UNMET NEEDS, KNOWLEDGE, ATTITUDE AND PRACTICE OF CONTRACEPTION IN WOMEN WITH SCHIZOPHRENIA/SCHIZOAFFECTIVE DISORDER

Dissertation submitted to

The Tamilnadu Dr M.G.R. Medical University

In part fulfillment of the requirement for

M.D. Psychiatry final examination

March 2015

CERTIFICATE

This is to certify that the dissertation titled “Unmet needs, knowledge, attitude and practice of contraception in women with Schizophrenia/Schizoaffective disorder” is the bonafide work of Dr. Bhuvaneshwari S towards MD Psychiatry Degree Examination of Tamilnadu, Dr M.G.R Medical University to be conducted in March 2015. This work has not been submitted to any university in part or full.

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CERTIFICATE

This is to certify that the dissertation titled “Unmet needs, knowledge, attitude and practice of contraception in women with Schizophrenia/Schizoaffective disorder” is the bonafide work of Dr. Bhuvaneshwari S towards MD Psychiatry Degree Examination of Tamilnadu, Dr M.G.R Medical University to be conducted in March 2015 and that this study has been done under my guidance. This work has not been submitted to any university in part or full.

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DECLARATION

I hereby declare that this dissertation titled **"**Unmet needs, knowledge, attitude and practice of contraception in women with Schizophrenia/Schizoaffective disorder**"** is a bonafide work done by me under the guidance of Dr. Suja Kurian, Professor of Psychiatry, Christian Medical College, Vellore. This work has not been submitted to any university in part or full.

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Unmet needs and knowledge, attitude, practice of contraception in women with Schizophrenia/schizoaffective disorder.
Dr. Bhuvaneshwari. S, PG Registrar, Psychiatry, Dr. Suja Kurian, Dr. Reeta Vijayaselvi, Obstetrics & Gynaecology.

Ref: IRB Min. No. 8486 [OBSERVE] dated 09.10.2013

Dear Dr. Bhuvaneshwari. S,

I enclose the following documents:

1. Institutional Review Board approval 2. Agreement

Could you please sign the agreement and send it to Dr. Nihal Thomas, Addl. Vice Principal (Research), so that the grant money can be released.

With best wishes,

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Dear Dr. Bhuvaneshwari. S,

The Institutional Review Board (Blue, Research and Ethics Committee) of the Christian Medical College, Vellore, reviewed and discussed your project entitled "Unmet needs and knowledge, attitude, practice of contraception in women with Schizophrenia/schizoaffective disorder." on October 9, 2013.

The Committees reviewed the following documents:

1. IRB application form
2. Curriculum Vitae' of Drs. Bhuvaneshwari. S, Suja Kurian, Reeta Vijayaselvi.
3. Patient Consent form (Tamil)
4. Patient Information Sheet (Tamil)
5. CANSAS – P Self Rated version of Camberwell Assessment of Need
6. No of documents 1-5

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Dr. Chandra Singh	MS, MCH, DMB	Professor, Urology, CMCH.	Internal, Clinician
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We approve the project to be conducted as presented.

The Institutional Ethics Committee expects to be informed about the progress of the project, any **adverse events** occurring in the course of the project, any **amendments in the protocol and the patient information / informed consent**. On completion of the study you are expected to submit a copy of the **final report**. Respective forms can be downloaded from the following link: http://172.16.11.136/Research/IRB_Polices.html in the CMC Intranet and in the CMC website link address: http://www.cmch-vellore.edu/static/research/Index.html.

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Fluid Grant Allocation:

A sum of 4,000/- INR (Rupees Four Thousand only) will be granted for 1 year.

Yours sincerely

Dr. Nihal Thomas
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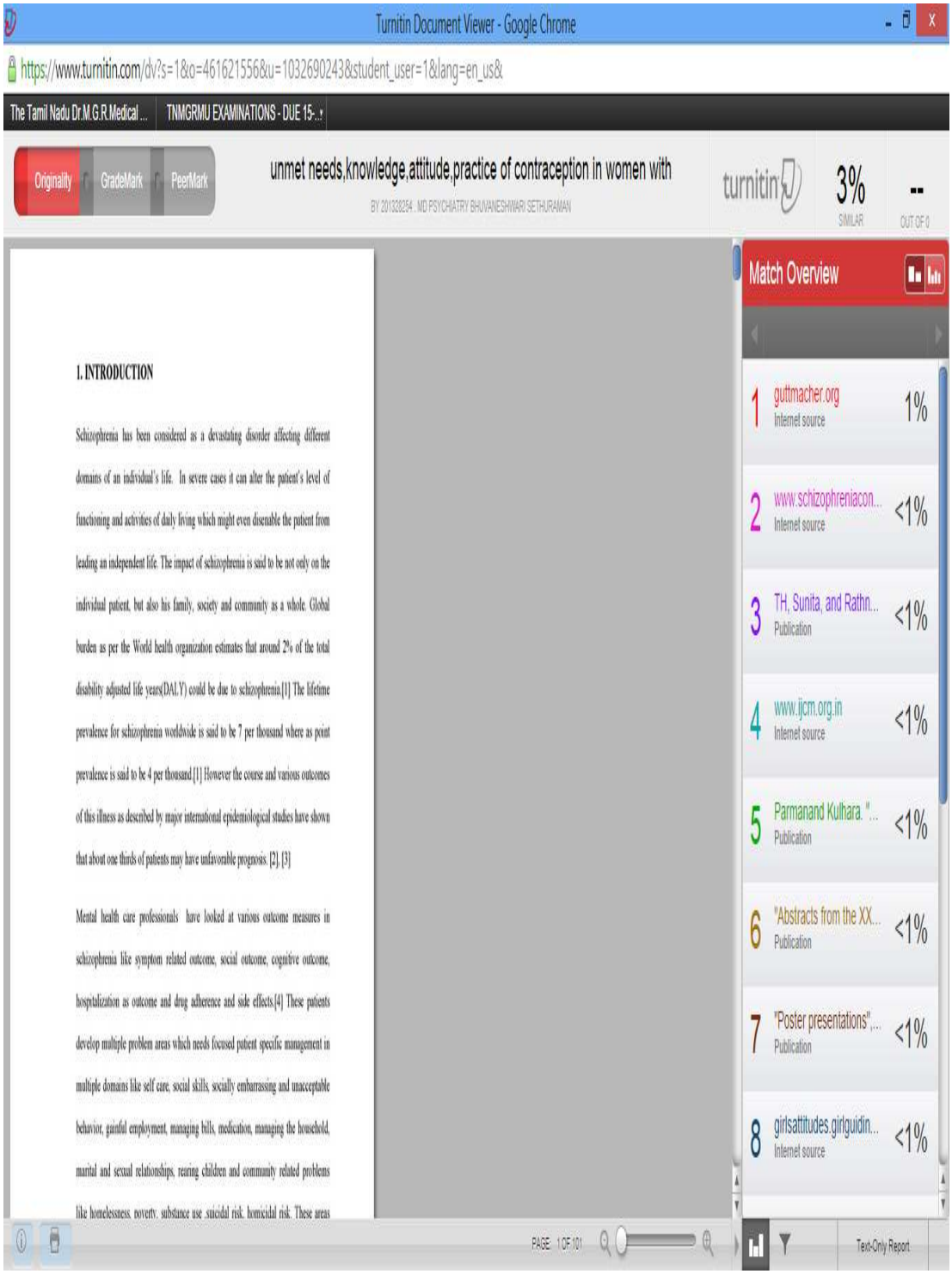

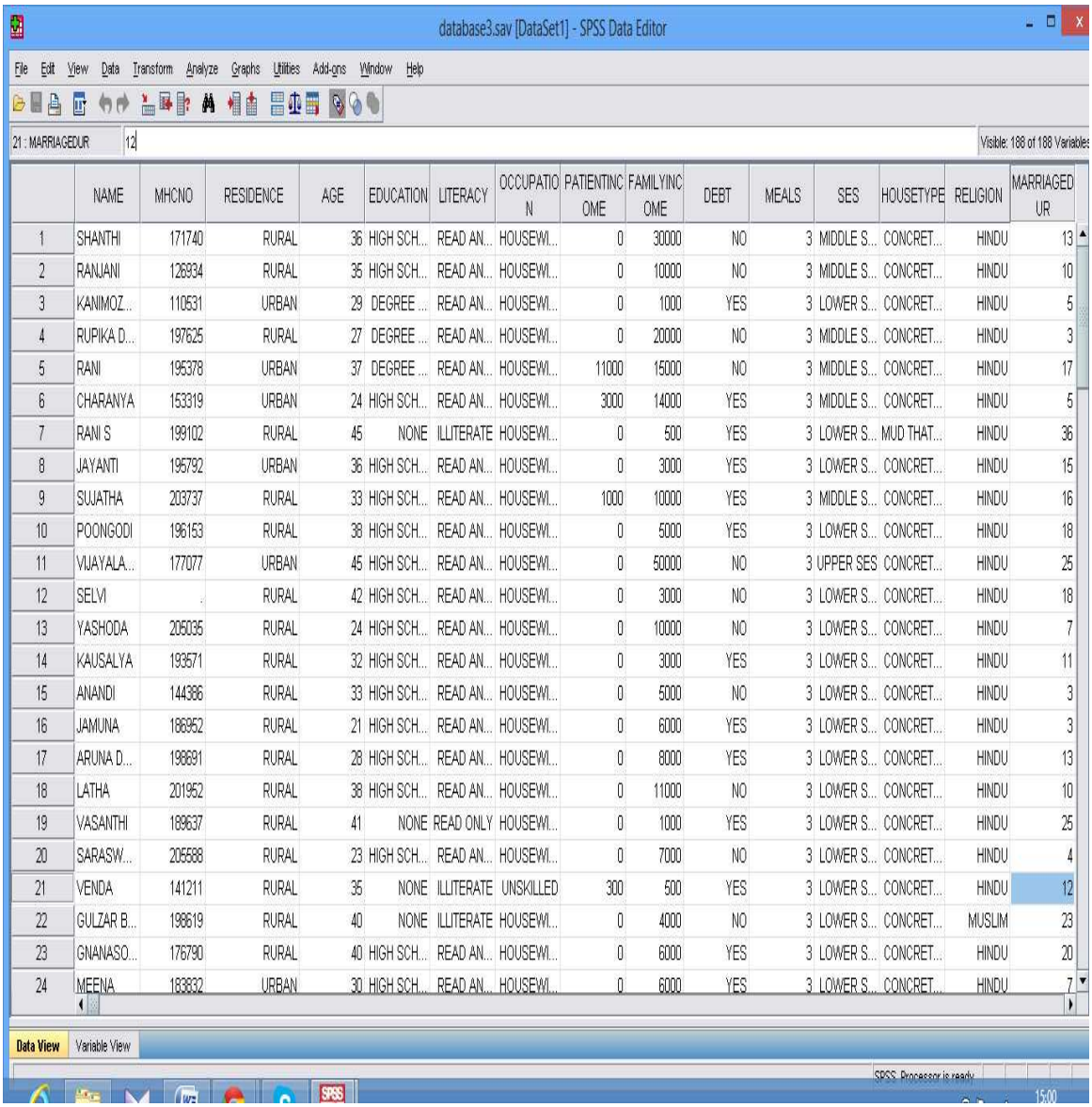

	NAME	MHCNO	RESIDENCE	AGE	EDUCATION	LITERACY	OCCUPATION	PATIENTINCOME	FAMILYINCOME	DEBT	MEALS	SES	HOUSETYPE	RELIGION	MARRIAGEDUR
1	SHANTHI	171740	RURAL	36	HIGH SCH...	READ AN...	HOUSEWI...	0	30000	NO	3	MIDDLE S...	CONCRET...	HINDU	13
2	RANJANI	126934	RURAL	35	HIGH SCH...	READ AN...	HOUSEWI...	0	10000	NO	3	MIDDLE S...	CONCRET...	HINDU	10
3	KANIMOZ...	110531	URBAN	29	DEGREE ...	READ AN...	HOUSEWI...	0	1000	YES	3	LOWER S...	CONCRET...	HINDU	5
4	RUPIKA D...	197625	RURAL	27	DEGREE ...	READ AN...	HOUSEWI...	0	20000	NO	3	MIDDLE S...	CONCRET...	HINDU	3
5	RANI	195378	URBAN	37	DEGREE ...	READ AN...	HOUSEWI...	11000	15000	NO	3	MIDDLE S...	CONCRET...	HINDU	17
6	CHARANYA	153319	URBAN	24	HIGH SCH...	READ AN...	HOUSEWI...	3000	14000	YES	3	MIDDLE S...	CONCRET...	HINDU	5
7	RANI S	199102	RURAL	45	NONE	ILLITERATE	HOUSEWI...	0	500	YES	3	LOWER S...	MUD THAT...	HINDU	36
8	JAYANTI	195792	URBAN	36	HIGH SCH...	READ AN...	HOUSEWI...	0	3000	YES	3	LOWER S...	CONCRET...	HINDU	15
9	SUJATHA	203737	RURAL	33	HIGH SCH...	READ AN...	HOUSEWI...	1000	10000	YES	3	MIDDLE S...	CONCRET...	HINDU	16
10	POONGODI	196153	RURAL	38	HIGH SCH...	READ AN...	HOUSEWI...	0	5000	YES	3	LOWER S...	CONCRET...	HINDU	18
11	VIJAYALA...	177077	URBAN	45	HIGH SCH...	READ AN...	HOUSEWI...	0	50000	NO	3	UPPER SES	CONCRET...	HINDU	25
12	SELVI	.	RURAL	42	HIGH SCH...	READ AN...	HOUSEWI...	0	3000	NO	3	LOWER S...	CONCRET...	HINDU	18
13	YASHODA	205035	RURAL	24	HIGH SCH...	READ AN...	HOUSEWI...	0	10000	NO	3	LOWER S...	CONCRET...	HINDU	7
14	KAUSALYA	193571	RURAL	32	HIGH SCH...	READ AN...	HOUSEWI...	0	3000	YES	3	LOWER S...	CONCRET...	HINDU	11
15	ANANDI	144386	RURAL	33	HIGH SCH...	READ AN...	HOUSEWI...	0	5000	NO	3	LOWER S...	CONCRET...	HINDU	3
16	JAMUNA	186952	RURAL	21	HIGH SCH...	READ AN...	HOUSEWI...	0	6000	YES	3	LOWER S...	CONCRET...	HINDU	3
17	ARUNA D...	198691	RURAL	28	HIGH SCH...	READ AN...	HOUSEWI...	0	8000	YES	3	LOWER S...	CONCRET...	HINDU	13
18	LATHA	201952	RURAL	38	HIGH SCH...	READ AN...	HOUSEWI...	0	11000	NO	3	LOWER S...	CONCRET...	HINDU	10
19	VASANTHI	189637	RURAL	41	NONE	READ ONLY	HOUSEWI...	0	1000	YES	3	LOWER S...	CONCRET...	HINDU	25
20	SARASW...	205588	RURAL	23	HIGH SCH...	READ AN...	HOUSEWI...	0	7000	NO	3	LOWER S...	CONCRET...	HINDU	4
21	VENDA	141211	RURAL	35	NONE	ILLITERATE	UNSKILLED	300	500	YES	3	LOWER S...	CONCRET...	HINDU	12
22	GULZAR B...	198619	RURAL	40	NONE	ILLITERATE	HOUSEWI...	0	4000	NO	3	LOWER S...	CONCRET...	MUSLIM	23
23	GNANASO...	176790	RURAL	40	HIGH SCH...	READ AN...	HOUSEWI...	0	6000	YES	3	LOWER S...	CONCRET...	HINDU	20
24	MEENA	183832	URBAN	30	HIGH SCH...	READ AN...	HOUSEWI...	0	6000	YES	3	LOWER S...	CONCRET...	HINDU	7

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I sincerely thank my guide Dr.Suja Kurian for helping me choose the topic of study,formulate the plan and execute effectively amidst the time constraints

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I would like to thank Mr.Suresh who helped me in formatting and Mr.James who would be receptive at all times to take print out.

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ABSTRACT

1. **Title of the abstract:** Unmet needs, knowledge, attitude and practice of contraception in women with Schizophrenia/schizoaffective disorder

Name of the Department: Department of Psychiatry

Name of the Candidate: Dr.Bhuvaneshwari.S

Degree and Subject: MD Psychiatry

Name of the Guide: Dr.Suja Kurian, Professor of Psychiatry

Objectives

1. To assess the unmet needs, knowledge, attitude, practise of contraception of married women with diagnosis of schizophrenia/schizoaffective disorder in remission.
2. To evaluate factors associated with unmet needs and contraceptive practices.

Methods

Married women attending outpatient services of Department of Psychiatry of a tertiary care general hospital with ICD 10 diagnosis of schizophrenia/schizoaffective disorder in remission were recruited after obtaining informed consent. Socio demographic and clinical details were collected. Psychopathology rating was done using Positive & Negative Syndrome Scale (PANSS) and unmet needs were assessed using Camberwell assessment of Need Short Appraisal Schedule – patient rated version (CANSAS P). Knowledge, attitude, practise of contraception was assessed using modified version of a standardised questionnaire from the National Family Health Survey (NFHS Part 3). Statistical methods included descriptive methods, tests of association and logistic regression.

Results

Majority of women were housewives and from rural background.63.9% of women were educated up to high school. Mean PANSS score was 38 and 74% of patients had no unmet needs. Unmet needs were significantly associated with the location of residence being urban and lower level of education. Current practise of contraception was present in 71% of patients and factors significantly associated with the practice were age above 33 years, having two children, having at least one male child and undifferentiated schizophrenia. These results were discussed.

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1. INTRODUCTION

Schizophrenia has been considered as a devastating disorder affecting different domains of an individual's life. In severe cases it can alter the patient's level of functioning and activities of daily living which might even disenable the patient from leading an independent life. The impact of schizophrenia is said to be not only on the individual patient, but also felt by his family, society and community as a whole. Global burden as per the World health organization (WHO) estimates that around 2% of the total disability adjusted life years (DALY) could be due to schizophrenia.[1] The lifetime prevalence for schizophrenia worldwide is said to be 7 per thousand where as point prevalence is said to be 4 per thousand.[1] However the course and various outcomes of this illness as described by major international epidemiological studies have shown that about one third of patients may have an unfavorable prognosis. [2], [3]

Mental health care professionals have looked at various outcome measures in schizophrenia like symptom related outcome, social outcome, cognitive outcome, hospitalization as outcome as well as drug adherence and side effects.[4] These patients develop multiple problem areas which needs focused patient specific management in multiple domains like self care, social skills, socially embarrassing and unacceptable behavior, gainful employment, managing bills, medication, managing the household, marital and sexual relationships, rearing children and community related problems like homelessness, poverty, substance use, suicidal risk and homicidal risk. These areas would highlight the areas of disability in such patients. There is a dire need to include specific problem areas in rehabilitation of such patients. This subset of patients would require

assessment of their needs for planning regarding their rehabilitation and appropriate integration into the community.

Assessment of needs as an important patient rated outcome in patients with mental illness has been argued over the last several years. Reasons for this are many. First among them is the concept of describing patients as clients of mental health services which is more acceptable in the background of consumerism.[4] Second advantage is with the benefits of including patient in decision making and informed consent, choices.[5] Thirdly assessment of needs by patient and clinician can be used for comparison.[6] Fourthly is the concept of whether levels of needs could be used as proxy indicators to assess efficiency of mental health services.[7] There are international and national studies looking at the needs of patients rated by themselves. There are very few studies from south India describing the needs of the patients. [8] There are no studies addressing needs of women with major mental illness from this area. First aim of this study is to look at needs of women with schizophrenia or schizoaffective disorder and factors associated with unmet needs in these patients.

Gender related issues in patients with schizophrenia have been described by many psychiatrists over the years.[9], [10], [11] It is said that women have better prognosis than men because of later age of onset, different gender roles, and lesser expectations from the family and society regarding their functioning. But women with mental illness have unique needs in areas like sexual relationship, marriage, pregnancy, delivery, breast feeding, childrearing, birth control and menstrual difficulties.[12] Decision and informed choice regarding pregnancy, child birth and contraception are jeopardized in mentally ill women due to various reasons.[12] Firstly coerced physical relationships are more

common in these women. Problems related to unexpected and unplanned pregnancy are seen in these women compared to normal population and obstetric and birth related complications are also more common. Help seeking behavior and regular antenatal checkups may be undermined due to illness and difficulty in reaching the services. Poverty, malnutrition and anemia in India and other developing countries add to the complex combination of problems. Further there could be problems related to illness like delusions towards the baby, neglect of self and the baby, problems with breast feeding etc. Exacerbation of illness during pregnancy and postpartum is well known. Problems related to rearing the child is also seen because of inability to pick up cues from the child and illness related negative and cognitive symptoms. For these reasons it is recommended that women with mental illness in reproductive age group get psycho education in the domains of sexual concerns, marriage, conception and family planning methods.[13]

International studies have shown that the use of family planning methods is less in women with schizophrenia in comparison to normal women. Common reasons cited are difficulty to plan birth control methods, difficulty in obtaining these methods, lack of awareness as compared to normal women who mentioned fear of side effects as a major concern.[14] There is a need to empower these women to make informed choices regarding pregnancy and contraceptive practices. There is a dearth of studies looking at the use of contraceptive methods in women with schizophrenia and schizoaffective disorder. Hence the second aim of this study is to assess the knowledge, attitude and practice of contraception in women with major mental illness and factors associated with current use of contraception with socio demographic and illness variables in these women.

