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Original Research Article

Effectiveness of Psychoeducation on Attitude towards Persons with Negative Symptoms of Schizophrenia among Their Family Members

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ABSTRACT

Background: Family members' attitude towards the clients plays a significant role in the functioning, treatment adherence and better quality of life for the clients. Lack of proper knowledge about illness, unparalleled expectations from clients and limited mental health services and facilities contribute towards the development of negative attitude towards the client.
Aim: The present study aimed to find out the impact of psychoeducation on attitude towards persons with negative symptoms of schizophrenia among their family members.
Materials and methods: Quasi experimental study design was adopted. Though purposive sampling 30 dyads of patients and family members each from control and experimental group took part in the study. Measures include socio demographic proforma, Positive and Negative syndrome scale (PANSS), Scale for assessment of negative symptoms (SANS) and Family attitude scale (FAS). Three sessions of family psychoeducation were provided to the experimental group during the hospital stay of the clients. Pre test data was collected before the implementation of family psychoeducation and post test data after one month i.e. at the first follow up of the clients after discharge from the hospital. Descriptive statistics, inferential statistics paired, independent '*t*' test, Pearson's correlation and chi square were computed.
Results: A significant difference in the pre test and post test family attitude score was found in the experimental group at P<0.001. However, no significant difference was found in the control group.
Conclusions: Family psychoeducation was found to be effective for improving the attitude of the family members towards the client with negative symptoms of schizophrenia.

Key words: Psychoeducation, attitude, negative symptoms of schizophrenia

INTRODUCTION

Schizophrenia is complex mental disorders which persist as most enigmatic form of psychological experience.[1] The symptoms of schizophrenia sway clients in a wide range. Negative symptoms of schizophrenia results in long term disability of the clients. It also causes huge impact on the families and society.[2] Early age of onset and chronic nature of the of illness generates large amount of burden on the families.[3] Provencher et al.[4] reported that objective burden experience by the caregivers in the forms of physical problems, financial difficulties and household tensions were related to severity of negative symptoms whereas subjective burden are associated with both the positive and negative symptoms severity. Families also face drastic changes in their lives, which require significant changes in behavior and capacities for dealing with strong emotion.[5] All these may lead to the development of negative attitude or high

expressed emotions towards their clients. Weisman et al.[6] found that high expressed emotions families of schizophrenia patients viewed illness and associated symptoms under patient control and symptoms reflecting behavioral deficits like poor hygiene were criticized more than the symptoms like hallucinations. Another study by Harrison et al.[7] found that low expressed emotion as compared with high expressed emotion families had more knowledge on illness and were less likely to attribute the cause of negative symptoms to clients personality.

Family interventions augmented with pharmacotherapy results in reduced relapse rate, improved psychopathology and better functioning of the client in the social and vocational aspects.[8] Therefore, educating the family members about the illness may help them to understand the nature of the illness and symptoms clients exhibit are not under the control of the clients. This may help to develop better attitude towards the client which may directly or indirectly affects the adherence, relapse and quality of life of the clients. However, there is heterogeneous evidence on the effectiveness of psychoeducation on the family attitude of the family members. Budiono et al.[9] reported that expressed emotion was decreased among the experimental group after receiving psychoeducation. Similarly Bulut et al.[10] also found lower level of burden from baseline to follow up among the experimental group followed by the eight sessions of psychoeducation. However, in a studies by Cozolino et al.[11] showed that education about schizophrenia among high expressed emotion relatives does not showed information gain however showed a significant education effect on their sense of understanding of illness.

Usually, the family members seek the inpatient treatment for the clients when symptoms like aggressive behavior, delusions, and hallucinations flare up. Family members found symptoms like withdrawn behavior, apathy, alogia, avolition less disturbing. Attitude of the the family members towards the clients may vary due to the diverse symptoms. Limited studies are carried out in the north eastern part of India focusing on the effectiveness of psychoeducation on the family members attitude for the clients with negative symptoms of schizophrenia. In addition, certain factors like the cultural practices, belief system and outlook towards the symptoms may influence the attitude of the family members. Therefore, the study was conducted with the aim to find out the impact of family psychoeducation on the family attitudes towards the persons with negative symptoms of schizophrenia.

