

# Predicting of Early Warning Signs of Relapse for Psychotic Patients

Hassan Ali Hussein

Department of Psychiatric Mental Health Nursing, College of Nursing, University of Baghdad, Baghdad, Iraq

## Abstract

**Background:** Psychosis relapses are frequent and have serious repercussions. Frequently causes relapses, which can have a detrimental effect on the quality of life for the individual and their family. **Objective:** This cross-sectional study investigated the primary and secondary effects of relapse-related factors in individuals with psychoses. The aim of this paper was to predict behavioral anomalies that would be early indicators of psychotic relapse. **Materials and Methods:** The researcher used a cross-sectional design and findings in the primary analysis. Schizophrenic inpatients aged between 20 years old and above were targeted. Two psychiatric teaching hospitals were purposively sampled and data was drawn from the 124 respondents who were screened at baseline. Data were collected using Warning Psychotic Relapse Scale and a sociodemographic questionnaire. Descriptive statistics and binary logistic regression were used to analyze data. **Results:** The findings revealed the severity of relapse signs among the patients were moderate in severity (72%) and there are no statistical predictors between early warning signs and sociodemographic and clinical characteristics. **Conclusions:** The researcher concluded that predicting psychotic relapse episodes is a realistic goal. Health teams and psychiatric and mental health nurses must screen, identify, and stop the recurrence of individuals suffering from psychoses.

**Keywords:** Early warning signs, psychotic patients, relapse

## INTRODUCTION

Prevalence of mental illness, particularly psychosis is a significant concern, affecting about 3% of the population.<sup>[1,2]</sup> The impact of psychotic experiences on a patient's health is substantial, leading to deterioration. Within 2 weeks of the prodromal period, the patient exhibits symptoms of neuropsychiatry. The psychotic phase of this illness, which might include agitation, mania, psychosis, anxiety, depression, or disorganized behavior, is when it is primarily identified.<sup>[3]</sup> Neurological symptoms such as complex seizures, catatonia or stupor, dyskinesias, poor concentration or disorientation, memory loss or delirium, ataxia, and autonomic instability (variable blood pressure, hypoventilation, and tachycardia) may follow these psychotic symptoms.<sup>[4]</sup> Approximately 58% of affected individuals have another episode within 5 years of recovering from the first episode.<sup>[5]</sup> Relapses, which are marked by the escalation of acute psychotic symptoms, have grave repercussions.

In general, exposure to psychotic episodes is harmful to the integrity of the brain and the long-term prognosis of schizophrenia. Following up on early warning signs is one method of reducing the chance of relapse and early diagnosis and intervention in psychotic patients is always critical because it can decrease or prevent relapse severity.<sup>[6,7]</sup> Relapse also affects the family members who are providing care for their sick person. For the family, this issue causes stress, emotional pain, and financial difficulties.<sup>[8]</sup>

Many studies have confirmed that personal and clinical factors such as age, gender, educational level, current job, involvement in religious and spiritual activities, type of psychological illness, period of illness onset, number

**Address for correspondence:** Dr. Hassan Ali Hussein,  
Department of Psychiatric Mental Health Nursing, College of Nursing,  
University of Baghdad, P.O. Box 14149, Baghdad, Iraq.  
E-mail: hassana@conursing.uobaghdad.edu.iq

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of episodes of illness, social stigma, relapse in psychotic patients are linked to a number of factors, including severity of symptoms, unplanned antipsychotic medication withdrawal, and a lack of acceptance of therapy.<sup>[9,10]</sup> Nevertheless, only a small number of researches have examined the relationship between each component and relapse in individuals with schizophrenia. Relapse rates increase after a single episode to 20%–35% after a year, having an impact on the long-term course of psychosis. According to recent research, the combined prevalence of positive symptoms relapsing in the first episode was 28% (interquartile range = 12%–47%), 43% (35%–54%), and 54% (40%–63%) at 1, 1.5–2, and 3 years follow-up, respectively.<sup>[11]</sup> The most significant influence on these patterns of care utilization is caused by relapsing or unstable psychosis. According to the study by Raudino *et al.*,<sup>[12]</sup> psychiatric admissions (including the utilization of emergency services) were linked to more severe symptoms, suicidal thoughts, poor functioning, and younger ages.

