

# “Assessment of family history and precipitating factors leading to schizophrenia among schizophrenic patients in selected areas”.

*“Assessment of family history and precipitating factors leading to schizophrenia among schizophrenic patients”.*

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## **Abstract :**

**Background:** The cause of schizophrenia is still uncertain. Most likely, no single factor can be implicated in the etiology; rather, the disease probably result from a combination of influences that include biological factors includes genetics factors in that relatives of individual with schizophrenia have a higher probability of developing the disease. Monozygotic twins, decreasing level of Dopamine lead to schizophrenia. Prefrontal cortex and limbic cortex may never fully develop during the pregnancy, Congested housing accommodations, inadequate nutrition, poverty, and stressful situations these all factors lead to schizophrenia. The **objectives** of the study: 1.To assess the family history leading to schizophrenia among schizophrenic patients.2.To assess precipitating factors leading to schizophrenia among schizophrenic patients **Assumption:** There is certain family history and precipitating factors leading to schizophrenia. **Research methodology:** The Conceptual framework of the study was based on Hildegard Peplau’s conceptual framework. The study was conducted using nonexperimental research design. In this study the target population was Schizophrenic patients and family members. Nonprobability convenient sampling technique was adopted for this study. From this population 60 schizophrenic patients were selected as subjects of the study. **Result:** The study findings of family history shows that 73.33% of patients do not have family history of schizophrenia. 11.67% of patients have second & third degree family history of schizophrenia (uncle, father, mother, grandfather, grandmother) and 3.33% of patients have first degree schizophrenia (Brother, sister). **Conclusion:** Based on the analysis of the findings of the study, the following inference was drawn. 73.33% of patients do not have family history of schizophrenia. most of the patients are having positive attitude towards society and family. most of the patients are having positive attitude towards self. most of the patients were having moral and religious values. majority of 96.67% of schizophrenic patients had moderate pre- morbid personality score (60-90), 3.33% of them had good high pre-morbid personality score (90-120).

**Key Words-** Family History, Precipitating factors, Schizophrenia

## **I. INTRODUCTION**

The word „schizophrenia“ was coined in 1908 by the Swiss psychiatrist Paul Eugen Bleuler, and is derived from the Greek words “schizo” (split) and “phren” (mind). Bleuler had intended the term to refer to the dissociation or “loosening” of thoughts and feelings that he had found to be a prominent feature of the illness.<sup>1</sup> Schizophrenia is a brain disorder that interferes with normal brain functioning. The brain is the organ in the body where thinking, feeling and understanding of the world takes place (where consciousness exists), a brain disorder like schizophrenia alters thinking, feeling, understanding and consciousness itself in affected persons, changing their lives for the worse. The disease can impact every aspect of affected people’s work, family, and social life. The family members also frequently become distressed and overwhelmed by the difficulties.<sup>2</sup> The deadline of men for schizophrenia in India peaks at age above 80. It kills men at the lowest rate at age 40-44. Women are killed at the highest rate from schizophrenia in India at age 80. It was least deadly to women at age 30-34. At 0.9 deaths per 100,000 women in 2013, the peak mortality rate for women was higher than that of men, which was 0.8 per 100,000 men.<sup>3</sup>

### **Background of the Study**

**Dr. Kraepelin E** The word "schizophrenia" is less than 100 years old. However, the disease was first identified as a discrete mental illness in the 1887. Written documents that identify Schizophrenia can be traced to the old Pharaonic Egypt, as far back as the second millennium before Christ. Depression, dementia, as well as thought disturbances that are typical in schizophrenia are described in detail in the Book of Hearts. The Heart and the mind seem to have been synonymous in ancient Egypt. The physical illnesses were regarded as symptoms of the heart and the uterus and originating from the blood vessels or from purulence, fecal matter, a poison, or demons.<sup>4</sup>

The cause of schizophrenia is still uncertain. Most likely, no single factor can be implicated in the etiology; rather, the disease probably result from a combination of influences that include biological factors includes genetics factors in that relatives of individual with schizophrenia have a higher probability of developing the disease. Monozygotic twins, decreasing level of Dopamine lead to schizophrenia. Prefrontal cortex and limbic cortex may never fully develop during the pregnancy, Congested housing accommodations, inadequate nutrition, poverty, and stressful situations these all factors lead to schizophrenia.<sup>5</sup>

