Theme and Content of Delusions in Asian Indian Psychotic Patients: Correlation with Diagnosis

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Abstract

The aim of this study was to investigate the types of delusions present in Asian Indian psychotic patients and evaluate correlation with patient diagnosis. Delusional narratives were collected from 50 Indian patients with schizophrenia or an affective disorder. These narratives were judged for delusional theme and content and were correlated with DSM-III-R diagnoses. Using simple categorical analysis, delusional themes of grandiosity and guilt correlated with affective diagnoses. Delusional themes of reference and Schneiderian types were more often associated with schizophrenia. These findings support the concept that delusional themes can be used as valid diagnostic clues in the assessment of psychotic Indian patients.

INTRODUCTION

One of the challenges an evaluating psychiatrist faces during the initial assessment of a functionally psychotic patient is differentiating between affective and non-affective illness. An acute schizophrenic episode can present exactly like either an acute depressive episode with psychotic features or an acute manic episode. While such factors as family history, premorbid level of functioning and response to medication can aid in determining the functional etiology of the diagnosis, usually only long term clinical course will reveal the true diagnostic category (1). In order to facilitate obtaining the correct diagnosis earlier in the clinical course of the psychotic illness, various studies have assessed other factors that could be correlated with diagnosis. One such variable that has not been examined extensively but has yielded some promise in this area is the type of delusion with which the patient presents.

Historically, categorizing delusions as one or more of several types has not been felt to be useful in the clarification of diagnosis (2). However, Junginger, Barker and Coe (3) examined delusional theme as related to diagnosis and found that grandiose and Schneiderian types (thought broadcasting, thought insertion, thought withdrawal, and delusions of being controlled) appeared to differentiate schizophrenic patients from non-schizophrenic patients. That is, schizophrenic patients were much more likely to have Schneiderian delusions and less likely to have grandiose types. In

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contrast, Sampath, et al (4) examined delusional content as a variable to differentiate schizophrenia from alcohol hallucinosis. They noted that patients with schizophrenia were much more likely than those with alcohol hallucinosis to experience grandiose delusions.

Other research has not supported the diagnostic importance of delusional theme. Goldman, et al (5) concluded from their study of 214 psychotic inpatients that bizarre delusions should not be given any special emphasis in the diagnosis of schizophrenia. Carpenter, Straus and Muleh (6) reached a similar conclusion from their work.

This study seeks to investigate further the relationship between types of delusions and diagnoses. It was hypothesized that delusional themes would differentiate schizophrenic subjects from those with an affective disorder.

METHODS

This survey was conducted over a two month period (July and August) at a university teaching hospital in southern India. The inpatient psychiatric service had 50 adult beds, and the outpatient psychiatric clinic accomodated approximately 1,500 clinic visits per month.

The population served was about 30% indigent with the remainder being full or partial pay, and was primarily drawn from a four state area in southern India. Approximately 60% of this population was urban or suburban and the remainder rural.

Adult psychiatric patients were surveyed from both inpatient and outpatient settings. The criterion for initial evaluation was delusional beliefs currently or in the past three months. For the purpose of the study, the definition of "delusion" used was taken from the DSM-III-R "Glossary of Technical Terms," which defines a delusion as a

> false personal belief based on incorrect inference about external reality and firmly sustained in spite of what almost everyone else believes and in spite of what constitutes incontrovertible and obvious proof or evidence to the contrary. The belief is not one ordinarily accepted by other members of the person's culture or subculture (i.e., it is not an article of religious faith). (7)

Patients were evaluated in a semi-structured interview to elicit delusional beliefs and content. Questions used included "Do you have any beliefs or ideas that your family or friends consider unusual?", "Do you have any ideas that really bother you?" and "In what ways, if any, are you different from other people?", among others. A third person narrative of 50 to 150 words was written of the primary delusion, i.e. the delusion causing the most distress when more than one delusion was present.

If the delusion was rated to be of moderate severity or greater, using the Brief Psychiatric Rating Scale criteria for delusional beliefs, a DSM III-R symptom

checklist was administered in an interview with the patient to determine diagnosis. Further, chart reviews were conducted to confirm diagnosis, and only patients meeting DSM III-R criteria for schizophrenia, major depression, or mania were included in this research project. Of note, due to the cultural structure of both the inpatient and outpatient facilities in India, a family member was present in the clinical interviews for all but three of the patients. The amount of information the family members added was quite variable among the interviews.