2. REVIEW OF LITERATURE

2.1 SCHIZOPHRENIA

2.1.1 EPIDEMIOLOGY AND ETIOLOGY OF SCHIZOPHRENIA

Schizophrenia is considered a complex, heterogeneous disorder with polygenic inheritance and etiology due to various causes. It is a syndrome consisting of problems in thought, emotion, perception and behavior. Schizophrenia has ranked eighth in the world as a cause for loss in DALY. [1]

Three groups of symptoms are described in schizophrenia. These can be categorized as *positive symptoms* like delusions and hallucinations, *negative symptoms* like alogia, asocialization, avolition, apathy, anhedonia , blunting of emotional responses and *cognitive symptoms* manifested as problems in attention, problem solving, reasoning, verbal and visual learning and memory, working memory, speed of processing, verbal fluency and social cognition.[1]

Schizophrenia is an incapacitating mental illness and demands a multimodal approach to management. Its etio-pathogenesis remains obscure till date despite advances in research. Schizophrenia is said to occur across all cultures and in all countries. Prevalence is equal in men and women. It occurs in late teens and early twenties; however the onset of illness is slightly delayed in females with a second peak known to occur after 40 years. Prevalence is approximately 1 to 4 per thousand and incidence is described as 0.1 to 0.4 per thousand population.[15] Risk factors include a family history of schizophrenia, male gender, advanced paternal age, winter and spring birth, influenza infection, migration and social isolation, perinatal and obstetric complications like diabetes, pregnancy induced

hypertension, antepartum hemorrhage, Rh incompatibility, perinatal asphyxia, respiratory infection, intellectual disability, substance use, and vitamin D deficiency.[16]

Epidemiological studies conducted by the WHO have described that the incidence is almost the same across all types of populations and geographical boundaries. Course, prognosis and outcome is quite different between developed and developing countries for various reasons.[2], [3], [17]

INDIAN STUDIES ON EPIDEMIOLOGY OF SCHIZOPHRENIA

Epidemiological study done by Padmavathi et al.[18] showed a prevalence rate of 2/1000 for schizophrenia in Chennai. A multicentre study, (study of factors associated with course and outcome of schizophrenia) done in Vellore, Chennai and Lucknow described a better prognosis and the study results were very similar to the International pilot study of schizophrenia.[19] A favorable prognosis was observed in 65% of the patients in a 5 year follow up study done at Vellore. This study found that acute onset of illness, economic stability, younger age at onset, lack of agitation and lesser duration of symptoms were associated with better outcome.[20]

Determinants of factors associated with course and outcome associated with severe mental disorders (DOSMED) study, a multicenter enterprise involving ten countries included 2 centers in urban and rural Chandigarh. This study has described an incidence of 4/10,000 for schizophrenia.[21] More recent studies have a shown a prevalence of 3 per 1000 individuals.[22] Females have better prognosis than males.[10]

ETIOLOGY [1], [23], [24]

1. Neurodevelopmental model of schizophrenia states that schizophrenia could be the consequence of early brain changes that does not manifest until late life
2. Dopamine hypothesis of schizophrenia describes excess of dopamine release associated with positive symptoms in schizophrenia, exacerbation of psychosis in Parkinsons disease when syndopa is administered. Antipsychotics help in remission by antagonizing dopamine, while dopaminergic drugs like amphetamine cause psychosis
3. Genetic model of schizophrenia describes a polygenetic threshold model in which schizophrenia might occur if there are cumulative effects of numerous genes from various loci. Other modes of occurrence could be due to gene-gene or gene environment interactions. People can develop schizophrenia without family history through incomplete penetrance, variable expressivity
4. Immune and viral models of schizophrenia: Exposure to influenza infection during antenatal period especially in second trimester is postulated in the development of schizophrenia. Schizophrenia is also believed to have an auto immune etiology
5. Stress vulnerability model: Factors like limited ability to cope, lack of social competence, problems in information processing could be the vulnerable factors in the individual. Life events or stressors may precipitate psychosis in the individuals having these vulnerable factors
6. Family theories state that a person escapes from conflict into loss of contact with reality culminating in psychosis due to double bind, skew & schism,

pseudohostile and pseudomutual families. Expressed emotions may lead to exacerbation of psychosis

7. Learning theory states that psychosis occurs due to abnormal modeling from parents in early childhood
8. Psychodynamic model states that Schizophrenia is due to deficiency of ego development which occurs due to early developmental fixation

2.1.2 COURSE AND OUTCOME IN SCHIZOPHRENIA

The usual course of illness is that of exacerbation and remission. Failure to return to pre-morbid level of functioning after each exacerbation is seen leading to partial remission. There could be a period of prodrome, after which the illness appears for the first time with or without a stressor. Precipitants of an episode may be due to substance use, poor adherence to medication, stressor, poor social support, expressed emotions, natural course of the disease and so on. It is said that the first 5 years of illness may determine its course.[23] Homelessness, poverty, unemployment, poor social support, substance use, co morbid psychiatric and medical illness influence the course further.

The first WHO epidemiological international pilot study of schizophrenia in 1967 discussed about a more favorable short term course in developing than in developed countries. The DOSMED study determined that one third of patients had good prognosis while another third had bad prognosis and the remainder being intermediate.[2], [3]

Good prognostic factors include later age of onset, reasonable premorbid functioning, sudden and acute onset, stressors and presence of social support. Bad prognostic factors

include early age of onset, insidious onset, family history of schizophrenia, unmarried status, substance use and presence of negative symptoms.[23]

2.1.3 CLINICAL FEATURES

Schizophrenia is a heterogeneous syndrome consisting of positive symptoms like Scheinder's first rank symptoms, negative symptoms like apathy, social withdrawal, anhedonia, blunted affect, alogia, avolition, cognitive symptoms like inattention, executive functioning, verbal new learning, working memory, affective symptoms, and obsessive compulsive symptoms. Some patients may have a prodromal phase where they could be gradual decline in socio occupational functioning and loss of sleep, appetite, and libido.[1], [23] International classificatory symptoms like International classification of diseases 10 (ICD 10) describe subtypes of schizophrenia while the Diagnostic and statistical manual of mental disorders 5 (DSM 5) has made amendments by removing subtypes.

2.1.4 MANAGEMENT

Guidelines for treatment of schizophrenia discuss a holistic multimodal approach involving doctors, nurses, occupational therapists, case managers, social workers and psychologists. American Psychiatric Association practice guidelines, 2004 discusses the management of schizophrenia as follows. [25]Management can be divided according the phases of illness like acute, stabilization and stable phase.

Acute phase assessment would include patients symptom profile , severity of illness, physical examination and serial mental status examination, cross sectional and longitudinal diagnosis, social support, level of functioning, suicidal and homicidal risk, substance use, life events or stressors, presence of comorbid psychiatric and medical

illness, reasons for exacerbation of illness, treatment compliance, need for inpatient management. Monitoring would include watching for progress with medication, side effects of medication, control of agitated behavior, harm reducing strategies, watching for return to patient's usual level of functioning, treatment adherence, and patient's physical status including vitals, hydration and nutrition.

Management in stabilisation phase would include consolidating gains made during the acute phase, educating about warning signs of relapse, avoiding substance use, supervised medication, sleep hygiene techniques, stress reduction strategies, regular follow up with the services, encouraging patient to adapt his life in the community.

Management in stable phase would include maintaining the control of symptoms, patient's level of daily functioning, monitoring side effects of medication, gainful employment, social skills training, cognitive behavioural interventions etc.

Management of schizophrenia can be broadly divided into pharmacological and psychosocial management.

PHARMACOLOGICAL TREATMENT

Antipsychotics are indicated in acute, continuation and maintenance phase of treatment of schizophrenia. Choice of antipsychotic medication depends on efficacy, tolerability and side effects of medication. Matching side effect profile to symptom profile, metabolic parameters and past response of individual patient, special population like pregnant women, children and geriatric population are some of factors considered while choosing an antipsychotic.[25] Some side effects of antipsychotics include extra pyramidal side effects, anti cholinergic side effects, drowsiness, raised prolactin, sexual dysfunction and

postural hypotension.[25] National institute of clinical excellence (NICE) guidelines recommend trial with clozapine if two adequate trials of antipsychotics have shown inadequate response.[26]

PSYCHOSOCIAL MANAGEMENT

Multidisciplinary and multimodal treatment is believed to provide the best therapeutic option that can be tailored to an individual patient. It includes assessment of positive, negative, cognitive symptoms, social support, suicidal risk, substance abuse, stressors, expressed emotion, compliance of medication and drug related side effects.[25] Comprehensive management should include psycho-education about illness, drugs, course, prognosis, supervision of medication, reward principles, grief among family members regarding illness, sexual, marital, interpersonal, occupational, financial difficulties. Cognitive behavioral interventions for delusions, hallucinations, obsessive compulsive symptoms, agitation, socially embarrassing behavior, insight related dysphoria should be included. Social skills training, assertive training, vocational and cognitive rehabilitation are also included in psychosocial interventions in schizophrenia.[25], [26]

2.1.5 MEASURES OF OUTCOME IN SCHIZOPHRENIA

Emil Kreplin defined schizophrenia as a condition with unfavorable outcome and labeled this entity as 'Dementia praecox'. In contrast, Eugen Bleuler held an optimistic view on the outcome. Scheineder's approach of first rank symptoms gave a more quantifiable form of symptom based approach for outcome measurement. [4]

Outcome measures are methods to assess and quantify improvement in a patient and are used in research methods to identify efficacy of any treatment. There were cohort studies like the European Schizophrenia health outcome study in which outcome measures were rated by psychiatrists.[27] Later rating scales like Brief psychiatric rating scale (BPRS) Positive and negative symptom scale (PANSS) were used to assess symptom remission as an outcome.[28], [29]

Green argued for cognitive deficits to be considered as an outcome measure due to the description that they cause social impairment.[30] Later neurobiological outcome measures were put forward.[31] Context dependent outcome measures were described due to the fact that all the other outcomes like symptomatic outcome, cognitive and neuro-biological outcome did not include the local culture or context around which the values of a particular society are built. Side effects reported by patients like sedation, fatigue, stiffness, restlessness, weight gain, menstrual irregularities become important in the milieu of adherence to medication and hence course of illness. Also these side effects could be associated with stigma because of change in physical appearance. Side effects could also be considered as part of the outcome measure. [32] Some of the outcomes like homelessness, poverty, substance use, violence and suicide may be of greater importance to society than to the patient. These could be called as social outcomes which could be seen as a consequence of illness.[33]

Hospitalization as an outcome is more meaningful to health care providers. It is seen more in high income countries than in low income countries and differs according to context.[34] Duration of untreated psychosis may contribute to neuro-toxicity and related consequences like social and cognitive dysfunction altering the course of illness. Hence

Singh et al. have looked at duration of untreated psychosis and whether it can be an independent outcome measure.[35]Mc Crone discussed about the cost of inpatient admission in terms of cost incurred to cause a defined unit of improvement using standardized scales like quality adjusted life years.[36]

These outcomes used in the west may be unsuitable for low and middle income countries where hospitalization and economic outcome may not be meaningful. Issac et al points out outcome measures used in developing countries like symptom profile, mortality, social and occupational functioning, marriage, care giver burden which are different from outcome indicators used in developed countries.[37]

NEEDS AS AN OUTCOME

Assessment of progress in management of schizophrenia is based on clinical interview with the patient. Patient's illness experience is taken into account. He/she is considered as the consumer or client of mental health services. His/her satisfaction is important. Patients' families usually expect their active involvement in assessment of the situation and their judgment regarding progress in his/her illness. Multiple patient rated outcomes have been looked into like needs of the patient, mental health services satisfaction, therapeutic alliance, employment, accommodation etc.[4] There are also scales to assess quality of life. However there are limitations of patient reported scales as they could be influenced by their underlying mood, therapeutic alliance etc.[38] Hence caution should be exercised and scales with good validity and reliability should be chosen.

2.2 EVOLUTION OF CONCEPT OF NEEDS

There has been significant change in the management of Schizophrenia after de-institutionalization. In earlier days, people found it difficult to live in the community after discharge from hospital. The focus of treatment earlier was on remission of symptoms, reducing severity of illness, discharge from hospital setting and prevention of relapse.[39] However this alone did not fulfill or address the problem list of these patients. Further recovery was possible only in a subgroup of patients with a manageable profile of illness.[40]

There was a dire need for these patients to get integrated into the community for their living. This gap was filled by defining and formulating needs of the patient. Now perspective and focus of treatment also looks at skills required for daily living like looking after self and family, occupation, communication skills, transport, shopping, financial requirement, recreation etc. [39]Improvement of illness which was exclusively defined by clinicians by clinical standards and remission of symptoms gradually shifted towards inclusion of caregivers and patients as well. This is vital because of significance in patient participation in defining target symptoms for improvement, diverse needs in patient population, participation in treatment decision making, existing norms on human rights, ethics and informed consent.[5] This could also help the policy makers to include these perspectives in management. Evaluation of unmet needs have also been considered as formal evaluation of success of mental health services and satisfaction of clients.[41]

2.2.1 DEFINITION OF NEEDS

'Needs' has multiple definitions in sociology, community health and medical science. Needs can be defined as either lack of health or access to treatment and health care services or lack of welfare.[42] This simply means psychosocial dysfunction of an individual due to psychiatric illness. From a community and public health perspective, needs is defined as ability to benefit from health care services.[43] Needs has also been defined as the component which is necessary to restore, maintain, achieve social independence or quality of life.[44]. Abraham Maslow discussed about hierarchy of human needs in 1954.

There is conflict regarding the definition of mental health needs.[45] The controversies are as to what the threshold should be to label a need as an unmet need and whose version should define unmet need (patient or care giver or clinician).

Health care services have components of assessment, diagnosis, evaluation through investigation, treatment and follow up. Differentiation should be made between needs, demands and utility of health services. Need could be the deficits for which good treatment is necessary. Demand is the potential to pay for services or willingness to consume resources. Utilization is the concept of consuming services.[44]

2.2.2 TOOLS TO ASSESS NEEDS

Assessment of needs can be done in 2 ways.

1) It can be done by comparing existing treatment with the standard guidelines

2) By assessing the needs directly from clients, caregivers and clinicians.[5] Unmet needs can occur due to lack of follow up of treatment, suboptimal delivery of treatment due to

inadequate resources. Generally the assessment of needs looks at severity of illness, activities of daily living, communication, occupation, social support available, presence or absence of effective intervention, ability to take care of self and family. Hence defining, assessing needs have improved quality of life, socio occupational functioning and care of the mentally ill patient. Multiple tools have been developed over the years to look at the assessment of needs. Some of the scales just looked at the areas of deficits, assessing whether intervention was possible. Many scales have their own limitations. For instance, a scale called 'needs for care assessment' (NCA) was developed which was difficult to use in homeless people and patients with chronic mental illness. According to this scale, there is a need when patient's functioning falls below certain standards.[46] There was a modification called 'cardinal needs assessment' to be used in community studies. The central tenet was that people with mental illness might have unique needs compared to normal people. Needs is a universal social concept and no single perspective is considered truly correct and differences might arise from multiple views.[47]

Camberwell assessment of needs (CAN) was developed in UK by Phelan et al in 1995 for assessment of needs in the community mental health services. There are 2 versions- one used by clinicians and the other by researchers. Both are validated and reliable instruments.[48] It assess the presence of needs, its severity and presence of intervention. Met and unmet needs are defined as follows:

Met needs are those which are not a problem/moderate problem responsive to intervention/help.

Unmet needs are those which are a serious problem though intervention is available or for which a good intervention is not yet available.

These assessments can be completed by an untrained person in half an hour. Short appraisal schedule of CAN is CANSAS and was developed as a shorter version and skips questions on satisfaction with intervention. It includes a clinician, caregiver and patient version.[49]

Comparison between CAN and CANSAS P showed a high number of unmet needs in CANSAS P than CAN.[50] There are separate scales used for elderly people (CANE)[51] people with intellectual disability (CANDID)[52] forensic psychiatry patients (CANFOR) and pregnant women (CANSAS M).

2.2.3 UNMET NEEDS IN TREATMENT NEEDS OF PATIENTS WITH SCHIZOPHRENIA

INTERNATIONAL STUDIES

It is vital that psychosocial management forms an inherent and important component of patient management in Schizophrenia. In the clinical setting, unmet needs may arise due to the fact that recommended guidelines for management of Schizophrenia are being followed at a suboptimal level. It perhaps explains why many patients are lost to follow up after the index visit.{53],[5] The major epidemiological surveys like the Epidemiological catchment survey (ECA) and National co-morbidity survey its revised version have shown the prevalence of Schizophrenia to be around 1%, though there were significant differences in sampling techniques, diagnostic instruments across different periods of time. They have shown that only around 50% take continuous treatment for 6 months and more than 50% did not receive any form of treatment from a specialist service. This magnitude of a problem reflects the unmet needs regarding treatment in

western countries.[54] This is in comparison to the previous studies done between 1940-1970 which have shown that treatment rates were as high as 80%. This could probably be due to variations in diagnosis of Schizophrenia, sampling techniques and method of the study.[5] Evidence from the 10 country DOSMED study suggests that only 15% received continuous follow up treatment in developing countries like India, Nigeria as compared to 70 % in developed countries.[2] Fifty percent of the patients never had hospitalization in developing countries versus 10% in developed countries; this reflects the magnitude of unmet needs for treatment.[15],[5] A longitudinal study of first episode Schizophrenia patients on follow up for 2 years found that only 50% were on continuous medication in 2 years.[5]

Port study group has shown that less than 50% received standard treatment and outpatients received less care than admitted counterparts and psychosocial modalities were less utilized compared to pharmacological treatment.[5],[53]

NIMH is in the process of developing a management package for unmet therapeutic needs which are described as negative symptoms and cognitive symptoms.

METHODOLOGICAL ISSUES IN MEASUREMENT OF UNMET NEEDS IN TREATMENT

Epidemiological studies in the general population have some limitations like scarce data on course, extent of illness and details of treatment, absence of severely ill in the community and their admission into hospital. A longitudinal epidemiological study in a clinical population has got the advantage of sampling techniques of a clinical population,

extensive data on quantity and quality of mental health services , reasonable estimate of unmet needs in these patients[2]. [5], [55], [56]

UNMET NEEDS IN MEDICAL SERVICES

There is evidence that mentally ill patients receive suboptimal medical care both in prevention and treatment. This unmet need in management of these patients calls for integration between mental health services and medical services. National institute of mental health services clinical antipsychotic trial of intervention effectiveness found out that 61% of patients with schizophrenia had substance abuse and at least 40% had substance dependence.[57]There is an unmet need for treatment of substance use disorder in these group of patients which can interfere with remission of psychosis.

ASSESSMENT OF UNMET NEEDS- CLINICIAN, CAREGIVER AND PATIENT PERSPECTIVES

Differences may essentially arise from clinician and patients' view due to various reasons. Needs are viewed as a subjective and relative concept as there is no absolute definition of need. It is said that clinician view could be influenced by socio cultural factors, medical ethics, professional and even personal values. Patients' view could be influenced by the fact that educational background, past illness experience and socio-cultural factors vary widely.[58]

An important study done in Norway has shown the difference between perspective of unmet needs between patient, caregiver and clinician. Identified needs by the patient were intimate relationships, psychological distress and company where as daytime activities

and psychotic symptoms were top rated by caregivers and clinician.[47] These differences between patients' and clinician perspectives in cross sectional studies and epidemiological studies in general and clinical populations are very different.[5] This could be due to the fact that differences in response of patients to treatment when guidelines were made taking a typical patient into consideration and reasons like understanding of the patients regarding mental health services due to awareness of illness.[59] Difference in rating between clinician and patients' view could be due to the fact that severity of illness and insight may affect perspective by patient or societal expectation towards a poor patient may be less. Psychiatric epidemiology studies in general population have shown needs between 3 to 8 and unmet needs across all diagnoses to have association with lack of employment, unmarried status and disability scores. It is said that a longer time period of contact with mental health services were associated with high met need and satisfaction with mental health services.[41]Studies have described about improvement of unmet needs in patients might improved quality of life cross sectionally and on follow up.[60]

Follow up study done on 300 patients showed that more than 60% of unmet needs changed to met needs or no needs rated by clinician and the patients after intervention, though unmet needs are not considered as an outcome criteria to assess the effectiveness of any type of intervention.[7] One other study done by Wiersma et al. showed unmet needs between 4 and 10 and one out of 4 needs were said to be unmet and they were psychotic symptoms, psychological distress, activities of daily living and company.[44] Correlates of unmet needs were poor socioeconomic status, severity of illness, type of mental health services, diagnosis and modality of treatment; unmet needs were not

related to gender, age or educational qualification.[44] It is also said that assessment of unmet needs could show the evaluation of mental health service delivery. One study looked at the impact of association between therapeutic alliance and unmet needs and found that more number of unmet needs had less therapeutic alliance and reduction of patient rated unmet needs increased the quality of patient rated therapeutic alliance.[61] The EPISILON study done in 5 different European countries has shown needs vary in different centers and may reflect the type of delivery of services.[62] In an underdeveloped country like Ethiopia, cross sectional study done in homeless mentally ill people with psychosis were reported to have more than 80% unmet needs in 26 domains in CANSAS and 10%, ever received treatment for illness.[63]Cross sectional survey done in an Arab country showed that a common unmet need was not being able to take care of the family and needs were associated with severity of illness, negative symptoms and inability to participate in outdoor functioning.[64] In Sweden, cross sectional assessment of needs using CAN were done on two occasions in 1996 and 2000 and the comparison showed improvement in clinical and social needs after introducing some form of reforms[65]

NEEDS OF PATIENTS WITH SCHIZOPHRENIA- INDIAN STUDIES

A cross sectional study done in Chandigarh showed that numbers of unmet needs in patients were 6 while it was 7 from caregivers.[66] Commonly identified areas were negligible help from governmental and non governmental organisations. Common unmet needs of patients were welfare benefits, psychological distress, psychotic symptoms, information about condition; whereas caregivers mentioned company, money, intimate

relationships.[66]. A case control done at Vellore on 100 patients showed that many patients had unmet needs and they were associated with severity of illness, less education and poverty.[8]

Needs of women with Schizophrenia

It is said that needs of females are very different from males in this subgroup of population. Needs of young females are mainly to prevent exacerbation of psychosis and older females mainly in rehabilitation of lost capabilities and functioning. It is said that mental health delivery services should suit gender related differences.[67]. Another study has mainly addressing needs that are not met in females with severe mental illness in jail found very minimal access to mental health services showing treatment needs.[68]

2.3 GENDER RELATED FEATURES OF SCHIZOPHRENIA

Prevalence rates of schiophrenia in both sexes are equal. It is well known that female sex is a good prognostic factor in schizophrenia. On an average, women may develop illness 5 years later compared to men. Females may have more mood symptoms and men may have more negative symptoms.[69]Outcome is better in females compared to males according to international epidemiological studies.[10]

So also level of expectation from the society towards women in terms of education, employment and financial sources is lesser compared to men in countries like India.[9], [11] In terms of disability, females have problems in marital domains and men have problems more with occupation.[70]

Other reasons mentioned for better outcome in females are better pre-morbid level of functioning in terms of completion of education, dependence on their families of origin for living as an accepted norm in the community.[9] Other special gender related issues in Schizophrenia could be a difference in drug adherence, treatment drop out, social support, help seeking and treatment seeking behavior, gender role expectation. However the role of gender and gender related issues in Schizophrenia needs to go a long way in research. It is also said that parents and family tend to blame themselves less for daughters' illness because by the time the illness develops, they would have been married and left their mother's house.[11]

2.4 KNOWLEDGE, ATTITUDE AND PRACTICE OF CONTRACEPTION AMONG WOMEN

Knowledge and practice of effective contraception gives a sense of confidence for women to avoid unplanned pregnancies. This has direct benefits for the family as well larger benefits for society where resources are scant due to a burgeoning population. Studies have shown the indirect relationship between population density and mental well being. Consequences of population explosion like poverty, housing, unemployment, crime, disease may have lead to stress and high rates of mental illness in the general population.[71]Despite undoubted benefits, studies have shown the association between various contraceptive methods and psychological symptoms like multiple somatic complaints, anxiety, depression with vasectomy and tubectomy.[71],[72] Understanding knowledge, attitude and practices of contraception among women in the reproductive age group helps policy makers, heath care deliverers and end users achieve the goal of

limiting family size and regulating fertility by spacing childbirth and avoiding unplanned pregnancy.

