

## Effects of Psycho Education Intervention in Improving Insight and Medication Compliance of Schizophrenic Clients, Riyadh, Saudi Arabia

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**Abstract:** This study aimed to intervene schizophrenic client through two aspects: Enhance their insight, improve medication compliance. An exploratory study using quasi-experimental design was utilized in this study. The study carried out at Inpatient Psychiatric wards (Villas) at Al Amal Mental Hospital (Al Amal Complex) related to Ministry of Health, Al Riyadh city, Kingdom of Saudi Arabia (KSA); 20 participants included in the study (10 control group-10 study group). Psycho education intervention guidelines were developed by the researcher after reviewing literature. The study comprised 3 main phases: I. Development Phase, II. Implementation Phase and III. Evaluation Phase. Results revealed that clients with schizophrenia who received psycho educational intervention had improvement in insight that led to improved medication compliance. In conclusion, based on the findings of the present study, it is concluded that psycho educational intervention had a positive effect in improving insight and medication compliance for most of schizophrenic clients. The scores of knowledge and compliance were high. However, the study showed interdependency/ correlation of the three variables: knowledge, insight and medication compliance.

**Key words:** Psycho Education • Intervention • Insight • Medication Compliance • Psychosis

### INTRODUCTION

The increasing emphasis on education for those with mental health problems is partially due to the consumer movement with its advocacy for an individual's rights and empowerment. Psycho education covers a fundamental right of individuals to be informed about his or her illness.

Effective psycho educational interventions need to contain elements of practicality, concrete problem solving for everyday challenges, incremental shaping of social and independent living skills and specific and attainable goals [1]. Destigmatization and improvement of illness awareness is essential to successfully perform a psycho educative program: Many clients usually share some terrible myths about their illness that may be pushing them to diagnosis denial and medication noncompliance [2].

Although most clients will derive some benefit from appropriately prescribed medication for various mental disorders, many clients do not always take medication reliably; the modern era of psychopharmacology began in

the 1950s with the discovery of the antipsychotic drug chlorpromazine (Thorazine) [3]. Adherence is a primary determinant of the effectiveness of medication because poor adherence attenuates optimum clinical benefit; Some of the risks faced by clients who adhere poorly to their therapies are: More intense relapses (Relapses related to poor adherence to prescribed medication can be more severe than relapses that occur while the client is taking the medication as recommended, so persistent poor adherence can worsen the overall course of the illness and may eventually make the clients less likely to respond to treatment) [4]. Tay [5] stated that poor adherence might be associated with more severe drug side effects, specifically extra pyramidal side effects. All of the clients (92.7%) taking typical antipsychotic agents might have experienced side effects that they perceived as "bad things" about the medication.

Adherence is a multidimensional phenomenon determined by the interplay of five sets of factors, here termed "dimensions", of which client-related factors are just one determinant: Social and economic factors; Health

care team and system-related factors; Condition related factors; Therapy-related factors; Client-related factors. In research, adherence has been operationalized in many different ways: as the degree to which a regimen is followed expressed as a percentage or ratio, a categorical phenomenon (e.g. good versus poor adherence), or as an index score synthesizing multiple behaviors; A considerable amount of empirical, descriptive, research has identified correlates and predictors of adherence and nonadherence [4].

However, since medication nonadherence is considered to be an important health risk, numerous interventions to improve adherence have been developed [6].

In response to the severity, frequency and often negative effects of not taking medication as prescribed, various approaches to improve adherence have been developed [7]. Hence the most effective intervention approach in recent years is psycho education; the potential outcomes of psycho education include increased knowledge; improved adherence; and reduced relapse rates [8]. Monitoring and facilitating adherence should be an ongoing interactive and collaborative process with the client and family; and clinicians need to understand that medication adherence is a potential problem for any client during any phase of treatment. Also nurses face an important challenge when they believe that clients who choose not to take medication as prescribed are hindering their efforts to make progress toward their personal goals. They can facilitate medication adherence by taking a proactive, yet nonjudgmental and nonpunitive approach to monitoring medication use, having and conveying a positive attitude about the role of medication for promoting clients' overall health and well-being, supporting and encouraging medication use and being open to addressing questions and concerns from clients and families about taking medication. In addition; developing a trusting rapport between nurses and clients can be an important first step in engaging in a dialogue to better understand clients' attitudes and preferences regarding medication and personal recovery goals. Finally, Monitoring adherence to optimize effects and minimize nonadherence could be time consuming; but still important for every client [3,6, 7].

