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Medication Adherence of Clients Complaining of Schizophrenia in Saudi Arabia

Nora M. Al-Yahya and Elham M. Fayad

Department of Psychiatric and Community Health Nursing, Nursing College,
King Saud University, College of Nursing, King Saud University, Riyadh, KSA

Abstract: This study aimed to evaluate the relations of insight on, symptoms of and knowledge about schizophrenia with medication adherence in people with schizophrenia at Al Amal Complex, Riyadh City. A quantitative, descriptive, exploratory research design was utilized in this study. The study was conducted at Al Amal Complex, Riyadh City; 20 female participants complaining of schizophrenia were enrolled. Data were collected using four tools: insight observation and assessment questionnaire, social withdrawal observation scale, medication observation checklist and demographic data questionnaire. Results revealed that clients with schizophrenia had impaired insight that led to non-adherence to medication regimens. In conclusion, Assessment of client symptoms and adherence reported an exacerbation of psychotic symptoms and lack of understanding for the purpose of psychotic medication however medication adherence was surprisingly not very low. The findings suggested that there is need for a psycho-educational program developed specifically for clients with chronic schizophrenia. Such a program should include content to enhance client insights on schizophrenia and adherence to medication regimens.

Key words: Insight · Social Withdrawal · Preoccupation · Knowledge · Psychotic Disorder

INTRODUCTION

Optimal health outcomes require both efficacious medications and adherence to medication regimens. Behavioral science offers useful theories, models and strategies that support best-practice approaches to delivering psychiatric treatment. The effectiveness of behaviorally based interventions has been demonstrated in many therapeutic areas. However, the extent of clients' knowledge does not necessarily lead to a change in attitude or improvement of clinical and compliance outcomes [1].

Adherence to medication may refer to regular intake of medication as medically prescribed (e.g., correct dosage, correct frequency). Accordingly, medication non-adherence means that the client has either missed a dose of medicine or has not followed medically prescribed guidelines regarding dose amount; specifically, non-adherence indicates "either decrease or increase interval between each dose or refrain & refuse to take this medication prescribed to him/her [2].

The World Health Organization [3] reported that patient motivation to adhere with medication regimens is influenced by (1) the value that a person places on following the protocol (cost–benefit ratio) and (2) their degree of confidence in being able to follow it (i.e., self-efficacy). If either individual confidence or the perceived value of adherence is low, the likelihood of adherence will also be low. Studies consistently find that low-cost interventions focused on improving adherence yield significant cost-savings and increased effectiveness of health interventions.

Clients with psychotic disorders are at great risk for relapse and rehospitalization and the most common cause for these problems is non-adherence to medication regimens. It is suggested that patient insight into mental illness, including psychotic illnesses, is perhaps one factor that influences poor medication adherence [4].

Insight is not singularly defined, but within the space of psychodynamic psychiatry, it is conceptualized as self-awareness of unconscious conflicts. Within the psychoanalytic discipline, insight refers to a form of

Corresponding Author: Nora M. Al-Yahya, Nursing College, King Saud University, Riyadh, Saudi Arabia.
Mob: +966500954445.

deeper knowledge of the self. Insight has also been conceptualized the mechanism for acquiring such deeper knowledge [5, 6].

Acknowledgment of illness (i.e., insight) and the need for treatment is frequently deficient in clients with psychosis. Traditionally, psychotic symptoms and lack of insight are considered two sides of the same coin-in other words, phenomena that are intrinsically linked. Lack of insight is frequent in clients with schizophrenia and usually negatively influences the client's treatment and prognosis. An impairment of insight is one of the most frequently observed symptoms in schizophrenia, even after the remission of a psychotic episode. Generally, factors influencing insight in psychosis are cultural models of illness and health, general intelligence and knowledge, health care provider–client relationship and the symptomatology of the illness [7-9].

Medication adherence in clients with schizophrenia is the often most problematic issue in client management. Indeed, ensuring that clients adhere to treatments is a continuing problem for professionals working with the seriously mentally ill. It has been estimated that 20–50% of individuals with mental illness are at least partially non-adherent and, in clients with schizophrenia and related psychotic disorders, rates can run as high as 70% or 80%. Antipsychotic medications are the cornerstone of pharmacological treatment for clients with schizophrenia, but non-adherence with antipsychotic medications is generally high [10-12].