2.4.1 THE CONCEPT OF UNMET NEED IN CONTRACEPTION IN WOMEN

In a broad sense, unmet need in the context of contraception represents the discordance between women who want to avoid child birth but are not using contraception due to various reasons. This was measured as the 'knowledge, attitude and practices' (KAP) gap among married women in national surveys conducted in the 1970s and 80s in developing countries. The concept was renamed 'unmet need for family planning' by Westoff and Pebley.[73]'KAP-Gap' or 'Unmet-Need of family planning' is defined as the difference between fertility preferences and current fertility behavior.[74] There have been various refinements to make the definition of unmet inclusive and representative of all real life situations. Pregnant women are considered to have an unmet need for family planning if their current pregnancy was unplanned, on the assumption that these women would have had an unmet need had their most recent pregnancy not occurred. Dixon-Mueller and Germain argued for expanding the concept of unmet need to include women who are unmarried and sexually active (in the past month at the time of assessment), do not use contraception regularly or who need more effective methods.[75] It is generally felt that measures of unmet need should assume that women using solely a traditional method of contraception such as abstinence, coitus interruptus, lactational amenorrhea have an unmet need, noting that these methods are relatively ineffective.[75]

The widely accepted Demographic and Health Surveys (DHS) definition of unmet need is as follows.[76]

A woman has an unmet need if she

• is married or in a nonmarital union, or if she is never-married but sexually active;

• is fecund;

• does not want to have a child (or another child) in the next two years or at all; and

• is not using a modern or traditional method of contraception.

Pregnant or postpartum amenorrheic women who indicated that their pregnancy or most recent child birth was unwanted or mistimed are also considered to have an unmet need in this area. Addressing unmet need in this area is an effective means of increasing contraceptive use prevalence rates and achieving fertility targets. The UN Secretary-General has recommended adding a target of universal access to reproductive health to the millennium development goals (MDG) monitoring framework.[77] Addressing unmet need for family planning serves as an important indicator of progress on this target. In recent years, the emphasis is on enhancing the reproductive health of women of child bearing age to help them achieve their fertility aspirations. Planning the number and timing of child birth has huge benefits for women, their families and society too. The goal of planned childbirth and regulation of family size can be addressed both an individual as well as a population level as depicted in figure 1.

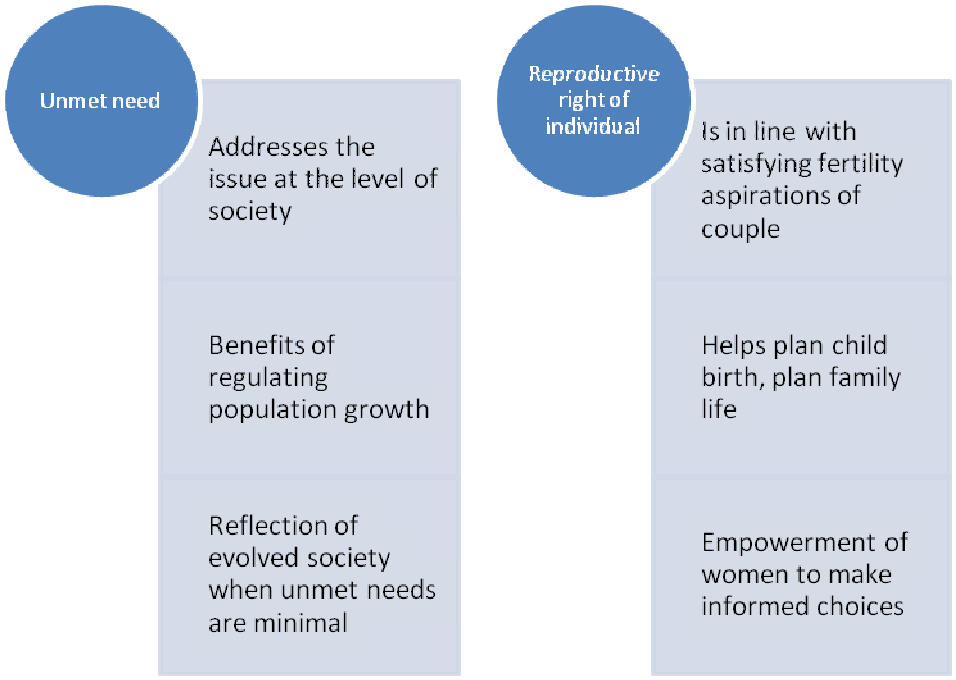


Figure 1 Representation of the individual and population based approaches to achievement of reproductive health goals

Along with the socioeconomic problems of developing countries like poverty, housing, unemployment, lack of sanitation, education malnutrition etc with unintended pregnancy (unplanned and unwanted pregnancy) can lead to significant health consequences in women.[78] Women with unintended pregnancy are at risk for poor peri-conceptional care, poor antenatal & perinatal care, maternal mortality, high rate of abortion, low birth weight & preterm babies. Emotional factors would include physical & mental exhaustion, relationship instability and physical abuse.[79] Unintended pregnancy is viewed as a public health problem currently. Unintended pregnancy could be due to failure of contraceptive use, lack of contraception and rarely coerced intercourse, rape etc.[78]

2.4.2 REASONS FOR NONUSE OF CONTRACEPTION

There is significant difference in the need, attitude & practice of contraception in developing countries. The unmet need for modern contraceptive methods in South Asia in 2012 was high (34%) and in sub- Saharan countries it was 60%.[80] In the surveys carried out in the 90s, lack of knowledge was a common reason in sub Saharan Africa, while concern about health and side effects were cited in Latin America. Desire to have another child, opposition from family members were also some reasons cited in Asian countries.[76] Studies have looked at the reasons in women for not using contraception in spite of its availability and possibility of unintended pregnancy.[81] The possible reasons for not using contraception are summarized in Table 1.

Table 1 Reasons for non-use of contraception among women in the reproductive age group.[82]

Exposure related	Supply of methods and services	Demand related
Women perceive that they are at low risk of getting pregnant -Infrequent sex -Post partum amenorrhea -Belief that they are sub-fecund	Knowledge of contraceptive methods Access to facilities Concerns about side effects and safety	Opposition to family planning- women/their partners Social/religious reasons Not decision makers

Unmet need is believed to be higher in rural, poor women who are not educated.

2.4.3 CONTRACEPTION IN INDIA

India was the first nation in the world to start a family planning program at the national level, in 1951. Between 1970 and 1990, the National Family Welfare Program was target oriented and relied heavily on sterilization to limit family size. After this, the emphasis has shifted slightly, concentrating on reproductive health issues of women and spacing between pregnancies. In a survey of about 90, 000 women in the reproductive age group in India, 21% had an unmet need for contraception.[82] This is the largest population in the world in terms of absolute numbers and is of great significance given the total fertility rate of 2.8 and a large population base. According to the 2005-2006 National Health Family Survey, only 56% of married women between the ages 15-49 years use some method of family planning.[83] This is despite the fact that 88% of them had some knowledge about modern contraceptive methods. Majority were aware of female sterilization (97%), pills (85 %) and intrauterine devices (69%). Young women aged 15-19 years had less awareness about spacing methods. Interestingly, 27% of men thought contraception is women's business, while majority of them were willing to share responsibility.

Female sterilization is the most prevalent method across all states in India. The pill and condom are effective but have high rates of discontinuation (up to 49, 45% respectively in the first year). Important reasons cited being anticipation of pregnancy 8%, fear of side effects 5%. It was also found that majority of women were not fully informed about their contraceptive choices. Only one third of women were informed about the side effects. Mass media, especially radio was the commonest mode through which people received information on family planning services. All southern states have a contraception

prevalence rate of 50-59%, except Kerala which has a rate above 60%. The total unmet need for contraception in India according to this survey is 13% (6% for spacing and 7% for limiting). The corresponding rates for Tamil Nadu is 9% (3% for spacing and 6% for limiting).[83]A cross sectional survey at a tertiary care district hospital in Karnataka has shown that only 48% of the 200 women between 20-45 years were using some form of contraception, despite all of them being aware of some method.[84] The most common method adopted was female sterilization (70%); some reasons for non-usage included desire for further children, especially a male child, worry about side effects, opposition from family members and inability to avail of services. One cross sectional study done by All India Institute of Medical Sciences in the community showed that there is a significant difference between unmet need between husbands (H) and wives (W) for both spacing (H-3.5% vs. W-6%) and limiting (H-7.5% vs. W-11.5%) child birth, although the overall concordance rate was 93.5%.[85] A community-based behavior change communication intervention study in Meerut has shown that education can lead to better birth spacing in women aged 15-25 years.[86]

2.5 SPECIAL NEEDS OF WOMEN WITH SCHIZOPHRENIA

2.5.1 SEXUALITY IN WOMEN WITH SCHIZOPHRENIA

Reports suggest that before 1980, during the era of institutionalized treatment for chronic mental illness women with chronic mental illness had lesser conception rates and unplanned pregnancy as compared to the general population. Reasons could be near absence of marriage in mentally ill women in a closed set up, biological feature of the disorder, effect of antipsychotic drugs and unacceptable social norms of physical contact

without marriage though exceptions existed.[87] Compared to men, women had a slightly superior social outcome. Along with changes in treatment facilities and de-institutionalization, more women with schizophrenia are living with their families and getting into marital relationships.

Knowledge and sexual behavior and in women with schizophrenia compared to the normal population has been studied in western population. Studies have shown that desire for physical contact and satisfaction were less, there were problems with forced sex and unsafe sexual practices leading to risk of sexually transmitted diseases.[12] Lack of impulse control and judgment, high rates of substance abuse in this group of patients may further lead to unsafe sexual practices. Antipsychotic medications have an impact on sexual functioning, causing reduction in desire and orgasm mainly due to elevation of prolactin, menstrual irregularities and increased sedation. There is well known societal expectation upon women and unique gender role in marriage, bearing children and raising a family. In addition there are gradual increments in problems related to unexpected pregnancy and postpartum period and lack of adequate antenatal and perinatal services to cater to the needs of this unique cohort of women. Rice in 2008 demonstrated high rates of sexual or physical abuse up to 95%.[88]. Many Indian studies have confirmed similar problems.[89] Sexual abuse and harassment can occur even during pregnancy and has been reported by Miller and Finnerty.[14]

MARRIAGE AND SCHIZOPHRENIA

There are myths related to marriage and mental illness in India, one of them being that marriage will cure mental illness. Gender role of female in India is mainly managing the

house and rearing children. So illness is often undisclosed to the prospective groom and his family for fear of the marriage proposal being turned down if mental illness becomes known. There is possibility of induced abortion, forcing not to have children because of fear that the child might also develop major mental illness. Separation from spouse and children, abandonment and divorce also are reported as consequences of mental illness in women.[89]

2.5.2 PREGNANCY AND SCHIZOPHRENIA

There could be a bidirectional relationship between exacerbation of schizophrenic illness during pregnancy. Firstly there could be exacerbation of psychosis during pregnancy and then postpartum period. Secondly due to unplanned pregnancy and less awareness about the need of early access to obstetric services and other reasons , obstetric and perinatal complications may be more in these women with schizophrenia.[12]Consequences of illness, factors like positive, negative and cognitive symptoms may jeopardize needed obstetric and perinatal care to mother and baby. There are more rates of unexpected and unplanned conception in women with major mental illness. Possible reasons could be high rates of vulnerability to sexual abuse, high risk behavior during illness, lack of adequate contraception. Homelessness, poverty, domestic violence, physical and sexual abuse may further aggravate problems related to coerced and unexpected sex.[12]

There seems to be more evidence of obstetric complications in unplanned pregnancy in women with major mental illness. Probable reasons could be psychosocial factors like poor social support, poverty, low socio economic status, ignorance about need for quick access to health care.

Presence of psychotic illness contributes to lack of early identification of conception, lack of judgment for adequate obstetric care, false beliefs on physiological changes in the body, denial of being pregnant due to delusional misinterpretation, lack of early identification of labor, illness related consequences like lack of adequate nutritious food, neglect of self, presence of harm to self and others and risk of suicide.[12]

Malnutrition, anemia, poor antenatal and perinatal care complicated further by exacerbation of illness and its consequences may lead to multiple obstetric complications like antepartum and intrapartum hemorrhage. There are higher rates of exposure to psychotropics in unplanned pregnancy and lack of education regarding risk and benefits of use of psychotropics during pregnancy. Quality care providing education to potential mothers about risks, benefits of psychotropics and possible exacerbation of illness during the peripartum period are grossly lacking in current health care services both nationally and internationally.[90]

There may be harm to baby in the postpartum period due to delusion that the baby is dead or defective or command auditory hallucinations involving the baby. There may be poor child care due to lack of insight for baby care due to florid illness. The obstacles for good psychiatric care post partum will include mother’s refusal for admission into hospital, stigma coming to a psychiatric clinic, practical difficulties to get treatment at various clinics like pediatrician for her baby, obstetrician for her postpartum checkup, psychiatrist for her mental well being, difficulties in mobilizing financial and other resources to help her and her baby.[12]

There may be major problems in child rearing due to problems related to illness, lack of social support. Mothers with major mental illness may have impaired capacity to respond

to children's emotional and physical needs due to positive, negative and cognitive symptoms. Overall quality of parenting is lesser compared to the general population in terms of reading children's' cues, overtly expressing warmth and affection, teaching them how to react in new social situations. There may be unacceptable behavior of violence, distancing and sometimes negative symptoms all of which might affect parent child relationship. There is also some evidence to suggest that children of schizophrenic mothers are difficult to raise.[12], [91]

2.5.3 FAMILY PLANNING IN WOMEN WITH SCHIZOPHRENIA

Reports have clearly shown that though women with major mental illness are sexually active like normal counterparts and they wanted to delay or avoid pregnancy, likeliness of using contraceptive methods were low.[14]As already mentioned these subset of women may have high risk sexual behavior and sexual abuse and inadequate contraception contributing to unexpected and unplanned pregnancies[12], [92], [93]

It is also described in a cross sectional study that women with major mental illness had more abortions that were induced for unwanted pregnancy than the normal counterpart.[92], [93] In a comparison study, patients with schizophrenia had more unprotected sex and lesser knowledge about family planning methods than normal people. Common reasons listed out for not using any methods were the perception of having future sex being less, difficulty in planning about contraception, no awareness about these methods, difficulty in obtaining specific form of contraception.[12]

Some of the reasons were non feasibility to attend a separate clinic for family planning counseling. There are some special issues unique to this cohort regarding type of contraception.

Barrier methods may be impracticable due to higher level of forceful sex.[12] Oral pills could be an issue due to fluctuations in mood, problem with compliance of medications, drug interaction with clozapine (causing increase in clozapine levels.[12], [13] Further hormonal contraceptive methods are contraindicated in females above 35 years of age and history of smoking with the additional comorbid problems of obesity, diabetes and hypertension due to antipsychotics.[13]

A qualitative study done on physicians portrays some of the barriers in providing adequate contraceptive education. It is described that clinicians may not discuss the issues in women with mental illness. There is lack of adequate training in contraception discussion, hesitation in discussing about physical contact, false beliefs that antipsychotic induced anmennorhea protects against conception.[94]

It is suggested that a psychiatrist should discuss about different types of contraception and the pros and con of various methods.[13] These should include 1) permanent sterilization in men and women, 2) intra uterine devices, 3) long acting hormonal injections, 4) oral contraceptive pills, 5) barrier methods and 6) natural methods like rhythm, calendar, withdrawal etc. Intra uterine devices are recommended for females with chronic illness considering the requirement of limited attention and duration of use of a device for up to a maximum period of 10 years. Long acting injections every 3 months also can be given for women who come for depot antipsychotic medication to the

Psychiatry clinic. Emergency contraception can be discussed with patients in this population where unexpected and coerced sex is prevalent.

IMPLICATIONS OF ISSUES RELATED TO CONCEPTION IN THE MANAGEMENT OF WOMEN WITH SCHIZOPHRENIA

It is recommended that women of reproductive age group and who are receiving treatment for schizophrenia should be informed about safe sex practices, coerced physical relationship, need for contraception and family planning methods, need for pre pregnancy counseling, effects of psychotropics on pregnancy and about issues related to child rearing.[13]Psychiatric services for women should have provision for assessment including detailed sexual and marital history, preparation of potential mothers for pregnancy and childbirth, enhanced support, medication adjustment during pregnancy and emphasis on need for constant follow up with the services. Separate mother child care units could be beneficial.[12] Pre pregnancy counseling will include communication regarding domestic violence, financial abilities, nutrition, accommodation, stopping substance use, genetic counseling, discussion about fear of loss of custody of the child, frequent follow up to psychiatric and obstetric services, possible exacerbation of illness, need for adjustment of dosage, risk vs. benefits of drugs in pregnancy and breast feeding.[13]In cases of unexpected, unwanted pregnancy, physician can discuss options including therapeutic abortion if the patient is competent to make a decision.

2.6 RATIONALE FOR STUDY

There are very few studies in the west assessing needs in a clinical population comprising of women. [67], [68].There are no Indian studies assessing needs exclusively in women. Further there is lack of data in the Indian setting in assessing contraceptive knowledge and practice in women with schizophrenia. This study is an attempt to assess unmet needs, knowledge, attitude and practice of contraception in women with schizophrenia.

3. AIM AND OBJECTIVES OF THE STUDY

AIM

Study was done to assess needs and knowledge, attitude, practice of contraception in women with schizophrenia/schizoaffective disorder

SPECIFIC OBJECTIVES

1. To assess unmet needs of women in reproductive age group with a diagnosis of schizophrenia/schizoaffective disorder, in remission.
2. To find out the association between unmet needs with sociodemographic and clinical variables of these patients.
3. To evaluate the knowledge, attitude, practice of contraception of these women with a diagnosis of schizophrenia/schizoaffective disorder in remission.
4. To analyze the association between practice of contraception with sociodemographic and clinical variables of these patients.

4.METHODOLOGY

STUDY DESIGN

This is a cross sectional observational study to assess needs and contraceptive practices of married women with diagnosis of schizophrenia/schizoaffective disorder, in remission.

STUDY SETTING AND SITE

This study was carried out in patients attending the outpatient clinics of the Department of Psychiatry, Christian Medical College which caters to about 700 to 800 patients in a day. The outpatient services are on 6 days a week run by 3 adult Psychiatry units and a child psychiatry unit and consultation liaison psychiatry services are for 5 days a week in the general hospital which is situated 8 km from this centre. Inpatient services include 12 beds for emergency psychiatry services and more than 100 beds for inpatient treatment for chronic illness. This hospital provides comprehensive short-term care for patients with psychiatric diagnoses not only from the town of Vellore but also from a wider rural area beyond. It also functions as a tertiary referral centre for management of patients with psychiatric morbidity from different parts of India. Main principles of management of patients are based on holistic and multidisciplinary treatment approaches.

