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## ORIGINAL RESEARCH

# Therapeutic outcome and monitoring of patients coming to psychiatry OPD with schizophrenia in tertiary care hospital of northern India: A prospective observational study

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## ABSTRACT

**Introduction- Schizophrenia is a chronic, multifaceted mental health illness marked by a variety of symptoms, including delusions, hallucinations, disorganized speech or behaviours, and cognitive impairment. The purpose of this study is to track and evaluate the effects and results of schizophrenia disorder treatment.**

**Method- This prospective observational research was performed from December 2019 to December 2021. The study participants were patients suffering from schizophrenia (according to DSM-5 criteria) who were treated at the tertiary care centre, Overall, 62 patients were included in the study as cases according to inclusion/exclusion criteria. Further, the demographic and clinical variables of patients were collected with a personal information form.**

**Results- The mean age of the total enrolled cases was 49.62±5.87, with male dominance was observed. Furthermore, in the case of FROGS SCALE, maximum mean was reported for the category of the frogs general, i.e. 48.02±15.21and minimum was observed for the category of Occupational functioning, i.e. 5.23±2.02. In the case of WHOQOL-BREF SCALE maximum mean was reported for the category of the Environment domain, i.e. 13.81±2.99 and the minimum was observed for the category of Social domain, i.e. 10.76±3.80. Also, as per the MARS Score, the mean with the range of 0-10 was 4.05±2.99, the median was 5 and the interquartile range was 2-6. Lastly, the maximum mean was reported for the category of the Environment domain, i.e. 26.23±4.87 and the minimum was observed for the category of Social domain, i.e. 10.37±2.02, in the case of quality of life (QOL).**

**Conclusion- Our research reveals the strong association between QOL perception and functional recovery in a group of schizophrenia patients with low levels of functional recovery.**

**Key words- Schizophrenia, WHOQOL-BREF SCALE, FROGS SCALE, QOL**

## INTRODUCTION

Schizophrenia is a chronic, multifaceted mental health illness marked by a variety of symptoms, including delusions, hallucinations, disorganized speech or behaviours, and cognitive impairment. The disease's early start and chronic nature make it a disabling condition for many sufferers and their families. Disability frequently occurs as a result of both negative symptoms (defined by loss or deficiencies) and cognitive symptoms, such as attention, working memory, or executive function problems. Furthermore, relapse may arise as a result of positive symptoms such as suspicion, delusions, or hallucinations. Due to schizophrenia's inherent variety, there is a dearth of consensus regarding the disorder's diagnostic criteria, etiology, and pathophysiology. [1]

Schizophrenia is an illness that manifests as psychotic episodes against a backdrop of cognitive, social, and functional deficits. Schizophrenia, a complex neuropsychiatric condition, affects approximately 1% of the world's population. It is caused by a complicated interaction between genetic predisposition and environmental variables. [2]

The increasing accuracy with which those truly at "high risk" for the psychotic disorder are identified has paved the way for early intervention strategies in this population, increasing the
possibility of minimising distress and disability and delaying or even preventing the onset of an evident psychotic disorder. Treatment (antipsychotic medication, psychological, and social treatments) for adolescents who fit the “at risk mental states” (ARMS) criteria should not be limited to the symptoms that comprise the ARMS criteria but should also address a broader range of challenges that the young person may present with these. When considering specific treatment alternatives, some ethical considerations must be made, and the potential hazards of treatment must be weighed against the potential benefits. [2]

Schizophrenia and related psychoses account for high levels of morbidity and are among the most misunderstood, neglected and stigmatized of all medical illnesses. One person in every hundred is likely to develop a schizophrenic disorder, and about half of these will have a substance use disorder (SUD). [3]

SUD is also associated with poor drug compliance, resulting in decreased clinical involvement and an increased risk of relapse. More profound knowledge of the elements that contribute to co-occurrence is necessary in order to establish possible causal links between the two illnesses and to develop prevention techniques that decrease the chance of persons with schizophrenia developing substance dependency. This comprehension will be aided by accurate mapping of the frequency of concomitant SUDs in schizophrenia across treatment settings. Substance abuse interventions are likely to improve symptoms, relapse rates, recovery rates, and other outcomes. [3] According to the literature, when patients' functional levels declined, their quality of life (QOL) decreased, and more functional issues manifested in their everyday lives.

