Psychosocial Interventions in Persons with Schizophrenia

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ABSTRACT

Background: Schizophrenia is a severe and chronic illness that is often one of the most difficult to manage, which have health and economic consequences for patients, families, and communities. Psychosocial interventions aim to change psychological, social, physiological, and functional outcomes by utilizing psychological or behavioural actions. **Aim:** To study the psychosocial needs and outcomes of person with schizophrenia. **Methods:** Psychosocial intervention was offered to patients with schizophrenia to see the outcomes of intervention. The research design of the study was a prospective intervention study in which intervention was given to patients at Out-Patient Department (OPD) of Department of Psychiatry, Government Medical College and Hospital, Chandigarh. 15 persons with schizophrenia (F20.0-20.9) as per the ICD-10 were included in the study consecutively. The intervention was done in 8 sessions around 1 hour in each session on a weekly basis in 2 months. **Results:** There were certain areas of unmet needs found in every patient. All the areas of impairment in socio-occupational functioning has statistically significant difference on the pre-and post-intervention and patient's adherence to the medication improved. All patients GAF score recorded a significant difference at the 0.001 level. The QOL score was also reported higher in post intervention. The intervention patients showed high satisfaction with the services since the scores obtained on each of the six domains of PAT-SAT. **Conclusion:** It demonstrated the feasibility of the psychosocial intervention in an OPD setting in a tertiary care centre. It also confirmed the various outcomes along with pharmacological intervention.

Keywords: Schizophrenia, psychosocial, psychosocial interventions

INTRODUCTION

Schizophrenia

Schizophrenia occurs when a person is transitioning from childhood to adulthood and it has the ability to stifle a person's emotional, functional, social, and occupational potential Although the incidence rate is low, the fact that one-third of patients have a chronic disease means the prevalence is high (1.1 percent) (Haq et al., 2009). While there have been successful therapies for schizophrenia for a long time, they have been hampered by the existence of severe side effects (Leucht & Lasser, 2006).

The emergence of neuroleptics and other psychotropic medications, as well as psychotherapy and other forms of successful treatment, has radically changed how we think about this disease (Allebeck, 1989). To achieve the greatest reduction in positive, negative, affective, and cognitive symptoms, a combination of pharmacological and psychosocial treatments may be required (Tandon et al., 2006). It has the potential to destroy not only the lives of patients, but also their families (Zhang et al., 2014).

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Schizophrenia is a severe psychiatric disorder with unknown etiology. Currently, a combination of genetic and environmental factors underlying the development of this disorder is discussed (Schmitt et al., 2011). One theory is that schizophrenia's disorder is largely due to cognitive deficiencies, such as concentration and working memory difficulties, which these medications fail to resolve (Insel, 2010).

Prevalence of Schizophrenia

The illness has a low prevalence (median value 15.2 per 100,000 people per year), it is a significant contributor to the global burden of disease. The equation "prevalence = incidence + course of illness" oversimplifies the complex matrix of factors that affect each variable (Saha et al., 2005). Hebephrenia (a form of schizophrenia marked by extreme personality disintegration) was found in 13% of cases in developed countries and 4% in developing countries. These disparities in disease incidence between developed and developing countries suggest that the prevalence of schizophrenia is more complicated than simple epidemiological results (Bhugra, 2005).

People with schizophrenia have a two- to threefold increased risk of death as compared to the general population. It would be reasonable to believe that males have a higher incidence of schizophrenia than females (Grath et al., 2008). Despite the fact that schizophrenia patients have a high incidence of cigarette smoking, there is a low prevalence of smoking cessation in this community. Tobacco restriction is therefore important in schizophrenia patients in order to minimise smoking-related damage (Zeng, 2020).

Psychosocial Intervention Needs

The importance of identifying the needs of patients cannot be overstated in India, where the population of patients with schizophrenia is large and resources to deal with this population are limited. The assessment of needs acts as a connection between issues, intervention, and evaluation, and has been recognised as a vital component in the preparation, development, and evaluation of clinical care and psychosocial recovery programmes (Kulhara et al., 2010).

It's important to think about the program's feasibility as well as its patient acceptability to address the needs (Buckley et al., 1990). The unmet need in the treatment of schizophrenia's negative symptoms is evident. Professional practise and programme evaluation both require an assessment of treatment needs. Needs are described in this context as the ability to benefit from (mental) health care that is aimed at reversing a deficiency through treatment (Chue et al., 2014). Monitoring changes in care needs over time and identifying the conditions that cause them is one way to create better treatment strategies (Landolt et al., 2012).

