



Efficiency of Psycho-Education Program in increasing knowledge and reducing burden of Care for Sudanese Caregivers of Patients with Schizophrenia

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ABSTRACT:

Background: This article explored the efficiency of family psycho-education intervention (FPP) in increasing the knowledge and reducing the burden of care for Sudanese caregivers of individuals with schizophrenia. **Methods:** Caregivers of patients diagnosed with schizophrenia in outpatients' hospitals were assigned to the intervention program. Pre and post measurements were applied for the assigned group. The psycho-educational program consisted of ten 180-min sessions held for ten weeks. Caregiver Burden (ZCB) scale and questionnaire were measured at baseline and after the intervention. **Results:** There was statistically significant increase on the level of knowledge and decrease of the burden of caregivers following FPP intervention. **Conclusion:** Results suggest that psycho-educational intervention for Sudanese family members caring for patients with schizophrenia would increase caregivers' knowledge about the illness and reduce difficulties families are facing which might improve their psychological health.

Keywords: Psycho -education, schizophrenia, caregivers, Burden of care, knowledge.

BACKGROUND:

Schizophrenia is a chronic mental illness that has a significant impact not only on patients but also on their entire families. Caregivers take on the responsibility accepting the burden of providing a comprehensive care for their patients. Approximately there are 50% and 80% of patients with schizophrenia live with or have regular contact with family members) Lehman, 1998, 1). Patients depend on their relatives for housing, emotional and financial support. Therefore, the quality of their relationships significantly impacts the family atmosphere where in return affect the psychological health for the whole family (Dixon, 2000, 18). However, these families report high levels of burden related to caring for a member with schizophrenia (Solomon, 1995, 419).

Psycho-educational approaches intended to increase knowledge and insight into the illness and its treatment. The goal of psycho-education is behavioral change, which leads to better treatment adherence. A psycho-educational program designed for patients with schizophrenia generally teaches participants that schizophrenia is a brain disorder which partially helped by medication (Partnering with Families, 2009, 868). There was another definition of psycho-education with respect to schizophrenia patients. It states that it is an intervention that has systematic psychotherapeutic interventions aimed at providing

information to patients and their families regarding the illness, treatment, and possible measures to prevent the illness (American Psychiatric Association, 2004). It emphasized the importance of viewing cases and situations to help families handle the illness and cope with the disorder. Many studies have showed that there is a need for organizational and structural implementation of a “family friendly service” (Sun Kyung, 2002, 1125)

In 1980, there was a gradual decrease in schizophrenia patients’ duration of stay within medical institutions, which indicated the economic use of effective therapeutic resources. Through time, patients and their family members started to demand compact and efficient treatments that are not only inexpensive but helpful in treating chronic diseases (McFarlane, 2016, 82). Furthermore, mid-eighties of the previous centuries witnessed the growth of independent psycho-education trends. According to Grácio (Grácio,2018,12) the new trend was undertaken by medical professionals with the aim of developing well-defined curriculum and strategic therapeutic methods that adopted for impaired patients who had symptoms of schizophrenia.

Medical and various means have proven the need for developing the capacity of family members in managing the disease. This include facilitate knowledge and create healthy environment where patients and their families would be able to arrive at reasonable health management. Researcher has discussed the burden on caregivers as a globally recognized issue. According to World Federation of Mental Health’s report family support requires energy, sensitivity, and efforts to be emphasized upon care providers to those chronic conditions (Akbari, 2018, 329).

Problem Statement

Most of Sudanese families of individuals with schizophrenia lack the access to adequate knowledge about the disorder and healthier strategies to communicate with their patients. Family psycho-education proposes to supply caregivers with Knowledge, skills, and facilitate comfortable atmosphere where stress is reduced, and self-care is obtained. Muela and Godoy indicated that there is “something in the family interaction that seems to cause a relapse of the patient and seems to influence the course of the disease, instead of being the origin of the same” (Muela, 2001, 18).

