



DEMOGRAPHIC FACTORS ASSOCIATED WITH CONTENT OF DELUSION AND ITS RELATION WITH HOSTILITY / VIOLENCE AMONG PATIENTS OF SCHIZOPHRENIA AT SIR COWASJEE JAHANGIR INSTITUTE OF PSYCHIATRY

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ABSTRACT

INTRODUCTION: Schizophrenia is a severe psychiatric disorder that normally begins in late adolescence or early adulthood period of life. It is characterized by gross distortion of thought, perception, and emotion. **OBJECTIVES:** The study was aimed to determine the correlation between socio-demographic factors and content of delusions among schizophrenic patients. Also to determine the association of content of delusion with the degree of violence in schizophrenia patients. **MATERIAL AND METHODS:** This cross-sectional study was conducted in Outpatient department (OPD) of Sir Cowasji Jahangir Institute of Psychiatry (SCJIP), Hyderabad, Sindh. All consecutive adult psychiatric patients of both sex having age between 18 to 60 years, who were reported in OPD of SCJIP during the study period and clinically diagnosed Schizophrenia according to DSM-IV criteria, were included in the study. A total of 173 consecutive schizophrenic patients from the OPD of SCJIP, Hyderabad, Pakistan, were investigated for theme or content of delusion through interviewed by using a semi-structured questionnaire during the study period from Nov 2018 to Jun 2019. Data were analyzed using SPSS version 16. Association was seen by using Pearson's chi-square test. A P-value of less than 0.05 was considered statistically significant. **RESULTS:** A total of 173 schizophrenic patients were included in the study. The mean age of study participants was 31.3 ± 9.3 years. Male was 113 (65%) with male to female ratio of 2:1. Among study participants 102 (59%) were ever married, 69 (40%) had no formal education and 101 (58%) had no monthly income rely on family. Among the content of delusion, the persecutory delusion was most common 81 (47%) followed by bizarre 52 (30%), grandiose 36 (21%) and the idea of reference 18 (10%) significantly. The frequency of violence was noted in 70 (40%) participants, among them, 2nd-degree violence was most common 42 (24%). No statistically significant correlation was seen between socio-cultural factors and the most common content of delusion (persecutory, grandiose and idea of reference) except Bizarre delusion. A significant relationship was found between Bizarre and some sociocultural factors (age, education, employment, and monthly income) ($P < 0.05$). The persecutory delusion was significantly correlated with a history of violence ($P = 0.001$, $P < 0.05$) whereas no other content of delusion was found correlated with violence. **CONCLUSIONS:** The persecutory delusion was the most common content of delusion followed by bizarre, Grandiose and idea of references. Only bizarre delusional content was found associated was sociocultural factors. The persecutory delusion was significantly correlated with any degree of violence.

KEYWORDS: Socio-demography, Association, Schizophrenia, Content of delusion, hallucinations, violence

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INTRODUCTION

An estimated 20 million people worldwide suffer from schizophrenia.¹ The Global Burden of Disease was quoted a point prevalence of schizophrenia was 0.4%.² Schizophrenia is a severe psychiatric disorder that normally begins in late adolescence or early adulthood period of life. It is characterized by gross distortion of thought, perception, and emotion. About 9% of males and 13% of female prisoners in Britain have a disability or special problem. In the United States, most patients have been diagnosed with psychiatric disorders at 60-70%.³ In Saudi Arabia, the number of patient patients in the group - patient was determined by is about 40-50%.⁴ Schizophrenia was also prevalent in Pakistan and about 1.5% of the general population was suffering from schizophrenia.⁵ It occurs in both male and female with same frequency and the onset usually occurs in between the ages of 15-40 years.

As many fundamental questions about the phenomenology of delusions were not clear.⁶ The Diagnostic and Statistical Manual of Mental Disorders, fourth edition (DSM-IV) defined delusion.⁷ a false belief that based on incorrect inference about external reality that is firmly sustained despite what almost everyone else believes and despite 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. When a false belief involves a value judgment, it is regarded as a delusion only when the judgment is so extreme as to defy credibility.