Patients with schizophrenia, according to the literature, are not satisfied with having only general knowledge about their condition and treatment, but also show a need for practical guidelines for dealing with their symptoms (Ochoa et al., 2003). It has been recognised that the management of mental and substance use disorders should not only involve medication but psychosocial intervention (PSI) also. Psychosocial interventions for mental and substance use disorders are interpersonal or informational activities, techniques, or strategies that target biological, behavioural, cognitive, emotional, interpersonal, social or environmental factors with the aim of improving health

functioning and well bring (Barrowclough et al., 1998). Psychosocial interventions are often valuable in their own but also can be combined with other interventions, such as medication, for range of disorders or problems (Barth et al., 2016).

Psychosocial Intervention

Psychosocial intervention can be carries in many approaches and methods which bring a change in three areas that are symptoms, functioning and wellbeing. The psychosocial interventions are provided in various settings which include outpatient clinics, primary care clinics, schools, client homes, hospitals (England et al., 2015). The effect of structured intervention creates progressive shift and families learn to incorporate the knowledge and skills that they have been taught into their daily handling of the patient (Kulhara et al., 2009).

Chronic illnesses such as schizophrenia often affect the lives of patients and their caregivers. Family functioning plays a crucial role in the treatment of person with schizophrenia (Kumar et al., 2020). Persons with schizophrenia respond well to comprehensive therapy and to the kinds of community-based support provided by institutions to help societies (Babor, 2001).

The psychosocial interventions can be in any format, e.g. in groups or individually and these interventions help the mental health providers to prevent relapses and increase treatment adherence in schizophrenia (Beri, 2021). Relapse rate of patients who are on medications is 30-50% percent.[24] In order to achieve the objective of community rehabilitation it is important to clearly document the coping styles of schizophrenic patient and their family (Lee et al., 1993). Communication is emphasised in the packages as a way of correcting the deterioration of interpersonal boundaries in family units (Lam, 1991).

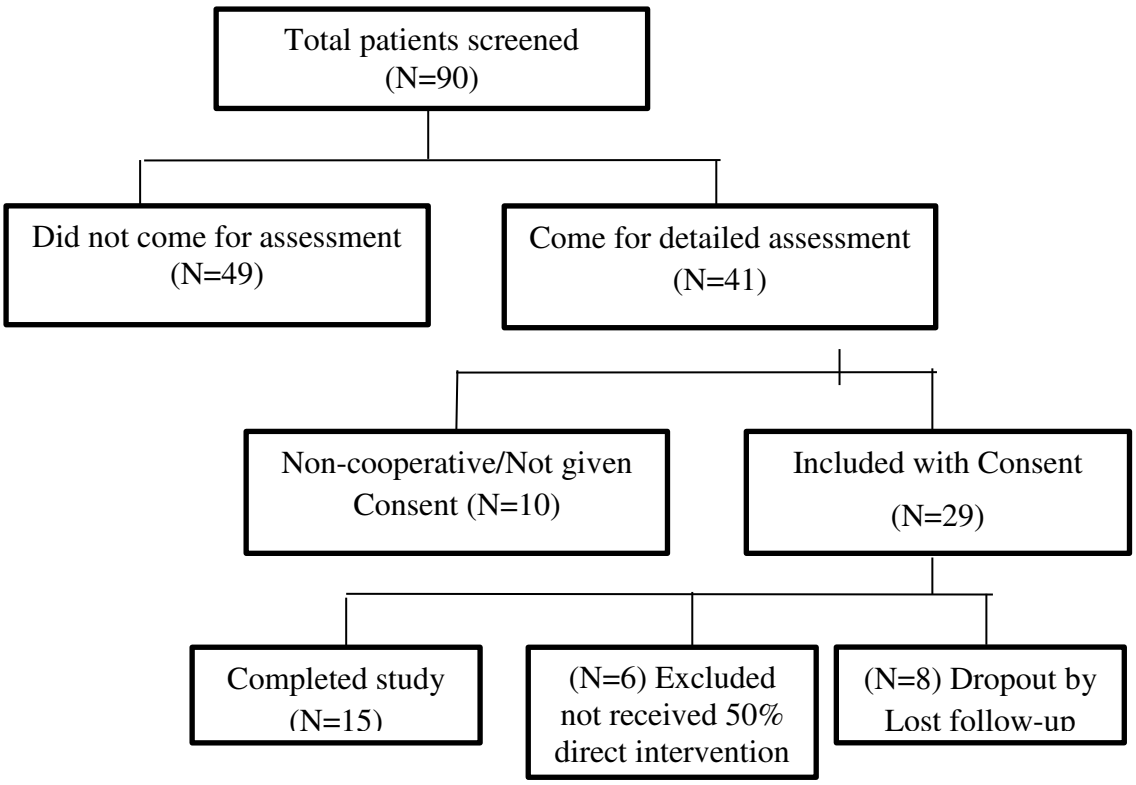
AIM

To study the psychosocial needs and outcomes of intervention in persons with schizophrenia