Insight denotes a mental restructuring that leads to a sudden gain of explicit knowledge allowing qualitatively changed behavior [9]. In general, insight is believed to refer to a form of knowledge or understanding held by an individual[10]. There has been recent interest in the

empirical exploration of insight in clients in general psychiatry and related disciplines such as neurology and neuropsychology [11].

Schizophrenia is a chronic psychotic illness that is often characterized by periodic relapses and incomplete remissions. It affects 1% of the population worldwide and is rated as the 8<sup>th</sup> leading cause of disability adjusted life years (DALYS) worldwide in the age group 15-44 years. It is first diagnosed in late adolescence and early adulthood [12]. Schizophrenia is a psychiatric disorder characterized by positive and negative symptom clusters further subdivided into three syndromes, reality distortion (such as hallucinations and delusions), psychomotor poverty (negative symptoms) and disorganization (thought disorder) [13]. Thought disorder and delusions were the most prominent positive symptoms, plus inappropriate affect (which may be classified as a facet of disorganization) which, when present, were associated with poor insight [10]. The first episode of schizophrenia and its resolution are likely to form a critical period affecting future course [14].

Psychotic mental disorders continue to present major worldwide public health problems and yet there are few empirically demonstrated, effective strategies to help clients better appreciate the severity of their illnesses; Currently, there are few effective strategies to improve insight into psychosis; the degree to which clients with schizophrenia acknowledge that they have a serious and persistent mental illness and need medication has consistently been found to predict how readily they will seek, or at least cooperate with treatment. In addition, improving functional behaviors represents a meaningful change in the quality of life of individuals with schizophrenia, as well as a socially relevant treatment goal, especially for older people who generally have more stable symptoms and fewer hospitalizations but still have poor functioning. Therefore, insight improvement should be a target for psycho educational intervention to improve treatment and medication compliance.

The aim of the study is to intervene schizophrenic client through two aspects: Enhance their insight, improve medication compliance.

Establishing the following objectives:

- Promote client insight toward symptoms.
  - Establish guideline to improve knowledge about symptoms and medication compliance.
- Enhance psychotic medication compliance by improving knowledge.

### Hypothesis:

- Client lacking insight toward their symptoms not regularly adhere to medication.
- Client lacking insight have problem with their psychotic medication intake.
- There is a correlation between insight promotion and medication compliance.
- Promoting insight by improving knowledge will promote psychotic medication compliance.

### Operational Definitions

**Schizophrenia:** Psychotic disorder manifested by hallucination, delusion and social withdrawal.

**Psychosis:** Disorder which manifested by symptoms that make individual away from reality such as hallucination, delusion and social withdrawal; and schizophrenia considered psychotic disorder.

**Insight:** Awareness about hallucination, delusion and social withdrawal.

**Medication Compliance:** Take medication with prescribed dose at regular and appropriate time.

**Psycho-education:** Guideline intervention that improve insight and medication compliance.

**Client:** A patient receiving psycho-education from an independent researcher.

## MATERIALS and METHODS

### Material

**Aim of the Study:** To intervene schizophrenic client through two aspects: Enhance their insight, improve medication compliance.

**Objectives of the Study:** Promote client insight toward symptoms, establish guideline to improve knowledge about symptoms and medication compliance and enhance psychotic medication compliance by improving knowledge.

**Study Design:** Exploratory study using quasi-Experimental Design (i.e. that is to say the researcher intervene clients by using a psycho education guideline with the purpose of intervening client to improve her insight and medication compliance).