Patients meeting current diagnostic criteria for mental retardation, a seizure disorder, an organic mental disorder, or substance abuse or dependence in the past six months were excluded from this study. A total of ninety-five patients were initially interviewed, and fifty patients were ultimately included in the study.

In order to control for culturally appropriate beliefs, delusional narratives were reviewed by Indian members of the psychiatric treatment team, i.e. psychiatrist, psychologist, social worker, and nurse. This review was used to determine whether an unusual idea was truly a delusion or a culturally appropriate belief: for example, spirit possession or reincarnation. Of note, some delusions reflected culturally appropriate concepts which extended beyond the spectrum of cultural acceptability and into delusional proportions.

Approximately 50% of the interviews were conducted in English with the remainder divided primarily among four Indian languages. Experienced translators were used in these cases and all narratives were written in English.

All patients participating in this project consented to be involved, having been informed that the purpose was to understand better the delusions of patients in a psychiatric setting and potentially to improve diagnosis.

Descriptive data collected for each patient included age, sex, religion, years of illness and number of hospitalizations.

The delusional narratives were then evaluated, without knowledge of patient diagnosis, based on a thirteen-type thematic categorization system and an eight-type content categorization system. The definitions for eleven of the thirteen delusional themes (thought insertion, thought withdrawal, thought broadcasting, control, bizarre, grandiose, reference, somatic, nihilistic, persecution and jealousy) were provided by the DSM-III-R (7) "Glossary of Technical Terms" and its diagnostic criteria for schizophrenia. The definition used for the delusional theme of guilt came from Fish's Clinical Psychopathology (8). The thirteenth category "other" was reserved for delusional themes that did not clearly conform to any of the previous categories.

In terms of delusional content, all identified themes were classified, again without access to patient diagnosis, into one of eight descriptive categories: sexual, religious, magical, mechanical/technological, political/economic, familial, spirit possession or other.

Theme and content for each delusion were then assessed as to statistical correlation with DSM-III-R diagnosis using simple categorical analysis (significance defined as $p < .05$).

RESULTS

Fifty subjects participated in this study. Subject characteristics are summarized in Table 1. (Note that the second column, "Comb. Affective," is a combination of the manic and the depressed patients.) When comparing all patients with affective illness to those with schizophrenia, the only significant difference in population demographics is gender (Fisher's exact, p, .05), with fewer females represented in the affective population.

On evaluation of the 50 delusional narratives from these subjects, a total of 85 delusional themes were identified making a mean of 1.7 themes identified for each narrative (range of 1–3). A total of 44 themes were identified in the 24 delusional narratives of schizophrenic patients; 17 themes from the 13 manic patients, and 24 themes from the 13 depressed patients.

A summary of theme as compared to subject diagnosis is presented in Table 2. Due to sample size and relative infrequency of certain themes, the thematic categorization was simplified first by condensing control delusions and delusions of thought insertion, broadcasting and withdrawal as Schneiderian delusions. Second, the other relatively infrequent themes (jealous, bizarre, nihilistic and somatic) were included with the "other" category. Table 3 represents this condensed organization.

TABLE 1.

Demographic Variables of Subjects

Variable	Schiz.	Comb. Affective (Manic + Depressed)	Manic	Depressed
N	24	26	13	13
Age				
Mean (m)	33.5	41.5	38.4	44.5
Range (r)	19–59	18–72	19–59	18–72
Years of Education				
m	10.8	9.1	9.8	8.4
r	0–18	0–17	0–17	0–16
Years of Illness				
m	7.0	6.3	6.4	6.2
r	0–41	0–34	0–34	0–25
Numb. of Hospitalizations				
m	3.0	2.0	2.9	1.2
r	0–20	0–19	0–19	0–3
Sex				
M(%)	12 (50.0%)	19 (73.1%)	9 (69.2%)	10 (76.9%)
F(%)	12 (50.0%)	7 (26.9%)	4 (30.8%)	3 (23.1%)
Relig*				
H(%)	17 (70.8%)	15 (57.7%)	6 (46.2%)	9 (69.2%)
C(%)	5 (20.9%)	8 (38.8%)	5 (38.4%)	3 (23.1%)
M(%)	2 (8.3%)	3 (11.5%)	2 (15.4%)	1 (7.7%)

*H = Hindu, C = Christian, M = Moslem.

