

# FIRST RANK SYMPTOMS IN THE DIAGNOSIS OF SCHIZOPHRENIA

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## ABSTRACT

**Objectives:** To determine the usefulness of Schneider's first rank symptoms of schizophrenia.

**Methodology:** Patients suffering from schizophrenia, admitted to the Psychiatry Ward Khyber Teaching Hospital, Peshawar during the year 2009 were selected by non probability purposive sampling. It was a descriptive study and the diagnosis was made according to DSM-IV criteria. Patients were interviewed by using a semi structured questionnaire based on Present State Examination and first rank symptoms were assessed.

**Results:** Out of 100 patients suffering from schizophrenia, there were 58 males and 42 females. Thirty four (34%) (22 male & 12 females) reported having one or more first rank symptoms while Sixty six (66%) patients although diagnosed with schizophrenia on DSM IV criteria did not show first rank symptoms. The most often found individual first rank symptoms in these 34 patients were voices commenting (n=14, %), made impulses (n=12, %), and voices arguing (n=12, %). None reported delusional perception.

**Conclusions:** The reliability of the presence of first rank symptoms in Schizophrenia should be taken cautiously as only one third of the patients diagnosed with schizophrenia as per the DSM IV criteria showed any first rank symptom.

**Key words:** Schizophrenia, First Rank Symptoms (FRS), Present State Examination (PSE).

## INTRODUCTION

Schizophrenia is a major mental illness with prevalence of about 1% equally found in different cultures and both genders<sup>1</sup>. Since its introduction by Kraepelin & Eugen Bleuler, no conclusive model could be agreed upon regarding its aetiology, diagnosis or treatment.

In 1959 Kurt Schneider, a German Psychiatrist introduced certain symptoms which he claimed to be diagnostic of schizophrenia, called as first-rank symptoms (FRS)<sup>2</sup>. He proposed that in absence of organic brain disease, presence of any of these FRS is sufficient to make the diagnosis of schizophrenia. Contrary to his claim however, there is a parallel on-going debate about their diagnostic value as they may be encountered in several other non-schizophrenic conditions also<sup>3</sup>. FRS are given enormous significance and

diagnostic value in both major diagnostic systems i.e. ICD-10 & DSM-IV, especially in the former<sup>4,5</sup>.

This diagnostic status is under continuous criticism for several phenomenological and methodological reasons leading to recommendations that their status be de-emphasized in next editions of diagnostic systems till their value is clarified. Besides the facts that many patients with schizophrenia do not exhibit FRS<sup>6</sup> and that FRS are found in several non-schizophrenic entities<sup>7</sup>, methodology adopted by Schneider has never satisfied a large majority of critics. All these factors have raised several yet un-answered questions regarding the usefulness of FRS in making a confident diagnosis of schizophrenia. It has been increasingly argued and agreed that FRS neither characteristic nor pathognomonic of schizophrenia.

With this background, this study was planned to determine the usefulness of Schneider's FRS of schizophrenia.

**METHODOLOGY**

This descriptive study was conducted on the patients suffering from schizophrenia admitted to the Psychiatry Ward Khyber Teaching Hospital, Peshawar during the year 2009 were selected by convenient sampling. Diagnosis was made

according to DSM-IV criteria. Patients were interviewed by using a semi structured questionnaire based on Present State Examination (PSE). The FRS were elicited according to Mellor's definitions<sup>8</sup> (Table 1).