Medication non-adherence may be a consequence of the lack of insight among psychotic clients, where lack of insight means that the client is unable to acknowledge that he is mentally ill and needs medication [13]. Thus, lacking insight about mental illness can lead to refusal of psychotic medication (non-adherence) and psychotic relapse.

To explore these adherence issues, the following questions are addressed in this paper:

- What are the adherence characteristics of schizophrenic client?
- Do clients with schizophrenia adhere to antipsychotic medication regimens?
- Is there a relationship between client insight and medication non-adherence?
- Are clients with schizophrenia knowledgeable about the symptoms of their disorder?

Are clients with schizophrenia aware of their medication adherence patterns guided by these research questions. The aim of the present study was to evaluate the relations of insights on, symptoms of and knowledge about schizophrenia with medication adherence among clients with schizophrenia at Al Amal Complex, Riyadh City.

Operational Definitions

Insight: Awareness of the presence of hallucinations, delusions and the importance of taking medication.

Medication Adherence: Taking the prescribed dose of medication at regular and appropriate times.

Social Withdrawal: The client is isolated in his/her private world and does not interact with other clients or health care providers.

Preoccupation: The client stated that she/he is overloaded with fantasies and daydreams or the researcher observe that client is not present in an interaction.

Knowledge: The client either said verbally that she/he has hallucinations, delusions and other symptoms or medication information and/or do nonverbal cues indicate hallucinations or symptoms.

Psychotic Disorder: A disorder manifested by symptoms that take an individual away from reality, such as hallucinations, delusions and social withdrawal. Schizophrenia is a psychotic disorder.

MATERIALS AND METHODS

Design and Participants

Aim of the Study: This study aimed to explore the relations of insights on, symptoms of and knowledge about schizophrenia with medication adherence in clients with schizophrenia at Al Amal Complex, Riyadh City.

Study Design: This study used a quantitative descriptive exploratory design.

Setting: The study was carried out at the inpatient psychiatric wards (villas) at Al Amal Mental Hospital (Al Amal Complex), a part of the Ministry of Health, Al Riyadh city, Kingdom of Saudi Arabia (KSA).

Subjects: Twenty clients with schizophrenia were recruited from the Al Amal Complex. The number of the subjects enrolled was limited as the target population is both vulnerable and difficult to reach. Additionally, this study was a preliminary study intended to inform a larger future study in this target population.

The following criteria were used for to select the subjects.

- Admitted at least one month previously and past the acute phase.
- Diagnosed by hospital physicians with any type of schizophrenia.
- Females aged 18 to 45 years.

Measurement Instruments: Instruments were developed by the researcher after reviewing literature and consulting with a committee consisting of experts in the field of psychiatric nursing.

Insight Observation and Assessment Questionnaire: This scale includes nine statements about insight, rated on a 5-point Likert scale with anchors of strongly agree (SA), agree (A), uncertain (U), disagree (D) and strongly disagree (SD). After the questionnaire was completed, we asked participants structured questions on their awareness, insight, knowledge and symptoms of the disorder.

Social Withdrawal Observation: This scale includes five statements about social withdrawal, rated on the same 5-point Likert scale noted above.

Medication Observation Checklist: The checklist includes 21 items about medication adherence, rated on the same 5-point Likert scale noted above. Upon completion, structured questions were asked on the topics including type of treatment, medication and medication side effects

Demographic Data: The following demographic information was collected about the participants: age, marital status, educational level, date of admission, number of previous admissions, duration of psychiatric illness, type of schizophrenia and prescribed medications.

Methods

Ethical Considerations

Permission for Study: Official permission was obtained from the Training and Improvement department in Al-Amal Complex, the Health Affairs department at Ministry of Health and the Inpatient Unit Director at Al-Amal Complex. Permission was granted for one month and could subsequently be renewed for an additional month.

Family Agreement Procedure: Written permission was obtained from the clients' families using a consent form from the Training and Development department of Al-Amal Hospital.

Confidentiality: Confidentiality was essential to this study and the following steps were taken to ensure it: (1) clients were identified by numbers, not names, on the questionnaires; (2) information about the clients obtained from clients, families, staff, or secured files was not shared with any one either inside or outside the hospital; (3) meetings with the clients' families were held in private rooms; and (4) conversations between the researcher and hospital staff were held outside of the presence of clients.

