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## **A comprehensive study to find out the different factors affecting the prognosis of schizophrenic patients**

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**Abstract**--Objective:The present study was undertaken to find out the different causative factors relating to the prognosis of various types of schizophrenic patients. Method: To accomplish the objectives of the current study all the subjects were taken from SCARF hospital and a total of 80 subjects were taken using the purposive sampling method which will involve taking samples from the population which is easily available or are easy to contact and were matched in age, sex and education and occupation. All the subject were the inhabitant of Chennai. General health questionnaire (GHQ-12), Mental Health Battery (MHB), Eysenck Personality Questionnaire (EPQ), and Multiphasic Personality Questionnaire (MPQ) were employed with each of the subjects in two sessions. Result:From Results of GHQ, it seen then scored above average and expressed less variability in scores. In EPQ subjects showed high score in psychoticism and in neuroticism, but average in introversion-extroversion. t-Test was also conducted and was found not significant. In MHB they score below average in all dimension. Correlation was done and was found that score of different dimensions is not related to each other. In MPQ they showed trends of paranoia, depression, hysteria, anxiety and relapses but scored below average in dimension of schizophrenia. It has been found that t-score are significant at 0.01 level in all the dimension apart from Hysteria. Conclusion: The outcomes revealed that the subjects showed less prominence in Mental health, psychoticism, neuroticism in their related disorder and relapses. They also showed better prominence in general health and schizophrenia. It may be due to the prolonged medication under psychiatrist, and the subjects did not show any symptoms of schizophrenia and they appeared healthier, but their

inherent trends of psychoticism and neuroticism were still present which has also reflected on their weaker mental health.

**Keywords**---schizophrenia, psychotic, neurotic symptom, prognosis factor.

## Introduction

When we talk about Schizophrenia, it is considered as one complex, long lasting mental health disorder, which consists of various symptoms. These symptoms can vary between having delusion, hallucination, incoherent speech, and poor cognitive capability. Earlier schizophrenia was known as “Dementia Praecox”, which was given by Emil Kraepelin. Later on, in 1911 Eugen Bleuler coined the term Schizophrenia, but the downside of this name was that it was derived from Greek words, schizo means “split” and phrene means “mind”. Hence it gave rise to a misconception that schizophrenia is characterized by split personality, but later on new definition are made which described the disorder properly. According to World Health Organization (WHO) schizophrenia is a severe mental health disorder, which is characterized by profound disruption in thinking, affecting language, perception, and sense of self. It usually includes psychotic experiences, like hearing voices or delusion". And Diagnostics Statistical Manual (DSM-V) classifies schizophrenia as "It is a severe and chronic mental disorder characterized by disturbances in thought, perception, and behavior". The etiology of schizophrenia is still an ongoing debate, has we still don't have any conclusive evidence regarding the onset of schizophrenia. But with help of many researches, we were able to make a list of this things which are believed to have an impact of onset of schizophrenia, those are genetics, environmental, substance abuse, psychological and social factors.

Various researches have been conducted on schizophrenia, studies like of (Chapman & Kwapil, 1993) have shown that using EPQ, they were able to come up with the conclusion that people suffering from schizophrenia tends to be high on Psychoticism scale. Not only psychoticism but they also tend to show high on Neuroticism scale, but the number of researches conducted on it is very less (Lysaker et al, 2017). Neurotic factors like Anxiety and Depression were also found high for patients suffering from schizophrenia according to research done by (Van OS & Jones, 2001). Few researches were also conducted to understand the relation between schizophrenic patients and anxiety, and it was found that its schizophrenic patients usually suffer from social anxiety, and to support this theory the research were conducted, and they came up with the conclusion that the participant suffering from schizophrenia suffers from social anxiety (Kumazakai et al., 2012). Some researches were conducted to find relation of hysteria and schizophrenia, and it was found there was no relation between schizophrenia and hysteria (Cernovosky & Landmark, 1994). Depression was found to be little high among schizophrenic people and this was seen in research done by (Harrow, Hansford, & Fletcher, 2008). (Drake et al., 2004) they did research to find the correlation of schizophrenic patients with depression and paranoia, and it was concluded that they both have significant correlation among schizophrenic patients. Emotional stability is another aspect on which few