MATERIALS AND METHODS

The research design of study was pre-and post without control group, prospective intervention study. The setting was Out Patient Department (OPD) of Department of Psychiatry, Government Medical College & Hospital, Chandigarh. The total sample size was Fifteen 15 persons with schizophrenia (F20.0-20.9) as per the ICD-10 (World Health Organization, 1993). The duration of the study was from July 2020 to June 2021. The consecutive patients coming to the OPD of Department of Psychiatry and given written consent to participate in the study and fulfilling inclusion and exclusion criteria were included in the study. Clinically stable patients defined as absence of exacerbation of illness requiring increase in drug doses by 50 % in past three months (Lobana et al., 2002); between the age ranges of 18 to 55 years suffering from schizophrenia for more than one year but less than 5 years were recruited in the study. The Patients with any unstable major medical illness or substance dependence (except nicotine and caffeine); those who are already receiving psychosocial intervention and worsening of clinical condition while receiving psychosocial intervention were excluded.

Flow Chart



Assessments/ Tools Used

1. Socio-demographic and Clinical Data Sheet
2. Psychosocial Intervention Needs Checklist (Dangroo etal., 2021)
3. Global Assessment of Functioning (GAF) (Zametkin et al., 1990; Goldman et al., 1992).
4. WHO-QoL-BREF (WHO, 1998)
5. Morisky Medication Adherence Scale (Pareja et al., 2020)
6. Social Occupational Functioning Scale (SOF) (Saraswat et al., 2006).
7. Patient Satisfaction Scale (PAT-SAT) (Gupta et al., 2022).

Intervention

- Monitoring Compliance for Intervention through Morisky Medication Adherence Scale (Pareja et al., 2020).
- Psychoeducation – IPS guidelines by Sarkhel, Singh & Arora (2020)
- Activity Scheduling and monitoring
- Intervention to address impaired socio-occupational functioning as per initial assessment with Social Occupational Functioning Scale (SOFS) (Saraswat et al., 2006).
- Engagement in Vocation or Productive Work

Pre-test: An initial assessment of three cases was conducted to check the suitability of the tools to be used in the study. The sequence of the intervention may be changed on

case to case basses keep in view of the needs of case. However these three cases were not involved in the final sample.

Description of Intervention Package and Plan:

- Monitoring Compliance for Intervention: It was monitored on scale if persons with schizophrenia are complying with both pharmacological and non-pharmacological treatment as prescribed by the clinician (Pareja et al., 2020).
- Psychoeducation

Goals of the psychoeducation:

- To ensure basic knowledge and competence of patients and their relatives about the illness.
- To provide insight into the illness
- To promote relapse prevention
- Engaging in crisis management and suicide Prevention if required through referral services.

Essential elements

1. Briefing the patients about their illness
2. Problem-solving training
3. Communication training
4. Self-assertiveness training (IPS guidelines 2020) (Sarkhel et al., 2020).

- *Activity Scheduling:* To help persons with schizophrenia in scheduling various activities into day-to-day lifestyle and help them to identify a timetable of activities to manage their attention, develop feelings of competence, develop social confidence etc. A written format of activity is scheduled and is monitored in each session to see if persons with schizophrenia are maintaining it.
- *Intervention to Address Impaired SOF as Initial Assessment:* After assessing the patient on SOF scale various deficits areas were found in persons with schizophrenia. As per requirement these issues were addressed in psychosocial intervention.
- *Engage in Vocation or Productive Work:* If person with schizophrenia is functional then vocational counselling in order to involve him/her in some productive activity and then once client is ready then we proceed for it. After assessing if there is any kind of vocational help needed she/he can be helped to engage in it.
- *Referral, Guidance and Monitoring:* As per the psychosocial need checklist there would be some unmet needs which can be fulfilled by other services the institute or other agencies. The patient was referred for that services which are discussed in the results.