**Settings:** The study carried out at Inpatient Psychiatric wards (Villas) at Al Amal Mental Hospital (Al Amal Complex) related to Ministry of Health, Al Riyadh city, Kingdom of Saudi Arabia (KSA).

**Subjects:** 20 participants included in the study:

- 10 schizophrenic patients enrolled at Al Amal Complex as an intervention group (Target research group).
- 10 schizophrenic patients not subjected for the psycho education intervention (Controlled group).

Selection criteria for both study and control groups (inclusion criteria). The following characteristics were followed in selecting the clients:

- The clients were admitted at least for 1 month "this means they pass the acute phase".
- Diagnosed by hospital physicians as any type of schizophrenia.
- Female at the age from 18-45 years.

### The Researcher Used the Following Tools Tools Related to the Development Phase:

1. a. *Insight observation and assessment sheet.* It is developed by researcher based on current related literature, in the literature; there were many scales used for observing and assessing insight, the researcher just take a view of main domains and main subject of these scales regardless of details [15-18].

1. b. *Social withdrawal observation sheet.* It is developed by researcher after reviewing the *Personality Inventory for Youth (PIY)* which contain main social withdrawal scale with its subscales [19-22]

1. c. *Medication observation checklist.* It is developed after reviewing the most commonly used measure for medication compliance [19,23-25]

2. *Psycho education intervention guidelines.* Were developed by the researcher after reviewing literature and preview intervention in this respect [26-29].

Supposed to manage and cover the following items:

- Increase *insight* for hallucination, delusion and social withdrawal.
- *Medication compliance* intervention guidelines conducted by applying 10 sessions.

*Brochures* distributed to support the guideline intervention to educate clients.

**Tools Related to Implementation Phase (Educational Sessions):** Will be carried out using the psycho education intervention guideline to implement its contents.

**Tools Related to Evaluation Phase:**

- Post-intervention assessment done by the same tool of pre-intervention assessment.
- The control group received pre-assessment and post-assessment without intervention guideline.

**Demographic Data Sheet for Clients:** Include age, marital status, educational level, date of admission, number of previous admissions and duration of psychiatric illness, medical diagnosis "type" and medications prescribed.

**Methods**

**The Study Comprised 3 Main Phases:**

- Development Phase
- Implementation Phase
- Evaluation Phase

**Ethical Considerations:**

**Agreement on the Study:** Official permission were obtained from training and improvement department in Al-Amal Complex Hospital, then refer researcher to health affairs department in Ministry of Health to take its agreement, after that researcher back to Al-Amal Hospital to take Agreement from inpatient units director, he gave agreement to enter the villas for 1 month, after that agreement can be renewed for another month.

**Family Agreement Procedure:**

- Official permission taken from clients' families and the format of permission taken from training and development department of Al-Amal Hospital.
- The telephone numbers of families taken from social workers, the families called and asked to come for discussing about intervention that will be applied, then signing in the format.

**Confidentiality:** This is the most important aspect in the study: The researcher assure clients and families that the names not written in sheets, they coded by numbers.

**The Actual Study Was Conducted as Following Development Phase:**

- The duration of assessment phase takes about 6 months to be completed (from 14-2 2011G until 2-8-2011G).
- During developmental stage the psycho education intervention guideline was developed by the researcher based on results of assessment stage; it took a period of 1 month, it includes:
- Increase *insight* for hallucination, delusion and social withdrawal. *This inventory consists of 10 Sessions.*
- *Medication compliance* intervention guidelines conducted by applying 10 sessions.
- *Brochures* distributed to support the guideline intervention to educate clients about the following:
- Schizophrenia:

Signs, symptoms and psychodynamics (e.g.; definition, positive and negative symptoms and common delusions exhibited by schizophrenics).

- Medications (Anti-psychotics and antiparkinsonial drugs).
  - Every medication has its separate brochure.