Schizophrenia is a disease that begins in early adulthood; between the ages of 15 and 25 years. Men tend to get develop schizophrenia slightly earlier than women; whereas most males become ill between 16 and 25 years old, most females develop symptoms several years later, and the incidence in women is noticeably higher in women after age 30. The average age of onset is 18

in men and 25 in women. Schizophrenia onset is quite rare for people under 10 years of age, or over 40 years of age. Incidence: The number of people who will be diagnosed as having schizophrenia in a year is about one in 4,000. So about 1.5 million people will be diagnosed with schizophrenia this year, worldwide.<sup>1</sup>

**Problem Statement:**

“Assessment of family history and precipitating factors leading to schizophrenia among schizophrenic patients in selected areas”

**Objectives of the Study:**

1. To assess the family history leading to schizophrenia among schizophrenic patients.
2. To assess precipitating factors leading to schizophrenia among schizophrenic patients.

**Conceptual framework:** The Conceptual framework of the study was based on Hildegard Peplau’s conceptual framework.

**Literature review:** for this study is organized under the following headings

1. Review on Family history as etiology of schizophrenia.
2. Review on Precipitating factors leading to schizophrenia

**RESEARCH METHODOLOGY**

**Research approach:** Focusing on the nature of the research problem for the present study and the objectives to be fulfilled, a quantitative research approach was considered to carry out the study.

**Research design:** As this study involves Assessment of family history and precipitating factors leading to schizophrenia among schizophrenic patients, so nonexperimental research design was chosen.

**Population:** A Population is the entire aggregation of cases in which a researcher is interested. The population comprised of family member and schizophrenic patient

**Target and accessible population:** In the present study, the target population comprised of family member and schizophrenic patient of selected area.

**Sample:** A sample is a portion of population that represents the entire population. Thus, it is the subset of the population elements. The samples for the present study were schizophrenic patients who are meeting inclusion criteria of study.

**Sampling Technique:** The sampling technique used for the study was Nonprobability convenient sampling technique., This sampling technique permits the researcher to decide purposely, to select subjects which are judged to be typical of the population.

**Sample size:** The sample size considered for the study were 60 schizophrenic patients and their 60 family members were involved together.

**Description of the tool: On modifying the tool as per the expert’s suggestions final tool consist of three sections.**

**Section I:** This section is aimed to obtain the consent if the family members of schizophrenic patients.

**Section II:** Socio- demographic data. This section consists of 6 items for obtaining information about selected demographic factors such as gender, religion, education, occupation, marital status, type of family of schizophrenic patients.

**Section III:** Check list Questionnaire for assessing precipitating factors and Likert scale to assess Premorbid personality of sample. (Each family member and patient interviewed separately).

This section deals with to assess precipitating factors leads to schizophrenia and which type of premorbid personality leads to schizophrenia. In precipitating factor 7 sub point was assess I.e. Antenatal history, Natal history, Post-natal history, Behavior during childhood, illness during childhood, schooling, and occupational history.

**Ethical review:** 1. The topic was reviewed, and permission was obtained from research and ethical committee to conduct research.2. Written permission was taken for conducting research from the concerned authorities of the selected Hospitals.3. Written consent was obtained from the subjects.4. The subject’s identity was kept confidential and autonomy was maintained of participation in the study.

**Statistical analysis:** The data were computerized and verified using the SPSS (statistical package for social science) version 16.0 to perform tabulation and statistical analysis. Qualitative variables were described in frequency and percentages, while quantitative variables were described by mean and standard deviation.