Professional Assessments of Measurement Tool Validity: The insight assessment and observation questionnaire, social withdrawal observation form and medication checklist were reviewed by two expert faculty members, two peer reviewers and four consultants from Al-Amal Hospital.

The pre-test study. A pre-test study was conducted with two clients to test clarity and suitability of the research tools for data collection.

Assessment: The assessments were conducted between 8 a.m. and 2 p.m. and lasted for approximately 2 months. Data for 20 clients was obtained from these observations and assessments. The statistical analyses were performed by an expert in statistics.

Statistical Analysis: Descriptive statistics were conducted on age, insight, knowledge of treatment and adherence variables.

RESULTS

Table 1 includes the demographic characteristics of the participants. Almost two-thirds of the clients with schizophrenia were over 40 years old (60%). The majority was divorced/widowed (55%, respectively). Basic or higher education was completed by 60% of the clients.

Table 1: The socio-demographic characteristics of schizophrenic clients. No. (20)

			Total	
Socio-demographic characteristics	No.	%	No.	%
Age (years):				
<40	8	40	20	100
40+	12	60		
Marital status:				
Married	6	30	20	100
Single	3	15		
Divorced/widow	11	55		
Education:				
Basic/intermediate	12	60	20	100
University	8	40		

Table 2: Disorder Types of schizophrenic clients.

			Total	
Items	No.	%	No.	%
Diagnosis:				
Paranoid schizophrenia	10	50	20	100
Disorganized schizophrenia	4	20		
Chronic schizophrenia	6	30		
Duration of illness (years):				
<10	8	40	20	100
10+	12	60		

Table 3: Medication characteristics of schizophrenic clients

			Total	
Items & Response	No.	%	No.	%
No. of medications:				
1 (one type)	4	20	20	100
2 types	4	20		
3-6 types	12	60		
Frequency of medication:				
1 (once/day)	10	50	20	100
2 (twice/day)	5	25		
3/day	5	25		
Medication routes:				
1 (oral)	17	85	20	100
2 (Intra-Muscular)	3	15		
Have major side effects:				
No	17	85	20	100
Yes	3	15		

Table 2 presents the types of schizophrenia in the study sample; 50% of the clients had been diagnosed with paranoid schizophrenia, 20% with disorganized schizophrenia and 30% with chronic schizophrenia. Sixty percent of the participants had been hospitalized for more than 10 consecutive years. The medication regimens for the clients were noted in Table 3: 60% of the clients were taking 3 to 6 types of medication daily. Medication was taken once a day by 50% of the participants. The majority of clients (85%) took oral medication and had no major side effects.

Table 4: Psychiatric Profile of the Schizophrenic Client. (NO. 20)

Psychiatric Profile	No.	%
1. More than one previous hospitalization.	12	60
2. Occurrence of major side effects.	17	85
3. Lack of insight.	12	60
4. Lack of knowledge about disorder.	15	75
5. Not acquainted with presence of symptoms	13	65

• More than one response was given by the researcher& the client.

Table 5: Assessment of client insight

Items & Response	No.	%
Approve medication	15	75
Stop and resume medication	8	40
Approve to continue medication	9	45
Knows she has delusions	1	5
Knows she has hallucinations	3	15
Pretends she has organic disorder	19	95
Pretends she has no psychological disorder	14	70
Know delusions are part of her illness	1	5
Know hallucinations are part of her illness	1	5

• Clients gave more than one response.

Table 6: Symptoms as reported by schizophrenic clients among the studied subjects

			Total	
Items & Response	No.	%	No.	%
Symptoms reported:				
None	7	35	20	100
Hallucinations & delusions	2	10		
Psychosis	1	5		
Depression, isolation, stress, phobia, insomnia	10	50		

The psychiatric profiles of the clients with schizophrenia revealed that 60% of the clients had more than one previous hospitalization, 60% were lacking insight into their disorder (Table 4). In addition, 75 and 65% were lacking knowledge about the disorder or were not aware of the presence of symptoms, respectively.

In relation to client insight, three-quarters of the clients (75%) approved of their medication. However, 95% believed that they had an organic disorder and 70% reported that they did not have a psychological disorder (Table 5).