**Implementation Phase:**

- Teaching basis schedule was developed by the researcher based on the contents of the developed psycho education intervention guidelines, submitted to supervisor, modifications were done accordingly.
- Before implementation of the education sessions, permission was secured from hospital director and nursing service director.
- Educational sessions were conducted for a period of 4 months, from 8 am until 2 pm (14-4-2011G until 2-8-2011G).

Teaching strategies used in sessions were:

- Asking the questions.
- Demonstration (for stoppage techniques for hallucinations).
- Discussion.
- Explanation.

Teaching aids were "4 x 6□ lined post-it notes", handouts, brochures and pens.

**Evaluation Phase:** After applying the psycho education, post-intervention assessment done by the same method of pre-intervention assessment.

- The last step in psycho education was brochures distribution.
- After each intervention with study group client, control group client selected, who had the same or nearest characteristics of opposed client in study group; this will make the results more valid with comparisons later in analysis.

The control group received pre-assessment and post-assessment without intervention to compare between two groups during applying statistical analysis.

## RESULTS

Table 1 describes the socio-demographic characteristics of clients in the study and control groups. The mean age was slightly higher among clients in the control group (41.5 years) compared to the study group (37.2 years). The study group had more clients who were divorced/widows and who had university education, but all these differences were not statistically significant.

A quantitative comparison of the insight, knowledge and compliance between clients in the study and control groups before the intervention is presented in Table 2. It shows statistically significant differences between the two groups as regards knowledge of intake ( $p=0.045$ ) and major side effects ( $p=0.014$ ). In both, the mean scores were higher among patients in the study group compared to the control group. No other differences of statistical significance could be revealed between the two groups.

Table 3 shows that the numbers of clients in the study group who social withdrawal or pre-occupations had increased after the study intervention. However, the differences were not statistically significant.

Concerning the changes in clients' knowledge about the disorder and its treatment after the intervention in the study group, Table 4 indicates increases in the numbers of those who had correct knowledge in almost all areas. However, no statistically significant differences could be shown between the pre and post-intervention figures.

As for client's awareness of their medications in the study group, Table 5 indicates increases in the numbers of those who were aware and those who were accepting their medication after the intervention. Although the number of those who were aware of the indications of their medications rose from two to seven after the intervention, the difference could not reach statistical significance ( $p=0.070$ ).

Table 6 describes a quantitative comparison of the insight, knowledge and compliance of the study group clients before and after the intervention. It shows higher mean scores in almost all items after implementation of the intervention. However, no statistically significant differences could be revealed in any of the items. Meanwhile, the improvements in the scores of insight and of the knowledge about the effect of medications were of borderline significance ( $p=0.057$  and  $p=0.051$ , respectively).

A quantitative comparison of the insight, knowledge and compliance between clients in the study and control groups after the intervention is described in Table 7. It indicates that the mean scores were higher among clients in the study group compared to the control

Table 1: Comparison of the socio-demographic characteristics of clients in the study and control groups

Socio-demographic characteristics	Study's Groups		Fisher p-value
	Study (n=10) No.	Control (n=10) No.	
Age (years):			
<40	5	3	
40+	5	7	
Mean±SD	37.2±10.7	41.5±11.1	t=0.884 (0.388)
Marital status:			
Married	3	3	
Single	0	3	--
Divorced/widow	7	4	
Education:			
Basic/intermediate	5	7	
University	5	3	0.650

Table 2: Comparison of pre-intervention mean scores of insight, knowledge and compliance among clients in the study and control groups

Scores (%)	Study's Groups				Mann-Whitney Z	p-value
	Study (n=10)		Control (n=10)			
	Mean	SD	Mean	SD		
Insight	56.0	7.1	57.6	8.0	0.152	0.879
Knowledge of treatment:						
Modalities	53.5	19.0	39.5	14.8	2.339	0.019
Effect	42.7	26.7	40.7	17.6	0.518	0.604
Intake	68.0	25.3	46.7	27.4	2.008	0.045*
Minor side effects	37.5	8.0	27.8	10.9	1.886	0.059
Major side effects	39.5	7.1	30.0	10.5	2.465	0.014*
Manage side effects	43.5	8.8	34.0	13.6	1.881	0.060
Total knowledge	55.5	15.2	44.2	20.1	0.907	0.364
Compliance	65.5	19.6	58.5	17.5	0.800	0.424

