

## EVIDENCE BASED PRACTICE: THE EFFECTIVENESS OF GROUP PSYCHOEDUCATION FOR MEDICATIONS ADHERENCE AMONG INPATIENT ADULTS WITH SCHIZOPHRENIA IN PSYCHIATRIC AND MENTAL HEALTH SETTINGS

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### Introduction

More concern is increasingly being given for those clients with schizophrenic disorder around the world, especially for hospitalized clients with nonadherence for medications and treatment regime. During the period of nonadherence for medication, the risk of relapses of mental health disorders increase among clients with schizophrenic disorder. Therefore, the effectiveness of group psychoeducation for medications adherence among inpatient adults with schizophrenia in psychiatric and mental health settings has become the target of many studies and research.

The term schizophrenia was used for the first time by the Swiss psychiatrist Bleuler to indicate a group of disorders or a major mental disorder (World Health Organization [WHO], 1998). Moreover, Schizophrenia was defined by Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) as abnormalities in one or more of the following five domains: hallucinations, delusions, disorganized thinking (speech), abnormal motor behavior (including catatonia) or grossly disorganized, and negative symptoms (DSM-5, 2013), and impairment of emotion and cognition (Tarrier & Wykes, 2004), with very poor social and occupational outcomes, which resulted in an 80% unemployment rate among patients with schizophrenia (Kuipers et al., 2006; Tarrier & Wykes, 2004).

Around 250,000 people in the United State of America live in prisons or in the streets, and about 46% of them have been diagnosed with schizophrenic or bipolar disorder (Neurobiology Foundation, 2012). In addition, more than 40% of chronic schizophrenia patients attempt suicide many times, because more than 50% of them don't receive treatment (Neurobiology Foundation, 2012). The prevalence of schizophrenia in the world approximately affects seven of 1000 in the adult population (Tusaie & Fitzpatrick, 2012). And about 2.3 million adults suffer from schizophrenia in the United States of America (Neurobiology Foundation, 2012).

Furthermore, there is increase of mortality and morbidity rate among individuals with schizophrenia (Saha, Chant, & McGrath, 2008). The burden of schizophrenia in western countries is expected to increase to 1.6% to 2.6% of total health care burden (WHO, 1998). In addition, it will increase the burden of schizophrenia on the health care system in the United State of America to reach 62.7 billion dollars (Wu et al., 2005).

### Abstract

**Objective:** One of the greatest barriers to treat clients with schizophrenia is nonadherence to medications regimen, and low levels of knowledge about their medications and side effects. Therefore, this evidence based practice paper examined the effectiveness of group psychoeducation for medications adherence among inpatient Adults with schizophrenia in psychiatric and mental health settings.

**Method:** Studies were selected by Electronic searches of CINAHL, Pub-med, and MEDLINE, for the years between 2009 and 2013. The criteria of selection were to select all relevant systematic review and randomized controlled trials focusing on the effectiveness of group psychoeducation for schizophrenic clients.

**Conclusions:** Group psychoeducation for medication adherence has proven to be effective in improving medication adherence among inpatient adults with schizophrenia in psychiatric and mental health settings, and a positive effect on decreased relapses and rehospitalization; and reduction of the length of hospitalization. Furthermore, it increases quality of life, self satisfaction, self-efficacy and self-esteem among these clients.

**Key words:** group psychoeducation, schizophrenia, group psychoeducation for client with schizophrenia, medication adherence, improve medication adherence.

The antipsychotic medications are considered as the first line in the treatment of clients with schizophrenia (Kuipers et al., 2006; Pilling et al., 2002), in which they have been found to be effective in dealing with acute psychosis and in preventing relapse. However, there is an increasing acknowledgement that pharmacological treatment alone, is insufficient for the best outcome in this disabling condition (Pilling et al., 2002).

