

Original Article

# The treatment approach of patients and their families and impact on SMS reminder toward OPD follow up of psychotic patients.

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## Abstract

**Background:** The patient's follow-up is a significant challenge for managing the psychiatric illness, especially psychotic disorders. Although many factors affect patients' clinical non-attendance with psychosis, patients and their families' approach toward medication influences treatment follow-up. The study evaluates the patient's and family's approach regarding OPD follow-up and the effect of SMS reminder on OPD follow-up of patients with psychosis.

**Methodology:** This study was conducted on a psychotic patient attending OPD at Karwan e Hayat, Karachi. A total of 248 patients were randomly divided into two groups, the SMS reminder group and the treatment-as-usual or control group. Computer-based SMS to improve patient follow-up was sent in Urdu and English to the SMS group. A total of four reminder messages were sent to the SMS group within 15 days of each clinical appointment over a period of 24-weeks, while no message was sent to the control group.

**Results:** All patients (Intervention & Control groups) were divided further into two groups based on the caring family approach reflected through several follow-ups, including a poor follow-up group with less than five visits and an appropriate follow-up group having five or more than five visits. The impact of SMS follow-up reminders on both groups was observed through OPD follow-ups. At baseline, all groups were comparable, but after a 3-month appropriate group of intervention were found with a significant ( $p=0.053$ ) increase in the number of follow-ups compared to patients with poor follow-up groups.

**Conclusion:** It is concluded from the study results that SMS reminders are an effective intervention in those psychotic patients and families who have a positive approach to illness.

## Keywords

Family Attitude, SMS Reminders, Psychosis, OPD followup, Mobile Intervention.



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## Introduction

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Outpatient follow-up is a major barrier to the effective management of severely mentally ill patients, where the clinic non-attendance rate is twice that of chronic medical conditions<sup>1</sup>. The period following discharge is critical for a good prognosis of the patient. It is reported that newly discharged patients who do not attend follow-up have a two to threefold increase rate of readmission compared to patients who remain in contact with services<sup>2</sup>.

Although many factors affect the patient's clinical non-attendance with psychosis, the patients' and their families approach and attitude play a vital role<sup>3</sup>. It has been suggested that patients' attitude and approach towards medication and the disease affect treatment follow up<sup>3</sup>. In a study conducted in 2006 on 221 patients discharged from a mental hospital, Compton et al. 2006 found that an important contributory factor towards non-attendance is fear of hospitalization and leaving the hospital before the treatment<sup>4</sup>.

Attitude is a psychological tendency that is expressed by evaluating a particular entity with some degree of favour or disfavour of the treatment<sup>5</sup>. In evaluating the patients and planning for their treatment and care, it also becomes necessary for the mental health professionals to assess the attitude and immediate social environment where the patient lives.

Current evidence suggests that families of people with mental disorders are likely to ignore the problem because of the attached stigma. They may hide them from public life, delay treatment-seeking, or even reject professional help<sup>6-8</sup>. Such attitudes and approaches may affect a pejorative illness course and increase the families' psychological and financial burdens<sup>6-8</sup>. These unhelpful attitudes toward mental disorders among the families are likely to represent an obstacle to developing more efficient mental health services<sup>9</sup>. On the other hand, a positive approach and acceptance of mental disorders can play an important role in rehabilitating the mentally ill.

In low and middle-income countries like Pakistan, care is provided by the family members who make important decisions regarding the severely mentally ill-treatment and management<sup>10</sup>. This study aimed to evaluate the patient's and family's approach regarding OPD follow-up and the effect of SMS reminder on OPD follow-up of patients with psychosis. Because mobile phones using the short message service (SMS) are now commonplace in both developed and developing countries, Mobile phone messages have the advantage of being convenient, inexpensive, and able to reach the intended person immediately<sup>11</sup>. These characteristics allow the technology to be widely used for health information transfer and efficient and effective healthcare delivery<sup>12</sup>. Different research studies in developing countries show that mobile phone messages improve follow-up and medicine adherence of psychiatric patients<sup>13, 14</sup>.

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## Methodology

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This was an intervention study. All included patients suffering from psychosis and were under treatment referred to research clinicians by psychiatrists. A total of 248 patients were randomly divided into two groups; the Intervention group would receive SMS reminders for the follow-up appointments and a Control group that received only treatment as usual. Research clinicians gathered initial data, and then patients who fulfilled the inclusion criteria for the study were registered. Written informed consent was obtained from patients or their attendants.

Participants were eligible for inclusion if the following criteria were met: (a) the diagnosis of psychosis is based on ICD10 criteria (b) individuals aged between 18-60 years (c) Capable of reading and writing; (d) a resident of Karachi (e) all registered clients or their relatives have a valid mobile number. They were excluded if they met any of the following criteria: (a) those who were not capable of giving consent (b) organic psychosis (c) being actively suicidal; (d) any comorbid psychiatric illness such as substance misuse or alcohol dependence, according to DSM IV criteria.

The study protocol was approved by the institutional review board of the Karwan e Hayat Institute of Mental Health Care. The computer-based SMS software was developed for the improvement of patient follow-up. SMS text messages were delivered in both Urdu and English as the majority of samples could not understand English. Participants were educated regarding the use of SMS before starting the project. A PowerPoint presentation was used to explain the text-messaging procedures in an initial 30-minute training session, and patients and their families were guided through approximately three practice trials. The follow-up of both groups was monitored.