Procedure: After receiving ethical clearance on 13/08/2020 and CTRI registration those patients who are attending to psychiatry OPD and diagnosis with schizophrenia (F20.0-20.9) as per ICD-10[50] criteria and meting the inclusion and exclusion criteria and give consent for the study were initially assessed consecutively.

Socio-demographic and Clinical details was collected from the case record file and from the patient or care givers. A detail psychosocial assessment was done then Psychosocial Intervention Needs checklist was filled based on the psychosocial assessment and information from the patients then they were assessed on Global Assessment of functioning (GAF) (Zametkin et al., 1990; Goldman et al., 1992), WHO-QoL-BREF (WHO, 1998), SOFS (Saraswat et al., 2006)**,** and Morisky Medication Adherence Scale. (Pareja et al., 2020). Subsequently, sessions were planned as per the intervention package

(psychosocial intervention) was proceeded along with the routine treatment from the OPD.

All interventions in the package were not applicable for all the patients it was specifically made for each person with schizophrenia depending upon the score of socio occupation functioning scale. After that during intervention sessions their issues were addressed as per the needs. Soon after the intervention, post assessment will be done assessing again on Global Assessment of functioning (GAF), WHO-QoL-BREF, Social Occupational Functioning Scale (SOFS), Morisky Medication Adherence Scale and additionally on Patient satisfaction scale (PAT-SAT) (Gupta et al., 2022).

Statistical Analysis: Data collected was entered in the master chart and later analysed using appropriate statistics with the help of Statistical package social sciences (SPSS 23). Descriptive statistics – mean & percentage was used and for association between variables Pearson coefficient of correlation test was used and comparative profile in pre and post intervention was be done by using Wilcoxon signed rank test.

Ethical Consideration: The purpose and the design of the study was explained to the patient and a close family member in language they understand viz. Hindi or English. The study was conducted with patients diagnosed Schizophrenia (only F20.0-20.9) as per ICD-10 (WHO, 1993) attending the Psychiatry Outpatient Department of Government Medical College and Hospital, Chandigarh. A written and informed consent was taken from all. The patient and the consenting caregivers were informed that they could withdraw any time from the study without giving reasons for the same. The confidentiality of the information obtained was maintained and revealed only to faculties/editors of this study.

RESULTS

Socio-demographic Profile

Table 1 shows the socio-demographic characteristics of persons with schizophrenia. The mean age of the sample was 28.53 ± 8.07. The majority of a person with schizophrenia were male single (60%), married (40%) and Hindu (86.7%) followed by Sikh (13.3%). Regarding education, the majority were educated up to matric (26.7%) followed by intermediate and graduate (20%), illiterate or primary (each 13.3%) and middle (6.7%). Concerning occupation, the majority of them were semi-skilled/un-skilled worker (46.7%), followed by unemployed/students and housewives (each 20%) and semi-professional (13.3%). Considering family income (66.7%) having below Rs. 10000 and 33.3% were having between 10001- 20,000. There were 80% person living in own hose and 20% on rented accommodation. All patients were belonging to the nuclear family (100%). The majority of the persons with schizophrenia were living in (53.3%) urban and followed by rural area (46.7%). They mostly belong from Punjab (53.3%), followed by Chandigarh (20%) and Haryana (20%). They all were speaking Hindi (100%).

Table 2 shows clinical details of persons with schizophrenia the mean age of onset was 26.53±7.63 years. The mean duration of illness and treatment was the same 2-5 years (53.3%) and 1-2 years (46.7%). Considering the severity of illness, 66.7% were having mild symptoms and 33.3% were moderately symptomatic. There were having no side effects (80%) and (20%) have side effects of the medicine. The majority of them were having no comorbidity with other illnesses and (6.7%) population were a comorbid

illness. around one-fourth (26.7%) persons having a history of substance and no patient was having any family history of psychiatric illness.

Table 1: Socio-demographic Profile of Patients with Schizophrenia

Variable	Variable category	f (%)/Mean ± SD
Age (18-60 years)		28.53±8.07
Sex	Male Female	9(60.0) 6(40.0)
Marital status	Single Married	9(60.0) 6(40.0)
Number of children	One child Two children	1(6.7) 4(26.7)
Living situation	Own home Rented accommodation	12(80.0) 3(20.0)
Education	Illiterate Primary Middle Matric Inter/diploma Graduate	2(13.3) 2(13.3) 1(6.7) 4(26.7) 3(20.0) 3(20.0)
Occupation	Semi-Professional Skilled/Semi-skilled/un-skilled worker Housewife Unemployed/student	2(13.3) 7(46.7) 3(20.0) 3(20.0)
Family income in Rs.	0-10000 10001- 20000	10(66.7) 5(33.3)
Religion	Hinduism Sikhism	13(86.7) 2(13.3)
Family type	Nuclear	15(100.0)
Locality	Urban Rural	7(46.7) 8(53.3)
Residence	Punjab Haryana Chandigarh	8(53.3) 3(20.0) 4(26.7)
Languages known	Hindi	15(100.0)