Patients for this study were recruited over a period 11 months (Oct 2013-Sep 2014). Following recruitment participants were interviewed at a single point of time. Data collection were done using socio demographic proforma sheet, medical records, clinical interview and specified scales.

SUBJECTS

Subjects for this study were selected from those attending the outpatient clinic at the Department of Psychiatry based on the following criteria:

Inclusion criteria:

1. Female patients with ICD 10 diagnosis of schizophrenia/schizoaffective disorder who are married and above 18 yrs and below 45 years of age, living with husband & having at least one child.
2. No history or record of relapse during preceding three months
3. Patient can converse in Tamil

Exclusion criteria:

1. Married women with a diagnosis of schizophrenia having no children
2. Subjects having exacerbation of illness or hospitalization during last 3 months
3. Subjects having mental retardation, severe cognitive or sensory impairment.
4. Patients who were currently not living with husband.

PROCEDURE

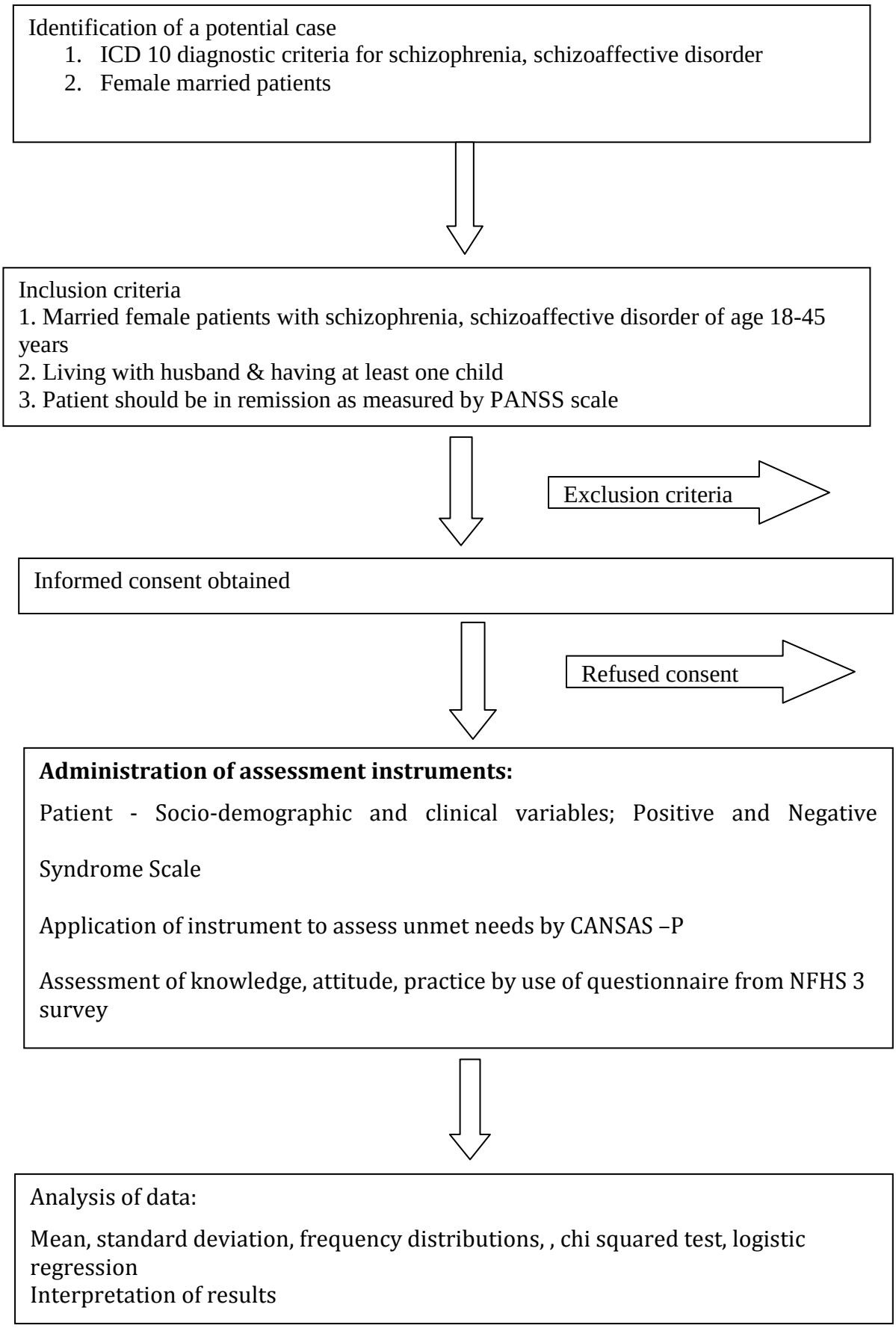
Sampling

Consecutive female patients with diagnosis of schizophrenia or schizoaffective disorder, who attended the outpatient clinic and fulfilled criteria for inclusion into the study, were contacted after careful assessment for exclusion criteria. Informed consent was obtained from the patient.

Variables assessed

Subjects who consented to take part in the study were assessed for socio-demographic variables, family, economic and personal data and clinical variables (duration of illness, severity of illness, treatment variables).Unmet needs were assessed using Camberwell assessment of needs CANSAS-P.[49]. Knowledge, attitude and practice of contraception were assessed by semi structured pilot tested questionnaire modified from National Family Health Survey 3 (NFHS 3).[95] **Sources of data** included interview with patient, informants and medical records.

Detailed diagrammatic algorithm of the study:



Data measurement

The following instruments were used in the study

- Positive and Negative Syndrome Scale (PANSS) for assessing severity of psychopathology [29]
- Camberwell assessment of Need Short Appraisal Schedule – CANSAS P used in patients with schizophrenia which is rated by the patient himself without involving clinician or caregiver.[49]
- Questionnaire on Knowledge, Attitude and practice of contraception is based on contraception section of the National Family Health Survey 3 which assess knowledge, current and past use of contraception and unmet needs of contraception in the community [95]
- Proforma for recording socio-demographic, clinical variables and specific questions to elicit patient's attitude to discuss aspects of contraception with treating physician

1. Positive and Negative Syndrome Scale (PANSS) [29]

This scale is used to assess the severity of symptoms and psychopathology in patients with schizophrenia.

The PANSS is well validated, standardized rating scale which has subset scoring of positive symptoms, negative symptoms and general psychopathology. It is used routinely by psychiatrists and researchers

It has 3 domains :a) positive symptoms of total 7 components

b) Negative symptoms of total 7 components

c) General psychopathology of total 16 components

There are totally 30 components. Each component will be scored between 1 to 7. Each item will be scored on a scale of 1-7, 1 means absence of symptoms and 7 means highest level of problems.

1- Absent

2 - Minimal, which means psychopathology is barely suspected or very subtle

3 - Mild, which means it is definitely present but does not interfere in daily functioning and activities

4 - Moderate, refers that it could a serious problem but interference in daily activities is only to a moderate level

5- Moderately Severe, represents it is in a marked degree and definitely affects the daily functioning but can be suppressed at will during the clinical interview

6 -Severe, indicates severe psychopathology that is present most of the time and affects patients activities and may need supervision also

7-Extreme, indicates the highest level of the problem, which severely affects the patients daily activities and they may need supervision in many areas of self care

2. Camberwell assessment of Need Short Appraisal Schedule – patient rated version (CANSAS - P) [49]

Early in 1995 Phelan et al.[48] devised a validated instrument CAN Camberwell assessment of need to evaluate patients with severe mental illness who are expected to have numerous needs. Modifications were done for special patient populations like pregnant women, patients with intellectual disability, forensic patients etc. CANSAS

P[49] is also a modification of the CAN scale with many advantages. It is rated by the patient, less time consuming and prevents bias that happens during the interview by the psychiatrist. There are studies showing differences in needs rated by doctor, patient and the caregivers. It is also described that CANSAS and its patient rated CANSAS P have reasonable inter rater reliability. The difference between the two is the option called 'I don't want to answer' which has been added in the latter.

This instrument totally contains 22 domains. It has various areas like food, shelter, substance use, looking after their children, running household, handling money, availability of benefits, psychotic symptoms, suicidal risk, physical relationship and so on. It also tells us about some form of intervention and absence of intervention also. This has to be completed by the patients themselves. There are 4 individual scores for each domain. Zero is for no need, 1 for met need, 2 for unmet need and 3 for I don't want to answer.

3. Questionnaire on Knowledge, Attitude and Practice of contraception

(The National Family Health Survey (NFHS Part 3, volume 2, section 3 B Contraception 2005 - 2006))[95]

This questionnaire consists of 38 questions which is a modified version from National family health survey 3 which had a total of 1028 questions. This NFHS survey which is for the third time in its series of surveys provides information on population , marriage & fertility, family planning, maternal & child health, nutrition, education , high risk behavior for sexually transmitted diseases etc .

The objective of NFHS survey in contraception section was to assess the knowledge, current use and unmet needs of contraception which is the need of the hour. So this questionnaire was chosen for our study but with some modification to suit patients coming to a tertiary hospital based setting.

This questionnaire contains section to assess both qualitative and quantitative variables of knowledge, attitude and practice of different type contraception & facility to avail the same. Similar questionnaire has been used by community health department in this college in a study done at Jawadi hills in 2012 by community health registrar and interns to find the knowledge, attitude & practice of contraception in normal married women.

4. Proforma for recording socio-demographic and clinical variables.

Clinical data will include socio economic details, details about married life & children, severity of illness, nature of illness, duration of illness, contraception etc.

SOCIODEMOGRAPHIC VARIABLES
1. Age of patients
2. Education
3. Occupation
4. Income
5. Debts
6. Socioeconomic status
7. Type of house
8. Religion

9. Married life

10. Menstruation

11. Number of children male and female

13. Desired family size categorical

ILLNESS VARIABLES

1.Duration of illness mean

2. Age of onset

3. Number of hospitalisation discrete and last admission how many years ago

4. Medication duration

5. Compliance

6. Last exacerbation of illness how many yrs ago

7. Electroconvulsive therapy

8. Type of illness

9. Severity of illness –PANNSS

NEEDS VARIABLES

No needs

Met needs

Unmet needs

CONTRACEPTION VARIABLES

1. Knowledge about contraception

2. Source

3. Current use

4.First use -mean age of starting a method

-duration of first use

-number of children during first use

-decision made by whom

-reason to stop

5. Past use type

6. Pregnancy on contraception

induced abortion

reason for abortion

7. Reason that they think it is needed to delay pregnancy

8. Reasons for using contraception

9. Reasons for not using contraception

10. Place of contraception

11. Cost of contraception

STATISTICAL METHODS

DETERMINATION OF SAMPLE SIZE

Of EpiInfo (ver 6.0) (1993) was employed to calculate the sample size.

The assumptions are: Confidence interval 95%; Power of 80 and precision of 10%. Current prevalence of needs in schizophrenia was 50% in earlier studies. The sample size required was 96. Over a period of 11 months, 83 patients were recruited for the study and the details related to these patients were analyzed with a plan to continue the study to after thesis submission.

DATA ANALYSIS

The statistical software SPSS for Windows (version 16.0) was employed for the analysis of data.

Mean and standard deviation were calculated for continuous variables. Categorical data were quantified by frequency distribution. Chi Square test was used to find the association between categorical binary data. Logistic regression was used to find out association between continuous and categorical data.

Association of unmet needs of the group with socio-demographic and illness variables were done after dividing the group into those with no unmet need and those with a minimum of one unmet need using chi square test for categorical data and logistic regression for continuous data. Similar analysis was done for the group to find out factors associated with current contraceptive practice.

5. RESULTS

Section 1: Socio-demographic variables

Table 1 Socio-demographic variables, need scores and contraceptive practice of patients with Schizophrenia (n= 83)

Characteristic	**n (%)**
Age in years, Mean (±SD)	33.90 (±6.7)
Residence	
Urban	29 (34.9)
Rural	54 (65.1)
Education	
None	7 (8.4)
Primary school	8 (9.6)
High school	53 (63.9)
Degree and above	15 (18.1)

Occupation	
Housewife	79 (95.2)
Unskilled	2 (2.4)
Semiskilled	1 (1.2)
Professional	1 (1.2)
So**cioeconomic status**	
Lower	50 (61)
Middle	31 (37.8)
Upper	1 (1.2)
Duration of married life in years, Mean (±SD)	14 (±7)
Number of children	
2	43 (57)
>2	16 (19.3)
PANSS*** total score , Mean (±SD)	38.6 (±7.4)

Domains of Needs	
No unmet need	62 (74.7)
At least one domain of unmet need	21 (25.3)
Current practice of contraception	
Yes	59 (71.1)
No	24 (28.9)

**S.D= Standard Deviation, ** Kuppusamy socio-economic scale 2012 [96]*

**** PANSS= Positive and Negative Syndrome Scale for Schizophrenia*

Table 1 shows the socio-demographic features of the sample population. Sample consisted of 83 female patients who were married, living with their husbands and having at least one child. They fulfilled International classification of diseases (ICD) 10 diagnosis of Schizophrenia. Mean age of this group was 33.9 years. Majority of the group was from a rural background (65%) and belonged to the lower socio-economic class (61%). Only one patient belonged to the upper socioeconomic class (Kuppusamy scale 2012). [96] One patient did not want to disclose the income.

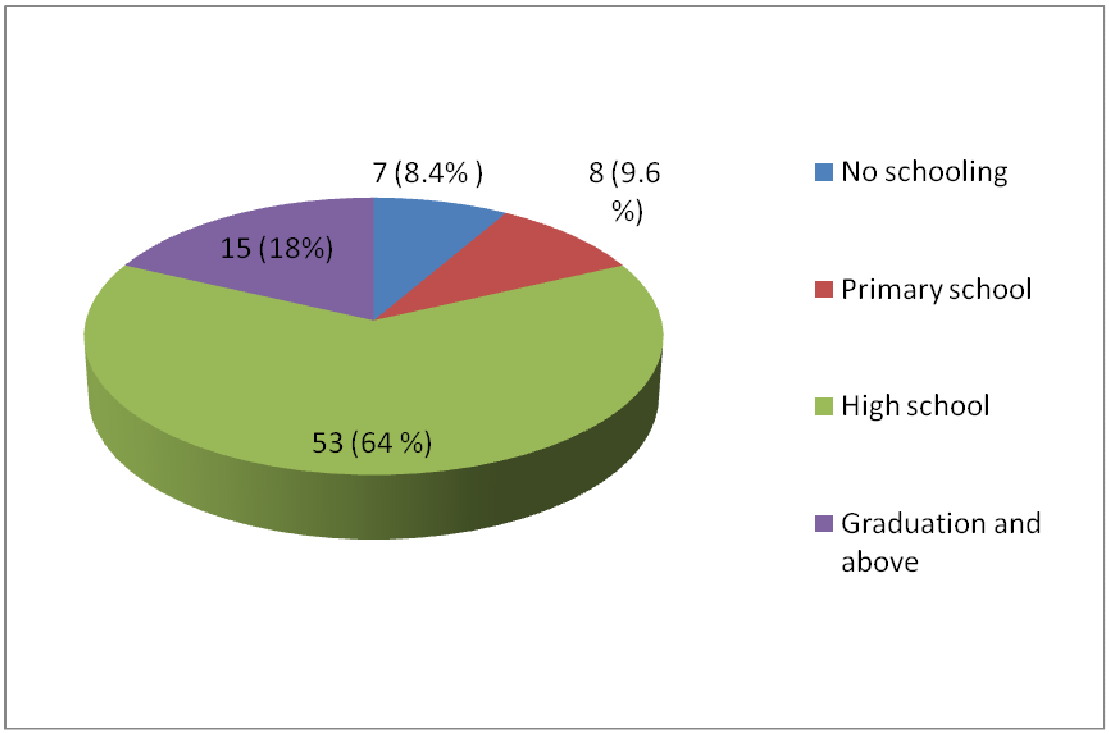


Figure 1 Level of education of participants of the study, N=83

Majority of this group of patients (64%) were educated till high school. Only 7 of them (8.4%) had no formal schooling. Around 90% of them could read and write, 4% were able to read only and 6% were illiterate.

Majority (95%) of the study population were home makers, while 2% were employed in semi-skilled work. Only a very small proportion of the group had skilled and professional employment. Seventy five patients (91.5%) had no income of their own. One patient did not want to disclose family income. Median income of families of 81 patients was 8000 INR per month.

Table 2 Socio-religious background of the study population

Characteristic	**n (%)**
Presence of debts	
Yes	39 (47)
No	44 (53)
Type of house	
Concrete with > 2 rooms	36 (43.4)
Concrete with <2 rooms	46 (55.4)
Mud thatched house	1 (1.2%)
Religion	
Hindu	74 (89.2)
Muslim	6 (7.2)
Christian	3 (3.6)

Majority of the group were Hindus 74/83 (89.2%), rest being Muslims (6%) and Christians (3%). Forty six (55%) lived in concrete houses with less than 2 rooms, 36/83 patients (43.4%) lived in concrete houses in more than 2 rooms, 1% in a mud thatched house. Out of 83 patients, 39 (47%) had debts.

The mean duration of married life in 79 patients was 14 years. Four patients were not able to exactly recall tell the duration of their married lives. Only 48.1% had regular menstruation, 35.8% had irregular menstruation and 16% had amenorrhea, but not were not pregnant.

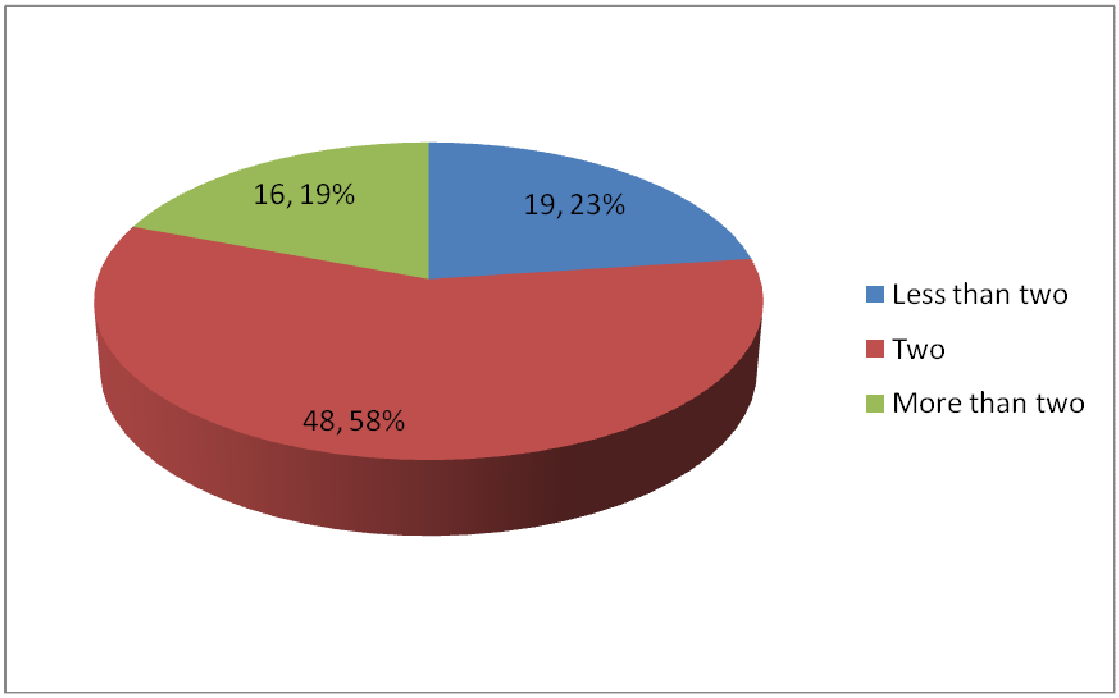


Figure 2 Family size (number of children) of respondents

Majority of the women (58%) had two children, while 23%, 19% had less than two and more than two children respectively

Twenty six (31.3%) had no male child, 36 (43%) patients had one male child, 19 (22.9%) had 2 male children, 2 (2.4%) had 3 male children.

No female children were found in 20 (24.1%); 44/83 patients (53 %) had one female child, 16 (19.3%) patients had 2 female children, 2 (2.4%) had 3 female children, while 1.4% had more than 3 female children.

Table 3 Desired family size (Number of children) as reported by respondents of the study population

Desired family size	n (%)
1	3 (3.7)
2	57 (70.4)
>2	11 (13.6)
I don't know/ not responded	12 (12.3)

Majority (70.4%) said that their desired family size is 2; 3.7% said that their desired family size is 1. Around 11.1% said they did not know their desired family size and gave various reasons like 'did not think about it', 'wanted to leave the decision to husband and family members', 'felt that question was not important'.

Section 2: Details of illness

Table 4 Details of illness in the study population

Illness variables	**Value**
Duration of illness, Median (range)	4 years (4 months to 20 years)
Age of onset of illness, Mean (±SD)	29 years (± 6.913)
Duration of medication taken by the patients, Median	3 years

**SD Standard deviation*

The duration of illness ranged from 4 months to 20 years with a median of 4 years. Sixty percent of patients had duration of illness of 4 years; 70% had duration of illness of 5 years; 80% of the patients had illness duration of 6 years. Age of onset of illness ranged from 15 years to 42 years. The mean age of onset of illness was 29 years. Median duration of medication use was 3 years.