Despite the current emphasis on community-based care and family psycho-education for seriously mentally ill patients ((Dixon, 2000, 8), these approaches have not been attempted in Sudan. In 2008, healthcare policy and regulations were revised with the aim of improving mental disabilities among patients suffering from schizophrenia and other psychological problems (Wylie, 2016, 11). It is stated in the study presented by Sanhori et al. (Sanhori, 2019, 2) that Sudanese government paid little attention to these policies. Accordingly, there were only a few signs of mental health improvement among patients. Moreover, it is also inspected that due to shortage of psychiatric doctors and trained professionals, patients are unable to receive effective treatments whereas the awareness among population regarding the improvement of mental health is also limited (Sanhori, 2019, 4) This shows that Sudan has major medical-based problems that have affected patients and their families. Moreover, the approach for addressing schizophrenia through preventive methods and other means has not proven to be viable as concerns the Sudanese society.

According to this, it seems reasonable to dedicate research and clinical resources to determine the needs of caregivers to improve the family environment and, consequently, maximize their abilities to foster their ill person recovery. Family psycho-education

might have positive impact on the entire family in reducing stress by increasing the knowledge about the disease, teaching new skills on coping strategies and problem solving. It would lessen families' suffering if they can provide knowledgeable support. The increased number of individual with schizophrenia in Sudan and lesser opportunities available for caregivers to gain relevant information has led the Researcher to undertake the present research to contribute to the field by assessing the efficiency of FPP in Khartoum. It sheds light and recognizes the significant role families can have on their relatives' functioning, rehabilitation, and recovery.

METHODS:

The present study has adopted the quantitative method for achieving its objectives through answering the below questions.

- Does Family Psycho- education intervention increase the knowledge of caregivers of individuals with schizophrenia?
- Does Psycho-education program reduce the burden of care of caregivers of individuals with schizophrenia?

The researcher has designed facilitators guide and participants booklet that cover the ten sessions which include specific goals, contents and activities. On the other hand, two tools were generated to measure the efficiency of psycho-educational program; Zarit Caregiver Burden (ZCB) Scale (Zarit, 1980, 55) and a questionnaire to test differences between pre and post questions on their knowledge.

Research Design: The design is a quasi-experimental using pretest-posttest type. Dependent variables were measured twice; once before intervention implementation and once after. In the pretest–posttest design, researchers gather data about some outcome through a single pretest, administer a treatment, and then gather posttest data on the same measure. Researcher implemented and evaluated the efficacy of a psycho-educational intervention program on caregiver's burden of care.

Sampling and Study area: The researcher used convenience sampling method, which is a non-probability/non-random sampling technique used to create sample as per ease of access, readiness to be part of the sample, availability at a given time slot. Thirty-one caregivers providing care for individuals with schizophrenia for more than 6 months were assigned a psycho-educational intervention program. Baseline characteristics of the disease and the demographic variables were assessed using a semi-structured interview with family members and guardians. The current study implemented and evaluated the efficacy of FPP intervention on caregivers of individuals with schizophrenia in Khartoum area in two outpatients' psychiatric hospitals; Altigani Almahi hospital and Fath-Alrahman aLBasheer Center.

Statistical Analyses: Pre and post tests were generated, and the differences were statistically calculated and interpreted. Data was analyzed with the SPSS software. Quantitative method was utilized for all variables. The Independent Sample t-test was used for the comparison of quantitative variables between pre and post- test. In the analysis stage 3 participants' data were excluded because they were missing information on the post-test scale.

Ethical Considerations

Official permission was obtained from Medical manager in Al-Tigani Almahi Hospital and Fath-Alrahman Albasheer Center. Researcher referred to health affairs department in Ministry of Health for the ethical committee approval.

Family Agreement Procedure

In an easy legible format, official permission was taken from patients' families. Caregivers were given the option to participate in the program and their phone numbers were taken personally to arrange for the time and location. Researcher assured families and their patients that their Identities won't be known and confirmed coding style for their numbers.

Program Overview

Researcher developed a program facilitator resource kit and participants' booklet. The material contained in both resources relate to the focus of each session goal and objective.