Clinical Profile

Table 2: Clinical Profile of the Patients with Schizophrenia

Variable	Variable category	f (%)/Mean±SD
Age of onset in years		26.53±7.63
Duration of illness	1-2 years 2-5 years	7(46.7) 8(53.3)
Duration of treatment	1-2 years 2-5 years	7(46.7) 8(53.3)
Severity of illness	Mild Moderate	10(66.7) 5(33.3)
Side effects	No Yes	12(80.0) 3(20.0)
Comorbidity	No Yes	14(93.3) 1(6.7)
History of substance use	No Yes	11(73.3) 4(26.7)
Family history of psychiatric illness	No	15(100.0)

Psychosocial Intervention Needs

Table 3: Psychosocial Intervention Needs

Unmet Psychosocial Intervention Needs		$f(\%)$
Basic		
1.	Food Accommodation, physical health, more time from clinicians, drugs, abuse emotional/physical/sexual), social support, sexual expression, tax benefits, legal aid, home visit	00
2.	Daytime activities, psychological distress, self-care, company, information on condition & treatment, activities of daily living	15(100.0)
Health		
3.	Psychotic symptoms, expressed emotion, employment, telephone	4(26.7)
4.	Treatment compliance	14(84.6)
5.	Crisis management, safety to others, intimate relationships, conflicts (includes property & family), looking after the home basic education, travel concession, money management, availability of finical recourses, insurance, medical reimbursement, nominated representative	1(6.7)
6.	Safety to self, alcohol, religious/spiritual need, transport, free treatment, advanced directives	2(13.3)
Social		
7.	Self-help (SHG, club, society)	12(80.0)
8.	Caregivers stress help	5(33.3)
9.	Stigma, certification	11(73.3)
Functioning		
10.	Childcare, flexible job timing, vocational training, reservation in job	3(20.0)
Service		
11.	Benefits (social assistance)	6(40.0)

Table 3 shows there are certain areas of unmet needs. some needs were unmet in all patients; these needs are daytime activities, psychological distress, self-care, company, information on condition & treatment and activities of daily living. The other areas of unmet needs were treatment compliance (84.6%), self-help e.g. club, society (80.0%), stigma, certification (73.3%), benefits or social assistance (40.0%), caregivers stress help (33.3%), psychotic symptoms, expressed emotion, employment, telephone (26.7%), childcare, flexible job timing, vocational training, reservation in a job (20.0%). There were areas where very few patients (6.7%) were having unmet needs - crisis management, safety to others, intimate relationships, conflicts (includes property & family), looking after the home, basic education, travel concession, money management, availability of finical recourses, insurance, medical reimbursement, nominated representative. The study has also identified areas where there was no unmet need - food, accommodation, physical health, more time from clinicians, drugs abuse (emotional/physical/sexual), social support, sexual expression, tax benefits, legal aid, home visit.

Socio-occupational Functioning

Table 4: Comparative Profile of Pre-and Post-Intervention Impairment on SOF

Areas of Impairment	Negative Ranks	Positive Ranks	Ties	Z
Bathing and grooming	15	0	0	-3.542***
Clothing and dressing	14	0	1	-3.372***
Eating, feeding and diet	14	0	1	-3.384***
Neatness and maintenance	15	0	0	-3.578***
Conversational skills	15	0	0	-3.499***
Social appropriateness/politeness	13	0	2	-3.358***
Social engagement	14	1	1	-2.605**
Money management	11	0	4	-3.066**
Orientation/mobility	14	0	1	-3.355***
Instrumental social	15	0	0	-3.477***
Recreation/leisure activity	15	0	0	-3.493***
Work	10	1	4	-2.001*
Respect	15	0	0	-3.508***
Independence/responsibility	13	0	2	-3.228***
Total score	15	0	0	-3.416***

* Significant at the 0.05 level (2-tailed).** Significant at the 0.01 level (2-tailed).
***Significant at the 0.001 level (2-tailed).