Content of Delusion has been the focus of multiple previous studies indicating persecutory delusions were the most prevalent content followed by the delusion of grandiosity.⁸⁻⁹ The content of delusion is clearly different in cultural and historical times. For example, Maher et al., The devil's delusions, were more common in Europe before the 20th century. These days, technology themes have replaced the themes of early times. The frequency of technical delusions increased from 12% in 1900 to 31% in 1960, reflecting major changes in content due to the interaction between delusional content and cultural context.¹⁰ Azhar et al. Kelantan) to assess the impact of cultural and ethnic factors on the content of delusions by conducting comparative studies on other ethnic and cultural groups (Malay and Chinese). He found that the delusion of persecution was the most common delusion in all groups. Regarding the content of delusions religious and

supernatural themes were common among both groups.¹¹ Similarly, delusional content has also been studied in relation to gender by Gecici et al. The study found the delusion of persecution, the delusion of poisoning, and erotomania were more prevalent in female than male schizophrenic patients.¹² Suhail et al also differentiate the content of delusion on the basis of social class and revealed that wealthy people are prone to have themes of having special powers and being a star in their delusions, while poorer are prone to have themes of black magic, persecution, control, and erotomania in their delusional content.⁹

Previous studies have been carried out to answer whether delusional content motivate psychotic patients for the act of violence.¹³⁻¹⁶ Studies by link and colleagues.^{17,18} showed that patients and former patients were significantly more likely to have a history of violence than non-patients. Differences being the patient's psychotic symptoms and particularly threat, slash, control-override symptoms and risk of violent behavior. These were further confirmed in an epidemiological study conducted in Israel.^{19,20} and epidemiological catchment area study²². Multiple studies have shown a positive association between delusions and suicidal ideation or behavior.^{21,22}

In view of above links among socio-demographic factors, the content of delusion, and acts of violence, it seems plausible to explore and establish a stronger association among socio-demographic factors, the content of delusions and violence in our part of the world especially at one of the biggest historical institute of psychiatry (SCJIP) in Pakistan. This study would help to predict the severity of violence, intent of suicide and therefore made us able to take appropriate measures for the safety of psychotic patients.

There was also a paucity of delusional content data in our country particularly such study has never been conducted at Cowasjee Jahangir Institute of Psychiatry, Liaquat University of Medical and Health Sciences (LUMHS), Hyderabad, Sindh. Therefore the purposed study would assess the association among socio-demographic factors, the content of delusion and degree of violence among schizophrenic patients.

MATERIAL AND METHODS: This cross-sectional study was conducted in outpatient department (OPD) of Sir Cowasji Jahangir Institute of Psychiatry (SCJIP), Hyderabad, Sindh, Pakistan for the period of one year from November 2018 to June 2019.

A total of 173 consecutive schizophrenic patients, diagnosed through DSM IV criteria, who were reported at OPD of SCJIP, during the study period were included in the study.

All consecutive adult psychiatric patients of both sex having age between 18 to 60 years, who met the clinical diagnosis of schizophrenia according to DSM-IV TR Criteria (8) and were capable of the productive interview according to their mental age, were included in the study. While Schizophrenics with comorbid substance abuse, Schizophrenics with a comorbid general medical condition, Schizophrenics previously treated with anti-psychotics and All Non-schizophrenic-psychotics were excluded.

Data Collection: The study protocol was approved by the synopsis review committee; ethics review committee (ERC) and advance studies & research board of Liaquat University of Medical and Health Sciences (LUMHS), Jamshoro, Sindh. All those adult schizophrenia patients, who were diagnosed through DSM-IV criteria and reported and the outpatient department (OPD) of Sir Cowasji Jahangir Institute of Psychiatry (SCJIP), Hyderabad during the study period and fulfill the inclusion criteria, were included in the study. Written Informed consent was taken from every study participants either from participant himself or from their attendant.