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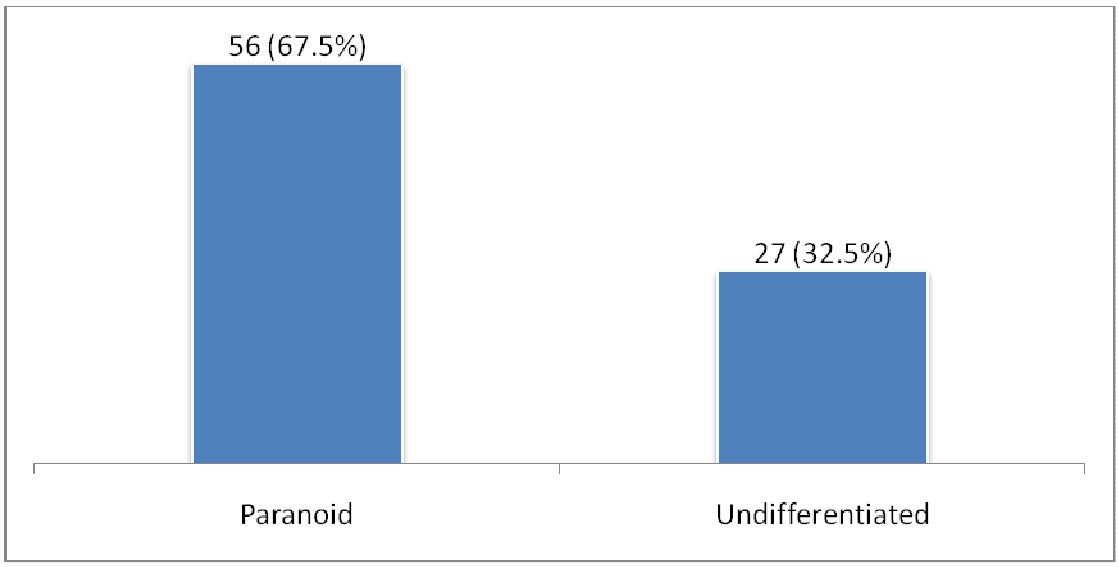

Figure 3 Sub type of Schizophrenia in study participants

Paranoid Schizophrenia was the most common subtype (67.5%) encountered in this study population. Undifferentiated type accounted for the remaining one-third of patients. There were no patients with hebephrenic subtype or schizoaffective disorder.

Table 5 Details of treatment in the study population

Variables	**n (%)**
Hospitalization	Yes 16 (19.3%) No 67 (80.7%)
Duration since last admission, Mean (SD)	4.2 (+_4.94)

Past treatment with **Electroconvulsive therapy**	
Yes	11 (13.3%)
No	72 (86.7 %)

**SD Standard deviation*

Majority did not have hospitalization. Time of last admission to hospital ranged between 4 months ago to 15 years ago. Very few had electroconvulsive therapy (around 13%). Out of the 16 patients requiring hospitalization, around two thirds had admission within the last 3 years.

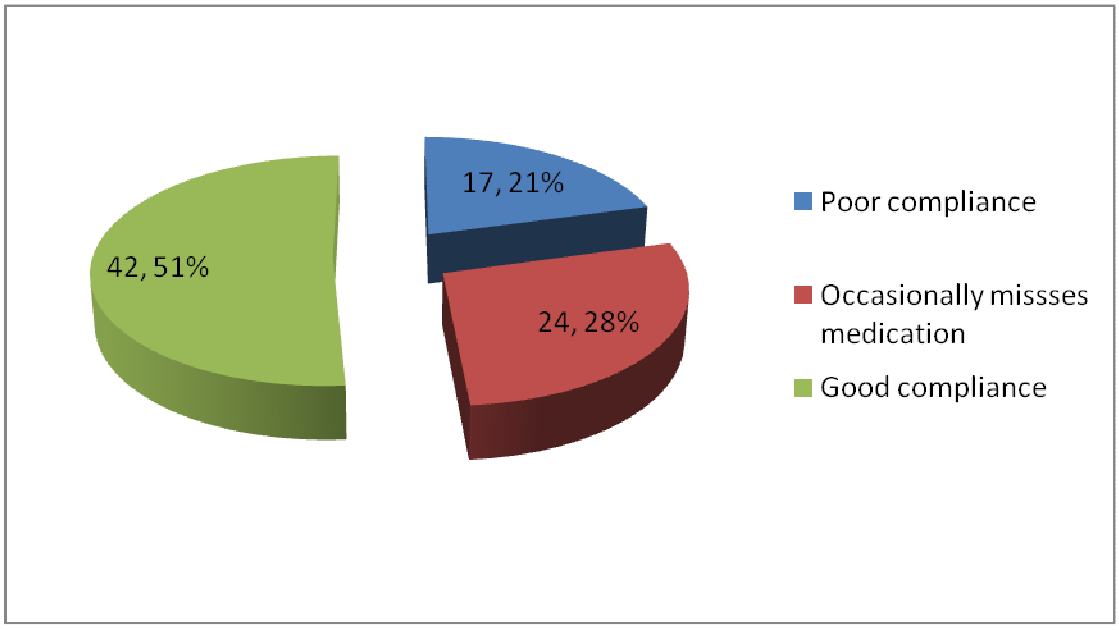

Figure 4 Compliance to medication among study participants

Half the patients (51%) reported good compliance to medication. Twenty eight percent of them occasionally missed their medication, while 21% were poorly compliant.

Table 6 Contact with Mental Health Services

Duration	**n (%)**
<5 years	65 (78.3)
5 to 10 years	12 (14.5)
>10 years	6 (7.2)

Majority of the patients (78.3%) had contact with Mental Health Services for a duration of less than 5 years.

Table 7 Severity of psychopathology (PANSS scale)

PANSS SCORE	**Mean (SD)**
PANSS total score	38.59 (7.37)
PANSS positive score	7.45 (1.15)
PANSS negative psychopathology	11.23 (3.21)
PANSS general psychopathology	20 (4.49)

**PANSS-positive and negative symptom scale for Schizophrenia*

PANSS-positive and negative symptom scale for Schizophrenia profile showed a mean total score of 38 and positive scale score of 7.4, showing near absence of positive symptoms.

Section 3: Needs

Table 8 Needs in patients with Schizophrenia

Needs	**Range**
Number of 'unmet needs'	0 -10
Number of patients n (%)	
With no unmet need	62 (74.7%)
With one unmet need	21 (25.3%)
Number of 'met needs'	0-12
Number of 'no needs'	5-22

Unmet need(s) were present in only 25% of the sample population. One unmet need was present in 9.6%, four unmet needs were present in 3.6%, 10 unmet needs were present in 1.2% of the total sample population.

Met need(s) was present in the majority 66 (79.5%) patients of the group (79.5%). Met needs were absent in 17 (20.5%). Mean number of 'met needs' was 4.8 with standard deviation of 3.75. Mean number of 'no needs' was 16.25 with standard deviation of 4.5.

Table 9 Needs of Patients with Schizophrenia assessed by CANSAS-P (n=83)

CANSAS variables	No need n (%)	Met need n (%)	Unmet need n (%)
1. Accommodation	80 (96.4)	3 (3.6%)	0
2. Food	80 (96.4)	3 (3.6)	0
3. Looking after the home	46 (57.4)	31 (37.3)	6 (7.2)
4. Self - care	77 (92.8)	6 (7.2)	0
5. Daytime activities	49 (59)	30 (36.1)	4 (4.8)
6. Physical health	44 (53)	37 (44.6)	2 (2.4)
7. Psychotic symptoms	76 (91.6)	6 (7.2)	1 (1.2)

8. Information on condition and treatment	74 (89.2)	7 (8.4)	1 (1.2)
9. Psychological distress	50 (60.2)	27 (32.5)	6 (7.2)
10. Safety to self	81 (97.6)	1 (1.2)	1 (1.2)
11. Safety to others	83 (100)	0	0
12. Alcohol	83 (100)	0	0
13. Drugs	83 (100)	0	0
14. Company	46 (55.4)	27 (32.5)	10 (12)
15. Intimate relationships	38 (45.8)	39 (47)	6 (7.2)
16. Sexual Expression	35 (42.2)	37 (44.6)	10 (12)
17. Child Care	43 (51.8)	33 (39.8)	5 (6.2%)
18. Basic Education	56 (68.3)	18 (22)	8 (9.8)

19. Telephone	71 (85.5)	11 (13.3)	1(1.2)
20. Transport	60 (72.3)	18 (21.7)	5 (6)
21. Money	37 (44.6)	40 (48.2)	6 (7.2)
22. Benefits	57 (68.7)	24 (28.9)	2 (2.4)

Common unmet needs as shown in the table 9 **are company and sexual expression (12% each**). Other unmet needs include intimate relationships, psychological distress, looking after home, money (7.2% each). This shows that unmet needs were seen in a minority of patients**.**

The common met needs were present in money (48%), intimate relationship (47%), sexual expression (44.6%), physical health (44%), child care (39.8%), day time activities (36%) among others. **Most common 'no needs'** were in the domains of alcohol ,drugs, safety to others (100% each), safety to self (97.6%), accommodation, food (96.4% each), self care (92.6%), psychotic symptoms (91.6%), information on treatment (89.2%).

FACTORS ASSOCIATED WITH UNMET NEEDS

Unmet needs are associated with urban area, less education and seem to have no association with age, socio economic status, presence of debts, type of diagnosis, electroconvulsive therapy and PANSS scores. This is depicted in the following tables (10 and 11 ,12 which detail individuals scores)

Table 10 Sociodemographic, illness and treatment factors associated with unmet needs in patients with Schizophrenia

Socio demographic and illness variables	No unmet need	One unmet need	p value	Chi square
Age <33 years	27 (73)	10 (27)	0.74	0.105
Age>33 years	35 (76.1)	11(23.9)		
Urban	18 (62.1)	11 (37.9)	0.05	3.762
Rural	44 (81.5)	10 (18.5)		
Up to primary school	8 (53.3)	7 (46.7)	0.035	4.422
High school and above	54 (79.4)	14 (20.6)		

Low SES Middle and upper SES	34 (68) 27 (84.4)	16 (32) 5 (15.6)	0.097	2.746
Debts present Debts absent	26 (66.7) 36 (81.8)	13 (33.3) 8 (18.2)	0.113	2.511
Paranoid types Undifferentiated types	45 (80.4) 17 (63)	11 (19.6) 10 (37)	0.088	2.916
Electroconvulsive therapy Yes No	9 (81.8) 53 (73.6)	2 (18.2) 19 (26.4)	0.56	0.340
Contact with mental health services <5 years >5 years	50 12	15 6	0.37	0.785

Table 11 Association of unmet needs and place of residence

Place of residence	No unmet need n (%)	At least one unmet need n (%)	Total n
Urban	18 (62.1)	11 (37.9)	29
Rural	44 (81.5)	10 (18.5)	54
Total	62	21	83

p value 0.05, Pearsons chi square 3.762

37% of the urban population had unmet needs as compared to 18% of the rural population having unmet needs (p value of 0.05).

Table 12 Association of unmet needs and education

Education	**No unmet need** **n (%)**	**At least one unmet need** **n (%)**	**Total** **N**
Up to primary school	8 (53.3)	7 (46.7%)	15
High school and above	54 (79.4%)	14 (20.6%)	68
Total	62	21	83

p value 0.035, Pearsons chi square 4.422

Forty six percent of people who were educated till primary school had unmet needs compared to 20% who were educated up to high school and above (p value of 0.035 and Pearsons chi square value of 4.422).

Association of unmet needs and severity of psychopathology

Association of unmet needs with PANSS total score was done using logistic regression was found to have an odds ratio of 1.175 with confidence interval of 1.078 to 1.280 and p value of 0.000.

Association of unmet needs with PANSS negative score was done using logistic regression was found to have odds of 1.324 with confidence interval of 1.103 to 1.589 and p value of 0.003.

Association of unmet needs with PANSS general psychopathology score was done using logistic regression was found to have odds of 1.221 with confidence interval of 1.075 and 1.387, p value of 0.002.

Section 4: Knowledge, attitude and practice of contraception

Table13 Knowledge, attitude and practice of contraception in the study population

*subjects may have chosen one or more options

Components	**n (%)**
Current practice of contraception present	n=59 (71.1%)
No contraceptive use currently	n=24 (28.9%)
Knowledge of number of methods known	
Less than 3 methods	n=52 (62.7%)
At least 3 methods	n=31 (37.3%)

Reasons for using contraception * n=59	Small family norm (55.9%) Completed family (42.3%) Economic reasons (15.3%)
Reasons for not using contraception* n=24	Desire to have a child/male child (45.8%) Fear of side effects (29.4%) Lack of awareness (25%) Did not receive information in MHC (25%)

KNOWLEDGE ABOUT CONTRACEPTION

Knowledge of number of methods of contraception known to study subjects

Eight percent of the population did not know about any methods of contraception. Ninety two percent of them knew about at least one of the contraceptive methods. About one third of them (36.1%) only knew about one method. Maximum number of methods known was 5 (1.2%). Patients' knowledge about contraception in terms of mean number of methods was 2; median was 2 with a standard deviation of 1.301

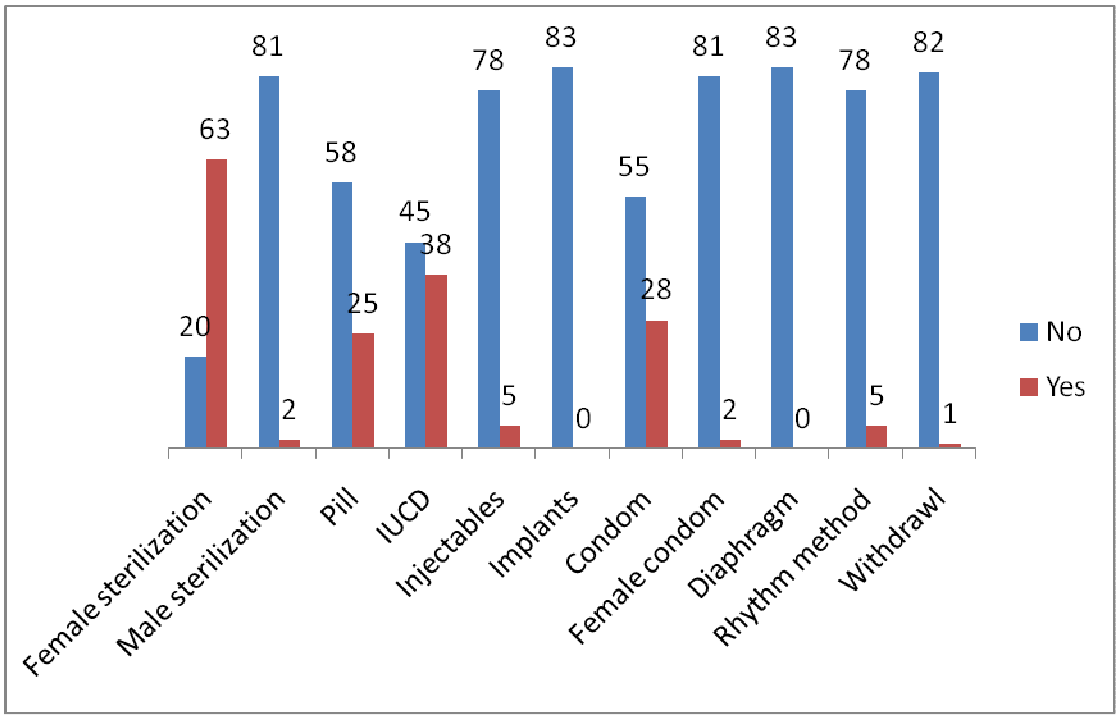

Figure 5 Knowledge of various contraceptive methods among the 83 study participants. *Data labels represent number of patients*

Majority of the patients, 63 out of 83 (75.9%) were aware of female sterilization. Intrauterine contraceptive device (IUCD), oral contraceptive pill and condom were known to 45.8%, 30.1% and 33.7% of the women respectively.

None of them knew about diaphragm, implants. Very few knew about injections, male sterilization, female condom, rhythm and withdrawal methods. Eighty eight percent of them knew about a place where family planning methods can be obtained. Few said they don’t want to answer.

Table 14 Places to obtain contraceptive services as per the respondents of the study, n=73

Government hospital	46 (63%)
Private clinic	23 (31.5%)
Pharmacy	3 (4.1%)
Visiting health worker	1 (1.4%)

Table 15 Sources of information on contraception as told by study participants*

Family members	42 (50.6)
TV, radio	7 (8.4)
Newspaper	2 (2.4)
Doctors/nurses/paramedics	24 (28.9)
Neighbors	6 (7.2)
I don’t know/don’t want to answer	12 (14.5%)

**one or more options were chosen by the respondents*

Table 15 shows that 73 patients (87%) knew about a source where contraception could be obtained. Ten patients did not want to answer/ said don't know a place where contraception could be obtained.

Half the patients knew about contraception thorough family members, while 28.9% of them got information through doctors.

CURRENT PRACTICE OF CONTRACEPTION

Current use of contraception:

59 women (71%) were using some form of contraception at the time of interview. Twenty four women (28%) were not using any method of contraception. Out of the 59 patients using contraception, types of contraceptive methods used are depicted in figure 7.

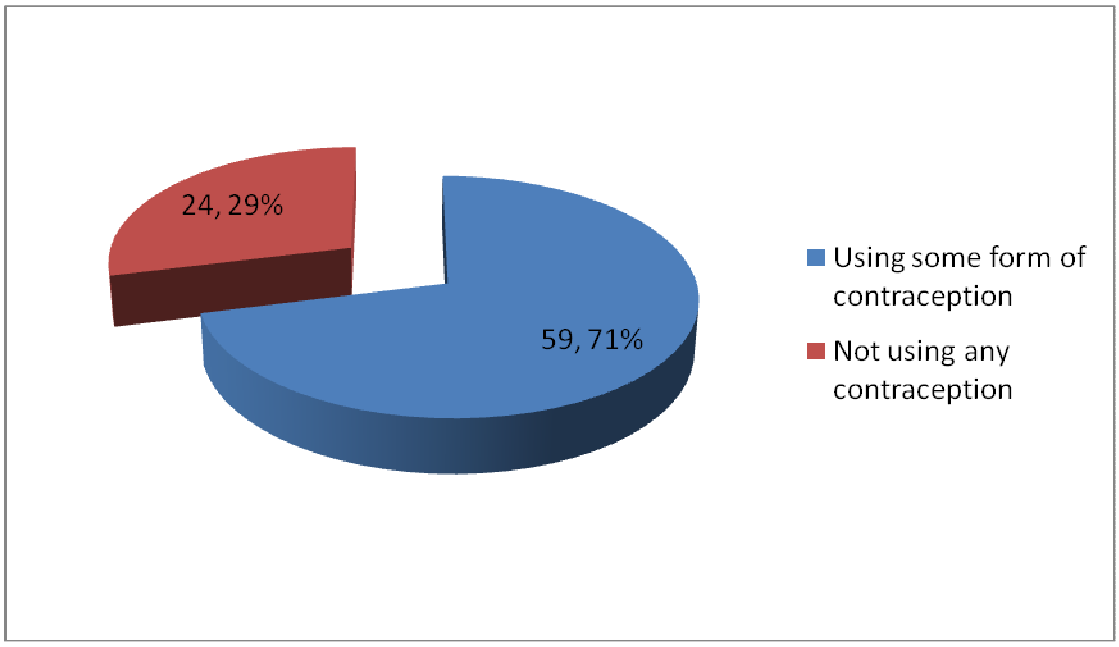

Figure 6 Prevalence of current use of contraception in the study population, N=83

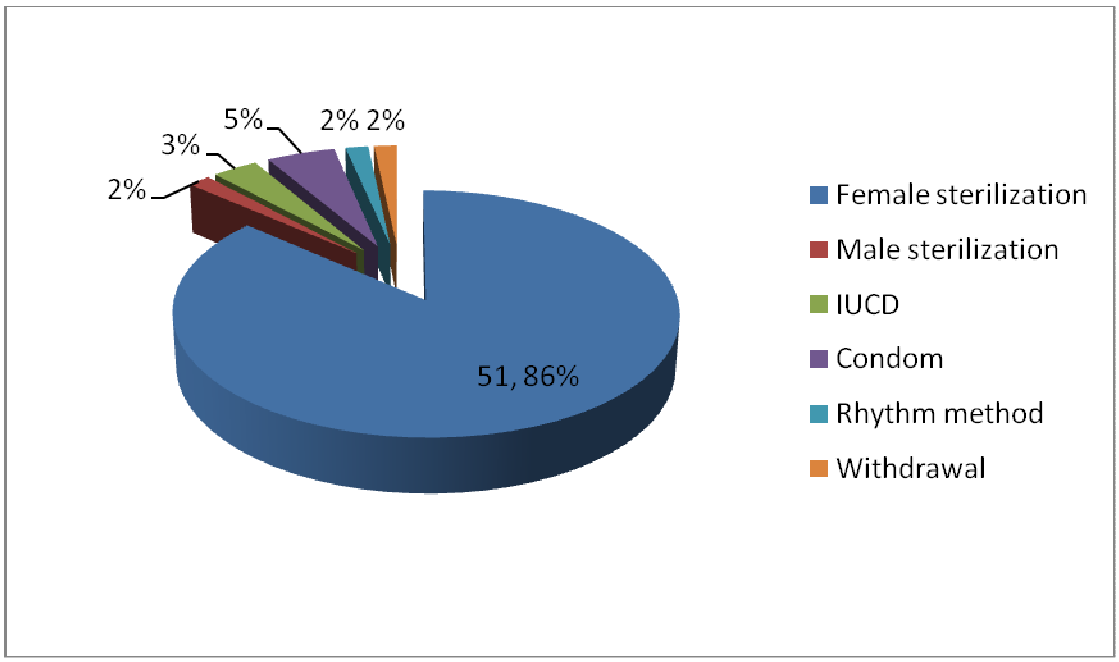

Figure 7 The type of contraception used at the time of interview, among patients using some form of contraception, N=59*

Majority of the patients (59 out of 83, 71%) were using some form of contraception. Out of these 59 patients, 51 (86%) had undergone female sterilization. This accounts for 61% of the total sample population (51/83). The remaining 14% used a condom, IUCD, male sterilization, withdrawal and rhythm methods. None of the study participants were using oral contraceptive pills, implants, female condom, diaphragm or injectables.