Table 4 shows the comparative profile of impairment in different areas of socio-occupational functioning in the pre-and post-intervention assessment among the schizophrenia patients which was done by using the Wilcoxon signed-rank test. All the areas of impairment in socio-occupational functioning has statistically significant difference on the pre-and post-intervention. There was higher improvement was reported in the areas of bathing and grooming, neatness and maintenance, conversation skills, instrumental and recreation and respect (0.001). The low improvement shows in the domain of social appropriateness, money management, work and responsibility (0.05 level).

Table 5: Comparative Profile of Pre-and Post-Intervention on QoL

Domains	Negative Ranks	Positive Ranks	Ties	Z
Physical health	0	15	0	-3.419***
Psychological	0	15	0	-3.422***
Social relationships	0	15	0	-3.438***
Environment	0	15	0	-3.448***
Total	0	15	0	-3.411***

***Significant at the 0.001 level (2-tailed).

The Wilcoxon signed-rank test is indicated for matched pairs when data is non-normally distributed and the level of the data is ordinal or higher. The nonparametric approach using the Wilcoxon signed-rank test was used to analyse differences in QoL scores in schizophrenia patients. The significant difference at the 0.001 level indicates all the domains have an improvement in the current results.

Table 6: Comparative Profile of Pre-and Post-Intervention on Medication Adherence

Variable	Negative Ranks	Positive Ranks	Ties	Z
Forget to take pills	10	0	5	-3.051
Miss taking their medication for reason other than forgetting	8	0	7	-2.828
Stopped medicine without telling the doctor	13	0	2	-3.606
Forget to bring along medicine in travel	13	0	2	-3.606
Taken medicine yesterday	8	0	7	-2.828
Feel under control and stop taking medicine	12	0	3	-3.404
Feeling hassled about sticking on a treatment plan	2	0	1	-1.414
Difficulty remembering to take medicine	14	0	1	-3.442
Total	14	0	1	-3.311

* Significant at the 0.05 level (2-tailed)** Significant at the 0.01 level (2-tailed).
***Significant at the 0.001 level (2-tailed).

Table 5 shows aassessment on the Morisky Medication Adherence Scale (MMAS-8), which has proved to be a valuable resource to address adherence concerns, such as forgetting to take medications or discontinuing medications without guidance. The Wilcoxon signed-rank test showed that statistically significant change in adherence levels on post-intervention scores in patients with schizophrenia enrolled in the psychosocial intervention ($Z = -3.311$). The positive ranks show in the table that all the patient's adherence to the medication improved, however, there are ties in certain areas which denotes no change in both pre-and post-intervention.

Table 7: Comparative Profile of Pre-and Post-Intervention on Global Functioning

Variable	Negative Ranks	Positive Ranks	Ties	Z
GAF	0	15	0	-3.417***

***Significant at the 0.001 level (2-tailed).

Table 6 shows the GAF scale evaluates both symptom severity and functioning (GAF-F), ranking a patient from zero to a hundred. In the present study, the Wilcoxon sign rank test was used to see the pre-and post-intervention changes in persons with schizophrenia. GAF scores in patients in post-intervention ≥ pre-intervention. All patients' GAF score recorded a significant difference at the 0.001 level (2-tailed).

Table 7: Patient Satisfaction

Domains	Mean ± SD
Trust	14.46±.74
Communication	14.06±.59
Exploration of ideas/options	9.66 ±.59
Body language	9.46 ±.63
Active listening	18.86 ±.83

Miscellaneous	23.6 ±.82

The present study explores the important dimension of patient satisfaction about the services that they had availed while getting treatment for mental illness. In this study, the psychosocial intervention was given to the schizophrenia patients after the intervention patients showed high satisfaction with the services since the scores obtained on each of the six domains of PAT-SAT were higher than the possible mean scores that could be obtained.

DISCUSSION

Socio-demographic Profile of the Patient with Schizophrenia

The mean age was near about thirty years which is slightly higher than typical age where schizophrenia develops during early adulthood (Gogtay et al., 2011). This study included more than half of the male with schizophrenia. Schizophrenia affects men and women equally (Judy, 1985) and the current study backs up that statement. Although the sample was not chosen randomly.

The majority of the participants in the present study were unmarried this could be because of the onset of the illness in the study participants; when they were supposed to get married they got the illness. This particular finding of the current study is contradictory to a study (Barth et al., 2016) which found a positive marital outcome in terms of getting married and keeping the marriage intact. This was linked to a number of clinical and socio-demographic characteristics, as well as several other domains.