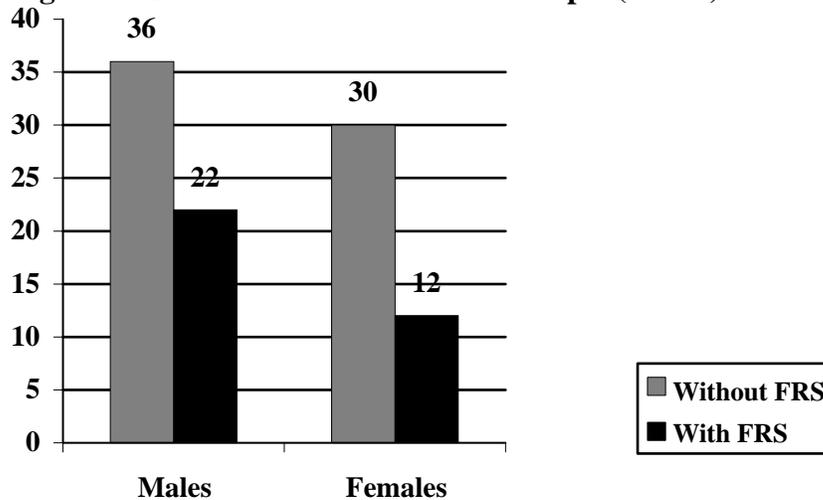
**RESULTS**

Out of 100 patients suffering from schizophrenia, there were 58 males and 42 females (Figure 1). The mean age of the sample was

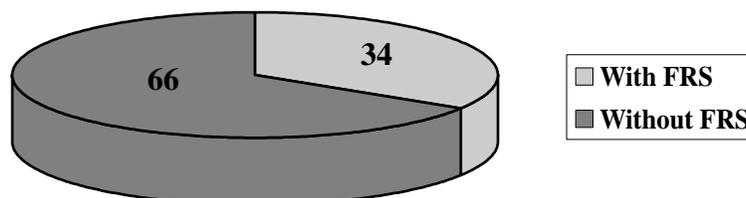
**Table 1: First Rank Symptoms according to Mellor's definitions (1970)<sup>8</sup>**

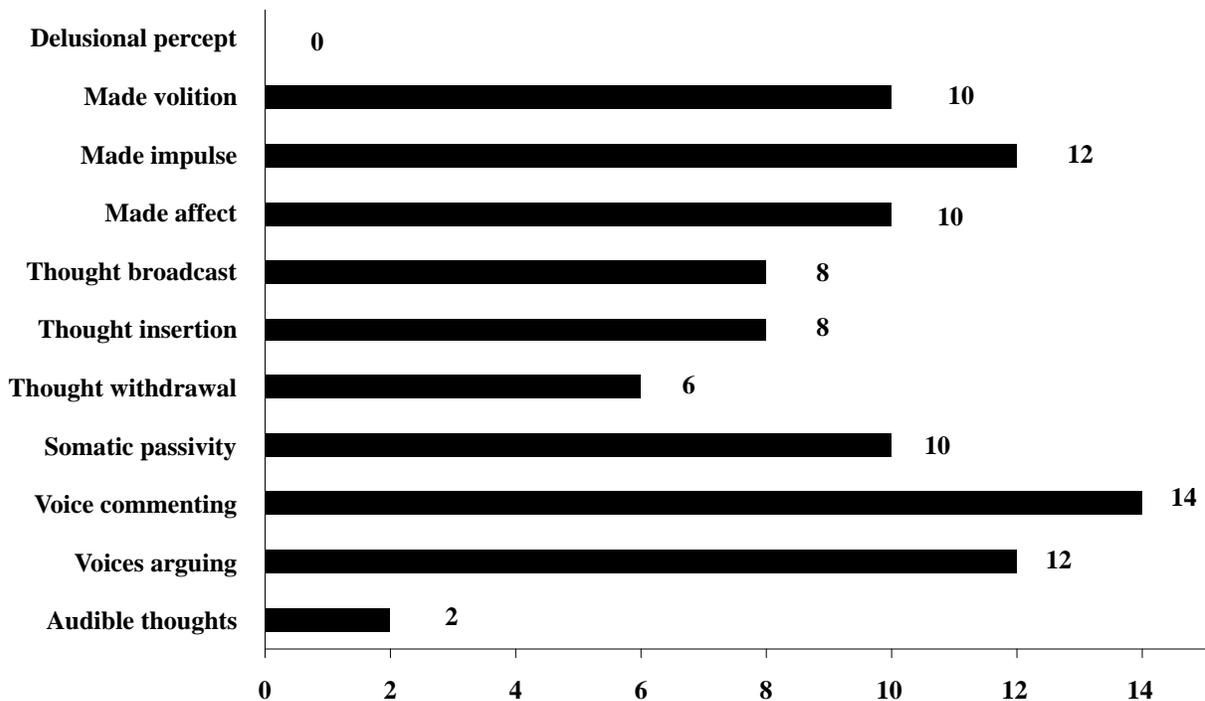
| First Rank Symptoms |                    |
|---------------------|--------------------|
| 1.                  | Audible thoughts   |
| 2.                  | Voices arguing     |
| 3.                  | Voice commenting   |
| 4.                  | Somatic passivity  |
| 5.                  | Thought withdrawal |
| 6.                  | Thought insertion  |
| 7.                  | Thought broadcast  |
| 8.                  | Made affect        |
| 9.                  | Made impulse       |
| 10.                 | Made volition      |
| 11.                 | Delusional percept |