[4] In particular, impairments in cognitive, perceptual, affective, and motor functions impair interpersonal connections, resulting in declines in functioning and quality of life. [5] Quality of life is a multifaceted notion described as the satisfaction of individuals, families, and society's material and nonmaterial requirements. QOL is a composite term that encompasses physical health and subjective wellbeing, life satisfaction, social wellbeing, and functional competence. [6] Inadequate cognitive, perceptual, affective, and motor functions result in a considerable decline in self-care, interpersonal interactions, functioning, and quality of life for the patient. There is evidence in the literature that schizophrenia has a detrimental effect on QOL. The results of studies demonstrating low levels of functional recovery and quality of life in people with schizophrenia underscore the critical nature of this issue. [7] As a result, facilitating

patients' integration into society and work-life to achieve a high-quality life and functional rehabilitation should be a primary treatment goal. Mental health experts cancontribute to their patients' functional recovery and hence to their overall quality of life. Aspatients with schizophrenia achieve functional recovery, their adaptability to treatment
improves, they become more content and productive in their lives, and their activities to maintain their health and personal interest in treatment also improve. As a result, people can demonstrate increased positive functioning while seeing a decrease in disease symptoms. The purpose of this study is to track and evaluate the effects and results of schizophrenia disordertreatment.

## MATERIAL & METHODS

The present study was conducted in the Department of Pharmacology & Therapeutics, in collaboration with the Department of Psychiatry, King George's Medical University, UP, Lucknow. This prospective observational research was performed from December 2019 to December 2021. The study participants were patients suffering from schizophrenia (according to DSM-5 criteria) who were treated at the tertiary care centre, KGMU, Lucknow, Uttar Pradesh (INDIA). Overall, 62 patients were included in the study as cases according to inclusion/exclusion criteria. Further, the demographic and clinical variables of patients were collected with a personal information form, which consisted of 26 questions including age, sex, marital status, education level, working status, monthly income, with whom the patient lived, the presence of other family members with schizophrenia, and the duration of KGMU treatment etc. Functioning was assessed by a psychiatrist with the Functional Remission of General Schizophrenia (FROGS) Scale and World Health Organization Quality of Life: Brief Version(WHOQOL-BREF).

## STATISTICAL ANALYSIS

The data were analysed using the Statistical Package for the Social Sciences (SPSS) version
22.0 software (IBM, Chicago, IL). Percentage distribution and mean were used to evaluate the data. Pearson's correlation and multiple regression analysis were used to determine the relationship between variables. The significance level was 0.05 for all tests and 95% confidence intervals.

## OBSERVATION & RESULTS

The mean age of the total enrolled cases was 49.62±5.87. However, the total number of patients range from 18-64 years. The maximum number of cases were from 35-55 years age group i.e., 33 (53.23%). Within total enrolled cases of 62, the male dominance was observed, i.e. the majority of cases were male [36 (58.06%)] followed by females [26 (41.94%)]. Amongst all, 24 (38.71%) were previously hospitalized also, however 38 (61.29%) were no hospitalisation required. Chronic Disease Score in cases, the maximum number of cases 13 (20.97%) have the score of 2 followed by 11 (17.74%) have the score of 3 and so on. The least number of cases 03 (4.84%) have a score of 6. As per Chronic Disease Score Depression in cases, maximum number of cases [34 (54.84%)] reported no depression. However 28 (45.16%) cases reported the depression. [TABLE-1]

**Table 1: Demographical parameters distribution of enrolled patients**

| | FREQUENCY [N=62] | PERCENTAGE |
|---|---|---|
| **DISTRIBUTION OF AGE** | | |
| 18-34 yrs | 20 | 32.26% |
| 35-54 yrs | 33 | 53.23% |
| 55-64 yrs | 9 | 14.52% |
| MEAN±SD | 49.62±5.87 | |
| **GENDER** | | |
| FEMALE | 36 | 58.06% |
| MALE | 26 | 41.94% |
| **PREVIOUS HOSPITALIZATION** | | |
| NO | 38 | 61.29% |
| YES | 24 | 38.71% |
| **CHRONIC DISEASE SCORE** | | |
| 0 | 4 | 6.45% |
| 1 | 8 | 12.90% |
| 2 | 13 | 20.97% |
| 3 | 11 | 17.74% |
| 4 | 10 | 16.13% |
| 5 | 7 | 11.29% |
| 6 | 3 | 4.84% |
| 7 | 6 | 9.68% |
| **CHRONIC DISEASE SCORE-DEPRESSION** | | |
| NO | 34 | 54.84% |
| YES | 28 | 45.16% |