The basic treatment for schizophrenia is antipsychotics. Major tranquilizers or antipsychotic often decrease the positive or negative symptoms of schizophrenia and don't remove the chronic symptoms of disorders (Clark, Finkel, Rey, & Whalen, 2012). Furthermore, there are two types of antipsychotic, first generation and second generation; the first generation is classified to low and high potency according to their affinity for the dopamine D2 receptor. The mechanisms of action for antipsychotic medications in the second generation are dopamine receptor blocking activity in the brain and serotonin receptor blocking activity in the brain (Clark, Finkel, Rey, & Whalen, 2012).

Today's psychoeducation appears as an essential component of the comprehensive treatment for schizophrenic clients and all clients should be benefiting from psycho-education programs (Aho-Mustonen, 2011). Psychoeducation developed through the past four decades to treat both mental illness in addition to schizophrenia and has proved its usefulness for patients and their families (Bisbee & Vickar, 2012).

Psychoeducation was initiated in the mid-1970's at Bryce Hospital in Tuscaloosa, Alabama, for education and treatment of patients with schizophrenia in a comprehensive manner about the disease and methods of treatment (Bisbee & Vickar, 2012). Furthermore, Psychoeducation not only enhances the patient's knowledge but, also teaches the patient and family how to cope with symptoms and increase their skills to prevent relapse and help recover. On the other side it decreases the burden of family and increases quality of life (Bisbee & Vickar, 2012).

Group therapy approach to psychoeducation had a variety of aspects, with a diversity of theoretical orientations. Moreover, groups are offered foundation on reality therapy, gestalt therapy, transactional analysis, client-centered therapy, and other multiple theoretical approaches (Bisbee & Vickar, 2012). The first use of group psychoeducation was by Dr. Joseph Pratt, in 1905 with classes of education to educate tuberculosis patients (Ruitenbeek, 1970).

Non adherence to medications is considered one of the biggest cost issues in health care and quality problems and cause of loss of productivity, high health care costs, and poor clinical outcomes (PHRMA, 2011). In addition, the risk of relapse, negative outcomes and

affecting the course of schizophrenia are increasing with poor adherence to client's medications (Petretto et al., 2013). Furthermore, more than 50% of prescriptions are administered incorrectly. The direct costs of nonadherence to medications in the United State of America is 100 billion dollars, and more than 1.5 billion dollars as indirect costs in addition to 50 billion dollars from lack of productivity (Peterson, Takiya, & Finley, 2003).

Therefore, clients with schizophrenia are considering a high risk group for medication nonadherence, which increases the risk of relapse and health care improvement, in addition to, increasing risk of social, financial, and educational impairment.

### Purpose of the Study

The purpose of this paper is to examine the effectiveness of group psycho-education for medication adherence among in-patient adults suffering from schizophrenia in the National Center for Psychiatric and Mental Health (Al-Fuhais), and to determine medications psychoeducation benefits, and how it is applied.

### The Study Questions

Is group psychoeducation for medication adherence enhancing medications adherence among adults with schizophrenia in psychiatric settings?

Are adults with schizophrenia who get group psychoeducation for medication adherence having higher medication adherence than adults with schizophrenia who didn't get group psychoeducation for medication adherence?

Does medication adherence increase among adults with schizophrenia who get group psychoeducation for medication adherence more than adults with schizophrenia who didn't get group psychoeducation for medication adherence?

### Literature Review

The purposes of literature review are to examine the effectiveness of group psychoeducation for clients with schizophrenia and specifically in medication adherence, and determine methods of applications.

Group therapy psychoeducation has a variety of aspects, with a diversity of theoretical orientations. Groups are offered foundation on reality therapy, gestalt therapy, transactional analysis, client-centered therapy, and other multiple theoretical approaches (Bisbee & Vickar, 2012). Group therapy was partly started by Dr. Joseph Pratt, in 1905 as classes of education to educate tuberculosis patients (Ruitenbeek, 1970).