Table 3: Comparison of pre-post-intervention social withdrawal and pre-occupations among clients in the study group

Items and Response	Time		Fisher p-value
	Pre (n=10)	Post (n=10)	
	No.	No.	
Social withdrawal:			
No	4	3	1.000
Sometimes/yes	6	7	
Pre-occupations:			
No	5	1	0.141
Sometimes/yes	5	9	

Table 4: Comparison of pre-post-intervention knowledge about disorder and treatment among clients in the study group as observed by researcher

Items and Response	Time		Fisher p-value
	Pre (n=10)	Post (n=10)	
	No.	No.	
Know the nature of the illness	7	8	1.000
Have satisfactory knowledge about			
Treatment modalities	3	2	1.000
Treatment effect	2	7	0.070
Medication intake	6	8	0.628
Treatment minor side effects	4	8	0.170
Treatment major side effects	9	9	1.000
Prevention/management of side effects	1	3	0.582

Table 5: Comparison of pre-post-intervention awareness of medications prescribed to them among clients in the study group as reported by them

Items and Response	Time		Fisher p-value
	Pre (n=10)	Post (n=10)	
	No.	No.	
Know medication:			
Name	3	6	0.370
Indication	2	7	0.070
Dose	7	8	1.000
Accept medication	7	10	0.211

Table 6: Comparisons of pre-post-intervention mean scores of insight, knowledge and compliance among clients in the study group

Scores (%)	Time				Mann-Whitney Z	p-value
	Pre (n=10)		Post (n=10)			
	Mean	SD	Mean	SD		
Insight	56.0	7.1	63.3	6.8	1.904	0.057
Knowledge of treatment:						
Modalities	53.5	19.0	45.0	21.7	0.994	0.320
Effect	42.7	26.7	74.0	30.5	1.952	0.051
Intake	68.0	25.3	74.0	26.7	0.556	0.578
Minor side effects	37.5	8.0	43.4	12.2	1.442	0.149
Major side effects	39.5	7.1	39.3	7.1	0.167	0.868
Manage side effects	43.5	8.8	44.7	10.2	0.720	0.472
Total knowledge	55.5	15.2	64.5	16.2	1.323	0.186
Compliance	65.5	19.6	76.5	20.4	1.294	0.196

Table 7: Comparison of post-intervention mean scores of insight, knowledge and compliance among clients in the study and control groups

Scores (%)	Study's Groups				Mann-Whitney Z	p-value
	Study (n=10)		Control (n=10)			
	Mean	SD	Mean	SD		
Insight	63.3	6.8	57.3	10.1	1.343	0.179
Knowledge of treatment:						
Modalities	45.0	21.7	31.0	19.0	2.264	0.024*
Effect	74.0	30.5	35.3	29.2	2.669	0.008*
Intake	74.0	26.7	48.0	31.6	1.874	0.061
Minor side effects	43.4	12.2	28.1	11.1	2.722	0.006*
Major side effects	39.3	7.1	30.0	10.5	2.313	0.021*
Manage side effects	44.7	10.2	32.3	12.5	2.261	0.024*
Total knowledge	64.5	16.2	42.3	23.2	2.158	0.031*
Compliance	76.5	20.4	52.0	22.0	2.643	0.008*

Correlates and predictors of knowledge and compliance scores

Table 8: Correlation matrix of the scores of insight, knowledge and compliance among clients in the study and control groups

Scores Of	Pearson correlation coefficient					
	Study group scores			Control group scores		
	Insight	Knowledge	Compliance	Insight	Knowledge	Compliance
Insight						
Knowledge	0.71*			0.77**		
Compliance	0.23	0.63**		0.57**	0.85**	