Antipsychotic Drugs usage we observed that, most of the patients i.e., 15 (24.19% were using Risperidone, followed by 13 (20.97%) patients that were using Olanzapine, and the least number of cases 01 (1.61%) were using Amisulpride and Fluphenazine. However, no adverse drug reaction was observed for, Amisulpride & Fluphenazine. Though the maximum ADR was reported for Clozapine, i.e., 3 (33.33%). [TABLE-2]

**Table-2: Tabular presentation for the record of drugs.**

| Antipsychotic Drug | Number of times prescribed (n=62) | Percentage | Number of adverse events (n=13) | Incidence of adverse drugevent per 100 prescriptions |
|---|---|---|---|---|
| Risperidone | 15 | 24.19% | 1 | 6.67% |
| Olanzapine | 13 | 20.97% | 1 | 7.69% |
| Aripiprazole | 10 | 16.13% | 1 | 10.00% |
| Clozapine | 9 | 14.52% | 3 | 33.33% |
| Quetiapine | 6 | 9.68% | 2 | 33.33% |
| Trifluoperazine | 5 | 8.06% | 4 | 80.00% |
| Haloperidol | 2 | 3.23% | 1 | 50.00% |
| Amisulpride | 1 | 1.61% | 0 | 0.00% |
| Fluphenazine | 1 | 1.61% | 0 | 0.00% |

As per Naranjo's scale we found that, possibly, certain events were Headache & Dizziness (01 each), and the implicated drug for the same were Clozapine (1) & Aripiprazole(1). Similarly, there were certain probable events were also observed, and out of that, the most possible were weight gain and tremors. The drugs responsible for them

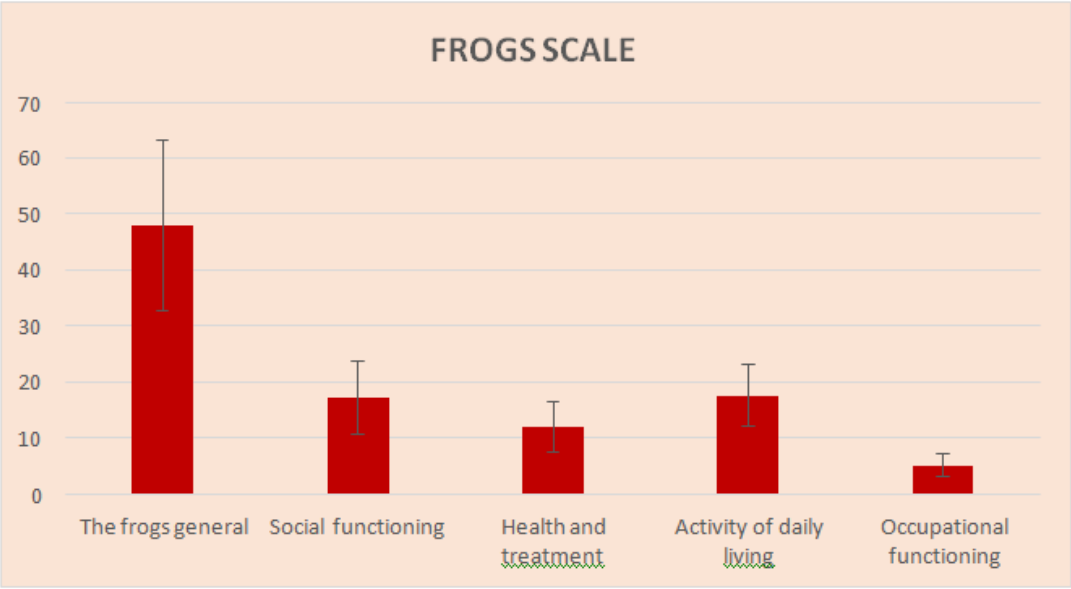
were Olanzapine (1), Quetiapine (1) and Trifluoperazine (2) respectively. [TABLE-3]

**Table-3: Adverse drug events and implicated drugs as per Naranjo's scale**

| Category | Number of adverse events (n=13) | Adverse Drug Event | Implicated Drugs |
|---|---|---|---|
| Definite (Certain) | 0 | Nil | - |
| Probable | 2 | Weight Gain | **Olanzapine(1) Quetiapine (1)** |
| | 1 | Decreased Sleep | **Risperidone (1)** |
| | 1 | Extrapyramidal Reaction | **Haloperidol (1)** |
| | 1 | Fatigue | **Quetiapine (1)** |
| | 2 | Tremors | **Trifluoperazine (2)** |
| | 1 | Agranulocytosis | **Clozapine (1)** |
| | 1 | Disturbance In Appetite | **Clozapine (1)** |
| | 1 | Decreased Libido | **Trifluoperazine (1)** |
| | 1 | Galactorrhea | **Trifluoperazine (1)** |
| Possible | 1 | Headache | **Clozapine (1)** |
| | 1 | Dizziness | **Aripiprazole (1)** |