**Figure 1: Gender Distribution of the sample (n=100)**



**Figure 2: Presence of First Rank Symptoms (n=100)**



**Figure 3: Individual First Rank Symptoms (n=34)**

Note: Maximum FRS in an individual patient were five

28.44±12.64 years. The mean age for male patients was 29.48±13.63 years and for females, 27.00±11.29 years. Out of 100 patients, 34 (22 male & 12 females) reported having one or more FRS (Figure 2). Sixty six patients although diagnosed with schizophrenia on DSM IV criteria did not show FRS. In fact, non-first rank symptoms e.g. incoherent talk, disorganized behaviour, self neglect, postural abnormalities and changes in eating, sleeping and social behaviour were more frequently reported as major or only symptoms.

Among the 34 exhibiting FRS, the most often found individual FRS were (n=14), made impulses (n=12), and voices arguing (n=12). Not a single patient reported delusional perception. Maximum FRS in an individual patient were five (Figure 3).

## DISCUSSION

Schneider's claim that in the absence of an organic illness, FRS are pathognomonic of schizophrenia gained un-opposed importance initially but gradually came under considerable criticism later<sup>9</sup>. It has been argued on the basis of data from different sources that these symptoms are neither characteristic nor specific for

schizophrenia. FRS, it has now been advocated, may be found in a wide variety of mental illnesses, ranging from personality disorder through drug withdrawal syndrome to symptomatic schizophrenia.

Ross et al and Kluft reported that Schneider's FRS are more characteristic of multiple personality disorder than of schizophrenia<sup>10,11</sup>.

For the first time FRS were also found in benzodiazepine withdrawal syndrome and erotomania<sup>12,13</sup>. Beckman et al reported that FRS were a frequent finding in cycloid psychosis<sup>14</sup>.

Huber and Marneros investigated the frequency of FRS in symptomatic schizophrenia and organic mental disorders respectively<sup>15,16</sup>. Both reported that FRS were as frequently encountered as were other schizophrenic symptoms. Marneros further observed that depending upon level of consciousness and etiology of the disorder the frequency of FRS could be exactly equal to that seen in schizophrenia<sup>17</sup>.

In a Danish study, Munk-Jorgensen et al reported that FRS were poorly correlated with diagnosis of schizophrenia<sup>18</sup>. They reported that instead, more emphasis was placed on the chronicity of course and flattening of affect: two

important features of Danish concept of schizophrenia. Based on data from IPSS, Tsirkin Slu found that no differences in the rate of morbidity from different countries was evident when narrow diagnostic criteria of schizophrenia were used indicating poor correlations between cultural factors and development of schizophrenia with FRS<sup>19</sup>. Berner et al compared six different operational diagnostic systems and concluded that Bleuler's basic symptoms were obviously considered by all of them to be more significant for attribution to schizophrenia than Schneider's FRS<sup>20</sup>.

Few other studies have pointed out the potential effects of cultural beliefs on reporting of FRS and agree that some of the FRS may never be reported to psychiatrists because they are considered normal by the community members<sup>21,22</sup>.

Marneros et al observed that even in Schneider oriented university clinics; the majority of diagnosis schizophrenia was based on non-first rank symptoms. FRS have inherent weaknesses, he concludes<sup>17</sup>.