A systematic review was conducted in 2011 in the United Kingdom, to evaluate the effectiveness of medications psychoeducation among adults with schizophrenia and

compare with previous knowledge levels for the clients. The review included 44 trials between 1988 to 2009, all of them randomized control trials, and consisting of 5142 participants. The average duration of the study was around 12 weeks. Findings are increased medication adherence in the short term among the psychoeducation group, decrease of relapse among psychoeducation group, enhancing quality of life and social activities with functional skills (Xia, Merinder &, Belgamwar, 2011).

In addition, a systematic review in 2009 included 10 studies with 1125 participants, to evaluate the effectiveness of psychoeducation and compared the results with previous knowledge; search strategy was electronic searches and all research was of experimental design, between 1966 to 1999. Data collection was independently reviewed by more than one reviewer. Psychoeducational intervention was in the form of brief group psychoeducation around one year. Findings were increased medications adherence and decreased rate of readmission or relapse to nine to eighteen months; others results were increased knowledge among interventional patients, increased mental and global functioning, and enhanced emotional expressing (Pekkala & Merinder, 2009).

Furthermore, a study was conducted in Finland in 2011, to examine the effectiveness, feasibility, and clients' experiences of group therapy. The secondary objectives of the study were to examine their satisfaction and expectations about intervention. The psychoeducation focused on information, participation, support and sharing. The data were collected between 2001 to 2006 in three phases. The study sample consisted of 39 forensic patients with schizophrenia. Findings were clients knowledge about their disorder was enhanced, increased self-esteem, increased awareness of their disorder and increased medication adherence. The psychoeducation appears as holistic treatment (Aho-Mustonen, 2011).

A randomized controlled trial study was conducted in Italy in 2013; the aim of the study was to assess changes in medication adherence with schizophrenic clients. The study was done by comparing the psychoeducation program group with another group of family supportive therapy. The sample of the study included 340 clients with schizophrenia. Methods of research were on psychoeducation and family support therapy for six months and reassessed at six, twelve and eighteen months after intervention. Medication adherence was assessed at 3 months after intervention by using the Medication Adherence Questionnaire, and high pressure liquid chromatography and compared it with essential results. Findings were that, psycho-education enhanced medication adherence and decreased readmissions and relapse (Petretto et al., 2013).

A randomized controlled trial study from the United State of America in 2009 was done to assess the

effectiveness of psychoeducation to increase awareness of cognitive dysfunction for schizophrenic clients, increase insight, and increase medication adherence. The study sample of 80 participants with schizophrenia, was divided into two groups, one control and another interventional. The findings were psychoeducation didn't enhance insight or willingness to participate in treatment or their cognitive deficits, but improved their awareness of cognitive deficit and treatment; the multi-session psycho-education program was more effective (Medalia, Saperstein, Choi, & Choi, 2012).

In addition, a randomized controlled trial study was done by Rabovsky, Trombini, Allemann, and Stoppe from Basel-Switzerland, in 2012, to evaluate the effective of group psycho-education in clients with severe schizophrenia, on medication adherence, readmission, and clinical changes. The sample of the study included 82 inpatients from Basel university hospital who were divided randomly into two groups, one interventional and another control. Relatives of the clients were invited to this psychoeducation program. The intervention program was by measuring of medication adherence, readmission, and clinical changes in the beginning of study, after 3 months and after 12 months as follow-up. The findings of the study indicated increase in medication adherence and decreased suicide rate between clients with severe schizophrenia after 3 months from intervention.

Furthermore, a randomized control trial study from Mexico in 2012 was done to assess the effectiveness of psychoeducation, psychosocial therapy, and pharmacotherapy on clients with schizophrenia. The sample of the study included 73 clients divided into two groups. The intervention group contained 39 participants with pharmacotherapy, psychoeducation, and psychosocial therapy and the control group contained 34 participants with pharmacotherapy only. The assessment of remission of functional and symptomatic aspects were in the beginning of the intervention and after one year. The findings of the study were the functional remission was 3.6% for the control group and 56.4% for the experimental group. Symptomatic remission was 58.8% for the control group and 94.9% for the experimental group. The conclusion of the study indicates decreased rehospitalization and relapse rate, enhancement of psychosocial functioning and symptomatology, an increase of medication adherence and compliance to 85 percent in experimental group, than control group (Valencia, Juarez, & Ortega, 2012).