TABLE 2.

Delusional Theme as Compared to Patient Diagnosis

	Diagnosis			
Theme (N)	Schiz (%) N = 44	Comb Aff (%) N = 41	Mania (%) N = 17	Dep (%) N = 24
Bizarre (3)	3 (6.8%)	0	0	0
Control (8)	6 (13.6%)	2 (4.9%)	1 (5.9%)	1 (4.2%)
Grandiose (18)	4 (9.1%)	14 (34.1%)	13 (76.5%)	1 (4.2%)
Guilt (7)	0	7 (17.1%)	0	7 (29.2%)
Jealousy (3)	2 (4.5%)	1 (2.4%)	0	1 (4.2%)
Nihilistic (1)	0	0	0	1 (4.2%)
Persecution (23)	15 (34.1%)	8 (19.5%)	1 (5.9%)	7 (29.2%)
Reference (12)	9 (20.5%)	3 (7.3%)	1 (5.9%)	2 (8.3%)
Somatic (6)	2 (4.5%)	4 (9.8%)	1 (5.9%)	3 (12.5%)
Thght Broad (0)	0	0	0	0
Thght Insrt (1)	1 (2.3%)	0	0	0
Thght Wdrwl (1)	1 (2.3%)	0	0	0
Other (2)	1 (2.3%)	1 (2.4%)	0	1 (4.2%)

In order to assess hypotheses of randomness, one sample binomial analyses of the themes from schizophrenic patients verses those of patients with affective disorders (combined manics and depressives) were conducted. On evaluation of binomial confidence intervals, significant differences ($p < .05$) were found between these populations for the delusional themes of grandiosity and guilt, i.e. both of these delusional themes were significantly more prevalent in the affective population. The themes of persecution, Schneiderian types, reference and other (condensed) were not found to be statistically different between these two populations. However, when the themes of reference and Schneiderian types were combined and evaluated together, they were significantly more prevalent in the schizophrenic population.

On assessment of the 85 delusional themes for actual content of the delusion, 25 of the themes (29.4%) had content other than the 7 primary categories. Table 4

TABLE 3.

Delusional Theme (Condensed Classification) as Compared to Patient Diagnosis

	Diagnosis			
Theme (N)	Schiz (%) N = 44	Comb Aff (%) N = 41	Mania (%) N = 17	Dep (%) N = 24
Grandiose (18)	4 (9.1%)	14 (34.1%)	13 (76.5%)	1 (4.2%)
Guilt (7)	0	7 (17.1%)	0	7 (29.2%)
Persecution (23)	15 (34.1%)	8 (19.5%)	1 (5.9%)	7 (29.2%)
Reference (12)	9 (20.1%)	3 (7.3%)	1 (5.9%)	2 (8.3%)
Schneiderian (10)	8 (18.2%)	2 (4.9%)	1 (5.9%)	1 (4.2%)
Other (15)	8 (18.2%)	7 (17.1%)	1 (5.9%)	6 (25.0%)

TABLE 4.

Content of Delusion as Compared to Patient Diagnosis

	Diagnosis			
Content (N)	Schiz (%) N = 44	Comb Aff (%) N = 41	Mania (%) N = 17	Dep (%) N = 24
Religious (16)	7 (15.9%)	9 (22.0%)	8 (47.1%)	1 (4.2%)
Mech/Tech (5)	4 (9.1%)	1 (2.4%)	0	1 (4.2%)
Sexual (8)	5 (11.4%)	3 (7.3%)	1 (5.9%)	2 (8.3%)
Familial (15)	11 (25.0%)	4 (9.8%)	1 (5.9%)	3 (12.5%)
Spirit Poss (6)	3 (6.8%)	3 (7.3%)	1 (5.9%)	2 (8.3%)
Polit/Econ (6)	1 (2.3%)	5 (12.2%)	5 (29.4%)	0
Magical (4)	3 (6.8%)	1 (2.4%)	0	1 (4.2%)
Other (25)	10 (22.7%)	15 (36.6%)	1 (5.9%)	14 (58.3%)

represents a comparison of content of the delusional theme to subject diagnosis. Due to low prevalence of some content types, all of the content categories except religion, sex and family were grouped with "other." Using one sample binomial analysis, the prevalences of these content types were not found to be statistically different in these two groups (schizophrenics versus combined affective).

