivation	22(16-25)	21(13-25)	11	16	-1.554	
Questionnaire on nurses' perception of psychoeducation						
I have an understanding of psychoeducation	2(2-4)	3(1-4)	31	0	5.245	*
Psychoeducation is an effective psycho-social intervention	3(3-4)	3(2-4)	9	3	1.807	
Nurses need to acquire knowledge of psychoeducation	4(2-4)	4(3-4)	5	6	-.302	
Nurses need to acquire implementation methods of psychoeducation	3(1-4)	3(2-4)	7	9	-.500	
Psychoeducation should be provided by other professions	3(1-4)	3(2-4)	14	3	2.707	*
I hope to implement (or continue) psychoeducation at someone's place of employment	3(0-4)	3(2-4)	5	4	.811	
I hope to acquire implementation methods of psychoeducation	4(1-4)	3(2-4)	4	7	-.535	

Wilcoxon Signed Ranks Test

*:$p<.05$

**:$p<.001$