**Results:** The data was analyzed and presented in the following sections:

**Section I: Findings related to demographic variables.**

**Table no.1: Frequency and percentage distribution of postnatal mothers according to demographic variables.**

SN	Demographic variables	Frequency (f)	Percentage (%)
1	<b>Gender</b>		
	• Male	33	55
	• Female	27	45
2	<b>Religion</b>		
	• Hindu	57	95
	• Muslim	01	1.67
	• Christian	00	00
	• Other	02	3.33
3	<b>Educational status</b>		
	• Illiterate	09	15
		21	35

	• Primary	15	25
	• Secondary	14	23.33
	• Graduate	01	01.67
	• Postgraduate		
4	<b>Occupation</b>		
	• Labor	21	35
	• Service	19	31.67
	• Business	06	10
	• Farming	07	11.67
	• Other (Specify)	07	11.67
5	<b>Marital status</b>		
	• Married	28	46.67
	• Unmarried	30	50
	• Divorced	02	3.33
6	<b>Type of family</b>		
	• Nuclear	06	10
	• Joint	52	86.67
	• Blended	01	01.67
	• Single parent	01	01.66
7	<b>Parity</b>		
	• Primi Para	39	65
	• Multi Para	19	32
	• Grand Multi Para	2	3

The data presented in **Table 1** indicates that majority (55%) were male and 45% were female. Majority 95% were Hindu and 1.67% were Muslims. Percentages wise distribution of respondents according to their Educational status depicts that majority 35% of the respondents had primary education, 25% of the respondents had secondary education and 23.33 were graduate. Percentage wise distribution of schizophrenic patients according to their occupation depicts that majority 35% were labor and 31.67% of them had occupation service. Percentages wise distribution of schizophrenic patients according to their marital status depicts that majority 50% were unmarried and 46.67% were married. Percentages wise distribution of schizophrenic patients according to type of family depicts that majority 86.67% were from joint family and 10% were from nuclear family.

**Section II: It deals with the analysis of data related to family history leading to schizophrenia among schizophrenic patients.**

**Table no 2: Distribution of data of samples in group according to family history (n=60)**

Family History	Freq	%
First Generation	02	3.33
Second generation	07	11.67
Third generation	07	11.67
No history of Schizophrenia	44	73.33

**Table no.2** reveals that Percentages wise distribution of schizophrenic patients according to family history depicts that majority 77.33% of the respondents did not have any history of schizophrenia and 26.67% of the respondents have family history of schizophrenia. Hence it can be interpreted that most of the respondents did not have any family history of schizophrenia.

**Section III: Table. 3** It deals with the analysis of data related to precipitating factors leading to schizophrenia among schizophrenic patients.

S N		Yes		No	
		Fre q	%	Fre q	%
<b>Whether the sample/ patient had:-</b>					
<b>1. Antenatal history</b>					
A	any significant history of maternal infection( Toxoplasmosis, Other agents, Rubella, cytomegalovirus and Herpes simplex)	08	13.33	52	86.67
B	any significant history of maternal exposure to radiation during antenatal period	00	00	60	100
C	all antenatal checkups are done regularly	45	75	15	25
D	any significant history of complication in antenatal period	05	8.33	55	91.67
<b>2. Natal history</b>					
A	Normal delivery	57	95	03	5
B	Cried after birth	59	98.33	01	1.67
<b>3. Postnatal history</b>					
A	Any significant history of neonatal infections	03	5	57	95
B	millstones normal	50	83.33	10	16.67

<b>4. Behavior during childhood</b>					
A	Excessive temper tantrum.	27	45	33	55
B	Normal feeding habits.	46	76.67	14	23.33
C	excessive fear during childhood	16	26.67	44	73.33
D	Abnormal eating habits, e.g., pica.	12	20	48	80
E	abnormal habit thumb sucking, etc.	11	18.33	49	81.67
F	history of enuresis and encopresis	16	26.67	44	73.33
<b>5. Illness during childhood</b>					
A	Any epileptic disorder.	03	5	57	95
B	Malnutrition.	05	8.33	55	91.67
<b>6. Schooling</b>					
A	Performance in school was normal.	54	90	06	10
B	Relationship with peer normal.	52	86.67	08	13.33
C	Relationship with teacher normal.	53	88.33	07	11.67
D	bad habits like stealing, truancy	11	18.33	49	81.67
<b>7. Occupational history</b>					
A	Normal relationship with superiors, inferiors and colleagues	47	78.33	13	21.67
B	Frequently changes of job.	15	25	45	75
C	Frequently absenteeism during job.	10	16.67	50	83.33

Item 1 indicates that maximum 86.67% patients did not have any significant history of maternal infection (Toxoplasmosis, Other agents, Rubella, cytomegalovirus, and Herpes simplex)