Study patients were evaluated by the attending psychiatrist through taking detail history and examination. Socio-demographic information, associated chronic illness (like diabetes/ hypertension/ chronic liver disease/ ischemic heart disease/ other psychiatric illness), the content of delusion, type of hallucination, type of harm and degree of violence data were taken on the pre-designed semi-structured questionnaire. The delusional content was classified into 17 categories according to the theme (Bizarre/ Erotomania/ Persecutory/ Grandiose/ idea of reference/ thought Echo/ Delusion of control/ delusion of jealousy/ delusion of infidelity/ religious/ thought broadcasting/ thought insertion/ nihilistic delusion/ quiescent delusion mixed delusion and others). All data were recorded on a semi-structured proforma by the investigator himself in real-time from the OPD.

Data analysis: Data entry and analysis were performed by using statistical package for social sciences (SPSS) version 16 software. Categorical data such as sex, marital status, religion, ethnicity, residence, occupation, education, and income were analyzed by taking frequencies and proportions. Mean and standard deviation (SD) were calculated for continuous variables like age. For the association between socio-demographic variables and content of delusion, Pearson's chi-square test was performed. A p-value of < 0.05 was considered statistically significant.

RESULTS: A total of 173 schizophrenic patients were included in the study and investigated for the presence of delusional content and history of violence, which were reported during the study period at the outpatient department of Sir Cowasji Jehangir Institute of Psychiatry Sindh, Pakistan. Nearly one-third of the patients 53 (30.6%) came from Hyderabad and the rest of the patients came from all other parts of Sindh. As far as rural and urban distribution of participants is concerned, nearly two-thirds of participants belong from the rural area. (See table 1).

Out of the total 173 study schizophrenic patients, male participants were 113 (65.3%) and female participants were 60 (34.7%). The male to female ratio was 2:1. (See table 1). The mean age of the total 173 study patients was 31.3 ± 9.3 years ranging from 18 to 60 years. The mean age of male patients was 30.9 ± 9.2 whereas the mean age of female patients was 31.9 ± 9.6 . (See table 1). Mostly study patients 101 (58.4 %) were fall in the young age group (18-30 years) or in the early adult age group (31-40 years), 45 (26.0%). Gradually the number of study patients decreased with the increase in age and only 4 (2.3 %) study patients fell in the age category greater than 50 years. (See table 1).

Among the religious background of the study participants, Nearly 152 (88 %) of study participants were Muslims, Hindu participants were 20 (11.6%) and only 1 (0.6) participant was Christian. (See table 1). According to ethnicity, majority participants 91 (52.6%) were Sindhi, followed by Siraiki 42 (24.3%), Mohajir (Urdu Speaking) 25 (14.5%), Punjabi 7 (4.0%), Balochi 5 (2.9%) and Pathan 3 (1.7%). (see table 1).

Regarding marital status, ever married participants were 102 (59 %) and never married were 71 (41%), details were seen in table 1. Significant numbers of participants have either no formal education 69 (40 %)

or 41 (23.5%) have baseline education (up to matric). For further details please see table 1. Regarding the employment status of study participants, the majority of study participants 101 (58.4 %) was unemployed or just doing house chores. Only 32 (18.5 %) have a private job, 22 (12.7%) have a govt job and 18 (10.4%) participants were self-employee. (See table 1). Among male participants (113) more than half 60 (53 %) of participants were employed whereas among female participants (60) only 12 (20%) were employed.

The majority of study participants 101 (58.4%) have no individual monthly income. Among income participants 72 (41.6%), 24 (13.9%) have income less than rupees 10,000/- per month, 26 (15.0%) have income between 10 to 20 thousand rupees per month, 18 (10.4%) have income 20 to 50 thousand and only 4 (2.3%) study participants have income beyond 50 thousand per month. (See table 1).

Among study schizophrenia patients different delusional content was identified. Persecutory delusion was most frequent 81 (46.8%) followed by bizarre 52 (30.1%), grandiose 36 (20.8%), idea of reference 18 (10.4%), religious 8 (4.6%), thought broadcasting 8 (4.6%), Erotomania 4 (2.3%), Delusion of control 4 (2.3%), Delusion of infidelity 3 (1.7%), Delusion of jealousy 1 (0.6%) and thought insertion 1(0.6%).(see table 1). The degree of violence was also recorded among study participants. Most frequent was 2nd-degree violence seen among 42 (24.3%) study participants followed by 3rd-degree violence 18 (10.4%) then 1st-degree violence was seen among 10 (5.8 %) study participants. No violence history was recorded among majority 103 (59.5%) of study participants (See table 1).