Some clients reported they had no symptoms (35%) that might lead to hospitalization. However, depression, isolation, stress, phobia and insomnia the most common reasons given for illness and hospitalization; 50% the clients reported these symptoms (Table 6).

Table 7: Negative & associative symptoms of the subjects as observed by the researcher

			Total	
Items & Response	No.	%	No.	%
Social withdrawal:				
Not present	6	30	20	100
Sometimes/always	14	70		
Pre-occupations:				
Not present	6	30	20	100
Sometimes/always	14	70		

Table 8: Knowledge about disorder and management among schizophrenic studied clients' subjects.

Items & Response	No.	%
Know the nature of the illness:		
No	12	60
Yes	8	40
Have satisfactory knowledge about:		
Treatment modalities are various	4	20
Treatment effect	3	15
Importance of medication intake	11	55
Treatment minor side effects	5	25
Treatment major side effects	14	70
Prevention/management of side effects	2	10

• Clients gave more than one response.

Table 9: Awareness of aspects of medication adherence to schizophrenic clients

Items & Response	No.	%
Know medication:		
Name	3	15
Indication	3	15
Dose	12	60
Approved to take medication	15	75

Table 10: Medication adherence and assisting interventions among schizophrenic clients

Items & Response	No.	%
Adherence to medication:		
High	12	60
Low	8	40
Handouts are handed to clients to remind them with medication intake	0	0
There are systems to remind them with medication intake	1	5

Table 7 lists the negative and associative symptoms: 70% of the clients were always or sometimes socially withdrawn and 70% sometimes or always complained of preoccupation.

Table 8 illustrates the clients' knowledge and management of the disorder: 60% did not know the nature of the illness, only 20% were aware of the various treatment modalities, 15% knew the effects of treatment, 55% acknowledged the importance of treatment and only 10% knew how to prevent side effects.

The clients' knowledge about their medication was summarized in Table 9: only 15% knew the name of their medication and only 15% understood the purpose of the medication. However, 60% knew the prescribed dose of the medication. Despite the above findings, most of the clients approved of taking their medication (75%).

For medication adherence (Table 10), 60% of the clients reported high adherence, although only 5% mentioned that there is a system to remind them to take medication.

DISCUSSION

The aim of this paper was to evaluate the relations of insight on, symptoms of and knowledge about schizophrenia with medication adherence in clients with schizophrenia at Al Amal Complex, Riyadh City.

As schizophrenia is a chronic psychotic disorder and psychotropic medication is generally administered over long periods, subjective attitudes and long-term medication adherence are of particular concern. The chronic nature of these illnesses could lead to medication non-adherence and poor insight among psychotic clients [14].

Schizophrenia is a major disturbance and the illness usually begins in adolescence, disturbing both social and professional roles. In this study, nearly two-thirds of the clients were older than 40 and single, widowed, or divorced. Most studies of clients with schizophrenia have identified the same characteristics in the population. Most clients fall ill in their late teenage or early adult years and males develop schizophrenia at an earlier age (early 20s) than females [15, 16].

In this study, one-half of the clients were diagnosed with paranoid schizophrenia (Table 2) that began after age 30; this finding may explain the number of the clients that had completed university education or were married. The onset of paranoid schizophrenia tends to be later than other types of schizophrenia and typically the client shows little or no impairment on neuropsychological or other cognitive tests [15]. Individuals with paranoid schizophrenia tend to be logical in their thinking, present arguments systematically and reason clearly because their cognition mostly intact.

In the present study, three-quarters of the clients approved to take medication. However, most clients reported that they were willing to take medication for

either an organic disorder or a psychological disorder. The clients' attitudes toward medication are consistent with the results of Aho-Mustonen *et al.* [17]. In that study, the attitudes of clients toward medication at baseline (pre-intervention) were relatively positive in both groups.

However, approval of medication does not mean that the client accepts his/her mental illness or has insight on or knowledge about the actual disorder. In hospital setting, the client may be obliged to take the medication regardless of their personal attitudes to the medication and its ability to control symptoms.

This study found that when asked about the symptoms that brought them to the hospital, most of them replied that other psychological symptoms, such as depression, isolation, stress, phobia and insomnia were the cause or that there was no reason for their hospitalization.