Item 2 indicates that maximum 100% patient's didn't have any significant history of maternal exposure to radiation during antenatal period

Item 3 indicates that maximum 75% patients have all antenatal checkups are done regularly

Item 4 indicates that maximum 91.67% patient's didn't have any significant history of complication in antenatal period

Hence it can be interpreted that most of the respondents have normal antenatal history. Natal history

Item 5 indicates that maximum 95% patient's had normal delivery Item 6 indicates that maximum 98.33% patient's cried after birth

Hence it can be interpreted that most of the respondents have normal natal history. Postnatal history

Item7 indicates that maximum 95% patient's didn't have any significant history of neonatal infections

Item8 indicates that maximum 83.33% patient's milestones were normal

**Hence it can be interpreted that most of the respondents have normal postnatal history.**

#### **Behavior during childhood**

Item 9 indicates that maximum 55% patient's didn't do excessive temper tantrum. Item 10 indicates that maximum 76.67% patients have normal feeding habits.

Item 11 indicates that maximum 73.33% patients did not have excessive fear during childhood

Item 12 indicates that maximum 80% patients did not have abnormal eating habits, e.g., pica.

Item 13 indicates that maximum 81.67% patients did not have abnormal habit thumb sucking, etc.

Item 14 indicates that maximum 73.33% patients did not have history of enuresis and encopresis

Hence it can be interpreted that most of the respondents have normal behavior during childhood.

#### **Illness during childhood**

Item 15 indicates that maximum 95% patients did not have any epileptic disorder

Item 16 indicates that maximum 91.67% patients did not have history Malnutrition.

**Hence it can be interpreted that most of the respondents have did not have an illness during childhood.**

#### **Schooling**

Item 17 indicates that maximum 90% patient's performance in school was normal.

Item 18 indicates that maximum 86.67% patient's relationship with peer was normal. Item 19 indicates that maximum 88.33% patient's relationship with teacher normal.

Item 20 indicates that maximum 81.67% patient's didn't have bad habits like stealing, truancy

**Hence it can be interpreted that most of the respondents had normal schooling Occupational history**

Item 21 indicates that maximum 78.33% patients have normal relationship with superiors, inferiors, and colleagues

Item 22 indicates that maximum 75% patients did not have frequently changes of job

Item 23 indicates that maximum 83.33% patients did not have frequently absenteeism during job.

**Hence it can be interpreted that most of the respondents have normal occupational history.**

#### **Section III: It deals with the analysis of data to assess Pre-morbid personality of sample**

**Table 4: Distribution of pre-morbid personality score of schizophrenic patients. (N=60)**

Pre-morbid personality score	Frequency	Percentage (%)
High (90-120)	02	3.33
Moderate (60-90)	58	96.67
Low (30-60)	00	00

The above table shows that majority of 96.67% of schizophrenic patients had moderate pre- morbid personality score

(60-90), 3.33% of them had good high pre-morbid personality score(90-120).

#### **Discussion:**

##### **Major findings of the study:**

**Section I:** Demographic data consists of 6 items analyzed by frequency distribution, percentage, table, and relevant graphs

There were total 6 demographic variables assessed in this study. 60 patients and family member from selected hospital were selected for the study. Following findings were noted:

a) Gender: Data reveals that 55% of samples were males and 45% of samples were females.

b) Religion: Data reveals that 95% of samples were Hindu, 1.67% of samples were Muslims, 3.33% of samples were other and 0% of samples were Christian.

c) Educational status: Data reveals that 35% of samples are primary educated, 25% of samples are secondary educated, 23.33% of samples are graduated, 15% of samples are Illiterate and 1.67% of samples are Post graduate.

d) Occupation: Data reveals that 35% of samples are Labour, 31.67% are doing Service, 11.67% of samples doing farming, 11.67% of samples of doing other job, 10% of samples are doing business.

e) Marital status: Data reveals that 50% of samples are unmarried, 46.67% of samples are married and 3.33% of samples are got divorced.

f) Type of family: Data reveals that 86.67% are from joint family, 10% of nuclear family, 1.67% is blended family and 1.66% is single parent.