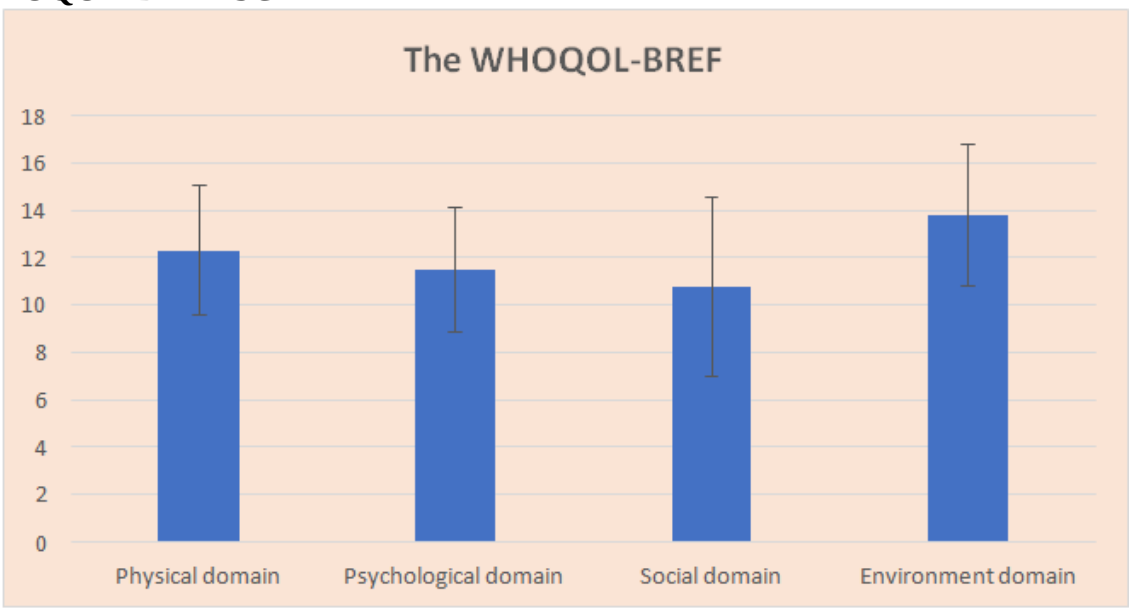
As per FROGS SCALE, maximum mean ADR was reported for the category of the frogs general, i.e., 48.02±15.21and minimum mean ADR was observed for the category of Occupational functioning, i.e., 5.23±2.02. [FIGURE-1]

**Figure-1: Graphical representation of Mean ADR and patient's distribution as per theFROGS SCALE.**




The World Health Organization Quality of Life: Brief Version (WHOQOL-BREF) assesses QOL in four domains, including physical health, psychological, social relationships and environment. The measure is calculated by summing the point values for the questions corresponding to each domain and then transforming the scores to a 0–100- point interval, or alternatively. Maximum mean was reported for the category of the Environment domain, i.e., 13.81±2.99 and the minimum was observed for the category of Social domain, i.e. 10.76±3.80. [FIGURE-2]

**Figure-2 Histogram for Mean ADR and patient's distribution as per the WHOQOL-BREF SCALE**




As per the MARS SCORE, the mean ADR with the range of 0-10 was 4.05±2.99, the median was 5 and the interquartile range was 2-6. [FIGURE-1] The QOLS is scored by adding up the score on each item to yield a total score for the instrument. Scores can range from 16 to 112. There is no automated administration or scoring software for the QOLS. Maximum mean was reported for the category of the Environment domain, i.e. 26.23±4.87, and the minimum was observed for the category of the Social domain, i.e. 10.37±2.02 [FIGURE-4]