researches have been done and it was concluded that, they show instability in controlling their emotions, which can go from suddenly getting angry or violent, irritable, depressive, to isolated emotions (Kring & Caponigro, 2010). Schizophrenic patients are found that their over-all adjustment skills are low compared to an individual, and this can be seen from the result of research done (L. Ponnuchamy., 2015). Schizophrenic patients also showed insecure type of adjustment personality, and this was found in research study of (Poizvosky & Nechamkin, 2007). Self-esteem level was found to be low for schizophrenic patient and many researches have been conducted to find the self-esteem level of them. Study by (Moe & Docherty, 2013) aimed to find sense of self in schizophrenic patients and they found out that self-esteem level of schizophrenic individual was comparatively less in comparison with psychotic and bipolar people. Studies like by (Suguwara & Mori, 2018) were able to find self-concept of person with schizophrenia in community of Japan, and they found that schizophrenic patients had a very hard time accepting themselves as they are, hence they were low of the category of "feelings towards and evaluation of self". Schizophrenic individual also tend to have quite low emotion intelligence, and this was proved in research of (Kee et al., 2008) with help of Mayor Salovey Caruso Emotional Intelligence Test- Youth Version (MSCEIT-YV). To understand more about the relapse, few researchers have conducted using their own methods and they were able to come with conclusion that majority of schizophrenic population faces relapses in their lifetime and those relapses consist of anxiety, depression, problem in expressing emotions and coping up with the society, and it also showed that 1 in every 6 do faces relapses due to treatment failure (Dawson et al., 2013).

### **Research Objectives**

The objective of this paper is to extend the research and to see:

1. whether general health of patients recovering from schizophrenia are affected
2. whether mental health of patients recovering from schizophrenia are affected
3. whether schizophrenic patients shows psychotic and neurotic trends later in their life

### **Research Hypothesis**

1. There will be no significant effect on general health of patients recovering from schizophrenia
2. There will be no significant effect on mental health of patients recovering from schizophrenia
3. There will be no significant effect of psychotic and neurotic trends on patients recovering from schizophrenia

Sample: In this present study, a total sample of 80 Schizophrenic subjects of stage III will be taken in for participation. These patients will be taken from SCARF hospital, Chennai. These subjects are approved by the psychiatrist and psychologist that they are in III stage of Schizophrenia.

**Sampling Technique:**The participants are taken by using the purposive sampling method which will involve taking samples from the population which is easily available or are easy to contact.

**Rational:** For this study subjects of the III stage of Schizophrenia have been chosen because in this particular phase after all their effective medication and other subsequent therapies, the Schizophrenics are better and they will be able to cooperate, communicate, follow our instruction properly.

### **Inclusion Criteria's**

1. All Subjects are from Schizophrenia in III stage
2. All Subjects are from middle socio-economic status
3. All the Subjects can read and write
4. All the Subjects are residents of Chennai
5. All the Subjects are from SCARF hospital

### **Exclusion Criteria's**

1. Schizophrenic subjects who are in other stages or have other Psychotic Disorders are not taken.
2. Subjects of other Psychotic Disorders are not taken
3. Subjects of upper and lower socio economy status are not taken.
4. Subjects who are not able to read or write are not taken.
5. Subjects residing outside Chennai is not taken
6. Subject from different Institution, Hospitals or Clinics are not taken.

### **Instruments**

This survey consists of 4 questionnaires, first one is Eysenck Personality Questionnaire test (EPQ), the second one is Multiphasic Personality Questionnaire (MPQ), the third one is the General Health Questionnaire (GHQ) and the last one is the Mental Health Battery by A.K. Singh.