Figure 1: Content of Family Psycho-education Program

Session Number	Objective
Session 1 Introduction to the Program	Researcher will focus toward building a group identity with the sense of commonly shared interest; establish a corporation between all participants by creating warm atmosphere where family members feel secure to share experiences and feelings.
Session 2 Informative; what is schizophrenia, symptoms, and possible treatment	Family members obtain accurate information about schizophrenia; understand how it impacts their patients, and the treatment options.
Session 3 Coping strategies for specific symptoms of schizophrenia	Family members understand the dynamics of symptoms, so they can provide effective support accordingly, also to cope with symptoms when they appear.
Session 4 Improve communication with an individual who has Schizophrenia	Family members learn new approaches to communicate with the individual with schizophrenia to reduce stress and improve satisfaction for both family members and patient.
Session 5 Practice of communication strategies	Application of communication skills
Session 6 Problem solving technique	Families learn problem solving techniques, recapture, and practice social skills they might have lost due to their long isolation and exposure to high levels of stress. In addition, families will be able to manage the symptoms of the illness beyond the multifamily group.
Session 7 Applications for the steps	Application of Problem-solving techniques
Session 8 Applications for the steps	Application of Problem-solving techniques
Session 9 Develop self-care strategies. Closing session	Enable Families to understand the important of self-care, develop self-care plan to and put it into action. Group Facilitator will assure that members of the group gained knowledge, learned new skills from psycho-education program, and obtained follow up procedures.

RESULTS:

31 caregivers completed the FPP intervention; data for 3 participants were excluded as they missed major information for the analysis. Majority (82.1%) of participants are females, compared to (17.9%) males. Bulk (46.4%) of participants was between 36-45 years old, (25%) were between 15-25 years, and (10.7%) were between 26-35 years or

46-55 years, while (7.1%) were between 56-65 years old. The education level for the bulk (53.6%) of participants was a diploma, (14.3%) had a university degree, and (17.9%) had a secondary school certificate, while only (3.6%) of them had primary or intermediate school level education. (46.4%) of participants were workers, (35.7%) of them were jobless, and (17.9%) were doing free business.

Monthly income for most (67.9%) of participants was average, while for (21.6%) was comparatively low. Results showed that show that the bulk (67.9%) of participant had a fair relationship with individuals with schizophrenia, (25.0 %) of them had good relationship, while only (3.6%) of them had bad relationships.

Researcher used (One-sample test) to measure the level of burden of care for participants before the FPP. It shows the following result :(DF=27)

Figure 2: Level of Burden of care before FPP Intervention

	No	Mean	ST-D	Average theoretical	(t)	SIG	Result
burden of care	28	40.96	9.834	45	2.272-	39.	Significantly (the level of burden before program is low

Figure 3: Shows differences in the mean score of pre-test and post-test on Caregivers' burden of care scale

The variable	NO	Type of measure	Mean	ST-D	(T)	Sig	Result
Burden of Care	28 28	Pre Post	40.96 35.79	9.834 8.561	3.071	005.	Statistically (there are differences between pre and post

Figure 4: Shows the frequencies on Knowledge questions

	N	Pre		post		Results		
		F	p	f	p	There are differences between pre and post Questions	There are differences between pre and post Questions	There are differences between pre and post Questions
Individuals with Schizophrenia personalities have several	Yes No	27 1	96.4 3.6	4 24	14.3 85.7	There are differences between pre and post Questions		
Individuals with Schizophrenia are danger for other	Yes No	24 4	85.7 14.3	2 26	7.1 92.9	There are differences between pre and post Questions		
Better to convince individual with schizophrenia that delusions or hallucinations are not true or real	Yes No	26 2	92.9 7.1	3 25	10.7 89.3	There are differences between pre and post Questions		
Do you know when and how communicate with schizophrenic	Yes No	17 11	60.7 39.3	28 -	%100 -	The difference is 100 percent		
Do you give the Schizophrenic options to solve their problems	Yes No	17 11	60.7 39.3	27 1	96.4 3.6	There are differences between pre and post Questions		

DISCUSSION:

The current study focused on the impact of psycho educational intervention in Sudanese families that have a member diagnosed with schizophrenia. Even though results pre to the intervention have showed that burden of care was low, results of our psycho educational

intervention were encouraging and the caregivers in intervention program indicated a significant decrease in the level of burden and increased in their knowledge. This might be a result of family's awareness of strategies for dealing with daily problematic situations (Bandeira, 2007, 50). The findings of the present research support this hypothesis. According to Nasr and Kausar (Nasr, 2009, 8) similar results were reported from a similar study done in Pakistan. Chang and Chan (Cheng, 2005, 99) state that burden is placed on the families of schizophrenia patients in terms of providing them with quality care and treatments so that they could survive their illness easily. It can be gathered from the findings of this research that the caregivers' burden was found to be reduced after they have been part of FPP and were better able to provide the care needed to their patient without draining them physically and emotionally. Before receiving the psycho-education, the mean scores of burdens of care were higher 40.96 whereas it dropped to a mean value of 35.79 after the caregivers received the psycho-education. The findings also confirm the findings of Martin-Carrasco et al (Carrasco, 2016, 33) who conducted similar study in Spain. Previous research show that psycho-education programs increase the knowledge of care-givers, decrease their stress levels, reducing negative attitudes towards patients and improving quality of life and general health conditions of care-givers which in turn reduce the burden of care. The results confirm that the psycho-education of care-givers makes them more empathetic towards the patients and they are better able to understand their needs which reduced the burden of care significantly.

In addition, our results may be related to family orientation of patients' symptoms and behavior, and to their skills of coping with them, consistent with other studies (Borkman, 1999). Because of our intervention, family members may have learned to understand effective ways to express emotions and problem-solving techniques. Likewise, Xiong and her colleagues in their study about family-based intervention for schizophrenic patients in china mentioned that families were better able to supervise the patients' use of antipsychotic drugs and enhanced treatment compliance which had significant improvement in patients' symptoms. (Xiong, 1994, 247) In addition, Niksalehi and colleagues, reported that telephone follow-ups were less effective compared with the effectiveness of nursing home care services for schizophrenic mental conditions (Niksalehi, 2014,445).

Medvene and Krauss found that shared experiences between members of the group of caregivers of the mentally ill resulted in increased relief when talking with other caregivers about their problems in care giving situations (Borkman, 1999). In addition, several studies have reported that the interactions between caregivers in groups may escalate chances for emotional support and practical help, which is extended to the post-intervention period (Citron, 1999, 30). Family psycho educational intervention may have a positive effect on family burden by reducing many patient risk factors. This is consistent with the positive therapeutic effects of psycho education on family burden reported by other authors (Dyck, 2002, 754). Also, Reza and colleagues (Reza, 2004,7) in their study indicated that psycho-education programs can empower social adjustment of Iranian psychiatric patients.

In Sudan, families are characterized by their close interpersonal relationships and many interactions among family members. Therefore, illnesses in one family member might result in a significant burden for the whole family. The results generated after psycho

educational intervention were encouraging, and the caregivers reported significant decrease in family burden. FPP intervention positively impacted families and helped them obtain knowledge of patient's symptoms and abnormal behavior. Also, they might have learned practical skills of coping with them. Family caregivers may have learned to understand effective ways of expressing their emotions and regulate them.

Ultimately, there is an evidence-based in the literature that support our assumption and main hypothesis on the effectiveness of FPP intervention and its positive impact on increasing caregivers' knowledge and reducing their burden of care. These results suggest that psycho-educational intervention for Sudanese caregivers of patients with schizophrenia has positive outcomes for families, which might have positive impact for their patient's recovery and adaptation.

CONCLUSION:

The current findings show the efficacy of a family psycho-educational intervention in increasing knowledge and reducing caregivers' burden in Sudanese sample. These results suggest that psycho-educational intervention for family members of patients with schizophrenia has positive outcomes for families, which might have positive impact for their patients. Further research on this approach is needed for family caregivers from culturally different backgrounds in the Sudanese population as well as the populations of other countries. Extended follow-up periods are recommended to determine the long-term effects of family psycho educational intervention on outcomes for patients and their families.

LIMITATIONS:

Our study had some limitations. The sample size was relatively small, so larger studies are needed to confirm these results. There was no follow up measurement; therefore further studies are needed to confirm the long-term effects of this family psycho-educational intervention. Also, more studies are recommended to perform and apply different models of psych-education.

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