**Figure-3 Histogram presentation for Mean ADR and patient's distribution as per theMARS SCORE**

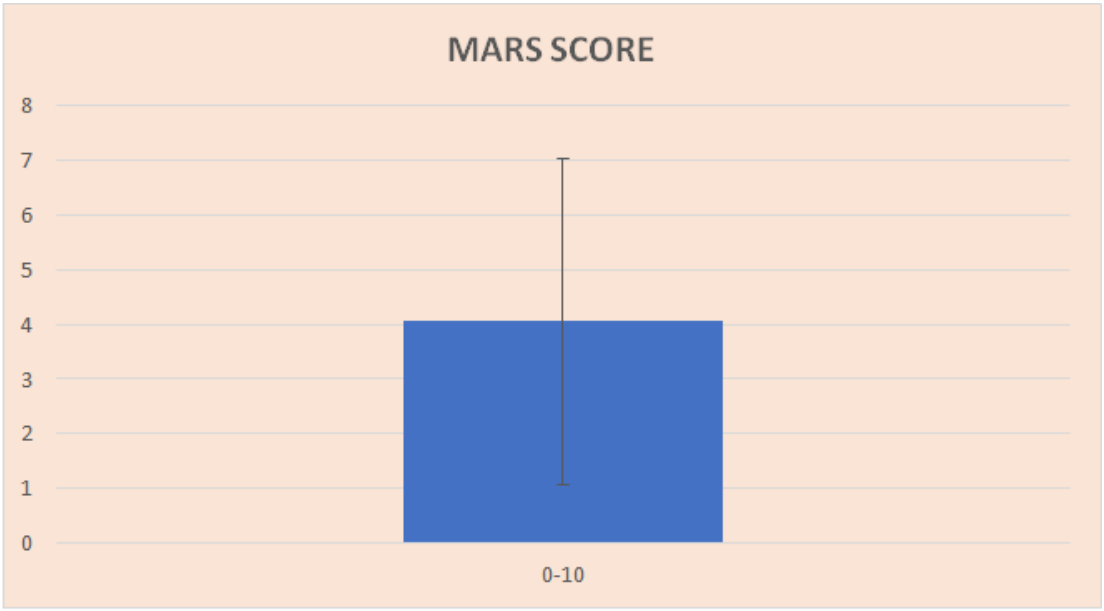
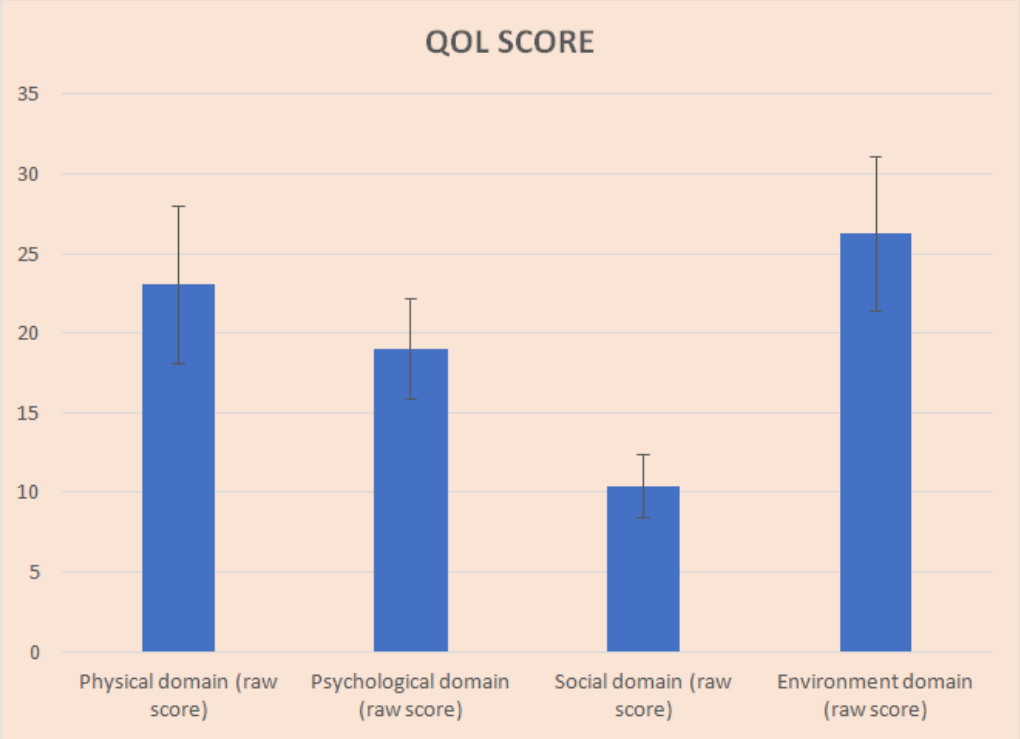