Hafner et al found that in 70% cases schizophrenia started solely with negative symptoms<sup>23</sup>. Since Schneider's symptoms are traditionally positive symptoms, their usefulness in the early stages of schizophrenia is doubtful. In contrast to above mentioned findings Brockington et al appreciate FRS as diagnostic tool for their higher inter rater reliability<sup>24</sup>. Malik et al described them as simple to use<sup>25</sup>. In the absence of organic brain dysfunction, Salleh found that the specification of FRS for schizophrenia was 87.8% and argued that although FRS are not pathognomonic for schizophrenia, their presence should strongly suggest the diagnosis of schizophrenia<sup>26</sup>. David and Appleby followed the same suit and stated that FRS are common as well as reliable, therefore highly useful<sup>27</sup>. They wrote that "Although not specific to schizophrenia, FRS show good discriminability. No other types of symptoms or investigation method can make such claims to usefulness". Wu Y reported that the specificity of FRS for schizophrenia as apposed to manic depressive psychosis was 93% and the sensitivity of FRS for schizophrenia was 72.9%<sup>28</sup>. O'Grady reported that FRS are not specific to schizophrenia but this can be increased if narrow rather than wide definition is employed<sup>29</sup>.

Al-Ansari et al although admitted the special importance of FRS in the diagnosis of schizophrenia but warns that caution is necessary in detecting these symptoms in societies where socio-culturally shared beliefs bear a resemblance to FRS<sup>30</sup>. Ndetie found that in immigrants from

various countries selected in UK, the phenomenology was influenced more by cultural reasons rather than social environment and racial status in the host country<sup>31</sup>. Having studied patients in three different countries, Chandrasena concluded that ethnicity and nationality were significant variables, associated with lower prevalence of FRS<sup>21</sup>. However, he believes that universally FRS have good discriminatory value<sup>21</sup>.

Chopra and Gunter suggested that FRS are much more common among schizophrenias and could be relied upon for the diagnosis<sup>32</sup>.

Contrary to taking extreme positions, few researchers have adopted neither this nor that posture. Kulhara et al evaluated four diagnostic systems of schizophrenia for usefulness, comprehensiveness and concordance<sup>33</sup>. One of them was Schneiderian system. He found that all the diagnostic systems had good agreement with the index diagnosis. In a similar fashion, Fenton et al believed that no diagnostic system is preferable over others on the basis of data they are all arbitrary<sup>34</sup>.

In summary, irrespective of arguments and counter arguments regarding usefulness of FRS in the diagnosis of schizophrenia, an undeniable fact is that continued acceptance and influence of these symptoms in different diagnostic systems. There is thus need for psychiatrists to remain familiar and well versed not only with the definitions of FRS but more significantly with the precise method of eliciting the same. They also need to appreciate the influence of culture and religious beliefs on the tendency to report FRS.

## CONCLUSIONS

The reliability of the presence of first rank symptoms in Schizophrenia should be taken cautiously as only one third of the patients diagnosed with schizophrenia as per the DSM IV criteria showed any first rank symptom.

## REFERENCES

1. Meueser KT, Mc Gurk SR. Schizophrenia. *Lancet* 2004;363:2063-72.
2. Schneider K. Primare und sekundare symptome bei der Schizophrenie. *Fortschr Neurol Psychiatr* 1957;25:487-90.
3. Koehler K, Seminario I. Research diagnosable "schizo-affective" disorder in Schneiderian "first rank" schizophrenia. *Acta Psychiatr Scand* 1979;60:347-54.
4. American Psychiatric Association. Diagnostic and statistical manual of mental disorders. 4th