Sociodemographic variables (age, gender, religion, ethnicity, marital status, residence, education, employment, monthly income) and history of violence were correlated with identified content of delusion (Bizarre, Erotomania, Persecutory, Grandiose, Idea of reference, delusion of control, delusion of jealousy, delusion of infidelity, religious, thought broadcasting and thought insertion)

by performing Pearson's chi-square test.as shown if figure 1.

The correlation was seen between gender and content of delusion by performing a chi-square test and there was no relationship found between gender and different identified content of delusion (See table 2). The age variable was divided into two categories that were age group of young & early adult (18 to 40 years) and other was the adult age group (> 40 years). Age categories were cross tabbed with the content of delusion, only Bizarre (P=0.02) content of delusion was significantly correlated with age and remaining identified content of delusions were not found related. See table 2.

Religion, marital status and rural/urban residence of study participants have no significant relationship with the content of delusion (See tables 2). Whereas the ethnicity variable was found significantly correlated with the bizarre content of delusion (P < 0.05) (See table 2). Education variable was divide into non-educated and educated and then correlated with the content of delusion, only bizarre delusional content is statistically correlated with education (P=0.03) rest of content of delusions were found no relationship with education. Similarly, the employment variable was converted into un-employment and employment categories and then related to the content of delusion. Bizarre (P=0.00, P< 0.05) was found significantly correlated with employment status and the rest of the content of delusion was not related (See table 2). While relating income variable with the content of delusion, only bizarre (P=0.00, P< 0.05), delusional content was found statistically correlated with income (see table 2).

Presence of Violence (any degree of violence) was correlated with the content of delusions, and found that only persecutory delusional content was significantly correlated (P=0.002, P< 0.05) with violence and rest of the identified content of delusion were no relationship with violence. See table 2.

Table 1: Distribution of patients according demographic details (n=173)

Variables	Frequency	Proportion
Mean age ± SD (Rnage)	31.3 ± 9.3	(18-60)
Residence		
Rural	110	63.6%
Urban	31	17.9%
Semi-urban	32	18.5%
Total	173	100
Sex		
Male	113	65.3
Female	60	34.7

Age Categories		
Young age group (18-30 years)	101	58.4
Early adult group (31- 40 years)	45	26.0
Adult group (41-50 years)	23	13.3
Late adult group (> 50 years)	4	2.3
Total	173	100
Religion		
Muslim	152	87.9
Hindu	20	11.6
Christian	1	0.6
Total	173	100
Ethnicity		
Sindhi	91	52.6
Mohajir (Urdu Speaking)	25	14.5
Siraiki	42	24.3
Balochi	5	2.9
Punjabi	7	4.0
Pathan	3	1.7
Total	173	100
Marital status		
Un-married	71	41.0
Married	95	54.9
Divorced	3	1.7
Widow	2	1.2
Separated	2	1.2
Total	173	100
Education Status		
No Education	69	39.9
Primary	9	5.2
Middle	10	5.8
Matric	22	12.7
Intermediate	29	16.8
Graduate	11	6.4
Master	23	13.3
Total	173	100
Occupation		
Un-employee	83	48.0
Housewife	18	10.4
Govt Job	22	12.7
Private Job	32	18.5
Self-employee	18	10.4
Total	173	100
Monthly Income (PKR)		
No Income	101	58.4
< 10,000	24	13.9
10,000-20,000	26	15.0
20,001-50,000	18	10.4
> 50,000	4	2.3
Total	173	100
H/O Co-morbidity		
No associated disease	159	91.9
H/O Diabetes Mellitus	2	1.2
H/O Hypertension	5	2.8
H/O Chronic liver Disease	1	0.6
Obesity	3	1.7
Arthritis	1	0.6
Renal Stone	1	0.6
Hearing Loss (deafness)	1	0.6
Total	173	100
Content of delusion		
Bizarre	52	30.1
Erotomania	4	2.3
Persecutory	81	46.8
Grandiose	36	20.8
Idea of Reference	18	10.4
Delusion of control	4	2.3
Delusion of Jealousy	1	0.6
Delusion of Infidelity	3	1.7
Religious	8	4.6
Thought Broadcasting	8	4.6
Thought Insertion	1	0.6