## Implementation

The psychoeducation procedure will be using presentation technique in the National Centre for Mental Health (Al-Fuhais). The National Centre for Mental Health (Al-Fuhais) is a center under Ministry of health Umbrella, located between Salt and Amman and about 13 kilometers from Amman. The National Centre for Mental Health provides health care services for



Jordanian citizens and is considered the first and one of the most important centers in Jordan for mental health.

The implementation of group medication psychoeducation for clients with schizophrenia should take the following sessions in order:

**Assessment phase:** consists of two sessions and will include the purpose and objectives of the sessions; will assess client's knowledge about their illness, symptoms and medications, and medication adherence for schizophrenia.

**Intervention phase:** consists of seven sessions and will include enhancing level of knowledge about schizophrenia disorder, symptoms, medications, signs of relapses. Moreover, it is to improve strategies to decrease medications side effects, and prevent schizophrenic disorder relapses. Furthermore, it will be teaching stress coping strategies and problem solving techniques.

**Termination phase:** consists of one session and will include feedback of clients about interventions, answer any questions about psychoeducation procedure from the clients, and follow up clients.

## Recommendations

From the previous studies, the present paper suggests the following recommendations; the principal aim of group psychoeducation for medication adherence is to increase awareness about medications, side effects of medications and illness with determination of signs and symptoms of disorders among clients with schizophrenia. The next generation of group psychoeducation needs to focus on patient-directed psycho-education and, here especially, on integrating the more stable outpatients, who appear to profit more from psycho-education than do symptomatic inpatients, and developing cognitive rehabilitation strategies that target the social and vocational disability of otherwise symptomatically stable patients who are in the recovery phase. It will be both family and patient centered, as well as have individual and group approaches and integrate psychoeducation with other psychotherapy.

One of the group psycho-education limitations is to increase the proportion of attrition between the study samples especially in the follow-up period (Vickar, North, Downs, & Marshall, 2009). There may be increases in the rate of drop-out because of the complexity of the protocol of studies, or the use of methods may hurt some patients, such as blood sample or invasive procedure (Petretto et al., 2013). Therefore, the therapist should pay attention to the cognitive deficits such as poor concentration, poor memory, or poor executive and planning abilities and tailor interventions appropriately. Sessions must be kept short, simple and flexible, increase sample size, and use safe methods to evaluate the effect of group psychoeducation.

In addition, according to Vickar, North, Downs, and Marshall in 2009, more comprehensive larger studies are necessary to prove the effect of group psychoeducation for medication adherence and to help to identify the key elements of the application to be more efficient in the psychiatric setting. Furthermore, as mentioned in Petretto et al in 2013 it is important to use another psychoeducation approach such as control group to assess the most specific effects of group psychoeducation in treatment of inpatients with schizophrenia.

Group psychoeducation that does not focus on behavioral and attitudinal change have more success in enhancing medication adherence (Zygmunt, Olfson, Boyer, & Mechanic, 2002). In addition, the involvement of families in the group psychoeducation plan improves results of psychoeducation, reducing the bias and the application of group psychoeducation on patients with schizophrenia who have a high risk level to non adherence to medications (Zygmunt, Olfson, Boyer, & Mechanic, 2002).

in some clients, improving knowledge about their medications, side effects of medication, and their illness may lead to reduce medication adherence and increase their fear about their medication and treatment strategy (Perkins & Repper, 1999). Therefore, use other psychotherapy to reduce fear and distress, continuous follow-up especially in the first period of therapy, assessment for suicide, the involvement of patients and their families as well as relatives in the treatment plan and psychotherapy program, educate the patients according to their level of cognitive, emotional and judgmental status.