Mean duration of current use of contraception is 9.45 years with standard deviation of 6.78 and range of 1 month to 25 years.

FIRST USE OF CONTRACEPTION

Table 16 Contraceptive practices in the study population, n=66 denotes number of first time users of contraception

Variable	Range	Mean (SD) in years
Age of starting first use of any contraceptive method in years	17-37 years	24.65 (±-4)
Duration of continuing first use of contraception	1 month to 24 years	7.08 (±6.66)

Table 17 Number of children at the time of starting contraceptive use for the first time, n=66

No of children	n (%)
1	22 (33%)
2	33 (50%)
3	11 (16.7%)

Seventeen (20%) of patients did not use any form of contraception irrespective of number of children at any point of time. Half the patients used contraception after they had 2 children.

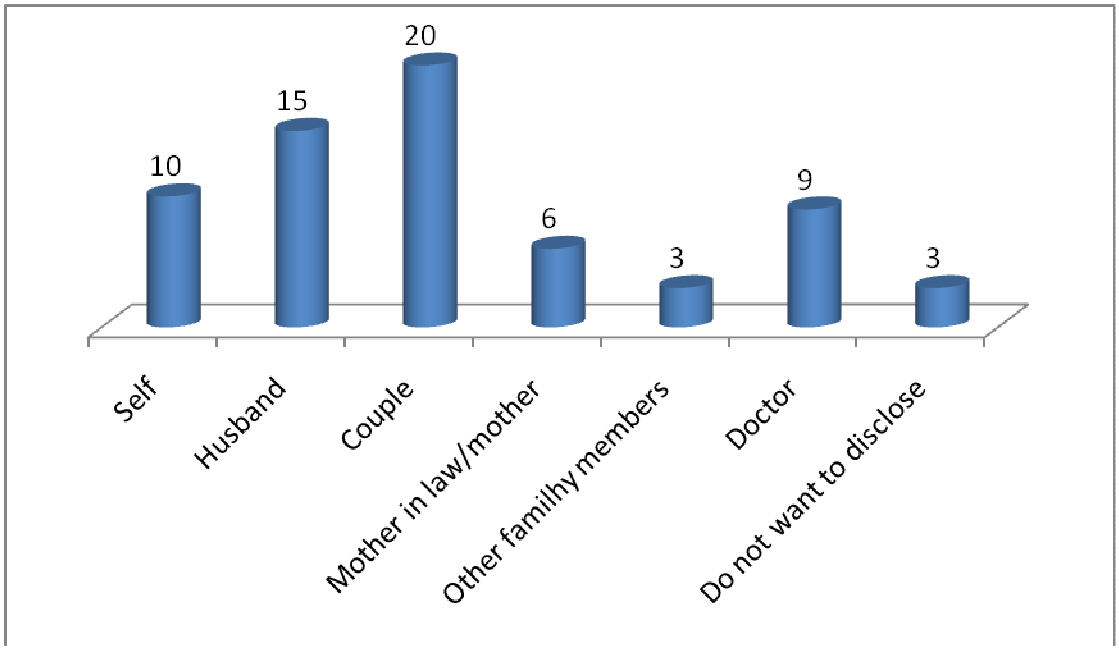

Figure 8 Decision makers of first use of contraception among study participants. The values represent number of patients.

N=66 denotes number of first time users of contraception

Out of the 66 responses obtained, 45 (68.2%) indicated that the decision to initiate contraceptive use was taken by self, husband or the couple. Nine of them (13.6%) cited the doctor as the deciding factor, while a similar number of them cited mother/mother in law or other family members.

Informed choices about contraception

None of the patients reported being informed about side effects of contraceptive methods; none felt that the decision was due to informed choices. None were told by health workers about the side effects and what to do if they experienced side effects.

Table 18 Reasons for stopping contraception in first time users, n=22 *

Wanted to have another child	10 (45%)
Side effects of contraception	9 (40%)
Forgot to use	2 (9%)
Became pregnant on contraception	1 (4.5%)

*Out of 66 first time users, 7 subjects were continuing to use contraception and 37 had undergone permanent sterilization. Rest were the 22 subjects who had stopped using contraception. Desire to have another child (45%) and side effects related to contraceptive use (40%) were the two most common reasons for discontinuing contraception in the study population.

PAST USE OF CONTRACEPTION/EVER USED CONTRACEPTION

Table 19 Contraceptive methods used in the past by the study population, n=83*

Female sterilization	51/83	61%
Male sterilization	1/83	1.2%
Pills	3/83	3.6%
Intrauterine devices	12/83	14.4%
Condoms	7/83	8.4%
Rhythm method	1/83	1.2%
Withdrawal method	3/83	1.2%
Injectables/ implants/ diaphragm/ female condom/ emergency contraception	0	0
Ever used some method of contraception	66/83	79.5%

**Subjects could have used more than one or more methods in the past.*

Maximum number of patients had undergone sterilization 51/83 (61%). Other prevalent methods were intrauterine devices (14.45%), condom (8.433%).

Pregnancy on contraception

Table 20 Unplanned pregnancy and abortion despite use of contraception in the study population

Number of patients who became pregnant on some method of contraception	9/66 (13.6%)
Number of patients having induced abortion for unplanned pregnancy	19/83 (22.9%)

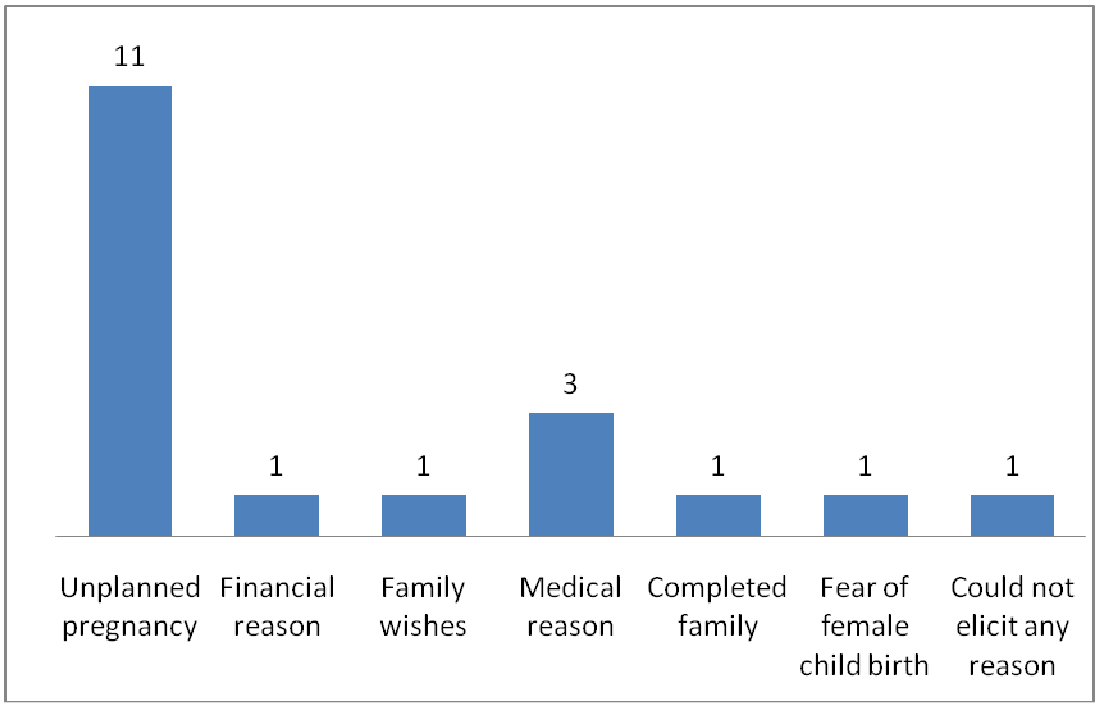

Figure 9 Reasons for abortion in the 19 women who underwent abortion

Nineteen out of the 83 women (22.9%) underwent an abortion. Unplanned pregnancy was the most common reason cited (11 out of the 19 women, 57.9%) for abortion in the study population.

ATTITUDE OF SUBJECTS TOWARDS CONTRACEPTION

Table 21 Reasons to delay pregnancy as per the study population (n=69)*

Completed family	58 (84.1)
Birth spacing	3 (4.3)
Financial reason	8 (11.6)
Don't know/don't want to answer	1 (1.4)
Difficulty to take care of the child	0

** Subjects would have chosen one or more options.*

69/83 patients thought they think they should delay or avoid pregnancy. Commonest reason was 'completed family'. Out of the total 83 patients, 59 patients were using contraception at the time of interview. This could indicate discrepancy between the attitude and actual practice.

Table 22 Reasons cited by study participants for using contraception currently, n=59*

Reasons for using contraception	**n (%)**
Economic reason	9 (15.3%)
Motivation	1 (1.6%)
Small family norm	33 (55.9%)
Illness may get exacerbated during pregnancy	3 (5%)
Spacing	2 (3.3%)
Completed family	25 (42.3%)
Incentive	0
Others (I don’t know/ weak mind/ weak body/ can’t raise first wife’s child)	3 (5%)

Out of 59 subjects who are using contraception at the time of interview, common reasons cited by the subjects for using contraception were small family norm (55%), completed family (42%), economic reason (15%).

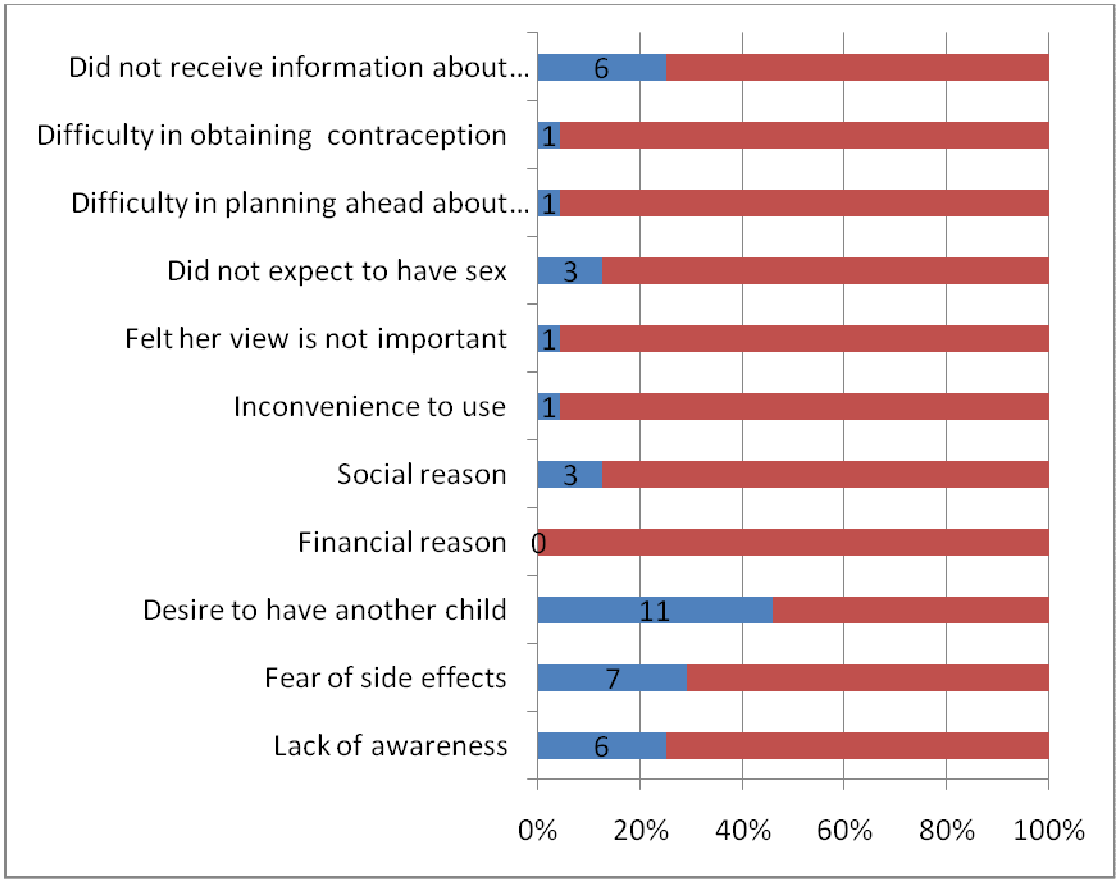

Figure 10 Reasons for not using contraceptive methods, n=24 * denotes the number of subjects who were not using contraception currently.

**Subjects could have chosen one or more than one options. The data labels in the blue bars represent the number of patients who said yes, while the red portions represent the number of people who said no for that reason. MHC- Mental Health Center where study was conducted*

Eleven of the 24 women (45.8%) who did not use any form of contraception cited desire to have another child as the most common reason for not using contraception. Fear of side effects (29.2%), lack of awareness (25%), and not receiving information in this regard from the hospital (25%) were the other common reasons cited by women who did not use contraception.

Table 23 Perceived importance of discussing contraception with doctor as per the respondents of the study population, n=83

Importance of discussing contraception with doctor	n (%)
Yes	53 (63.9)
No	29 (34.9)
I don't know	1 (1.2)

Though 63% felt the importance of discussing contraception with the doctor, only 17% said they would voluntarily approach a doctor for advice regarding contraception.

Out of 83 patients, 42.7% said they would not voluntarily approach anybody for contraception. Twenty two percent said they would approach their husband for advice regarding contraception; 13.3% said they would approach mother/mother in law; 5% said

they would approach other family members. Only 17% said they would approach the doctor/nurse for advice regarding contraception.

Table 24 Depiction of places where contraceptive services were availed of by study participants

Contraceptive method	Place where contraception was obtained	N(%)
Sterilization n=46*(%)	GH Private hospital Primary health centre CHAD Others	24 (52.2%) 12 (26%) 5 (10%) 2 (4.3%) 3 (6.5%)
Intrauterine devices n=14(%)	GH Private hospital Primary health centre Others	6 (42%) 6 (42%) 1 (7.1%) 1 (7.1%)
Condom n=3(%)	Medical store	100%

GH Government hospital, Community health and development run by CMC, Vellore

Majority of sterilization took place in government hospitals. *Out of the 51 patients who underwent sterilization only 46 patients were able to mention the place of sterilization. Out of the 51 patients who underwent sterilization, 38 patients (74%) did not spent money for sterilization.

Table 25 Sociodemographic features, illness variables and knowledge of contraceptive methods in women with schizophrenia with and without current contraceptive practice

Sl. No.	**Sociodemographic and illness variables**	**Using contraception currently n=59**	**Not using contraception currently n=24**
1.	Age of the patient in years, mean (SD)	35.2 (6.4)	30.8 (6.4)
2.	Place of residence, Rural	39(66.1%)	15(62.5%)
3.	Education, High school and above	79.7%	87.5%
4.	Socio-economic status	Lower: 62.7%	Lower: 56.5%

5.	Duration of married life, mean (SD)	15.9 (7.3)	10 .1 (7.1)
6.	Total no of children, median	2	1
7.	Total no of male children, median	1	0
8.	Total no of female children median	1	1
5.	Illness duration in years, mean, SD	4.8 (4.1)	4.8 (4)
6.	Age of onset of illness in years, mean, SD	30.7 (6.8)	26 (6.1)
7.	Type of schizophrenia Paranoid type	61%	83.3%
8.	PANSS positive, mean (SD)	7 (1)	7 (1)
9.	PANSS negative, mean (SD)	12 (3)	10 (3)

10.	PANSS GENERAL, mean (SD)	21 (5)	19 (3)
11.	PANSS Total, mean (SD)	40 (8)	36 (6)
12.	Knowledge of contraception		
	0 method	6.8%	12.5%
	1 method	39%	29.2%
	2 methods	16.9%	20.8%
	3 methods	22%	12.5%
	4 methods	13.6%	25%
	5 methods	1.7%	0

SD-Standard deviation PANSS-positive and negative symptom scale for Schizophrenia

FACTORS ASSOCIATED WITH CURRENT CONTRACEPTIVE USE IN WOMEN WITH A DIAGNOSIS OF SCHIZOPHRENIA

In the following tables it is examined whether socio-demographic/illness related factors are different between groups using contraception and not using contraception.

Table 26 Factors associated with Current Contraceptive use

Socio demographic and illness variables	Current practice of contraception n (%)	Lack of contraception currently n (%)	p value	Chi square
Age <33 years	21 (56.75)	16 (43.24)	0.010	6.667
Age>33 years	38 (82.6)	8 (17.39)		
Education up to primary school	12 (80)	3 (20)	0.4	0.708
High school and above	47 (69)	21 (30)		
Residence				
Urban	20 (60.9)	9 (31)	0.75	0.97
Rural	39 (72.2)	15 (27.8)		

Low SES Middle and upper SES	37 (74) 22 (68.8)	13 (26) 10 (31.2)	0.097	2.746
Single child At least one child	6 (31.6) 53 (82.8)	13 (68.4) 11 (17.2)	0.000	18.70
No male child At least one male child	14 (53.8) 45 (78.9)	12 (46.2) 12 (21.1)	0.019	5.473
Paranoid Schizophrenia Undifferentiated Schizophrenia	36 (64.3) 23 (85.2)	20 (35.7) 4 (14.8)	0.049	3.87
Knowledge Less than 3 methods At least 3 methods	37 (71.2) 22 (71)	15 (28.8) 9 (29)	0.98	0.000

It was found that age, number of children, number of male children and type of Schizophrenia were factors significantly associated with the use of contraception**. Age more than 33 years, having two children, having at least one male child and the diagnosis of undifferentiated as opposed to paranoid Schizophrenia were significantly associated with contraceptive use.** Eighty two percent were using contraception in women of age more than 33 years as compared to 56% who used contraception whose age was less than 33 years. 82% of women who had at least 2 children were using contraception as compared to 31% of women using contraception having single child. 78% of women having one male child were using contraception as compared to 53% of women using contraception having no male child.85.2% of women with undifferentiated Schizophrenia were using contraception as opposed to 64.3 % with paranoid type.

Level of education, socio-economic status, place of residence (urban vs. rural) and knowledge of contraception did not make any difference to the prevalence of use of contraception in the study population. Though type of Schizophrenia was important, the duration of illness or the PANSS score did not have any significant association with the use of contraception

Association of contraceptive use and severity of psychopathology

Association of use of contraception with duration of illness was evaluated using logistic regression showed unadjusted odds ratio of 0.995 with confidence interval of 0.887 to 1.121, p value of 0.95. Association of use of contraception with PANSS total showed unadjusted odds ratio of 1.075 with confidence interval of 0.994 to 1.163, p value of 0.69. This showed lack of association of contraceptive use with severity of illness and duration of illness.

6.DISCUSSION

This is a cross sectional study done on married women with a diagnosis of Schizophrenia. Patients who attended the outpatient services of a tertiary care setting were evaluated. Women who were living with their husbands and having at least one child and belonging to the age group of 18 to 45 years, who fulfilled inclusion and exclusion criteria and consented to participate, were included in the study. This study has attempted to elicit areas of needs which were met and areas which remain unmet after being in regular contact with mental health services. The second area of assessment consisted of knowledge related to contraception, contraceptive practices and their attitude towards contraception.

Needs of women with Schizophrenia

Domains of unmet needs

This group of women had number of unmet needs ranging between 0-10. Common areas of unmet needs were company, sexual expression, intimate relationship, psychological distress and looking after home which suggest perceived difficulties in specified areas related to interpersonal relationship and intimate relationship. Women in this group also perceived difficulty with their responsibilities as a homemaker. This finding is keeping with some of the earlier studies from the west. Wiersma et al. [44] have shown common unmet needs were in areas of company, psychological distress, psychotic symptoms, and activities of daily living and the number of unmet needs ranged between 4 to 10 domains.

Study done at a tertiary referral center in Chandigarh showed that patient rated unmet needs were in areas of benefits, psychotic symptoms, information about diagnosis and treatment; the average number of unmet needs were around six. [66] The current study has shown differences in the domains of unmet needs in comparison to the study from northern India. This could be due to the differences in sample, the current study consisting exclusively of female population all of whom are in remission.

Factors associated with unmet needs

Findings from this study showed that unmet needs were associated significantly with the patient's area of residence (urban) and low level of education (up to primary school level). Unmet needs did not have any association with other factors like socioeconomic status, presence of debts, type of Schizophrenia, having had treatment with electroconvulsive therapy or PANSS scores. Findings of this study are not in keeping with an earlier study from the west mentioned below.

Wiersma et al [44] have shown association between unmet needs and poor socioeconomic status, severity of illness, type of mental health services, diagnosis and modality of treatment and no association between unmet needs and age, gender or education. Another study from this region [8] showed correlation between poverty, severity of illness, low educational status and unmet needs. Low educational status is identified as a factor associated with unmet needs in the group of women included in this study also.

This group of women reported only few domains of unmet needs in comparison to no needs and met needs. Two thirds of women of this group did not have any area of unmet

need which is a positive finding with respect to patient outcome. This finding is possibly due to a combination of factors. Factors which were thought to contribute to this favorable outcome other than regular review with mental health services were (i) Remission from active psychotic illness reflected by low PANSS score (ii) Marital status and living with spouse which reflect high levels of social support in this culture (iii) Majority hailing from rural background and having consistent care giver support which reflect better levels of acceptance within the family (iv) Possible lower expectation on performance by family in comparison to men (v) Higher levels of education (vi) Majority of women having paranoid subtype of Schizophrenia with good prognosis (vii) Adequate resources to meet expenses of regular treatment and provision of treatment at concessional rate for those who cannot afford treatment (viii) Absence of co-morbid conditions like drug or alcohol use.