1. Eysenck Personality Questionnaire (EPQ- R):This test was developed by Hans Eysenck and Sybil Eysenck in 1975 to assess the personality trait of an individual. This test helps in measuring three dimension: Extroversion (E), Neuroticism (N), and Psychoticism (N). This test fully satisfies the constancy in all the scales except for reliability in psychoticism. This test confirms validity, and correlates with other personality measures and Rokeach Value Survey. The original test consists of 100 items out of which 32 were for psychoticism, 23 for extroversion, 24 for neuroticism, and 21 for lie scale.
2. Multiphasic Personality Questionnaire (MPQ):This test is designed by H.N Murthy in 1964.  
This test focused mainly on Indian Population. This test consists of 100 items which are divided into 9 subscale which are Hysteria, Anxiety, Depression, Mania, Psychopathic Deviate, Schizophrenia, K-scale, Repression sensitization, Paranoia.
3. General Health Questionnaire (GHQ-12):The General Health Questionnaire

(GHQ) is a test which help in measure current mental health which was developed in the 1970s by Goldberg and since it has been widely used in different settings and different cultures. GHQ is a screening test to find some minor psychological disorder among normal population within our society and non-psychiatric clinical settings for example primary care or general medical patient out-patient. Psychometric Assessment of GHQ-12 says that this test is a valid for measuring psychiatric illness, and it is also one reliable test, and the factors are already examined repeatedly. The test was originally created with 60 items but at present there are range of shortened version of the test such as GHQ-30, GHQ-28, GHQ-20, and GHQ-12. This test consists of 12 items, each assessing the seriousness of mental problem over the past few weeks using 4-point scale.

4. Mental Health Battery by A.K Singh: Mental Health Battery which is constructed by A.K Singh and Alpana Sen Gupta in the year 2000. This test consists of 6 dimensions which are Emotional Stability, Overall Adjustment, Autonomy, Security-Insecurity, Self-Concept, And Intelligence. With help of test-retest method and odd-even test correlation values were significant, and this test was also validated against other such tests and was found valid. There is total 130 items in the test. This test is used to measure the mental health status of young adults.

### Procedure of Data Collection

I took permission from the hospital then I went to visit my subjects for my research. Before beginning of the test, a good rapport session was built to make them comfortable. Proper instruction was given to them and was asked whether they understood everything or not. Then questionnaire was handed over to them and the test was conducted in two sessions and the order of test as changed to avoid order effect. When subjects were clear with everything, and they understood everything they were asked to start responding to the question given in questionnaire. The test was administered, and after completion of the test, booklet was taken back. The score of the data were tabulated, analyzed through statistical procedure, and discussed after that conclusion were made.

### Statistical techniques

For statistical analysis descriptive statistics (Mean, Standard Deviation), Inferential statistics (t - test) correlation analysis were used for data analysis, through SPSS 20.0 version

### Result

Table 1: Showing the comparative analysis of different dimensions in different scales in terms of Mean and Standard Deviation (S.D)

S.no	Test	Mean	S.D	Remark
1	EPQ:			
	Psychoticism	11.3	4.442031694	Psychoticism is comparatively on higher side
	Extraversion	9.225	3.990415733	Extraversion level is medium only