**Section II: It deals with the analysis of data related to family history leading to schizophrenia among schizophrenic patients.**

Assessment of family history shows that 73.33% of patients do not have family history of schizophrenia. 11.67% of patients have second- & third-degree family history of schizophrenia (uncle, father, mother, grandfather, grandmother) and 3.33% of patients have first degree schizophrenia (Brother, sister).

Section III: It deals with the analysis of data related to precipitating factors leading to schizophrenia among schizophrenic patients.

Assessment of precipitating factors leading to schizophrenia. Shows that in antenatal history sub points are mentioned i.e. maternal infection to child 13.33% patients have it and 86.67% do not have history of maternal infection, 0% of history of any exposure with radiation during antenatal period, check up 75% of mother done all checkup and 25% of mother not done all checkups, 8.33% mother have complication during antenatal period and 91.67% are normal during antenatal period.

Natal history 3% of mother have complication during birth and 97% of mother have normal delivery.

Postnatal history 5% of child have history infection and 95% of child normal during postnatal period, 83.33% child have normal milestone, 16.67% child have affected milestone during postnatal period.

Behavior during childhood 45% of child have excessive temper tantrum 55% have normal temper tantrum, 76.67% child have normal feeding habits and 23.33% have abnormal feeding habits, 26.67% child have excessive fear during childhood and 73.33% child don't have fear regarding any object, 20% child have abnormal (pica) eating habits and 80% child have normal eating habits, 26.67% child have enuresis and encopresis present and 73.33% don't have any history of enuresis and encopresis.

Illness during childhood 5% children have epileptic disorder and 95% of child don't have any epileptic disorder, 8.33% children are malnourished, and 91.67% children are normal weight.

Assessment of Schooling 90% patients have normal school performance and 10% of patients have abnormal, 86.67% patients have normal relationship with friends and 13.33% don't make normal relationship, 88.33% patients have normal relationship with teacher and 11.67% don't have normal relation with teachers, 18.33% have stealing habits and 81.67% are don't have any stealing habits.

Occupational history 78.33% have normal relationship with superiors and inferiors and 21.67% have abnormal relationship, 25% patients are doing frequently changes in job and 75% are continuous with their job, 16.67% are frequent absent on their job and 83.33% are present on their job.

**Section IV: percentage wise distribution of samples according to distribution of pre- morbid personality score of schizophrenic patients**

majority of 96.67% of schizophrenic patients had moderate pre-morbid personality score (60- 90), 3.33% of them had good high pre-morbid personality score (90-120)

**Nursing Implication**

**Nursing education:**

The study help to know how family history and precipitating factors lead to schizophrenia by understanding it we can overcome many aspects which may be used for proper growth of students and the same can be solved by applying it in nursing education.

**Mental health nursing:**

A specialized area in nursing practice, employing theories of human behavior as it a science and purposeful use of the self as it is an, in the diagnosis & the treatment of human responses to actual and potential mental health problems.

(American Nurses Association, 1994)

The study finds that family history and precipitating factors are helping to nurses and health professionals. Also, the severity of problems will add information in the „Nurses knowledge“ significantly in „Psychiatric nurses“ knowledge.

**Nursing research:**

The result of the study contributes to the body of knowledge of nursing.

For nursing researcher these findings are very essential to understand the status of updated nurse's knowledge which is essential for nursing research. The researcher used this study as reference while doing similar type of study of different samples, and also used for literature for study.

**Recommendations:**

**Basis of the findings, following recommendations are drawn for future researcher:**

1. A similar study can be replicated on large samples; thereby findings can be generalized for large number of samples.
2. The same study can be done on various factors like depression, anxiety, Alzheimer etc.
3. The similar study can be conducted for a longer period to get more reliable result.
4. Similar kind of studies can be taken under different settings and different target population.

**Conclusion:** Based on the analysis of the findings of the study, the following inference was drawn. 73.33% of patients do not have family history of schizophrenia. most of the patients are having positive attitude towards society and family. most of the patients are having positive attitude towards self. most of the patients were having moral and religious values. majority of 96.67% of schizophrenic patients had moderate pre- morbid personality score (60-90), 3.33% of them had good high pre-morbid personality score (90-120).

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