The multifaceted approach to reducing relapse rates in psychotic patients appears promising. The combination of increased accessibility to mental health services, involvement of the patient's support system through family psychological awareness, and avoidance of triggering situations could contribute significantly. Additionally, emphasizing the importance of a healthy lifestyle, proper medication adherence, and a multidisciplinary therapeutic approach addressing biopsychosocial factors seems crucial. By integrating these strategies, we may enhance the self-support system among psychiatric patients and promote a holistic approach to managing and preventing relapses.<sup>[13,14]</sup> The study aims to assess the prevalence of warning signs of psychotic relapse among schizophrenic patients.

## MATERIALS AND METHODS

A descriptive study (cross-sectional design) was used to guide this study was done from November 1, 2022, to January 2, 2023. This consistent with design was used by Aziz and Bakir<sup>[15]</sup> who used a cross-sectional design and the sampling was performed using a nonprobability technique. The target population was remitted schizophrenic patients who followed up clinics of psychiatric teaching hospitals in Baghdad city, the capital of Iraq who were 500 follow-ups had full documentation available. The inclusion criteria were being between the ages of 20 and 60 for both genders, being willing to take part in the current study, and not having had a comorbid mental health condition or physical ailment during the previous six months. Under the following assumptions, the sample size was determined using a double population proportion formula: 90% statistical power, 95% confidence level, and the cumulative relapse rate from the prior study on predictors of relapse in schizophrenia and related factors. Conveniently, 124 replies were gathered from Baghdad's

psychiatric teaching hospitals. Data was gathered between June 1 and September 1, 2022. Data were gathered using a standardized self-report questionnaire. Questionnaires about demographics, Warning Psychotic Relapse Scale were used to measure for assessing warning psychotic relapse developed by the researcher from the previous studies with was internal consistency of 0.87. The focus was presented to a panel of 10 experts regarding the degree of correspondence between an instrument and its validity, especially about content validity. It is a 30-item self-reporting questionnaire that gives a total score. Each item is scored on a two-point scale with higher scores indicating patients at risk of relapse. The score ranged from 1 to 2 (1 = no, 2 = yes). The score was interpreted as low (1–1.33), moderate (1.34–2.33), and high (2.34–3.00). The participants in the sampled houses were informed about the study's objectives, the key questions to be asked, their rights, anonymity, and the responses they would be providing. Standardized questionnaires with demographic and self-report components were given to the sample respondents along with an easy sampling technique for data collection after the hospital administration and respondents gave their informed consent. Participants were given an informed consent form, and participant consent was also acquired before any data were collected, to be aware of the specifics of the study. The mean, frequency, and percentage of the respondents were utilized as descriptive and inferential statistical measures to determine the overall pattern of early warning signs of a psychotic relapse among the respondents based on their age, gender, monthly income, occupation, level of education, place of residence, and length of illness. Because the data did not exhibit a normal distribution, binary logistic regression was used to assess the effects of specific components on relapse. Before the analysis procedure began, all pertinent assumptions were verified.

## Ethical approval

The psychotic patients were told that they might choose not to participate in the study. The researchers gave an explanation of the study's goal. To protect the participants' identities, they were given an anonymous questionnaire once they consented to take part in the study.

## RESULTS

A total of 124 patients participated in this study, 59.6% of the sample were male patients 60% who were in the age group of 30–39 years old 50% with barely sufficient income 62%; 50% of them were single who had graduated from college and high educational level 30%; 68% of them haven't occupation and the residence of them was urban 80% and duration of illness was 1–3 years 48% and number of relapse was one time 48%. Details of demographic characteristics are shown in Table 1.

**Table 1: Distribution of the patients according to their sociodemographic characteristics**

Characteristics		No.	%
Sex	Male	74	59.6
	Female	50	41.4
	Total	124	100
Age	20–29 years	47	38
	30–39 years	62	50
	40–49 years	5	4
	≤50 years	10	8
	Total	124	100
Income	Sufficient	17	14
	Barely sufficient	77	62
	Insufficient	30	24
	Total	124	100
Marital status	Single	62	50
	Married	47	38
	Divorced	12	10
	Separated	3	2
	Total	124	100
Educational level	Does not read and write	5	4
	Primary	25	20
	Intermediate	32	26
	Secondary	25	20
	College and high	37	30
Occupation	Total	124	100
	Employee	40	32
	Unemployed	74	68
Residence	Total	124	100
	Urban	99	80
	Rural	25	20
Duration of illness	Total	124	100
	<1 year	37	30
	1–3 years	60	48
	≤4 years	27	22
The number of hospitalizations (time)	Total	124	100
	Once	59	48
	Twice	40	32
	Thrice	25	20
Total	124	100	

No.: number, %: percentage

**Table 2: The severity of relapse signs among the patients**

Severity	No.	%	MS	SD
Mild	8	6	2.16	0.510
Moderate	89	72		
Severe	27	22		
Total	124	100		

No.: frequency, %: percentage, MS: mean of score, SD: standard deviation

This table indicated that patients experience the signs of relapse with a moderate level of severity (72%) shown in Table 2.