- ed. Washington DC: The Institute; 1994.
5. World Health Organization. International classification of diseases. Geneva: The Institute; 1990.
  6. Rosen C, Grossman LS, Harrow M, Bonner JA, Faull R. Diagnostic and prognostic significance of schneiderian first rank symptoms: a 20-year longitudinal study of schizophrenia and bipolar disorder. *Compr Psychiatry* 2010; doi:10.1016/j.comppsy. 2010.06.005.
  7. Marneros A. Schizophrenic first-rank symptoms in organic mental disorders. *Br J Psychiatry* 1988;152:625-8.
  8. Mellor CS. First rank symptoms of schizophrenia. *Br J Psychiatry* 1970;117:15-23.
  9. Mellor CS. The present status of first rank symptoms. *Br J Psychiatry* 1982;140:423-4.
  10. Ross CA, Miller SD, Reagor P, Bjornson L, Fraser GA, Anderson G. Schneiderian symptoms in multiple personality disorder and schizophrenia. *Comp. Psychiatry* 1990;31:111-8.
  11. Kluft RP. First rank symptoms as a diagnostic clue to multiple personality disorder. *Am J Psychiatry* 1987;144:293-8.
  12. Roberts K, Vass N. Schneiderian first rank symptoms caused by benzodiazepine withdrawal. *Br J Psychiatry* 1986;148:593-4.
  13. Hayes M, O'shea B. Erotomania in schneider positive schizophrenia: a case report. *Br J Psychiatry* 1985;146:661-3.
  14. Beckmann H, Fritze J, Lanczik M. Prognostic validity of the cycloid psychosis: a prospective follow-up study. *Psychopathology* 1990;23: 205-11.
  15. Huber G. Does symptomatic schizophrenia exist? *Psychiatr Neurol Med Psychol (Leipz)* 1990;42:11-24.
  16. Marneros A. Frequency of occurrence of schneider's first rank symptoms in schizophrenia. *Arch Psychiatry Neurol Sci* 1984;234:78-82.
  17. Marneros A, Rohde A, Deister A, Sakamoto K. Kurt schneider's schizophrenia- the picture of schizophrenia in a schneider-oriented university clinic. *Jpn J Psychiatry Neurol* 1987; 41:171-8.
  18. Munk JP, Mortensen PB. Schizophrenia: a 13 year follow-up diagnostic and psychopathological aspects. *Acta Psychiatr Scand* 1989; 79:391-9.
  19. Tsirkin S. International study of schizophrenia based on a WHO program. Incidence of schizophrenia. *Zh Nevropatol Psikhiatr Im S S Korsakova* 1987;87:1203-7.
  20. Berner P, Katschnig H, Lenz G. First rank symptoms and Bleuler's basic symptoms. New results in applying the polydiagnostic approach. *Psychoathology* 1986;19:244-52.
  21. Chandrasena R. Schneider's first rank symptoms: an international and interethnic comparative study. *Acta Psychiatry Scand* 1987;1 76:574-8.
  22. Chandrasena R, Rodreigo A. Schneider's first rank symptoms: their prevalence and diagnostic implications in an Asian population. *Br J Psychiatry* 1979;135:348-51.
  23. Hafner H; Riecher RA, Maurer K, Fatkenheuer B, Loffler W. First onset and early symptomatology of schizophrenia: a chapter of epidemiological and neuro biological research into age and sex difference. *Eur Arch Psychiatry Chin Neurosci* 1992;242:109-18.
  24. Brockington IF, Kendell RE, Leff JP. Definitions of schizophrenia: concordance and predictions of outcome. *Psychol Med* 1978;8:85-8.
  25. Malik SB, Ahmad M, Bashir A, Choudhry TM. Schneider's first rank symptoms of schizophrenia: Prevalence and diagnostic use. A study from Pakistan. *Br J Psychiatry* 1990;156:109-11.
  26. Salleh MR. Specificity of Schneider's first rank symptoms for schizophrenia in malay patients. *Psychopathology* 1992;25:199-203.
  27. David AS, Appleby L. Diagnostic criteria in schizophrenia: accurate the positive. *Schizophr Bull* 1992;18:551-7.
  28. Wu Y. Study of the diagnostic specificity by schneider's first rank symptoms. *Chung Hua Shen Ching Chiag Shen Ko Tsa Chih* 1990;23:79-80.
  29. O'Grady JC. The prevalence and diagnostic significance of schneiderian first rank symptoms in a random sample of acute psychiatric in-patients. *Br J Psychiatry* 1990;156:496-500.
  30. Al-Ansari EA, Emara MI, Mirza IA, el-Islam MF. Schizophrenia in ICD-10: a field trial of suggested diagnostic guidelines. *Compr Psychiatry* 1989;30:416-9.
  31. Ndeti DM. Psychiatric phenomenology across countries: constitutional, cultural of environmental? *Acta Psychiatr Scand Suppl*

- 1988;344:33-44.
32. Chopra HD, Gunter M. Diagnostic value of Schneider's first rank symptoms in schizophrenia. *Br J Psychiatry* 1987;150:132.
33. Kulhara P, Mattoo SK, Chandiramani K, Bhave S, Awasthi A. Diagnostic systems for schizophrenia: a cross sectional study of concordance from India. *Acta Psychiatr Scand* 1986;74:55-61.
34. Fenton WS, Mosher LR, Mathews SM. Diagnosis of schizophrenia: a critical review of current diagnostic systems. *Schizophr Bull* 1981;7:452-76.

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