DISCUSSION

The findings from this study support the idea that certain delusional themes can be associated with affective illnesses as compared to schizophrenia, and can therefore potentially be used as valid clues to patients' diagnoses. The association between grandiose delusions and affective illnesses agrees with the earlier research of Junginger, Barker and Coe (3). In addition, in our study delusions of guilt correlated with affective illnesses, which was a delusional category not examined by these researchers.

However, while Junginger, Barker and Coe were able to correlate Schneiderian type delusions with schizophrenia, our research cannot support this association. This may be due to inadequate sample size, as only 10 of the 85 delusional themes were of Schneiderian type. This small number of Schneiderian themes might be explained by variations in culture as Ndetei and Singh (9) asserted. Carpenter and Strauss (10) found that only 25% of Indian schizophrenic patients exhibited Schneiderian first rank symptoms.

In our study, it was only when Schneiderian type themes were combined with delusional themes of reference that this grouping could be correlated with schizophrenia in a significant way. While this may be of limited clinical significance, it could provide the clinician with further diagnostic clues.

Our research also tentatively supports the work of Goldman, et al (5) and Carpenter, Strauss and Muleh (6) in demonstrating no significant correlation between schizophrenia and bizarre delusions. However, this comparison is limited by

the small number of delusional themes that were categorized as bizarre. This low prevalence of bizarre delusional themes identified could be due to cultural differences between the rater and the study population. To be noted though, each delusion was reviewed by the Indian treatment team so as to better understand the cultural context of the delusions.

When comparing the prevalence of delusional themes as found in this study with the results from other researchers in India, one is struck by the wide range of prevalence rates among the various studies. In Indian schizophrenic patients, the prevalences of persecutory and control delusions were found to be 34.4% and 10.6% respectively by Sharma and Gupta (11) as compared to prevalences of 84.6% and 29.6% respectively in work done by Kulhara, et al (12). The prevalences of persecutory and control delusions in our study (34.1% and 13.6% respectively) are much more consistent with the findings of Sharma and Gupta.

Further, the prevalence of grandiose delusions among Indian schizophrenic patients range from 11.7% as found in the work of Sharma and Gupta (11) to 46.7% as noted by Sampath, et al (4). In our study, the prevalence of 9.1% for grandiose delusions among schizophrenic patients is again more consistent with the findings of Sharma and Kumar.

These wide ranges of delusional theme prevalences with schizophrenic patients among the various studies appear to be most likely due to different definitions of themes used by the various authors. As an example, Goldman, et al (5) defined delusional themes according to DSM III-R definitions, but both Sampath, et al (4) and Sharma and Gupta (11) generated their own definitions for the delusional themes. Of note, on literature review no information as to the delusional themes of Indian patients with affective disorders was found.

When looking at the actual delusional content instead of the theme, this study found no significant correlation with diagnosis. In terms of the prevalence of delusional content as compared with other studies done in India, the results are fairly consistent. Sharma and Gupta (11) found a similar prevalence rate for delusions with a sexual content (12.6%) in a schizophrenic patient population as this current study (11.4%). Kulhara, et al (12) found a similar prevalence of sexual content of delusions (12.2%) in an Indian schizophrenic population.

Kulhara et al (12) also noted a 14.3% prevalence of religious content delusions in the same population which is similar to the 15.9% prevalence noted in this study's schizophrenic population. However, Sharma and Gupta had found only a 6.8% prevalence of religious delusions in their sample of Indian schizophrenic patients.

Lastly, research done by Kala and Wig (13) demonstrated a prevalence of delusional content associated with machines or technology of 12.5% as compared to a 9.1% prevalence of this type of delusional content among schizophrenic patients in our study. These researchers further noted a 15.5% prevalence of economical or political content of delusions in the same population. This is markedly higher than the 2.3% prevalence noted among the schizophrenic patients in our study.

Again, on review of the literature no data were found pertaining to prevalence of content of delusions among patients with affective illnesses in India.

CONCLUSION

The findings from this study suggest that delusional themes can be used as diagnostic clues in the assessment of Indian psychotic patients. While grandiosity and guilt are more frequently associated with an affective illness, themes of reference and Schneiderian types correlate better with schizophrenia. In contrast, this study found no significant statistical association between content of delusion and diagnosis.

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