The table shows that there was no prediction between demographical and clinical characteristics and the Signs of Relapse at  $P < 0.05$  are shown in Table 3.

## DISCUSSION

Concern regarding relapse in psychotic patients is growing, as seen by the notable and substantial growth in the body of research evaluating early warning indications of relapse in recent years. In regards to demographic characteristics, the study found that the majority of patients were men, single, and had a college level of education. This result is inconsistent with the study of Al-Masoodi *et al.*<sup>[16]</sup> who found the majority of patients were women, single,

**Table 3: Multiple logistic regressions for the prediction between early warning signs of relapse and the demographical and clinical characteristics of the sample**

Demographical and clinical characteristics	Signs of relapse			
	Beta in	t	P value	CS
Gender	-0.024	-0.095	0.926	NS
Age	0.158	0.673	0.508	NS
Monthly income	0.374	1.360	0.189	NS
Marital status	0.120	0.497	0.624	NS
Level of education	-0.311	-1.089	0.289	NS
Occupation	-0.233	-0.886	0.386	NS
Residence	-0.122	-0.531	0.601	NS
Duration of illness	0.179	0.655	0.508	NS
Number of relapses	-0.461	1.484	0.153	NS

NS: non-significant

and had a secondary education level. In assessing the severity of signs of relapse, the highest percentage refers to a moderate level of severity. The results of this present study are in agreement with those of other studies of early warning signs of psychotic relapse. Emsley *et al.*'s study highlights alarming relapse rates post-treatment for individuals with a history of psychotic episodes. Even prolonging therapy doesn't reduce the risk, and relapses can occur suddenly with minimal warning. The return of symptoms mirrors the severity of the initial episode. Additionally, many relapse after reducing or discontinuing medication. Although most patients recover swiftly, responses vary, with therapeutic failure observed in about one in six cases.<sup>[17]</sup> Additionally, the results of the Eisner *et al.*'s<sup>[18]</sup> study revealed that 74% of participants reported having at least one fundamental symptom and that every participant had both traditional early indicators and "other" prerelapse experiences.

With regard to demographic variables and clinical characteristics of Multiple Logistic Regressions with totally psychotic relapse, there were no statistical predictors of relapse. The researchers attribute the results of this study to the fact that problems with treatment adherence among schizophrenic patients encompass a variety of behaviors, including taking medication incompletely, discontinuing medication, failing to attend outpatient appointments after hospitalization, missing scheduled appointments, and dropping out the outpatient follow-up. So lack of adherence to medication after discharge has been described as the single most significant risk factor for relapse. Additional characteristics that are significant in predicting relapse include the significance of family support for individuals with schizophrenia. A mentally ill relative may be encouraged to confront the issue by their family, which is a source of love and warmth they may share. The result is consistent with the study of Robison *et al.*<sup>[19]</sup> who found sex, diagnosis, duration of psychotic illness, and presence of residual symptoms after the initial episode did not significantly predict relapse. Another

study discovered that recurrence could not be predicted by the length of illness or the number of hospitalizations. There are several limitations to this study. The first is that the sample size was limited, which means that the findings cannot be applied to the entire patient population. A self-report questionnaire was used to collect data, which includes bias.

## CONCLUSION

This study focuses on relapse is an important and desirable goal in this study. There are common early warning signs; they will appear slightly different in each person. One person's early warning signs may be obvious and easy to spot, while in another person they may be difficult to detect. Early warning signs are signals that symptoms are starting again and that another episode of psychosis may occur. The researchers suggested teaching the patients and their families about the recognition of early signs of relapse and to take effective treatment. Establish a psychological education program for schizophrenic patients and their families to improve awareness of the disease and adherence to treatment during the remission period.

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## Author contribution

The manuscript has been read and approved by all the authors, the requirements for authorship as stated earlier in this document have been met, and each author believes that the manuscript represents honest work. All authors were involved in the initial conception of the paper and in the design. All authors contributed to the preparation of the final manuscript. All authors have agreed on the final version by drafting the article or revising it critically for important intellectual content.

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### Conflicts of interest

There are no conflicts of interest.

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