Hallucination		
Auditory	106	61.3
Command	3	1.7
Visual	2	1.2
Tactile	2	1.2
None	65	37.6
Harmness		
Self-harm	44	25.4
Harm to family & friends	8	4.6
Aggression thearats	25	14.5
Aggression Fantasies	6	3.5
H/O Suicide Attempts	10	5.8
Degree of violence		
1 st degree violence	10	5.8
2 nd degree violence	42	24.3
3 rd degree violence	18	10.4
No Violence	103	59.5

Graph 1: Frequency of degree of violence among schizophrenic patients (n=173)

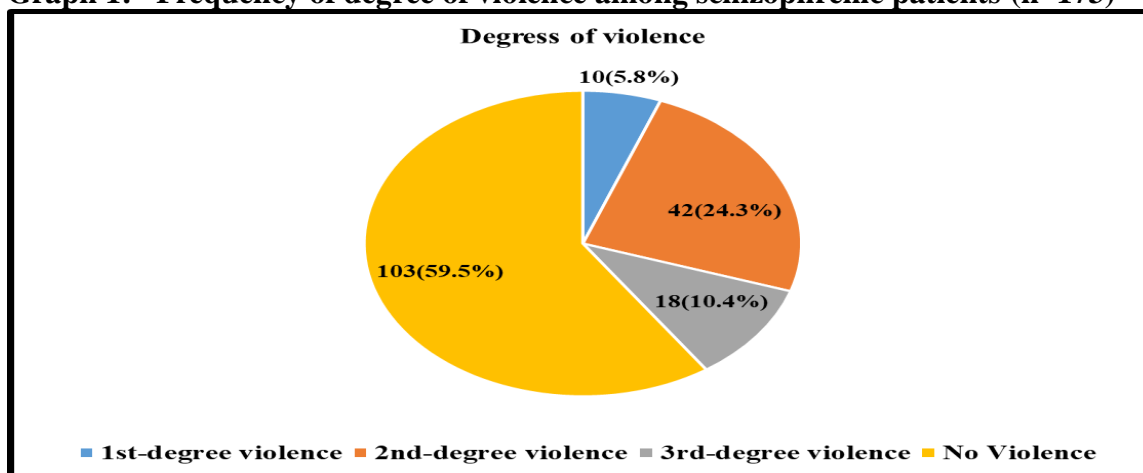


Table 2: Correlation of Gender and content of delusions among study patients (n=173)

Content of delusion (n)	Male (n=113) N (%)	Female (n=60) N (%)	Level of Significance (P-value)
Bizarre (52)	35 (30.9)	17 (28.3)	0.72
Erotomania (4)	3 (2.7)	1 (1.7)	NA [†]
Persecutory (81)	50 (44.2)	31 (51.7)	0.35
Grandiose (36)	23 (20.4)	13 (21.7)	0.84
Idea of Reference (18)	12 (10.6)	6 (10.0)	0.90
Delusion of control (4)	4 (3.5)	0 (0.0)	NA
Delusion of Jealousy (1)	1 (0.9)	0 (0.0)	NA
Delusion of Infidelity (3)	1 (0.9)	2 (3.3)	NA
Religious (8)	5 (4.4)	3 (5.0)	NA
Thought Broadcasting (8)	8 (7.1)	0 (0.0)	NA
Thought Insertion (1)	1 (0.9)	0 (0.0)	NA
Correlation of age category and content of delusions among study patients			
Content of delusion (n)	Young & early adult age group 18-40 years(n=146)	Adult Age Group > 40 years(n=27)	Level of Significance (P-value)
Bizarre (52)	49	3	0.02
Erotomania (4)	4	0	NA
Persecutory (81)	68	13	0.88
Grandiose (36)	32	4	0.40
Idea of Reference (18)	15	3	0.90
Delusion of control (4)	3	1	NA
The delusion of Jealousy (1)	1	0	NA
The delusion of Infidelity (3)	2	1	NA
Religious (8)	4	4	NA
Thought Broadcasting (8)	6	2	NA
Thought Insertion (1)	1	0	NA
Correlation of religion and content of delusions among study patients			
Content of delusion (n)	Muslim (n=152)	Non-Muslim (n=21)	Level of Significance (P-value)
Bizarre (52)	47	5	0.51
Erotomania (4)	4	0	NA
Persecutory (81)	68	13	0.14