MATERIALS AND METHOD

Study design:

The study adopted a quasi-experimental research design. The study was carried out at the inpatient and outpatient department of a tertiary care hospital located at the north eastern part of the country. The participants were selected through purposive sampling technique. The participants included in the study are the family members of the clients admitted with the negative symptoms of schizophrenia, who had provided care to the clients for more than one year and age above 18 years. Family members with any physical and mental illness are excluded from the study. A total of 60 dyads of patients and family members 30 each from control and experimental group participated in the study. One dyads for control group and three dyads for experimental group drop out during the time of post test.

Outcome measures: Negative symptoms of schizophrenia: This was assessed by Positive and negative syndrome scale (PANSS) and Scale for the assessment of negative symptoms (SANS). PANSS is a 30 items rating scale rated from 1 to 7. It includes 7 positive scales, 7 negative scale and 16 general psychopathology scale and composite scale score indicate the degree of predominance of one syndrome in relative

to the other.[12]SANS measure the aspects of negative symptoms at six points, 0 to 5. The score is rated for 25 items.[13]

Attitude of family members: Assessed with the Family attitude Scale (FAS) developed by David J. Kavanagh. The scale measures the current attitudes and behaviors of relatives towards patients.[14,15] The scale internally consisted the measure that was closely related to hostility/ criticism aspects of expressed emotion.[16] It consist of 30 items rated at 5 point from 4 to 0.Higher score indicate higher level of burden and criticism. Score 60 and above predicted relapse and high expressed emotion.[17] The English version of the scale was translated into Assamese language following the standard procedure. The reliability of the translated tool was found to be 0.75(Spearman-Brown coefficient)

Family psychoeducation: The family psychoeducation module was developed through extensive reviews of literature, consultation with the experts and considering the cultural aspects of the region. The module was validated by seven experts from the field of mental health. The module comprised of three sessions with the main aim to educate the family members about the illness which will help them to develop positive attitude towards the patients. Each session lasted for one hour. Session I focused on the misconceptions about mental illness and brief concept on schizophrenia. Session II concentrated on symptoms and treatment modalities of schizophrenia with special emphasis on negative symptoms. Session III dealt with impact of negative symptoms and responsibilities and role of the family members and stress management techniques.

Procedure: Ethical clearance was obtained from the concerned authorities to conduct the study. The participants were informed about the purpose of the study and written informed consent was obtained from them to participate in the study.

Data were collected from November'2020 to May 2021. To reduce the chances of contamination data was collected first from the control group followed by the experimental group. Persons admitted with the diagnosis of schizophrenia as per 1CD 10 criteria were assess on the 2nd day of admission for the presence of negative symptoms of schizophrenia from the case file. On the 5th day negative symptoms were assessed through PANSS and SANS. Patients with predominance negative symptoms in PANSS and any three prominent negative symptoms in SANS and their family members which fulfill the inclusion and exclusion criteria were selected for the study. On the same day socio demographic data were collected and pre- test data was collected through the administration of Family attitude Scale (FAS) from the participants. Family psychoeducation was provided on the 11th, 14th and 16th days of client admission to the participants with the use of appropriate AV aids. Post- test data was collected after one month i.e. at the first follow up of the clients after discharge from the hospital. Same process of data collection was carried out for the control group without the intervention. After the post –test, one session of need based family psychoeducation was provided for the control group.