**Figure-4 Histogram presentation for Mean ADR and patient's distribution as per theQOL SCORE**




## DISCUSSION

The present study was conducted in the Department of Pharmacology & Therapeutics, in collaboration with Department of Psychiatry, King George's Medical University, UP, Lucknow. This prospective observational research was performed from December 2019 to December 2021. The study participants were patients suffering from schizophrenia (according to DSM-5 criteria) who were treated at tertiary care center, KGMU, Lucknow, Uttar Pradesh (INDIA). Overall, 62 patients were included in the study as cases according to inclusion/exclusion criteria. Further, the demographic and clinical variables of patients were collected with a personal information form, which consisted of 26 questions including age, sex, marital status, education level, working status, monthly income, with whom the patient lived, the presence of other family members with schizophrenia, and the duration of KGMU treatment etc.

The primary objective of the present study was to analyze the therapeutic outcome and monitoring of patients coming to psychiatry OPD with schizophrenia in tertiary care hospital of Northern India. Further, the secondary objectives include the evaluation and analysis of certain measure, such as; To enhance the attention of people and governments of the world to the effects of mental health problems and substance abuse on the social wellbeing and physical health of the world's underserved populations. A first step is to increase awareness and concern of the importance of mental health through a series of key high profile regional and international events. Secondly, efforts will be devoted to building up the will of the key political authorities to participate. Thirdly, and finally, efforts are to be directed at securing political commitments by decision-makers. To establish a number of demonstration projects in each of the six WHO regions of the world. They are meant to illustrate the potential of collaborative efforts at country level, with the view of leading on to projects of a larger scale. To encourage technical support between countries for service development, research and training. To collect data recording the demographic profile of the patients suffering from schizophrenia coming to OPD at the Department of

Psychiatry, K.G.M.U., Lucknow. To find out the prescription pattern of medication in patients suffering from schizophrenia coming to OPD at the Department of Psychiatry, K.G.M.U. Lucknow. To assess the efficacy of various antischizophrenic drugs prescribed to patients with the help, we administered two scales, the functional remission of general schizophrenia scale (FROGS) and the World Health Organization QOL (WHOQOLBREF) Scale, to evaluate functional recovery and QOL, respectively. In patients undergoing treatment for schizophrenic at the Department of Psychiatry, K.G.M.U. and Lucknow. To monitor adverse drug reactions to any of the prescribed antischizoprenic drugs
in the patient's undergoing treatment for schizophrenia at the Department of Psychiatry,K.G.M.U, Lucknow. To measure the change in the quality of life in patients on treatment of schizoprenia after 6 months of treatment, and to measure treatment adherence using a medication adherence rating scale at 6 months of treatment. Present study is highly novel, and on extensive research of literature, very few articles were found on the therapeutic outcome and monitoring of patients with schizophrenia. Schizophrenia is a chronic, multidimensional mental health disorder that manifests itself via a number of symptoms, including delusions, hallucinations, disorganised speech or behaviour, and cognitive impairment. [1] Schizophrenia is a mental condition characterised by psychotic episodes and cognitive, social, and functional problems. Schizophrenia is a perplexing neuropsychiatric disorder that affects around 1% of the world's population. It is brought about by a complex interplay of genetic predisposition and environmental circumstances. According to the clinical staging model for psychotic diseases, effective treatment early in the course of the disorder may improve prognosis and prevent progression to more severe stages. Thus, schizophrenia prevention and early intervention are related with the prodromal phase, more specifically with "at risk mental states" (ARMS), and are predictive of their development to full-blown psychotic disorder. The psychosis prodrome is composed of nonspecific symptoms (such as depressed mood, anxiety, sleep disturbance, and decline in role functioning), "basic symptoms" (thought interference, receptive language disturbance, and visual perception disturbance), attenuated or sub-threshold psychotic symptoms, neurocognitive deficits, and neurobiological changes as measured by magnetic resonance imaging (MRI). [2] The majority of these hypotheses revolve around an excess orlack of neurotransmitters such as dopamine, serotonin, and glutamate. Other hypotheses attribute schizophrenia's neurochemical imbalance to aspartate, glycine, and gamma- aminobutyric acid (GABA) Abnormal dopamine receptor activation (particularly D2) is thought to be connected with several schizophrenia symptoms. There have been four dopaminergic pathways implicated. The substantia nigra-caudate nucleus nigrostriatal route begins in the substantia nigra and terminates in the caudate nucleus. Dopamine deficiency in this route is believed to affect the extrapyramidal system, resulting in motor symptoms.