Grandiose (36)	33	3	0.43		
Idea of Reference (18)	16	2	0.89		
Delusion of control (4)	3	1	NA		
The delusion of Jealousy (1)	1	0	NA		
The delusion of Infidelity (3)	2	1	NA		
Religious (8)	8	0	NA		
Thought Broadcasting (8)	8	0	NA		
Thought Insertion (1)	1	0	NA		
Correlation of marital status and content of delusions among study patients					
Content of delusion (n)	Nevermarried (n=71)	Ever Married (n=102)	Level of Significance (P-value)		
Bizarre (52)	24	28	0.37		
Erotomania (4)	2	2	NA		
Persecutory (81)	34	47	0.82		
Grandiose (36)	17	19	0.38		
Idea of Reference (18)	6	12	0.48		
Delusion of control (4)	2	2	NA		
The delusion of Jealousy (1)	1	0	NA		
The delusion of Infidelity (3)	1	2	NA		
Religious (8)	4	4	NA		
Thought Broadcasting (8)	4	4	NA		
Thought Insertion (1)	1	0	NA		
Correlation of ethnicity and content of delusions among study patients					
Content of delusion (n)	Sindhi (n=91) n(%)	Siraiki (n=42) n(%)	Mohajir (n=25) n(%)	Others^f (n=15) n(%)	Level of Significance (P-value)
Bizarre (52)	24 (26.4)	19 (45.2)	4 (16.0)	5 (33.3)	0.05
Erotomania (4)	0 (0.0)	1 (2.4)	1 (4.0)	2 (13.3)	NA
Persecutory (81)	46 (50.5)	18 (42.9)	14 (56.0)	3 (20.0)	0.11
Grandiose (36)	20 (21.9)	7 (16.7)	7 (28.0)	2 (13.3)	0.61
Idea of Reference (18)	10 (10.9)	7 (16.7)	0 (0.0)	1 (6.7)	0.18
Delusion of control (4)	2 (2.2)	2 (4.8)	0 (0.0)	0 (0.0)	NA
Delusion of Jealousy (1)	1 (1.1)	0 (0.0)	0 (0.0)	0 (0.0)	NA
Delusion of Infidelity (3)	2 (2.2)	0 (0.0)	0 (0.0)	1 (6.7)	NA
Religious (8)	6 (6.6)	0 (0.0)	1 (4.0)	1 (6.7)	0.39
Thought Broadcasting (8)	4 (4.4)	2 (4.8)	1 (4.0)	1 (6.7)	0.98
Thought Insertion (1)	1 (1.1)	0 (0.0)	0 (0.0)	0 (0.0)	NA
Correlation of residence and content of delusions among study patients					
Content of delusion (n)	Urban (n=63)	Rural (n=110)	Level of Significance (P-value)		
Bizarre (52)	37	15	0.18		
Erotomania (4)	2	2	NA		
Persecutory (81)	52	29	0.88		
Grandiose (36)	22	14	0.73		
Idea of Reference (18)	11	7	0.82		
Delusion of control (4)	3	1	NA		
The delusion of Jealousy (1)	0	1	NA		
The delusion of Infidelity (3)	2	1	NA		
Religious (8)	3	5	NA		
Thought Broadcasting (8)	7	1	NA		
Thought Insertion (1)	0	1	NA		
Correlation of education and content of delusions among study patients					
Content of delusion (n)	No education (n=69)	Education (n=104)	Level of Significance (P-value)		
Bizarre (52)	27	25	0.03		
Erotomania (4)	2	2	NA		
Persecutory (81)	33	48	0.83		
Grandiose (36)	11	25	0.20		
Idea of Reference (18)	8	10	0.68		
Delusion of control (4)	1	3	NA		
The delusion of Jealousy (1)	0	1	NA		
The delusion of Infidelity (3)	2	1	NA		
Religious (8)	1	7	NA		
Thought Broadcasting (8)	3	5	NA		
Thought Insertion (1)	0	1	NA		
Correlation of Employment and content of delusions among study patients					
Content of delusion (n)	Un-employment (n=83)	Employment (n=90)	Level of Significance (P-value)		
Bizarre (52)	36	16	0.00		
Erotomania (4)	0	4	NA		