The majority of clients in the study were classified as socially withdrawn. Social withdrawal can result in hallucinations and delusions as well as possibly trigger other psychotic symptoms. The establishment of new psychotic symptoms may create an alternate world during social withdrawal and this experience may perpetuate a lack insight resulting in medication non-adherence [18]. Social withdrawal and preoccupation, two negative symptoms of schizophrenia, may be directly related to the lack of insight.

The psychopharmacology for clients with schizophrenia has improved in recent years with the development of new medications, which increase the probability of finding an appropriate drug for individual clients. The provision of psychotropic medication is central to the treatment of people with psychotic illnesses such as schizophrenia. While the *efficacy* of medication in reducing symptoms has been established in clinical trials, the *effectiveness* in day-to-day control of symptoms is strongly related to the clients' medication regimen adherence [14, 19]. Adherence to medication may be affected by a lack of knowledge about prevention and management of the side effects of medication; only two clients in this study were knowledgeable about coping with side effects. This finding is consistent with the study of Aho-Mustonen *et al*. [17], which reported that baseline knowledge of schizophrenia is not high. Therefore, one of the most important aspects of interventions in the schizophrenic population is to offer information about medication side effects, symptoms and symptom management.

Knowledge about the nature of the schizophrenia is an important step toward gaining insight and increasing adherence to medication regimens. Psychiatric nurses are effective in improving knowledge of the disorder and treatment, which can lead to enhanced adherence and insight.

The literature on schizophrenia indicates that clients frequently deny that they are mentally ill. Additionally, previous studies have shown that clients who refuse medication do not believe it is an effective treatment for their disorder. However, when clients believed medication could control their symptoms, they continued to use it, even if they experienced some side effects [20]. One of the characteristics of clients with schizophrenia is automatic obedience. Hence, schizophrenics may take medication without understanding its importance and even when they are not convinced they are mentally ill.

It is the role of the health care provider to educate the client about effects and benefits of medication. The health care provider is also expected to convey the importance of treatment and its role in reducing client relapse and frequency of readmission.

In this study, client's knowledge of their prescribed medication was restricted to the dose. A small number of clients were aware of the name of their medications and the reasons behind the prescription. Medication adherence is a key factor in the treatment of mental illnesses such as schizophrenia. Achieving medication adherence when treating clients with schizophrenia has been an elusive pursuit over the last few decades [21].

None of the clients in this study reported having received handouts to remind them to take their medication and only one client reported the presence of a reminder system.

Consistency is one of the principles that should be followed for psychiatric clients generally and it is particularly relevant when the goal is to improve medication adherence.

Teaching clients about the importance of medication in the management of their illness, including symptom control and enhanced daily functioning, is essential because the best psychiatric treatment is ineffective without adherence to medication regimens [22].

Over 80% of individuals with schizophrenia have significantly impaired insight. Knowing and acknowledging that one has an illness, recognizing the symptoms and consequences, accepting that necessary treatment may mean hospitalization and understanding the illness is ongoing are all part of insight. Poor insight

is associated with poor clinical outcomes, impaired psychosocial functioning, compromised treatment adherence and increased risk of violent and suicidal behaviors. Many studies have found correlations between poor medication adherence and lack of insight across diagnostic groupings. The assessment of insight plays a pivotal role in the decision to give psychotic clients long-acting depot medication [23-27].

In conclusion, further studies should be undertaken to improve client insight for the enhancement of medication adherence and decrease of symptoms through psycho educational interventions.

Implications for Nursing Practice: The results of this study suggested there is value in establishing a psycho-educational program aimed at helping clients with schizophrenia enhance their insight and medication adherence. In addition, the improvement of the psycho-educational skills of nurses and clients should include:

- The role of nurses working in psychiatric hospital should be expanded to include psycho-educational tasks; an in-service training to educate nurses could lead to the improvement of client care.
- Clients with schizophrenia must have regular psycho-educational interventions
- Programs should be designed to teach clients about their illness and the importance of medication adherence to prevent or minimize deficiency of knowledge, chronic symptoms and long periods of hospitalization.
- Brochures, handouts and posters developed to enhance client's knowledge should be widely distributed and displayed.
- Increasing community-based psycho-educational interventions could decrease relapse rates.

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