Domains reported as no needs and met needs

Maximum number of patients had mentioned no need in domains of alcohol, drugs, safety to self and others, food, accommodation, self care, psychotic symptoms and information on treatment. This reflects socio economic resource levels of this sample and remission from active psychotic illness. The last domain could reflect one aspect of quality of delivery of services provided. Psycho-education regarding the nature, course, prognosis and compliance issues along with other modalities of treatment possibly contribute to this finding of no need in this domain.

Money, intimate relationship, sexual expression, physical health and care of the child were mentioned as common domains of met needs in this population. In this sample

population majority were housewives without independent income but were supported by the family for living and source of income. These domains may reflect the social support obtained from rural areas for rearing children.

Knowledge about contraception in women with Schizophrenia

Majority of women (92%) in this group had knowledge about of at least one contraceptive method. Around 75% of women were aware of female sterilization and 48% knew about intrauterine devices and 30% knew about condom as compared to National Family Health Survey 3 survey done in general population where the knowledge was reported as 95% being aware of female sterilization and 85% being aware of contraceptive pills.[83] This high level of knowledge in studies in general population might be an outcome of the family planning programs offered by the Government, publicity in mass media, and awareness programs through community health outreach centers.

One interesting finding of the study was that none of the women were told about side effects of contraception and what was to be done if they have side effects including information on alternative contraceptive methods. Though these women had knowledge about the presence of some contraceptive methods, none were aware about the side effects.

National average from NFHS 3 study clearly mentions that at least one third of population were informed about side effects. [83] This highlights that mentally ill women has unique needs with respect to contraception.

Women in this group mentioned family members as the source of their information in comparison to findings from general population in which source of information was reported as television and radio. This finding is understandable with the cultural factors and the context where decision making in women with mental illness being influenced by immediate family members or caregivers.

Contraceptive practices in women with Schizophrenia

Current practice of contraception was reported by 71% of this sample population and around 61% had undergone sterilization. This is in comparison to the national report of 56% of women in India using some form of contraception and 37% having undergone permanent sterilization (as reported by National Family Health Survey 3 done in 2005-2006). [83] Majority of women in this group who underwent sterilization had this done in a Government hospital.

Factors associated with contraceptive practices

This study has shown factors associated with current use of contraception are age more than 33 years, number of children being 2, having at least one male child and undifferentiated type of Schizophrenia. Factors like socio economic status, place of residence, education, knowledge about contraception, severity of illness were not associated with current contraceptive use.

There are no studies in Indian scenario looking at factors associated with contraceptive practice in women with chronic mental illness.

Attitude towards use of contraception in women with Schizophrenia

This study showed that common reasons mentioned for use of contraceptive methods were completed family, small family norm and financial reasons. Common reasons for not using contraceptive methods were the wish to have an another child or a male child, fear of side effects, not receiving details of contraceptive methods from hospital and lack of awareness. These reasons were similar to the reasons obtained from women in the community as reported by NFHS 3 where normal women did not use contraceptive methods due to desire of conception and fear of side effects. [83]

Studies done in the west by Miller and Finnerty in 1998 [14] have looked at differences between normal women and mentally ill women with respect to reasons for not using contraception; these included difficulty in planning about contraception, perceived difficulties in obtaining family planning methods, low levels of expectation of future sex, lack of awareness about family planning methods .

These differences in the current study could be explained by differences in cross sectional assessment and lack of control group to find the differences, cultural difference between India and the west. Further there are similarities with reasons cited by normal women from India as compared to the current study group. There are no comparison studies in the Indian scenario.

Informed decision making regarding contraception in women with mental illness

Seventy percent of the patients said their desired family size is two. Out of the sample population, 63% (n=83) felt it was important to discuss about contraception with their

doctor. However the decision for contraceptive use for the first time was made with the help of a doctor in only 13% (n=66) of patients. This shows a huge gap in attitude and practice in discussing contraception with the treating doctor. Approximately a quarter of the sample, 23% (n=83) of patients also reported medical termination of pregnancy following an unplanned pregnancy. These findings argue for the need of empowerment of these women by the treating physician to help them plan their family early. This could also help in avoiding complications related to unwanted pregnancies.

7. SUMMARY AND CONCLUSIONS

This group of married women with Schizophrenia in remission had lesser number of unmet needs compared to no needs and met needs in various domains.

Domains of unmet need were identified as were company, sexual expression, intimate relationship, psychological distress and looking after home.

Twenty five percent of women had unmet need in at least one domain. Factors associated with unmet need were patient's area of residence being urban and low level of education up to primary school level.

Majority of women in this group had knowledge about a minimum of one contraceptive method. Uses of contraception was associated with age more than 33 years, parity, number of male children and undifferentiated subtype of Schizophrenia and was not associated with other socio demographic and illness variables.

8. STRENGTHS AND LIMITATIONS

Strengths of the study

1. Female patients comprising of homogenous group with well informed care giver about the patient and informed consent were used for the study

2. Validated rating scales and questionnaire from a national epidemiological study on contraception in both English and local language were used for the study.

3. No similar studies exclusively on women from this socio cultural background in the assessment of needs and knowledge, attitude and practice of contraception.

Limitations

1. As this cross sectional survey was done in patients attending the outpatient department of a tertiary care referral centre, findings related to domains of unmet needs may not reflect observations in the community.

2. Limitation with the number of patients studied and the setting may affect generalizability of findings to other settings.

3. Cross sectional nature of the study interfering with interpretation on causal effects of factors associated with unmet needs.

9. **FUTURE DIRECTIONS AND RECOMMENDATIONS**

1. Study of unmet needs of women with a diagnosis of Schizophrenia who are on regular treatment in a community setting and follow up studies to look at causal effects of illness and other factors

2. To use and study needs as one of the outcome measures in the evaluation of mental health services.

3. Studies to assess and compare knowledge and contraceptive practices in women in the general population and in mentally ill to find out differences and to bridge the gap in the knowledge

4. Measures to include psycho-education with respect to issues related to marriage, child rearing, spacing of pregnancy and contraceptive methods in the treatment plan of women with mental illness in reproductive age group

5. Liaison with family planning services to address specific needs of women with mental illness

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APPENDIX
INFORMATION SHEET FOR PATIENT INFORMED CONSENT

Title of study:

Unmet needs, knowledge, attitude & practice of contraception

Institution:

Department of Psychiatry, Christian Medical College, Vellore

Nature and purpose of the study:

Needs of patients with Schizophrenia are varied and may be unmet sometimes. Further there is considerable difficulty for women to practice contraception to plan their families in India due to various reasons. So we intend to study about different unmet needs in female patients with Schizophrenia and knowledge, attitude & practice of contraception in women with psychosis.

Procedure to be followed:

A doctor from the Department of Psychiatry will conduct this study. She will collect information regarding various aspects of unmet needs, contraception knowledge and practice by administering a standard questionnaire**.** Some information of very personal nature may be asked in the study and you are free to either answer such questions or refuse. It will be done in complete privacy. About 100 women will participate in this study.

Expected duration of involvement:

The assessment will be done in one session that will each last about half an hour.

Possible benefits of the study:

The information we obtain may help us find problems related to your unmet needs & difficulty in practicing contraception. If further intervention is required or you desire help,

you will be advised regarding the same. Others may also benefit from the overall conclusions at the end of the study.

Confidentiality:

The records and details obtained in this study will remain confidential at all times and will only be available to the doctor conducting the study. Your personal data will be collected and processed only for research purposes. You will not be referred to by name or identified in any report or publication.

Right to withdraw from the study:

You are free to leave the study at any time. Your decision to/ not to participate in this study will not affect your future medical or psychiatric care in this hospital. For further queries you may contact:

Dr. Bhuvaneshwari

Department of Psychiatry, Unit 1, Christian Medical College

Vellore 632002

Phone: 0416 228 4516,email: psych1@cmcvellore.ac.in

INFORMATION IN TAMIL FOR PATIENT
INFORMED CONSENT
ஒப்புதல் படிவம்

ஆய்வின் தலைப்பு:
மனச்சிதைவு நோயுற்றோரின் நிறைவேறாத தேவைகள் எவை என கண்டறிதல். கருத்தடை சாதனங்கள் குறித்த அறிவு , விழிப்புணர்வு மற்றும் அதன் உபயோகம் குறித்தும் கண்டறிதல்.

நிலையம்:
மனநல மருத்துவமனை , கிருத்துவ மருத்துவக் கல்லூரி, பாகாயம் , வேலூர்.

ஆய்வின் நோக்கம்:
மனச்சிதைவு நோயுற்ற பெண்களுக்கு தன் சொந்த வாழ்வில் முக்கியமாக. குடும்ப வாழ்க்கையிலும் பொது வாழ்க்கையிலும் நிறைவேறாத தேவைகள் காணப்படுகின்றது. மேலும் கருத்தடை சாதனங்கள் குறித்து விழிப்புணர்வும் மற்றும் உபயோகம் மிகவும் குறைவாக உள்ளன.
இந்த ஆய்வின் மூலம் நிறைவேறாத தேவைகளையும் கருத்தடை சாதனம் குறித்த விழிப்பணர்வு மற்றும் உபயோகம் பற்றியும் கண்டறியப்படும்.

பின்பற்ற இருக்கும் செயல்முறை:
மனநோய் மருத்துவப் பிரிவிலிருந்து ஒரு மருத்துவர் இந்த ஆய்வினை மேற்கொள்வார். அவர் நோய்யுற்ற பெண்களின் நிறைவேறாத தேவைகள் குறித்தும் கருத்தடை முறைகளின் உபயோகம் குறித்த தகவல்களை சில கேள்விச்சாதனங்கள் மூலம் சேகரிப்பார். தங்களின் தனிப்பட்ட விஷயங்கள் குறித்து சில கேள்விகள் கேட்கப்பட உள்ளன.. நீங்கள் அந்தவித கேள்விகளுக்கு பதிலளிக்கவும் அல்லது மறுப்பு தெரிவிக்கவும் தங்களுக்கு முழு சுதந்திரம் உள்ளது. ஒரு நூறு பெண்கள் இந்த ஆய்வில் கலந்துக்கொள்வார்கள்.

எதிர்பார்க்கப்படும் பங்கேற்பு காலம்:
கலந்துரையாடல் சுமார் அரைமணி நேரம் வரை ஆகலாம்.

இந்த ஆய்வின் மூலம் ஏற்படும் நன்மைகள்:
எங்களுக்கு கிடைக்கும் தகவல்கள் மூலம் தங்களின் நிறைவேறாத தேவைகள் குறித்தும் கருத்தடை சாதனம் குறித்த விழிப்பணர்வு குறித்தும் நாங்கள் அறிந்துகொள்வதற்கு உதவியாக இருக்கம். மேற்கொண்டு இதற்கு சிகிச்சை தேவைப்பட்டால் அல்லது தாங்கள் உதவி வேண்டும் என்று விரும்பினால் அதன்படியே ஆலோசனை வழங்கப்படும். மேலும் இந்த ஆய்வின் முடிவில் தெரிய வரும் தகவல்களினால் மற்றவர்களும் பயன்பெற வாய்புகள் உள்ளது.

இரகசியக்காப்பு:

இந்த ஆய்வின் ஆவனங்கள் மற்றும் இந்த ஆய்வில் பெறப்படும் தகவல்கள் அனைத்தும் மிகவும் இரகசியமாக வைக்கப்படும். இந்த ஆய்வை மேற்கொள்ளும் மருத்துவரை தவிர மற்றவர்களுக்கு எப்பொழுதும் தெரியப்படமாட்டது. தங்களின் தனிப்பட்ட தகவல்கள் இந்த ஆய்விற்காக மட்டுமே பயன்படுத்தப்படும். தங்களின் பெயர் மற்றும் அடையாளம் எந்தவித வெளியீட்டிலும் தெரியபடுத்தமாட்டாது.

ஆய்விலிருந்து விலகிக்கொள்வதற்கான உரிமை:

இந்த ஆய்விலிருந்து விலகிக்கொள்வதற்கு எந்த நேரமும் தங்களுக்கு முழு சுதந்திரம் உண்டு. தாங்கள் இந்த ஆய்வில் பங்கேற்பதற்கும் அல்லது மறுப்பு தெரிவிப்பதற்கும் எடுக்கும் முடிவு இந்த மருத்துவமனையில் மேற்கொண்டு தொடர்ந்து மருத்துவ அல்லது மனநோய் சிகிச்சை பெறுவதை எந்த வகையிலும் பாதிக்காது. மேலும் சந்தேகங்களுக்கு கீழ்கண்ட முகவரியினை தொடர்புகொள்ளுங்கள்.

டாக்டர் : புவனேஸ்வரி . S
மனநோய் மருத்துவப்பிரிவு
கிருத்துவ மருத்துவக் கல்லூரி
வேலூர் - 632 002.

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இமெயில் : psych1@cmcvellore.ac.in

FORMAT FOR INFORMED CONSENT FORM FOR STUDY PARTICIPANTS

Informed Consent form to participate in a research study

Study Title: Unmet needs, knowledge, attitude and practice of contraception of patients with Schizophrenia/Schizoaffective disorder, currently in remission

Study Number: _____

Subject's Initials: _____

Subject's Name: _____

Date of Birth / Age: _____

(Subject)

(i) I confirm that I have read and understood the information sheet dated _____ for the above study and have had the opportunity to ask questions.

(ii) I understand that my participation in the study is voluntary and that I am free to withdraw at any time, without giving any reason, without my medical care or legal rights being affected.

(iii) I understand that the Sponsor of the clinical trial, others working on the Sponsor's behalf, the Ethics Committee and the regulatory authorities will not need my permission to look at my health records both in respect of the current study and any further research that may be conducted in relation to it, even if I withdraw from the trial. I agree to this access. However, I understand that my identity will not be revealed in any information released to third parties or in any published work.

(iv) I agree not to restrict the use of any data or results that arise from this study provided such a use is only for scientific purpose(s).

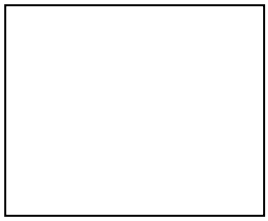
(v) I agree to take part in the above study.

Signature (or Thumb impression) of the Subject/Legally Acceptable

Date: _____/_____/_____

Signatory's Name: _____ Signature:

Or



Representative: _____

Date: _____/_____/_____

Signatory's Name: _____

Signature of the Investigator: _____

Date: _____/_____/_____

Study Investigator's Name: _____

Signature of the Witness: _____

Date: _____/_____/_____

Name & Address of the Witness: _____

ஒப்புதல் படிவம்

ஆய்வில் பங்கேற்பதற்கான ஒப்புதல்:

ஆய்வின் தலைப்பு:
மனச்சிதைவு நோய்யுற்றோரின் நிறைவேறாத தேவைகள் எவை என கண்டறிதல். கருத்தடை சாதனங்கள் குறித்த அறிவு, விழிப்புணர்வு மற்றும் அதன் உபயோகம் குறித்து கண்டறிதல்.

ஆய்வு எண்: _____

கலந்து கொள்பவரின் முதற்பெயர்: _____

கலந்து கொள்பவரின் பெயர்: _____

பிறந்து நாள் / வயது: _____

கலந்து கொள்பவர்

i). நான் உறுதி செய்வது என்வென்றால் _____

தேதியின் நடக்கக இருக்கம் ஆய்வு குறித்த தகவல் தாளை முழமையாக படித்து புரிந்து கொண்டேன். இதைப்பற்றி கேள்வி கேட்கவும் வாய்ப்பு கிடைத்தது.

ii). நான் புரிந்து கொண்டது என்னவென்றால் , நானாக முன்வந்து இந்த ஆய்வில் கலந்து கொள்கிறேன் என்றும், நான் எப்பொழுது வேண்டுமானாலும், காரணம் இன்றி இந்த ஆய்வில் இருந்து விலக்கிக்கொள்ளலாம் என்றும் இதனால், என்னுடைய வைத்தியமோ சட்ட உரிமையோ பாதிக்கப்படாது என்பதை அறிவேன்.

iii). நான் புரிந்து கொண்டது என்னவென்றால் மருத்துவ பரிசோதனைக்கு பண உதவு செய்பவர்கள் அல்லது அவர்களுக்கு பதிலாக பண உதவு செய்பவர்கள், நன்னடத்தை குழு, கட்டுப்பாட்டு அதிகாரிகள் ஆகியோருக்கு என்னுடைய உடல்நலம், மனநலம் பற்றிய மருத்துவக் குறிப்புகளைப் பார்ப்பதற்கு என்னுடைய அனுமதி தேவையில்லை என்பதும் நான் ஆய்வில் இருந்து விலகிக்கொண்டாலும் இப்பொழுதுதோ அல்லது எதிர்காலத்திலோ, என்னுடைய அனுமதி தேவையில்லை என்பதை அறிவேன். என்னுடைய மருத்துவக் குறிப்புகளைப் பார்ப்பதற்கு ஒத்துக்கொள்கிறேன். என்னுடைய பெயர் மற்றும் முகவரி மூன்றாவதுமனிதர்களுக்கு தெரியப்படுத்தப்படமாட்டாது என்பதை அறிவேன்.

iv). இந்த ஆய்வில் மூலம் தெரிவரும் முடிவுகள் அறிவியல் நோக்கத்திற்காக பயன்படுத்தப்படுவதை நான் ஒத்துக்கொள்கிறேன்.

v). நான் இந்த ஆய்வில் கலந்துக்கொள்ள சம்மதிக்கிறேன்

பங்குகொள்பவரின் கையெப்பம்: _____
தேதி:
பங்குகொள்பவரின் பெயர்: _____

பிரதிநிதி: _____
தேதி: _____
பெயர்: _____

ஆய்வாளரின் கையெப்பம்: _____
தேதி:
ஆய்வாளரின் பெயர்: _____
தேதி: _____

சாட்சியின் பெயர்: _____ ____
மற்றும் முகவரி : _____

SOCIODEMOGRAPHIC PROFORMA

1. Name:

2. Hospital no:

3. Address:

4. Residence : urban/rural

5. Phone no:

6. Age in years:

7. Number of years of education:

8. Literacy: 1)read and write 2)read only 3)illiterate

9. Occupation:

10. Income of patient per month:

11. Income of the family per month:

12. Are you in debts? 1)yes 2)no

13. Number of square meals per day:

14. Socioeconomic status:

15. Type of house: 1)concrete with more than 2 rooms 2) concrete with 2 or less rooms 3)mud thatched house 4) no house

16. Religion: 1)Hindu 2)Christian 3)Muslim 4)Others

17. Duration of married life: specify

18. Marital status 1)married 2)separated or divorced

19. Menstruation 1)regular 2)irregular 3)amenorrhoea

20. Total number of children: 1) one 2)two 3) three 4) more than three

21. How many male children do you have?

22. How many female children do you have**?**

23. Age of the last born child: 1) <5 yrs 2) 5-10 yrs 3) >10 years

24. Place of delivery : 1)Home 2)Hospital

25. History of past MTP due to psychotropic exposure?

26. Currently living with husband? 1)Yes 2)No

27. Total duration of illness in years:

28. Age of onset of illness in years :

29. Number of hospitalization:

30. Total duration of contact with MHC: 1) <5 years 2) 5 to 10 years 3)>10 years

31. How long are you on medication:

32. History of medication compliance over past year : 1)poor compliance

2)occasionally misses medication 3)good compliance

33. When did the last exacerbation occur:

34. When did last admission in the hospital occur for exacerbation of illness:

35. ECT given in the past : 1)yes 2) No

36. Type of schizophrenia: 1)paranoid 2)undifferentiated 3)hebephrenic 4) others

37. Current PANSS score:

38. CANSAS –P score

39. What was your desired family size?

40. Do you think its important to discuss about contraception with your doctor?

41. Whom will you approach for advice regarding contraception?

CANSAS - P - SELF RATED VERSION OF THE CAMBERWELL ASSESSMENT OF NEED

Name :
Other identifying information (e.g. date of birth) :
Date of completion :

Instructions - please tick one box in each row (22 in total)

No need = This area is not a serious problem for me at all

Met need = This area is not a serious problem for me because of help I am given

Unmet need = This area remains a serious problem for me despite any help I am given

	No Need	**Met need**	**Unmet need**	**I don't want to answer**
1. Accommodation What kind of place do you live in?	☐	☐	☐	◯
2. Food Do you get enough to eat?	☐	☐	☐	◯
3. Looking after the home Are you able to look after your home?	☐	☐	☐	◯
4. Self - Care Do you have problems keeping clean and tidy?	☐	☐	☐	◯
5. Daytime activities How do you spend your day?	☐	☐	☐	◯
6. physical Health How well do you feel physically?	☐	☐	☐	◯

7. Psychotic symptoms Do you ever hear voices or have problems with your thoughts?	☐	☐	☐	◯
8. Information on condition and treatment Have you been given clear information about your medication?	☐	☐	☐	◯
9. Psychological distress Have you recently felt very sad or low?	☐	☐	☐	◯
10. Safety to self Do you ever have thoughts of harming yourself?	☐	☐	☐	◯
11. Safety to others Do you think you could be a danger to other people's safety?	☐	☐	☐	◯

	No Need	**Met need**	**Unmet need**	**I don't want to answer**
12. Alcohol Does drinking cause you any problems?	☐	☐	☐	◯
13. Drugs Do you take any drugs that aren't prescribed?	☐	☐	☐	◯
14. Company Are you happy with your social life?	☐	☐	☐	◯
15. Intimate relationships Do you have a partner?	☐	☐	☐	◯
16. sexual Expression How is your sex life?	☐	☐	☐	◯
17. child Care	☐	☐	☐	◯

Do you have any children under 18?				
18. Basic Education Any difficulty in reading, writing or understanding English.	☐	☐	☐	◯
19. Telephone Do you know how to use a telephone?	☐	☐	☐	◯
20. Transport How do you find using the bus, tram or train?	☐	☐	☐	◯
21 Money How do you find budgeting your money?	☐	☐	☐	◯
22. benefits Are you getting all the money you are entitled to?	☐	☐	☐	◯

CANSAS – P Self Rated version of Camberwell Assessment of Need

பெயர்:

பிறந்த தேதி:

பூர்த்தி செய்த தேதி:

தேவைகள் இல்லை = இது எனக்கு ஒரு பெரிய பிரச்சனையே அல்ல.
நிறைவேறிய தேவை = எனக்கு உதவி கிடைப்பதால் , இது எனக்கு ஒரு பெரிய பிரச்சனை இல்லை.