The mesolimbic pathway, which connects the ventral tegmental area (VTA) to limbic areas, may contribute to positive symptoms of schizophrenia when dopamine levels are elevated. From the VTA to the cortex, the mesocortical pathway exists. In schizophrenia, negative symptoms and cognitive difficulties are believed to be caused by decreased mesocortical dopamine levels. From the hypothalamus to the pituitary gland, the tubero infundibular route
is located. Tuberoinfundibular dopamine deficiency or blockage results in increased prolactinlevels and, consequently, galactorrhea, ammenorrhea, and decreased libido. [8]

The serotonin theory for schizophrenia development originated with the discovery that lysergic acid diethylamide (LSD) amplified serotonin's effects in the brain. Subsequent research discovered drugs that inhibited both dopamine and serotonin receptors, in

contrast to earlier treatments that targeted just dopamine receptors. The more recent chemicals are beneficial at alleviating both positive and negative symptoms of schizophrenia. [8] Prescribers should be informed of antipsychotics' potential harmful effects and when they are most likely to occur. Neurologic side effects are the most alarming of first-generation antipsychotics. The Abnormal Involuntary Movement Scale can be used to assess the progression of involuntary movements associated with neurologic adverse effects. While newer atypical antipsychotics have less neurologic adverse effects, they are associated with an increased risk of metabolic side effects such as diabetes, hypercholesterolemia, and weight gain. [1, 9]

Antipsychotics appear to have a reversible diabetogenic effect when the medication is withdrawn. Although no controlled trials have been conducted to determine the efficacy of long-term monitoring of biomedical markers (e.g., weight, blood sugar, and cholesterol levels) in patients taking atypical antipsychotics, the risk of metabolic side effects is high enough that several consensus panels recommend routine monitoring. [10] The purpose of this study is to track and evaluate the effects and results of schizophrenia disorder treatment. The purpose of this study is to conduct an observational study. The objective is to summarise the study's findings.

In the current study while analyzing the basic demographical characters we have recorded various details of name, sex, age, address, basic location and various histories for the previous medication or injury etc. The mean age of the total enrolled cases was 49.62±5.87. However, the total patients range from 18-64 years. The maximum number of cases were from 35 -55 years age group i.e. 33 (53.23%). Within total enrolled cases 62 the male dominance was observed, i.e. the majority of cases were male 36 (58.06%) followed by females 26 (41.94%).

In present study during analysis, we have recorded various haemodynamic characters, including hospitalization status, Chronic disease score and depression etc. Within total enrolled cases 62 the 24 (38.71%) were previously hospitalized also, however 38 (61.29%) were no hospitalisation required. Further, the Chronic Disease Score for total enrolled cases 62. The

maximum number of cases 13 (20.97%) have the score of 2 followed by 11 (17.74%) have the score of 3 and so on. The maximum number of cases 34 (54.84%) reported no depression, however 28 (45.16%) cases reported the depression.

In our study additionally we have also observed certain clinical parameters including prominantly prescribed drugs, their adverse effects and various scores to check the pycosis level etc. While analysing the Antipsychotic Drugs usage we observed that, most of the patients i.e. 15 (24.19% were using Risperidone, followed by 13 (20.97%) patients that were using Olanzapine, and least number of cases 01 (1.61%) were using Amisulpride and Fluphenazine. However, opposing our results, the study performed by **Goyal V et al. 2016** [11] stats that, Olanzapine was the most frequently prescription antipsychotic followed by Chlorpromazine (9.23 %), the most often prescribed antipsychotic medication. Sodium Valproate was the mostfrequently given anticonvulsant and mood stabilizer (46.25 %) (49.38 %). Further, anxiolytics were the most often prescribed class of medications for psychiatric indications (26.95 %), followed by antidepressants (15.28 %), antipsychotics (14.43 %), anticonvulsants, and mood stabilizers (7.87 %). Clonazepam (45.84 %) and Escitalopram (29.79 %) were the most frequently prescribed antidepressants overall. Although, no adverse drug reaction was observed for, Amisulpride & Fluphenazine. Though the maximum ADR was reported for Clozapine i.e. 3 (33.33%). Also, while observing the adverse drug events and implicated drugs as per Naranjo’s scale we found that, possibly certain events were Headache & Dizziness (01 each) and the implicated drug for the same were Clozapine (1) &

Aripiprazole (1). Similarly there were certain probable events were also observed and out of that the most possible were weight gain and tremors. The drugs responsible for them were Olanzapine (1), Quetiapine (1)and Trifluoperazine (2) respectively.