In the present study majority of the sample belongs to the Hindu religion, which could be explained by the sampling area from where they were coming from. In regard to education, the majority were studied up to matric or tenth slandered followed by intermediate and graduate. In regard to occupation, the majority were semi-skilled/un-skilled worker followed by unemployed/students, housewives. These findings are similar to findings of another study (Ochoa et al., 2003) also correlates with results which showed majority of persons with schizophrenia have decline in occupational functioning. Considering family income majority were having below Rs 10000 per month and some were having between 10001- 20,000. Majority of the patients were living in own home and some were living on rented accommodation. All patients were belonging to a nuclear family. The findings of the current study also support that a functional disorder was found high in subjects living in nuclear family or living alone (WHO, 2001). It was found that the majority of people with schizophrenia come from nuclear families and that those who live with a larger number of family members have less impairment in the areas of self-care, interpersonal activities, communication and understanding. The persons with schizophrenia were mainly from urban areas and less than half were from the rural area and mostly belong from Punjab, followed by Chandigarh and followed by Haryana. All the participants were Hindi speaking. It could be due to their socio-cultural background and every individual was living with their family.

Clinical Profile of the Patient with Schizophrenia

The mean age of onset were the twenties which is similar to another study (DeLisi, 1992). The majority of the persons were having a duration of illness and duration of treatment of 2-5 years and followed by 1-2 years. Considering the severity of illness majority of the patients were having mild symptoms and a few were moderately symptomatic. There were the majority of persons having no side effects and only a few were having side effects of the medicine. The only one person was having co-morbidity with other illness

and one-fourth of the persons were having a history of substance use which is similar with another study (Warner et al., 1994) and no patient was having a history of family psychiatric illness this particular finding is somewhat uncommon. Schizophrenia has a high heritability, with a 10-fold increase in risk to siblings of probands (Mäki et al., 2005).

Unmet Needs of the Patients with Schizophrenia

In the present study, we have used a psychosocial need checklist (Dangroo et al., 2021) which assessed the areas of unmet psychosocial needs which were intervened through psychosocial intervention. The current study shows all participants have unmet needs in the following areas - daytime activities, psychological distress, self-care, company, information on condition and treatment and activities of daily living followed by treatment compliance 84.6%, self-help (SHG, club, society) 80.0%, stigma, certification 73.3%, benefits (social assistance) 40.0%. These results are similar to a Spanish study[48] which identified unmet needs related to health and social services provision, including psychotic symptoms, house upkeep, food, and information.

The present study also supports that the main barrier to access to services is a stigma associated with mental illness. Thus, negative perceptions about mental illness in the users are related to a higher number of unmet needs and negative attitudes toward medication (Pompili et al., 2017).

In another study, it was revealed that they need help for educating other members of the family, looking after family members' health, financial help etc. which merely reflects the social problems of poverty and unemployment. The study concluded that it would be impossible to rehabilitate the family as well unless voluntary care agencies are sufficiently motivated in this direction (Pillai et al., 2010).

Socio-occupational Functioning of the Patients with Schizophrenia

In the current study, the SOF scale was used to assess specific domains of social functioning. In the pre-intervention, various impairments were identified at a moderate or severe level which was improved after the intervention in all the domains of socio-occupational functioning especially in the areas of bathing and grooming, neatness and maintenance, conversation skills, instrumental and recreation and respect. However, less improvement reported in certain areas social appropriateness, money management, work and responsibility. The current study finding was consistent with another study (Ganguly et al., 2019). The present study findings suggested positive outcomes in managing different impairments in various areas of socio-occupational functioning and also the feasibility of reducing the overall severity of impairments with an adequate psychosocial intervention. These findings are somewhat similar to another study (Cowman et al., 2021) where psychosocial treatments targeting cognitive deficits, in particular those focusing on social cognition, are likely to be important for improving functional outcomes in early psychosis.

Quality of Life of the Patients with Schizophrenia

In present study assessed the quality of life of patients in four domains, which were physical, psychological, social and environmental. There is a significant improvement in pre-and post-intervention in various domains of quality of life. This demonstrates that the utilization of psychosocial intervention in the current study was relevant to bringing positive changes in QOL of the patients with schizophrenia. Similar findings were reported in another study (Pitkänen et al., 2013) where the psychosocial intervention has a significant effect on improvement on the quality of life at baseline and after six months.

In another study (Bechdolf et al., 2010) which assessed the impact of psychosocial intervention on the QOL of patients with schizophrenia reported a significant improvement in QOL, social functioning, and activities of daily living.