Intervention and control groups were further divided into two types; appropriate follow-up and poor follow-up. We considered appropriate follow-up for patients who had five or more visits in the first three months, and those who had four or fewer visits considered them a poor follow-up.

Four text messages were sent to the Intervention group, while no message was sent to the Control group. The intervention group received four text messages within 15 days of each clinical appointment over a period of 24-weeks, focusing on Welcome on the first day, Service Satisfaction on the 4<sup>th</sup>-day, assurance of medication adherence on the 7<sup>th</sup> day, and a reminder of the next appointment on the 13<sup>th</sup> day. If any case participant was not coming to his / her appointment date, then a reminder message was sent twice a week for the

next six weeks. After six weeks, the participant was considered a dropout.

#### Outcome measures

The primary outcome measure was the number of follow-up appointments of the patients at baseline and 3 months follow-up period. To determine patients and their families' approach towards follow up last 3 months, data were analyzed based on which two groups were created, one with appropriate follow and up other with poor follow-up.

#### Statistical Analysis

The statistical analysis was performed using SPSS, version 27.0. The primary outcome of the study was the non-attendance rate. The patient's non-attendance was inferred from the electronic system of KeH, where they were shown absent for their scheduled appointment. The non-attendance rate in the SMS reminder group was compared with that in the controlled group using the t-test. P-values < 0.05 were considered to be statistically significant.

## Results

Table 1 shows the main characteristics of patients at baseline and the 3-month follow-up in the SMS group (n=124) and control groups (n=124). A 30.5% female and 69.4% male patients participated. The Major age group was 26-30 years (21.4%). The largest diagnosis group was Delusional Disorder, Schizophrenia and Schizoaffective Disorders ICD-10.

**Table 1: Demographic Characteristics**

| Variable  |                          | n(%)       |
|-----------|--------------------------|------------|
| Gender    | Female                   | 76(30.50)  |
|           | Male                     | 172(69.40) |
| Age       | 18-35                    | 146(58.9)  |
|           | 36-45                    | 68(27.4)   |
|           | 46-60                    | 34(13.7)   |
| Diagnosis | Delusional Disorder      | 117(47.20) |
|           | Schizoaffective Disorder | 22(8.80)   |
|           | Schizophrenia            | 109(43.80) |

Table 2 provides estimates of SMS Message effects on Follow up of patients. The study hypothesized that the patients whose families have a positive approach give a good response to SMS messages compared to those with the negative or poor approach. A total of 248 patients were included in the study. At three months OPD attendance rate for the appropriate follow-up (positive approach) group was significantly higher than for the poor follow-up (negative or poor approach) group through the 2-sample test of proportion ( $p=0.053$ ).

**Table 2: Before and after recruitment Patient's follow up**

| Category              | Baseline (First 3 months) |                            | Follow Up (After 3 months) |                            | p-value |
|-----------------------|---------------------------|----------------------------|----------------------------|----------------------------|---------|
|                       | Controlled Group (N=124)  | Intervention Group (N=124) | Controlled Group (N=125)   | Intervention Group (N=124) |         |
| Poor Follow Up        | 88(49.4)                  | 90(50.6)                   | 91(53.5)                   | 79(46.5)                   | 0.856   |
| Appropriate Follow Up | 36(51.4)                  | 34(48.6)                   | 33(42.3)                   | 45(57.7)                   | 0.053   |

\*Values are given as n(%)

## Discussion

This was a realistic and matching group randomized controlled trial. The subspecialty of this group was a large group of people with serious mental illnesses. Our main assumption was that the SMS's, Improve the follow-up of patients whose families and patients are both have a positive approach to treatment. This study demonstrated that SMS reminders to patients' mobile phones were effective only for those patients and their families who have a positive approach and attitude according to previous follow-up and treatment records.

In the present study, we noted that follow-up of OPD could be attributed to the presence of awareness about mental illness. Because Researches showed that awareness regarding mental illness enhances positive attitudes and approaches to treatment<sup>15</sup>. The majority of the patients with poor follow-up had a lack of awareness about the illness, followed by a poor approach. Previously, numerous studies have reported many factors that influence poor follow-up, but these studies have not explored the family's attitude that influences their approach to OPD to follow up. According to the reviewed article on exploring patients', carers', and professionals' view on medication follow up; five themes that significantly influenced follow-up included medication efficacy, external factors such as patient

support and therapeutic alliance, insight, side effects, and attitudes toward medication<sup>16</sup>.

Lack of awareness and poor follow-up are the common features of schizophrenia and have a major impact on treatment, course, and outcome. Several studies have shown that better knowledge about illness results in favourable clinical outcomes, fewer hospitalizations, and better global functioning<sup>17</sup>.

In the same study result shown, about 6% of the non-attendance patients reported that lack of information about illness affected follow-up behaviour. Schizophrenia is a chronic illness that requires long-term therapy. Accurate information about the disease and medication plays a key role in the follow-up behaviour of the patients. This highlights the need for explaining to the patients about the nature of illness and treatment-related facts<sup>16</sup>.

Similar to other studies, results are supporting the current study findings, which shows that. It was better compliance for patients whose majority of patients and family members had a positive medicine approach<sup>18</sup>. The patients' and their families' positive belief in treatment and medication might be the reasons for the patient's positive approach and increase the patient's follow up for taking medications, which results in compliance.

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## Conclusion

This study demonstrated that text messaging is a more feasible and effective intervention in those psychotic patients and families who have a positive approach toward illness.

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## Conflicts of Interest

None.

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