Similar to our study, the research performed by **Nanotkar S et al. 2016** [12] also stats that both risperidone and olanzapine have a proclivity for causing metabolic syndrome in their users. When compared to risperidone, olanzapine has a greater likelihood of causing metabolic syndrome in people prescribed it. They performed a prospective, open-label, observational study with the purpose to investigate the adverse effects and metabolic abnormalities caused by the medication risperidone and olanzapine. Their study's findings indicated that individuals receiving risperidone (n=84) experienced a rise in all variables except HDL cholesterol levels, which decreased. Weight and body mass index increases were found to be significantly significant ($p<0.001$). While systolic and diastolic blood pressure, fasting glucose, and
triglycerides increased, the effects were not significant. There was no statistically significant decrease in HDL cholesterol. Further, to check the quality level of psychosis, certain scales and scores were followed, and some of them were used by us such as; The "Functional Remission of General Schizophrenia" (FROGS) scale was developed using the expert consensus method following a MEDLINE and standard database search. Maximum mean was reported for the category of the frogs general i.e. 48.02±15.21and minimum was observed for the category of Occupational functioning i.e. 5.23±2.02. The World Health Organization Quality of Life: Brief Version (WHOQOL-BREF) assesses QOL in four domains, including physical health, psychological, social relationships and environment. The measure is calculated by summing the point values for the questions corresponding to each domain and then transforming the scores to a 0-100 point interval, or alternatively. Maximum mean was reported for the categoryof the Environment domain, i.e. 13.81±2.99 and the minimum was observed for the category of Social domain, i.e. 10.76±3.80. Medication Administration Records, or MARs, may include medication records, prescriber order, treatment sheets, or psychotropic charts that facilities may use when administering treatment to their patients. The observed mean with the range of 0-10 was 4.05±2.99, the median was 5 and the interquartile range was 2-6. The QOLS is scored by adding up the score on each item to yield a total score for the instrument. Scores can range from 16 to 112. There is no automated administration or scoring software for the QOLS. Maximum mean was reported for the category of the Environment domain, i.e. 26.23±4.87 and minimum was observed for the category of Social domain, i.e. 10.37±2.02.

As discussed above we used several scales and scores like FROGS, WHOQOL, QOL and MARS. However, in contrast to our study, **Fornells-Ambrojo M et al. 2017** [13] performed a study with the aim to demonstrate the clinical and economic impact of interventions. They examined service users' experiences using ROM at a psychosis demonstration site for Improving Access to Psychological Therapies for People with Severe Mental Illness. They observed that finding ROM to be less beneficial was connected with younger age and poorer overall outcomes, but not with psychotic symptoms or therapy discontinuation. Qualitative themes that emerged included the importance of being understood, valuing opportunities for reflection, expressing emotions, and tracking progress toward goals. It would be desirable if batteries were shorter, particularly for younger respondents and those with poorer outcomes. Thus, the study found that ROM is acceptable for individuals suffering from psychosis. Assessments should be tailored to specific subgroups.

Additionally in support of our findings, **Ertekin Pinar S et al. 2020** [14] also conducted an observational study. The purpose of their study was to assess functional recovery and

quality of life (QOL) in a sample of schizophrenia patients treated at a Community Mental Health Center (CMHC) and examine the link between these two treatment outcomes. Their study's findings revealed a statistically significant positive correlation between the mean scores for the general and subscales of the functional remission of general schizophrenia scale and the mean score for all domains of the World Health Organization's quality of life (r = 0.63-0.33; P.001). Lastly, they concluded that as functional recovery levels improve, QOL improves. Nursing practices should be intended to facilitate patients' functional recovery.

The findings of the present study strongly supported the previous literature and add on further information in relation to the therapeutic outcomes and monitoring of schizophrenia patients.Further, our limited experience and only a few available literature about the therapeutic outcome and monitoring of patients with schizophrenia, created a difficulty to choose a properly effective and safe protocol. However, to bypass the confounders and enhance the efficacy of the current literature, we must recommend the multicentric study with a large as well as large sample size.

## CONCLUSION

Considering the results of the present study, we may infer that, most of the affected cases have belonged to 35-54 years of age group and within the total enrolled cases of 62 the, male dominance was observed. Our research reveals the strong association between QOL perception and functional recovery in a group of schizophrenia patients with low levels of functional recovery. The current study's findings corroborate earlier research and add to the body of knowledge about the therapy outcomes and follow-up of schizophrenia patients. To overcome confounding variables and improve the efficacy of the existing research, we advocate a multicentric study with a high descriptive sample size.

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