Persecutory (81)	37	44	0.57
Grandiose (36)	16	20	0.63
Idea of Reference (18)	8	10	0.75
Delusion of control (4)	2	2	NA
The delusion of Jealousy (1)	1	0	NA
The delusion of Infidelity (3)	1	2	NA
Religious (8)	2	6	NA
Thought Broadcasting (8)	6	2	NA
Thought Insertion (1)	1	0	NA
Correlation of Income with the content of delusion among study patients			
Content of delusion (n)	No Income (n=101)	Income(n=72)	Level of Significance (P-value)
Bizarre (52)	42	10	0.00
Erotomania (4)	0	4	NA
Persecutory (81)	46	35	0.69
Grandiose (36)	17	19	0.13
Idea of Reference (18)	11	7	0.80
Delusion of control (4)	2	2	NA
The delusion of Jealousy (1)	1	0	NA
The delusion of Infidelity (3)	2	1	NA
Religious (8)	2	6	NA
Thought Broadcasting (8)	6	2	NA
Thought Insertion (1)	1	0	NA
Degree of violence and content of delusion among study patients			
Content of delusion (n)	No Violence (n=103)	Violence (n=70)	Level of Significance (P-value)
Bizarre (52)	27	25	0.18
Erotomania (4)	4	0	NA
Persecutory (81)	38	43	0.002
Grandiose (36)	22	14	0.83
Idea of Reference (18)	8	10	0.17
Delusion of control (4)	4	0	NA
The delusion of Jealousy (1)	0	1	NA
The delusion of Infidelity (3)	1	2	NA
Religious (8)	7	1	NA
Thought Broadcasting (8)	5	3	NA
Thought Insertion (1)	0	1	NA

¶ Others includes Punjabi, Balochi, and Pathan

¶ NA= Chi-Square test is not applicable because of 1 or 2 cells have expected count less than 5

DISCUSSION:

The main finding of the present study was the presence of persecutory delusion among schizophrenia patients was most common followed by bizarre, grandiose and idea of reference delusions. There was no statistically significant correlation was found between socio-demographic factors and the most common content of delusion (persecutory, grandiose and idea of reference) except Bizarre delusion. The persecutory delusion was significantly correlated with a history of violence. Whereas no other content of delusions was found correlated with violence.

Content of delusion has been studied in various previous studies. In Pakistan, the content of delusions has been evaluated by Suhail at al.⁹ in subjects with schizophrenic. Suhail at al reported that persecutory delusion was the most common type of delusion followed by grandiose delusion.⁹ Stompe et al.⁸ Austria among patients with the disease and schizophrenia patients Pakistan the results compared to the content of delusions persecutory delusions are common in both groups appeared. A similar finding was reported by the present study

that among schizophrenia patients persecutory delusion was most common followed by bizarre, grandiose and idea of reference delusions.