Table 9: Best fitting multiple linear regression model for knowledge scores among clients in the study and control groups

Independent Predictor	Unstandardized Coefficients		Standardized Coefficients	t-test	p-value
	B	Std. Error			
Constant	76.808	9.361		8.205	<0.001
Intervention: reference control	16.777	5.921	.418	2.834	.007

r-square=0.17

Model ANOVA: F=8.03, p=0.007

Variables excluded by model: age, education, duration of illness

Table 10: Best fitting multiple linear regression model for compliance scores among clients in the study and control groups

Independent Predictor	Unstandardized Coefficients		Standardized Coefficients	t-test	p-value
	B	Std. Error			
Constant	13.867	6.384		2.172	.036
Duration of illness	.437	.196	.214	2.233	.032
Knowledge score	.818	.100	.782	8.145	<0.001

r-square=0.64

Model ANOVA: F=36.72, p&lt;0.001

Variables excluded by model: age, education, group

group in all items of knowledge and in compliance. The differences were all statistically significant, except for the knowledge about intake of medication ( $p=0.061$ ).

Table 8 displays the correlations among the scores of client's insights, knowledge and compliance in the study and control groups. It indicates statistically significant positive moderate to strong correlations. The strongest was the correlation between knowledge and compliance in the control group ( $r=0.85$ ), while the lowest was between insight and compliance in the same group ( $r=0.57$ ). Meanwhile, no statistically significant correlation could be revealed between the scores of insight and compliance in the study group.

Table 9 illustrates the best fitting multiple linear regression model for the score of knowledge. It indicates that the intervention was the only statistically significant independent predictor of the knowledge score; it has a positive relation to knowledge score. The model explains 17% of the improvement in knowledge score as indicated from the value of r-square. Meanwhile, other factors as client age, education and duration of illness had no significant effect on knowledge score.

Table 10 presents the best fitting multiple linear regression model for the score of compliance. It indicates that the duration of illness and the knowledge scores were the statistically significant independent predictors of the compliance score and had a positive relation to it. The model explains 64% of the improvement in compliance score as indicated from the value of r-square. Meanwhile, other factors as client age, education and group had no significant effect on compliance score.

## DISCUSSION

The aim of this study is to intervene schizophrenic client through two aspects: Enhance their *insight*; in order to improve *medication compliance*. The researcher point of view and vision that improving insight through nursing intervention may enhance medication compliance and vise

versa. Hence; this study select a type of population that need actual intervention, they are chronic and psychotic clients who resident in psychiatric hospital.

The socio-demographic characteristics of clients in this study for both the study and control groups show that no statistical significant, hence the control group in this study is matching with study group in socio-demographic characteristics (Table 1).

Nevertheless, this study subject's characteristics are consistent to the study applied by Magliano *et al.* [30] for clients with schizophrenia assigned to psycho educational intervention or a control group and the same result found in Ming-Yuan *et al.* [31] study; and in another study from Nasr and Kauser [32] the age variable give the same result, hence these two groups in this present study are valid for conducting this research.

Concerning the changes in clients' knowledge about the disorder and its treatment after the intervention in the study group, there is increasing in the numbers of those who had correct knowledge in almost all areas. However, no statistically significant differences could be shown between the pre and post-intervention figures (Table 4).

The knowledge about medication leads to medication compliance; this indicates to the high effect of psycho educational intervention at present study. In the tentative comparison of the insight, knowledge and compliance of the study group clients before and after the intervention. It shows higher mean scores in almost all items after implementation of the intervention. However, no statistically significant differences could be revealed in any of the items. Meanwhile, the improvements in the scores of insight and of the knowledge about the effect of medications were of borderline significance (Table 6).

Hence improvement of insight leads to improved medication compliance; this is a high indicator to the effect of psycho education intervention at present study.

Study done by Ran *et al.* [33] supports the present study; after 9-months psycho educational intervention, treatment compliance in study group was significantly higher than in the other groups.