	Neuroticism	11.15	4.480901808	Neuroticism is also comparatively on higher side
	Lie-scale	4.675	2.46892074	This indicates that no participant lied in this given test
2	GHQ:	10.25	3.577354938	Their general health index was on normal range
3	MPQ:			
	Schizophrenia	4.8625	1.438562486	Comparatively the score is below average which states that there were less relapses among the subjects
	Paranoia	10.45	2.773746723	the score was above average hence we can state that paranoia was slightly higher among our subjects
	Depression	6.425	1.719397893	The score slightly higher than average, hence we can say that mild depression was there among half of the subjects
	Hysteria	4.6125	1.838365744	the score is slightly more than average than hence hysteria was there among the subjects
	Anxiety	14.4875	3.283999376	the score is high which interprets that anxiety was there among our subjects
	Normal	7.2125	2.437542599	The score was high which means majority of our subject were getting better after their treatment.
4	MHB:			
	Part I	6.975	1.999841766	According to score of the participants we can determine that they are low in Emotional Stability
	Part II	24.1375	5.742895997	According to score of the participants we can determine that they are low in Overall adjustment
	Part III	8.2	1.925182878	According to score of the participants we can determine that they are low in Autonomy
	Part IV	7.1125	2.018858871	According to score of the participants we can determine that they are low in Self Esteem
	Part V	7.8	2.107250894	According to score of the participants we can determine that they are low in Security - Insecurity
	Part VI	9.7875	3.286696429	According to score of the participants we can determine that they are low in Emotional Intelligence

Table 2: Showing comparative analysis of different dimension in different scale in term of t-value

S.no	t - Test (between groups)	t - Score
1	Psychoticism vs Neuroticism	t = 0.2108
2	Schizophrenia vs Paranoia	t = 15.4054

3	Schizophrenia vs Depression	t = 6.5135
4	Schizophrenia vs Hysteria	t = 1.0077
5	Schizophrenia vs Anxiety	t = 23.8101
6	Schizophrenia vs Normal	t = 8.1135

Table 3: Showing the comparative analysis of different dimensions of mental health battery (MHB) scales in terms of Correlations

Emotional Stability vs Overall Adjustment	Part I	1	Part II
	Part II	0.023448545	1
Autonomy vs Security - Insecurity	Part III	1	Part IV
	Part IV	0.274225003	1
Self-Concept vs Emotional Intelligence	Part V	1	Part VI
	Part VI	0.086996949	1

## Discussions

From the above results, among the schizophrenic patients of stage III it was found that the score of General Health Questionnaire (GHQ) has been above average in dimension which indicates that their general and physical health are beyond average level (mean =10.25) and from standard deviation value (S.D =3.57) it shows that participants have expressed less variability of score. The above finding falls in line with studies which shows how schizophrenic patients are usually at risk of gaining or losing weight, suffer from diabetes, have cardiovascular disease, hence an eye has to be kept on them during their treatment phase.

In section of Mental Health Battery (MHB), participants scored below average in all dimensions which were, emotional stability, over-all adjustment, autonomy, security-insecurity, self-concept, and emotional intelligence (mean =6.97, mean =24.13, mean =8.20, mean =7.11, mean =7.8 and mean =9.78). From the overall dimension of Mental Health Battery, the subjects have scored less than the average (mean = 10.66). From Standard Deviation (S.D =1.377) proves that they show less variability of scores in overall. Correlation analysis was done among the dimension of Mental Health Battery, and from the Co-relational Analysis, it has been found that the score of different dimensions is not related to each other (co-relation = 0.023, co-relation =0.274, and co-relation =0.086). It implies that the dimension individually affected the subjects independently and they scored less than the average score. The findings from this test falls in line with previous research studies which concludes that schizophrenic patients show weaker Mental Health, but contradictory finding, like one study which conducted Quality of Life scale, states that ID symptoms are suppressed in successfully at earlier stage and then it increase the quality of life of a schizophrenic patient.