Medication Adherence among the Patients with Schizophrenia

In the present study, the medication adherence scale was used to monitor the compliance of the medication and treatment. Which assess forgetting to take medication, carelessness about taking medication, stopping the medication when feeling better and stopping the medication when feeling worse. The patients show higher improvement in all most domains and become fully compliant to the medication in post-intervention assessment. There was no change in some domains where the score was the same in both pre-and post-intervention.

This has been reported in previous research on schizophrenia (Kim et al., 2010). Patients with chronic diseases often receiving multiple medications are at higher risk for non-adherence to medication whereas medication adherence is essential for improving health outcomes. The measurement of patient medication adherence and the use of interventions to improve adherence is a prime requirement in clinical and pharmaceutical practice. Another study (Zygmunt et al., 2002) shows relevant findings that high rates of medication adherence were common with the psychosocial intervention in which psychoeducation for patients with schizophrenia and their families is largely effective in improving adherence with antipsychotic medications.

Global Assessment Functioning

The present study assessed in global functioning of the patient with schizophrenia. It shows improvement in both symptoms and global functioning. A higher score was reported in post-intervention in the global functioning of the patient. The improvement in functioning after receiving treatment will imply that the treatment has been effective. The current findings are also supported by good evidence (Silva et al., 2013) of sizable improvements in social functioning due to multi-component structured psychosocial intervention. The trials included psychoeducation supplemented with at least two additional therapies.

Patient Satisfaction with Psychosocial Intervention

The current study looks into a key aspect of patient satisfaction with regard to the psychosocial intervention they received along with pharmacological treatment. All the patients reported highly satisfied. Examining in detail the patient satisfaction in various domains, the highest score was obtained for the "trust and communication" domains. The other four domains like an exploration of ideas, body language, active listening and miscellaneous were also scored well. The current findings of the study are consistent with another similar study (Woldekidan et al., 2019) which examined the satisfaction level of patients attending the psychiatric outpatient care at one of the tertiary care teaching hospital and reported high satisfaction with. Similarly, in the Indian study (Brooke et al., 2015) patients showed high satisfaction with psychosocial interventions. High participation rates and levels of satisfaction were found to be evidence of acceptability.

CONCLUSION

The schizophrenia patients attending OPD clinic reported a significant number of psychosocial intervention needs which were addressed in the psychosocial intervention. The most common unmet needs reported were daytime activities, psychological distress, and self-care, company, information on condition & treatment and activities of daily

living and followed by treatment compliance. It was reported that psychosocial intervention enhances patient's compliance to medication. There was a significant improvement in all areas of impairment in socio-occupational function. However, there are few areas where improvement was minimal but the improvement was present. Significant improvement was reported in quality of life patients who received psychosocial intervention therefore it correlates with psychosocial intervention and quality of life of the patients. The psychosocial intervention with schizophrenia patients had a significantly beneficial effect on the global functioning of the patient. The result shows that most of the enrolled patients had good improvement in various areas which might help them to reach recovery. The result is crucial, as it demonstrated the feasibility of the psychosocial intervention in an OPD setting in a tertiary care centre. It also confirmed the various outcomes along with pharmacological intervention.

STRENGTHS

The feasibility of structured psychosocial intervention along with routine out-patient care among outpatients with schizophrenia in a tertiary care centre was reasserted. Initially, the high number of dropouts was seen despite the investigator's persistent efforts to convince patients to attend the sessions which were overcome successfully and completed the study as per protocol is the biggest strength. The study was conducted during the COVID-19 pandemic situation when regular physical OPD was closed or had restricted function so sessions were conducted telephonically to continue intervention which a strength. Patients' high satisfaction on post-assessment is also a strength of this study.

LIMITATIONS

The sample size was less which limit the generalizability of the findings and interventions were offered only to persons with schizophrenia their family caregivers were not considered for intervention. The positive symptoms, cognitive deficits of an individual's disease were not investigated as mediating factors. The consecutive sampling with no controlled group was another limitation.

FUTURE DIRECTIONS

The Studies with a large sample size can give a better understanding and some mediating factors, such as therapeutic alliance, positive symptoms, cognitive deficiencies, and the severity of an individual's illness, can be considered. The inclusion of family members in psychosocial intervention can be considered in future research. The adherence behaviour of individuals towards different types of psychosocial interventions should also be examined. The longer interventional period may be more effective in bringing about psychopathological changes. Similarly, future studies should assess the long-term outcomes of these psychosocial interventions. Further research could be on the outcome of psychosocial intervention in comparison with different psychiatric disorders.

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