## Conclusion

The purpose of this paper was to examine the effectiveness of group psycho-education for medication adherence in treatment of inpatients with schizophrenia, its benefits, and how it is applied.

Group psychoeducation for medication adherence has proven to be effective in improving medication adherence among clients with chronic schizophrenia. In addition, group psychoeducation for medication adherence has demonstrated a positive effect on decreased relapses and rehospitalization; reduction in the length of hospitalization, increase in quality of life, self satisfaction, self-efficacy and self-esteem. Furthermore, studies have indicated some of the positive aspects of group psychoeducation for medication adherence such as being structured, time limited, flexible, cost effective, and group psychoeducation does not require highly trained therapists (Petretto et al., 2013). In addition, it has a significant effect when mixed with pharmaco-psychotherapy.

On the other hand group psychoeducation has demonstrated certain limitations in managing some cases with schizophrenia, occurrence of complexities in some psychoeducation programs, high rate of attrition and drop-out in

the studies, and psychoeducation cannot change certain behaviors, in addition to, decrease of medication adherence among patients with schizophrenia and fear of treatment plan application in some situations.

Authors and Year of Study	Objective of The Study	Design	Number of Sample	Results of The Study	Level of Evidence
Xia, Merinder &, Belgamwar, in 2011	To evaluate the effectiveness of medication psychoeducation among adult with schizophrenia and compared with previous knowledge levels for the clients.	A systematic review (experimental)	5142 in-patients with schizophrenia	Increase medication adherence in the short term among psychoeducation group, decrease of relapse among psychoeducation group	Level I
Pekkala and Merinder, in 2009	To evaluate the effectiveness of psychoeducation and compared the results with previous knowledge	A systematic review (experimental)	The total number of participants was 1125 in-patients with schizophrenia	Increase medications adherence and decrease rate of readmission or relapse to nine to eighteen months	Level I
Aho-Mustonen, 2011	To examine the effectiveness, feasibility, and clients' experiences of group therapy. Secondary objective was to examine their satisfaction and expectations about intervention.	Randomized control trial	39 forensic in-patients with schizophrenia	Clients enhanced their knowledge about their disorder, increased self-esteem, increased awareness of their disorder and increased medication adherence.	Level I
Petretto et al., 2011	The aim of the study was to assess changes in medication adherence with schizophrenic clients	Randomized controlled trial	340 in-patients with schizophrenia	Psycho-education enhancing medication adherence and decreasing readmission and relapse	Level I
Medalia, Saperstein Choi, & Choi, 2012	To assess the effect of psychoeducation to increase awareness of cognitive dysfunction for schizophrenia clients and that lead to increase of insight and increased medication adherence.	Randomized controlled trial	80 in-patients with schizophrenia	Psycho-education didn't enhance insight of willingness to participate in treatment or their cognitive deficits, but improve their awareness of cognitive deficit and treatment, the multi-session psychoeducation program is more effective	Level I
Rabovsky, Trombin Allemann, and Stoppe in 2012	To evaluate the effective of group psychoeducation in clients with severe schizophrenia on medication adherence, readmission, and clinical changes.	Randomized controlled trial	82 in-patients with schizophrenia	Increase the medication adherence and decrease suicide rate between clients with severe schizophrenia after 3 months from intervention	Level I

(PART A)



Valencia, Juarez, & Ortega, 2012	To assess the effective of psychoeducation, psychosocial therapy, and pharmacotherapy on clients with schizophrenia.	Randomized control trial	73 in-patients with schizophrenia	Decreased rehospitalization and relapse rate, enhancement of psychosocial functioning and symptomatology, an increase of medication adherence and compliance to 85 percent in experimental group than control group	Level I
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(PART B)

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