Also another study about compliance done by Chaityajan *et al.* [34] was nearly similar with the present results, the difference in the proportion of participants were statistically significant regarding compliance.

That means as long as psycho education program takes time, the result will benefit the client and it is better to do long term plan and care for these clients implicit in the care to work on improve client insight.

A person with very poor recognition or acknowledgment is referred to be as having "poor insight" or "lack of insight" [10]. An insight is the derivation of a rule which links cause with effect [35].

A tentative comparison of the insight, knowledge and compliance between clients in the study and control groups after the intervention is indicate that the mean scores were higher among clients in the study group compared to the control group in all items of knowledge and in compliance. The differences were all statistically significant, except for the knowledge about intake of medication (Table 7).

The results of Baruah and Reddemma [36] go with present study regarding compliance; it showed that in respect of drug compliance, there was statistically significant difference in post test scores between the control and the experimental groups. This observation indicated better gain in comparison to control group and showing the efficacy of educative intervention for schizophrenic clients.

Lack of insight among schizophrenia symptoms that leads to increase social withdrawal. Social withdrawal considered one of episodes of mental illness, especially schizophrenia when the clients withdraw into their private world of delusions and hallucinations.

Studies proved that withdrawal is among associative symptoms of schizophrenics. Hence it needs rehabilitation and social skill training.

Hence external interventions and nurse-patient relationship proved to enhance client condition regard socialization.

For social withdrawal, a study conducted by Magliano *et al.* [30] proved that both study and control group had social withdrawal before intervention. But at follow-up (post intervention) compared to control group which showed no change.

The numbers of clients in the study group who had social withdrawal or preoccupations had decreased after the study intervention. However, the differences were not statistically significant (Table 3).

This indicates to that the social withdrawal increased may be because of the increased period of hospitalization; this leads to be more preoccupied.

In contrast of present results, the study of Magliano *et al.* [30] showed that in the intervention (study) group, a statistically significant improvement was found in social withdrawal.

In this study there is a slight increase in the number of study group clients who had high compliance after the nursing intervention, compared to the preintervention. In other words, the researcher thought that the slight elevation of client insight comes as a result of handouts distributed to them by a researcher as a nursing intervention.

The increasing of compliant clients even with one number; indicates to that there is slight effect of psycho educational intervention.

The study applied by Baruah and Reddemma [36] go with recent study; it displayed a statistically significant difference between pre and post test (intervention) drug compliance scores in the experimental (study) group. This observation indicated the effectiveness of medical and psychosocial intervention.

## CONCLUSION

Based on the findings of the present study, it is concluded that psycho educational intervention had a positive effect in improving insight and medication compliance for most of schizophrenic clients. The scores of knowledge and compliance were high.

**Implications for Nursing Practice:** According to the results of the present study, the following two themes implications were suggested:

- The tasks of nurses working in psychiatric hospital should be expanded to include psycho educational tasks; hence, in service training to educate nurses is very important in order to improve client care.
- Future studies needed about effects of psycho educational intervention in the field of nursing.

**The Tasks of Nurses Working in Psychiatric Hospital Should Be Expanded to Include Psycho Educational Tasks; Hence, in Service Training to Educate Nurses Is Very Important in Order to Improve Client Care:**

- The schizophrenic clients must have regular orientation through psycho education interventions.
- Programs should be designed by health care provider for teaching clients about their illness and medication compliance because of their deficiency of knowledge from chronicity and long period of hospitalization.

- The brochures, handouts and posters which enhance client's knowledge supposed to be distributed continuously.

Psycho educational intervention should be community based in order to decrease the relapse rate and frequent hospitalization.

**Future Studies Needed about Effects of Psycho Educational Intervention:** Schizophrenic clients' problems and the effect of psycho education in improving clients' state need more studies to be conducted in Saudi Arabia for both genders to enhance the mental health in general and to emphasize the importance of psychiatric nurses role in general and the importance of different psycho education nursing interventions.

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