நிறைவேறாத தேவை = எனக்கு உதவி கிடைத்தாலும் , இது எனக்கு மிகப்பெரிய பிரச்சனையாக இருக்கிறது.

	தேவைகள் இல்லை	நிறைவேறிய தேவைகள்	நிறைவேறாத தேவை	பதில் அளிக்க விருப்பம் இல்லை
1. குடியிருக்கு இடம் : எந்த மாதியான இடத்தில் வசிக்கிறீர்கள்?	☐	☐	☐	○
2. உணவு: போதிய உணவு சாப்பிடுவதற்கு கிடைக்கிறதா?	☐	☐	☐	○
3. வீட்டைப் பராமரித்தல்: உங்களால் வீட்டைப் பராமரிக்க முடிகிறதா?	☐	☐	☐	○
4. உடல் சுகாதாரம்: உங்கள் உடலை சுகாதாரத்துடன் பேண முடிகிறதா?	☐	☐	☐	○
5. பகல் நேர செயல்கள்: ஒரு நாள் பொழுதை எப்படி கழிக்கிறீர்கள் ?	☐	☐	☐	○
6. உடல் நலம்: உங்கள் உடல் நலம் எப்படி உள்ளது?	☐	☐	☐	○
7. மனநோய் அறிகுறிகள்: எப்பொழுதாவது உங்கள் காதில் குரல் கேட்கின்றதா அல்லது உங்களின் எண்ணங்களால் பிரச்சனை வருகின்றதா?	☐	☐	☐	○
8. நோய் மற்றும் சிகிச்சைக்காக வினக்கம்: நீங்கள் உட்கொள்ளும் மருந்துகளைப் பற்றி தெளிவாக எடுத்துரைக்கப்பட்டதா?	☐	☐	☐	○
9. மனச்சோர்வு: இப்பொழுது உங்களுக்கு மனச்சோர்வு அல்லது துக்கம் உள்ளதா?	☐	☐	☐	○
10. தற்கொலை எண்ணம்: எப்பொதாவது தற்கொலை எண்ணம் தோன்றி இருக்கிறதா?	☐	☐	☐	○
11. மற்றவரின் பாதுகாப்பு: மற்றவரின் பாதுகாப்பற்கு பங்கம் வரும்படி எப்போதாவது நடந்து கொண்டிருக்கிறீர்களா?	☐	☐	☐	○
12. குடிப்பழக்கம்: குடிப்பழக்கத்தால் உங்களுக்கு ஏதும் பிரச்சனை வந்துள்ளதா?	☐	☐	☐	○
13. மருந்துகள்: உங்களுக்கு கொடுக்கப்படாத மற்ற மருந்துகள் உட்கொள்ள பழக்கம் உள்ளதா?	☐	☐	☐	○

14. நட்புவட்டம்: உங்கள் பொதுவாழ்க்கை உங்களுக்கு **சந்தோஷத்தைத் தருகிறதா?**	☐	☐	☐	○
15. நெருக்கமான உறவுகள்: உங்களுக்கு துணைவர் இருக்கிறாரா?	☐	☐	☐	○
16. உடல் உறவு இச்சை: உங்கள் உடல்உறவு வாழ்க்கை எப்படி உள்ளது?	☐	☐	☐	○
17. குழந்தை பராமரிப்பு: உங்களுக்கு பதினெட்டு வயதின் கீழ் குழந்தைகள் உள்ளனரா?	☐	☐	☐	○
18. அடிப்படைக்கல்வி: தமிழைப் படிப்பதிலும் எழுதுவதிலும் புரிந்துக்கொள்ளுதலிலும் ஏதும் பிரச்சனைகள் உள்ளனவா?	☐	☐	☐	○
19. தொலைபேசி: **தொலைபேசிய உபயோகப்படுத்தும்** முறை உங்களுக்குத் தெரியுமா?	☐	☐	☐	○
20. போக்குவரத்து: பேருந்து மற்றும் ரயிலில் பயணம் செய்வது **உங்களுக்கு எப்படி இருக்கிறது?**	☐	☐	☐	○
21. பணம்: நீங்கள் வரவு செலவு கணக்கு பார்ப்பது உங்களுக்கு எப்படி இருக்கிறது?	☐	☐	☐	○
22. ஆதாயம்: உங்களுக்கு வரவேண்டிய பணம் உங்களுக்கு கிடைக்கிறதா?	☐	☐	☐	○
	☐	☐	☐	○

KNOWLEDGE, ATTITUDE, PRACTICE OF CONTRACEPTION QUESTIONNAIRE (NFHS 3)

Knowledge

1. A. Which methods of family planning have you heard about? (Yes/No/I don't know)

a) female sterilization

b) male sterilization

c) pill

d) IUD/loop

e) injectables

f) implants

g) condom/nirodh

h) female condom

i) diaphragm

j) rhythm method

k) withdrawal

l) others, specify

1.B. Source of knowledge about contraception 1)family members 2)TV, radio 3)Newspaper 4)paramedics/doctors 5)friends/neighbors 6)I don't know

Current use/practice

2. Are you currently doing something or using any method to delay or avoid getting pregnant? Yes/No
3. Which method are you using? (Yes/No)

a) female sterilization

b) male sterilization

c) pill

d) IUD/loop

e) injectables

f) implants

g) condom/nirodh

h) female condom

i) diaphragm

j) rhythm method

k) withdrawal

l) other _____

(specify)

4. For how long have you been using (CURRENT METHOD) now without stopping?
5. Were you ever told by a health or family planning worker about side effects or problems you might have with the method? Yes/No
6. Were you told what to do if you experienced side effects or problems? Yes/No
7. At that time, were you told about other methods of family planning that you could use? Yes/No
8. Do you know of a place where you can obtain a method of family planning? Yes/No
9. Where is that?

10. Do you want to avoid or delay pregnancy? Yes/No

    If, yes, why do you want to delay or avoid pregnancy:

    1)completed family 2)birth spacing 3)wants male child 4)financial reason 5)don't know

    First use/practice

11. When did you first start using any method to avoid or delay pregnancy? (Age)
12. How many living children did you have, when you first started using any method to avoid or delay pregnancy?
13. Who made the decision to avoid or delay pregnancy?
14. How long did you use that method to delay or avoid pregnancy?
15. What was the reason to stop using that method to delay or avoid pregnancy?
16. Have you ever got pregnant while using any method to avoid or delay pregnancy: Yes/No
17. Have you ever had an induced abortion for unplanned pregnancy?
18. Why did you get the abortion done?

Past use/practice

19. Have you undergone sterilization? Yes/No
20. Has your husband undergone sterilization? Yes/No
21. Have you ever used a pill? Yes/No
22. Have you ever used an IUD or loop? Yes/No
23. Have you ever used injectibles? Yes/No
24. Have you ever used a female condom? Yes/No
25. Has your husband ever used a condom/nirodh? Yes/No

26. Have you tried the rhythm method? Yes/No

27. Has your husband tried withdrawal method? Yes/No

28. Have you ever used an emergency contraceptive pill within 3 days of intercourse to avoid pregnancy? Yes/No

29. Have you heard of any other ways or methods that women or men can use to avoid pregnancy (SPECIFY)

Attitude

30. A .If you are not using any method to avoid or delay pregnancy, give reason:

a. Lack of awareness

b .fear of side effects

c. wants to have a male child/any child

d .financial reason

e. social reason (specify)

f. inconvenient to use

g. felt her view is not considered important

h .she did not expect to have sex

I .difficulty in planning ahead about contraception

j. difficulty to obtain contraception/could not access family planning services

k.did not receive any information about need for family planning in MHC

30 B. What are the reasons to use contraception 1) economic reason 2)motivation 3)small family norm 4)incentive 5) illness may exacerbate during pregnancy & postpartum 6) others

31. The last time you obtained contraception how much did you pay in total, including the cost of the method and any consultation you may have had?

32. Where did you go to get the abortion done?

a) Government Hospital

b) Primary Health Centre

c) Sub-centre

d) Village Health Nurse

e) Private clinic/hospital

f) Medical store

g) CHAD

h) Don’t know

33. If using IUCD or ever used IUCD, where did u get it inserted?

a) Government Hospital

b) Primary Health Centre

c) Sub-centre

d) Private clinic/hospital

e) CHAD

f) Others, specify:

34. From which facility do you get condoms?

a) Government Hospital

b) Primary Health Centre

c) Sub-centre

d) Village Health Nurse

e) Private clinic/hospital

f) Medical store

g) CHAD

h) CHAD mobile clinics

i) Don’t know

j) Others, specify:

35. In what facility did the sterilization take place?

    a) Government Hospital

    b) Primary health centre

    c) Private health facility

    d) CHAD

    e) Sterilization Camps

    f) Others, specify:

36. Before your sterilization operation, were you told that you would not be able to have any (more) children because of the operation? Yes/No

37. How much did you pay in total for the sterilization, including any consultation you may have had?

38. Do you regret that you had the sterilization? Yes/no

KNOWLEDGE, ATTITUDE AND PRACTICE OF CONTRACEPTION
TAMIL VERSION - NFHS –3

கருத்தடை முறைகள் குறித்த அறிவு, மற்றும் உபயோகம்

கருத்தடை முறைகள் குறித்த அறிவு:-

1. எந்த குடும்பகட்டுப்பாடு முறைகளை பற்றி கேள்விப்பட்டுயிருக்கிறீர்கள்?
   ஆம் / இல்லை / தெரியாது.

   a) பெண்களுக்கான கருத்தடை அறுவை சிகிச்சை
   b) ஆண்களுக்கான கருத்தடை அறுவை சிகிச்சை
   c) கருத்தடை மாத்திரைகள்
   d) காப்பர்டி அல்லது லூப்
   e) கருத்தடை ஊசிகள்
   f) புஜத்தில் உள்வைக்கக்கூடிய கருத்தடை சாதனம்
   g) ஆண்உறை அல்லது நிரோத்
   h) பெண்களுக்கான உறை
   i) டயாபிரம் என்கிற கருத்தடை சாதனம்
   j) ஏதாவது நாட்கள் குறிப்பாக உறவு கொள்ளாமல் இருந்தால் கருத்தறிக்காது என்பதை அறிவீர்கள் அல்லது அது எந்த நாட்கள்
   k) உறவு கொண்ட பின் விந்து உடலுக்குள் விடாமல் வெளியே எடுப்பது
   l) மற்றவை (குறிப்பிட்டு சொல்லவும்)

2. கர்ப்பத்தை தடை செய்யவோ தள்ளிப்போடவோ ஏதாவது முறைகள் கடைப்பிடிக்கிறீர்களா? ஆம் / இல்லை

3. எந்த வழிமுறையை கடைப்பிடிக்கிறீர்கள்?

   a) பெண்களுக்கான் கருத்தடை அறுவை சிகிச்சை
   b) ஆண்களுக்கான கருத்தடை அறுவை சிகிச்சை
   c) கருத்தடை மாத்திரைகள்
   d) காப்பர் டி / லூப்
   e) கருத்தடை ஊசிகள்
   f) புஜத்தில் உள்வைக்கக்கூடிய சாதனம்
   g) ஆண் உறை அல்லது நிரோத்
   h) பெண்களுக்கான உறை
   i) டயாபிரம் என்கிற கருத்தடை சாதனம்
   j) ஏதாவது நாட்கள் குறிப்பாக உறவு கொள்ளாமல் இருந்தால் கருத்தறிக்காது என்பதை அறிவீர்கள் (அது எந்த நாட்கள்)
   k) உறவு கொண்டபின் விந்து பெண் உடலிலுள் விடாமல் வெளியே எடுப்பது
   l) மற்ற வழிகள் (குறிப்பிட்டு சொல்லவும்)

4. இப்பொழுது பயன்படுத்தும் குடும்ப கட்டுப்பாடு முறையை எவ்வளவு நாட்களாக நிறுத்தாமல் பயன்படுத்துகிறீர்கள்?

5. குடும்ப கட்டுப்பாட்டுத்துறை ஊழியர் அல்லது சுகாதாரப் பணியாளர் ஏதேனும் கருத்தடை முறையின் பக்கவிளைவுகள் அல்லது பிரச்சனைகள் குறித்து விளக்கி உள்ளனரா? ஆம் / இல்லை

6. பக்கவிளைவுகள் வந்தால் என்ன செய்ய வேண்டும், என விளக்கி உள்ளார்களா? ஆம் / இல்லை

7. அந்தநேரத்தில் வேறு கருத்தடை முறைகள் குறித்து விளக்கி உள்ளாரா? ஆம் / இல்லை

8. எந்த இடத்திற்கு குடும்ப கட்டுப்பாடு முறைக்காக செல்லவேண்டும் என்று தெரியுமா? ஆம் / இல்லை

9. எங்கே செல்ல வேண்டும்?

10. கர்ப்பத்தை தள்ளி போடவேண்டும் அல்லது தடை செய்ய வேண்டும் என்று நினைக்கிறீர்களா? ஆம் / இல்லை

ஆம் என்றால் ஏன் செய்ய வேண்டும்?
1) குழந்தைகள் நிறைவான குடும்பம்
2) குழந்தை பிறப்பிற்கு இடைவெளி தேவை
3) ஆண்குழந்தை தேவை
4) பணம் பற்றாக்குறை
5) தெரியவில்லை

<u>முதன் முறையாக கருத்தடை உபயோகம்:-</u>

11. எந்த வயதில் கர்ப்பத்தை தள்ளிப்போடவோ தடைசெய்யவோ முதன் முதலில் கருத்தடை முறைகள் பயன்படுத்தினீர்கள்?

12. முதன் முதலில் கருத்தடை முறைகள் நீங்கள் உபயோகித்தபொழுது, உங்களுக்கு எத்தனை குழந்தைகள் இருந்தன?

13. கர்ப்பத்தை தள்ளிப்போடுவது அல்லது தடை செய்வதைக் குறித்து, யார் முடிவு எடுத்தார்கள்?

14. இந்த கருத்தடை முறையை எவ்வளவு நாள் பயன்படுத்தினீர்கள்?

15. எந்த காரணத்தால் இந்த கருத்தடை முறையை நிறுத்திவிட்டீர்கள்?

16. கருத்தடை முறையை பின்பற்றும்பொழுது எப்பொழுதாவது நீங்கள் கர்ப்பம் ஆனதுண்டா?

17. நீங்கள் எதிர்பார்த்திராத கர்ப்பத்தை எப்பொழுதாவது கருகலைப்பு செய்தது உண்டா?

18. எங்கே கருக்கலைப்பு செய்து கொண்டீர்கள்?

முன்னாள் கருத்தடை உபயோகம்:-

19. உங்களுக்கு குடும்பக் கட்டுப்பாடு அறுவை சிகிச்சை செய்யப்பட்டுள்ளதா?
ஆம் / இல்லை

20. உங்கள் கணவர் குடும்பக் கட்டுப்பாடு அறுவை சிகிச்சை செய்து கொண்டாரா?
ஆம் / இல்லை

21. நீங்கள் எப்பொழுதாவது கருத்தடை மாத்திரைகள் உட்கொண்டதுண்டா?
ஆம் / இல்லை

22. நீங்கள் எப்பொழுதாவது காப்பர் டி அல்லது லூப் போட்டது உண்டா?
ஆம் / இல்லை

23. நீங்கள் எப்பொழுதாவது கருத்தடை ஊசி பயன்படுத்தியது உண்டா?
ஆம் / இல்லை

24. நீங்கள் எப்பொழுதாவது பெண்களுக்கான உறையைப் பயன்படுத்தி இருக்கிறீர்களா?
ஆம் / இல்லை

25. உங்கள் கணவர் எப்பொழுதாவது ஆண் உறையை உபயோகித்து இருக்கிறாரா?
ஆம் / இல்லை

26. ஏதாவது நாட்கள் குறிப்பாக உறவுக் கொள்ளாமல் இருந்தால் கர்ப்பம் தறிக்காது - இம்முறையை எப்பொழுதாவது பயன்படுத்தி இருக்கிறீர்களா? ஆம் / இல்லை

27. உறவு கொண்டபின் விந்து பெண்உடலுக்குள் விடாமல் வெளியே எடுத்தல் இம்முறையை எப்பொழுதாவது பயன்படுத்தி இருக்கிறீர்களா? ஆம் / இல்லை

28. உறவு கொண்டபின் கருத்தறிக்காமல் இருப்பதற்கு உடனடியாக உட்கொள்ளும் மாத்திரைகள் பயன்படுத்தி இருக்கிறீர்களா? ஆம் / இல்லை

29. இம்முறைகள் தவிர வேறு ஏதேனும் கருத்தடை முறைகள், ஆண் மற்றும் பெண் உபயோகிக்கும் முறைகள் தெரியுமா? விளக்குக.

30. கருத்தடை முறைகள் எதுவும் உபயோகிக்கவில்லை என்றால் அதன் காரணங்கள் எவை?

a) விழிப்புணர்வு இல்லை
b) பக்கவிளைவுகள் பற்றிய பயம்
c) ஆண்குழந்தை பற்றிய ஆசை
d) பணக்கஷ்டம்
e) சமுகக் காரணங்கள்
f) பயன்படுத்துவது அசௌகரியமாக உள்ளது
g) என்னுடைய கருத்துக்கு முக்கியத்துவம் தரவில்லை

31. சென்ற முறை கருக்கலைப்பு செய்தற்கான மருத்துவ செலவுகள் எவ்வளவு?

32. கருக்கலைப்பு எங்கு செய்துக்கொண்டீர்கள்?

a) அரசு பொதுமருத்துவமணை
b) ஆரம்பசுகாதார நிலையம்
c) சுகாதார துணைமையம்
d) செவிலியர்
e) தனியார் மருத்துவமணை
f) மருந்துக்கடை
g) சார்ட்
h) தெரியாது

33. நீங்கள் காப்பர் டி எப்பொழுதாவது உபயோகித்தது இருந்தால், எங்கு அணிந்து கொண்டீர்கள்?

a) அரசு மருத்துவமணை
b) ஆரம்பசுகாதார மையம்
c) சுகாதார துணைமையம்
d) தனியார் மருத்துவமணை
e) சார்ட்
f) மற்ற இடங்கள்
g) தெரியாது (குறிப்பிடுக)

34. எங்கிருந்து ஆண்உறை வாங்கலாம்?

a) அரசு மருத்துவமணை
b) ஆரம்பசுகாதார மையம்
c) துணைமையம்
d) செவிலியர்
e) தனியார் மருத்துவமணை

35. எங்கு கருத்தடை அறுவை சிகிச்சை நடந்தது?

a) அரசு மருத்துவமனை
b) ஆரம்பசுகாதார மையம்
c) சுகாதார துணைமையம்
d) தனியார் மருத்துவமனை
e) சார்ட்
f) மற்ற இடங்கள்

36. குடும்ப கட்டுப்பாடு அறுவை சிகிச்சைக்கு முன்பு, இதற்குமேல் குழந்தை பெற முடியாது என்பதை எவரேனும் சொன்னாரா?

37. கருத்தடை அறுவை சிகிச்சைக்கான செலவு, மற்றும் மருத்துவரைப் பார்ப்பதற்கான செலவுகள் எவ்வளவு?

38. கருத்தடை அறுவை சிகிச்சை செய்து கொண்டதைப் பற்றி உங்களுக்கு வருத்தம் உள்ளதா? ஆம் / இல்லை

PANSS RATING SCALE

Name MHC No.	**Key**	Absent (1)	Minimal (2)	Mild (3)	Moderate (4)	Moderate Severe(5)	Severe (6)	Extreme (7)
P1	Delusions							
P2	Conceptual disorganization							
P3	Hallucinatory behavior							
P4	Excitement							
P5	Grandiosity							
P6	Suspiciousness/persecution							
P7	Hostility							
N1	Blunted affect							
N2	Emotional withdrawal							
N3	Poor rapport							
N4	Passive/							
	apathetic social withdrawal							
N5	Difficulty in abstract thinking							
N6	Lack of spontaneity &							
	flow of conversation							
N7	Stereotyped thinking							
G1	Somatic concern							
G2	Anxiety							
G3	Guilt feelings							
G4	Tension							
G5	Mannerisms & posturing							
G6	Depression							
G7	Motor retardation							
G8	Uncooperativeness							
G9	Unusual thought content							
G10	Disorientation							
G11	Poor attention							
G12	Lack of judgement & insight							
G13	Disturbance of volition							
G14	Poor impulse control							
G15	Preoccupation							
G16	Active social avoidance							