Content of delusions was also studied in relation to gender and this study found that delusion of persecution, Grandiose, and delusion of infidelity were more common in female whereas the bizarre, idea of reference, the delusion of control, thought broadcasting and Erotomania delusions were proportion wise more common in male schizophrenic patients. Gecici et al have also reported delusional content in relation to gender. He found that the delusion of persecution, the delusion of poisoning, and erotomania were more common in female than male schizophrenic patients.¹² As for age is concern this study reported that delusional content was related to the young and early adult age group (18-40 years). Delusions were started in adolescence and early young age group.⁷

Psychiatric symptoms were differently manifested in one culture to another and furthermore, unusual behavior in one culture may suppose as normal behavior in another culture. For instance, certain cultures

encourage specific kinds of beliefs like ideas of reference and deal with these ideas as normal beliefs according to their culture's norms.²³ The content of delusions was reported differs among different ethnic and cultural groups and it was still a mirror image of culture. Suhail at al correlated content of delusion with gender and social class and found that the content of delusions can differ between socio-cultural groups.⁹

In the current study, three main ethnic groups (Sindhi, Mohajir and Siraiki) were related with most frequent content of delusions (Persecutory, Grandiose, Bizarre and idea of reference) and the study found that Persecutory delusion was most common in Sindhi and Mohajir groups whereas bizarre delusion was most common in Siraiki group. Quite similar results were reported by Azhar et al.¹¹ He conducted a comparative study between two different ethnic and cultural groups that were Malay and Chinese at two different locations (Penang and Kelantan) in Malaysia and assessed the relationship between ethnic and cultural factors with the content of delusions. He found that persecutory delusions were the most common delusions in all groups. Regarding the content of delusions religious and supernatural themes were common among both groups.¹¹ Kim et al²⁴⁻²⁶ studies the differences in the content of delusions between three cultural groups: Korean, Korean-Chinese, and Chinese. As a result, China was seen in patients at least they were in the Korean-Chinese patients with moderate, grandiose, and the torture and jealousy overtake Korea showed the patient was found more often. Sin disaster compared with the other groups, patients were also more common in Korea.²⁴⁻²⁶

Schizophrenic patients thus a result of the cultural and social impact of their delusions appear to change the content. But ideas like magic and supernatural evil is still not available and firmly in both Western and non-Western societies sustained note. Dominated by the ignorance of the influence on the content of the source computer, radio, and in the days of the influence of laser sources that lead to the magic of the "technical" traditional magic and the supernatural has changed somewhat away from sources. This refers to the content of religious delusions, and ignorance of the secret agents and political organizations from the great saint of God, Napoleon and changed as well. Some of the relative frequency of the delusions over time, for example, the religious delusions and delusions of persecution, have been in the light of the cultural context changes.²⁷

This was a small scale study conducted with a limited time period and financial resources. The sample size was small therefore, the level of significance for all identified content of delusions with sociodemographic variables was not possible to analyze. The study sample was selected from only one psychiatric hospital of Sindh province so the study result would have limited to be representative of all countries. Another limitation of the study was no standardized questionnaire was used to measure the outcome variable (the content of delusion) except DSM-IV criteria based diagnosis by a psychiatrist and also by the investigator himself interviewed the patients to obtain first-hand accounts of their delusions and recorded on study proforma.

This study also found the association of content of delusion with the act of violence. The study found that persecutory delusion was significantly correlated with a history of violence and the rest of the delusional content did not have any relationship with violence. Previous studies have also been identified as the correlation between delusional content with an act of violence.¹³⁻¹⁶ Cheung et al,²⁸ schizophrenic patients in relation to violent behavior have studied the phenomenology of evil. As a result, people with schizophrenia in aggressive behavior, which have been produced by the disaster found that had been associated with negative emotions. Specifically, persecutory delusions and violent behavior correlated grandiose delusions were among a group of non-violence is more common. A similar association was also reported by Appelbaum et al.²⁹ The study concluded that there was a relationship between violence and delusions, especially with persecutory delusions.

Conclusion: Among different identified content of delusion in the study (Bizarre, Erotomania, persecutory, grandiose, idea of references, delusion of control, delusion of jealousy, delusion of infidelity, religious, thought broadcasting and thought insertion), persecutory delusion was the most common content of delusion followed by bizarre, grandiose and idea of references. Only bizarre delusional content was found a statistically significant relationship with different sociocultural factors (Age, ethnicity, education, employment, and monthly income). The persecutory delusion was significantly correlated with the act of violence.

ETHICS APPROVAL: The ERC gave ethical review approval

CONSENT TO PARTICIPATE: written and verbal consent was taken from subjects and next of kin

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