In section of Eysenck Personality Questionnaire (EPQ) the subject showed high score in psychoticism (mean =11.3), high score in neuroticism (mean =11.15) and average score in introversion-extroversion (mean = 9.22). Not a single subject crossed the cutoff point of lie scale (mean = 4.67). From Standard Deviation values apart from lie scale (S.D = 2.468) in other dimension subject scored more variability of scores ( S.D = 4.442, S.D = 4.480 and S.D = 3.990). t-Test was also conducted between psychoticism and neuroticism, t-value ( $t = 0.210$ ) has not been found significant. So, the difference between mean score were not statistically significant. It indicates that these two means are independent to each other. It refers that in this phase of schizophrenia also, the subject is showing trends of psychoticism and neuroticism. The present finding is very much in line with previous research studies like of (Chapman & Kwapil,1993) have shown using EPQ that they were able to find that schizophrenic people are found to be high on psychoticism and another study by (Lysaker & Taylor,2007) finds that neuroticism is high on patients who were and are suffering from schizophrenia. Reverse study were also found which showcased that EPQ simply measures the dimension of personality not typical factor of psychoticism.

In section of Multiphasic Personality Questionnaire (MPQ), the subject showed higher trends of Paranoia, Depression, Hysteria, Anxiety and Relapses. (mean = 10.45, mean = 6.42, mean = 4.61, mean = 14.48 and mean = 7.21) only in section of schizophrenia (mean = 4.86) and the score as been found below average. From Standard Deviation value (S.D = 3.283) of anxiety dimension. Apart from anxiety all other dimension (S.D = 2.773, S.D = 1.719, S.D = 1.838 and S.D = 2.437) indicates that they showed less variability. From t-values is compared between dimension of MPQ with schizophrenia. It has been found that t-score are significant at 0.01 level in all the dimension apart from Hysteria ( $t\text{-value} = 1.007$ ). So, it may be suggested the difference from schizophrenia to paranoia, depression, anxiety, and relapses have been found statistically significant. Only in case of the difference with hysteria, the mean score was not found significant. So, from this present result it may be inferred that the subjects scored higher trends in all the dimension except schizophrenia. It may be due to effect of prolong medication of schizophrenia. It also appeared that the other psychotic and neurotic symptoms will still be prevalent among them. This finding is very much similar to previous research study like one research says that high psychoticism outdid the control on rating of psychotic like problem from symptoms of schizophrenia (Chapman, J. Chapman & Kwapil, 1994). Contrary findings have also been pressed like in one study by (Berge & Ranney, 2005).

In summarization of the above-mentioned discussion, it may be said that schizophrenic patients have showed average in the dimension of general health in the present study. Their mental health has come out low than the average in all the dimension. In another tool of Eysenck Personality Questionnaire (EPQ) the subject were found high in psychoticism and neuroticism and in Multiphasic Personality Questionnaire (MPQ) though the subjects showed below average in schizophrenia, they scored higher in other dimensions of this tool viz paranoia, depression, anxiety, hysteria, and relapse. The quantitative analysis was also very much in line with qualitative analysis of the case studies.

## Conclusions

It may be concluded that there was impact of psychoticism, neuroticism, paranoia, depression, anxiety, hysteria, and relapses have been found among the subject of schizophrenia in phase III. They also showed weaker in Mental health. Only in category of general health and dimension of schizophrenia were found more than average. It may be implied that the subjects, due to their psychiatric treatments, they showed prominence in general health and symptoms of schizophrenia have been disappeared. Though the subjects have the trends of psychoticism and neuroticism which was also confirmed from different psychiatric, psychotic, and neurotic disorders like paranoia, depression, anxiety, hysteria. These symptoms appear lively but inherent symptoms may recure or relapse in upcoming day. So, it may be inferred that, their superficial schizophrenia symptoms have been disappeared and they showed better than average general health, but their inherent psychotic feature were still present . So, the null hypothesis has been rejected in the present study and alternative hypothesis have been accepted in all the domain which implies that there is a significant effect of general health, mental health, psychoticism, and neuroticism of the patients of schizophrenia in phase III. So, in the present study, the effect of psychoticism, neuroticism, general health, mental health has been studied among those various types of schizophrenia patients. So, the title of the present study is very apt and justified.

## Research Limitation

1. This study could not be completed with the subjects in their family situations
2. The subject was not accessed in other sphere like, their behavior with their friends and their colleagues.

**Research conflict:** No Research conflict

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