Statistical Analysis:

The data was analyzed using Statistical Packages for Social Sciences (SPSS) version 20. Descriptive statistics frequency, percentage; mean, standard deviation and range were used for the description of demographic data and negative symptoms. Chi square to find significant difference between the groups, Paired and independent '*t*' test were used to assess the effectiveness of family psychoeducation and Pearson's correlation to compute correlation between the selected socio demographic variables and family attitude score.

RESULT

Table 1: Description of discrete socio demographic variables of family members of persons with negative symptoms of schizophrenia. N=30+30=60

Variables		Control Group n=30		Experimental Group n=30	
		Frequency	Percentage	Frequency	Percentage
Gender	Male	18	60.0%	18	60.0%
	Female	12	40.0%	12	40.0%
Relationship to the patient	Parent	18	60.0%	17	56.7%
	Spouse	7	23.3%	3	10.0%
	Sibling	5	16.7%	8	26.7%
	Others	0	0%	2	6.7%
Education	Primary School	12	40.0%	10	33.3%
	Middle School	1	3.3%	6	20.0%
	High School	8	26.7%	5	16.7%
	Higher Secondary & Above	9	30.0%	8	26.7%
	Professionals	0	0%	1	3.3%
Marital status	Unmarried	0	0%	7	23.3%
	Married	27	90.0%	17	56.7%
	Widow/Widower	3	10.0%	6	20.0%
Currently employed	Yes	20	66.7%	19	63.3%
	No	10	33.3%	11	36.7%
Variables		**Control Group n=30**		**Experimental Group n=30**	
		Frequency	**Percentage**	**Frequency**	**Percentage**
Occupation	Home-maker	8	26.7%	7	23.3%
	Cultivator	6	20.0%	12	40.0%
	Daily wage workers	6	20.0%	4	13.3%
	Government Employee	1	3.3%	2	6.7%
	Others	9	30.0%	5	16.7%
Domicile	Rural	27	90.0%	26	86.7%
	Urban	3	10.0%	4	13.3%
Received any psychosocial treatment before	Yes	6	20.0%	2	6.7%
	No	24	80%	28	93.3%

Table 2: Description of continuous socio demographic variables of family members of persons with negative symptoms of schizophrenia. N=30+30=60

Variables	Control Group(n=30)				Experimental Group(n=30)			
	Minimum	Maximum	Mean	Standard Deviation	Minimum	Maximum	Mean	Standard Deviation
Age (years)	26	70	47.27	13.18	21	65	42.73	13.61
Total time spend for giving care per day (minutes)	30	300	114.00	77.35	30	180	78.00	41.39
Total time taken to reach hospital from home (hours)	1	14	4.70	2.99	1	12	4.53	2.64

Table 3: Description of pre- intervention comparison of socio demographic variables of family members of persons admitted with schizophrenia for control and experimental group. N=30+30=60

Variables		Control group n==30		Experimental Group n=30		χ^2	P value
		Frequency	Percentage	Frequency	Percentage		
Gender	Male	18	60.0%	18	60.0%	0.00	1.00
	Female	12	40.0%	12	40.0%		
Occupation	Homemaker	8	26.7%	8	23.3%	3.34	0.53
	Cultivator	6	20.0%	11	40.0%		
Occupation	Daily wage workers	6	20.0%	4	13.3%	3.34	0.53
	Govt. employee	1	3.3%	2	6.7%		
	Others	9	30.0%	5	16.7%		
Employed	Yes	20	66.7%	19	63.3%	0.073	1.00
	No	10	33.3%	11	36.7%		
Domicile	Rural	27	90.05	26	86.7%	0.16	1.00
	Urban	3	10.0%	4	13.3%		
Received psychosocial treatment	Yes	6	20.0%	2	6.7%	2.30	0.25
	No	24	80.0%	28	93.3%		

Table 4: Description of negative symptom score of persons with negative symptoms of schizophrenia. N=30+30=60

Variables		Control Group(n=30)			Experimental Group(n=30)		
		Minimum	Maximum	Mean ±SD	Minimum	Maximum	Mean ±SD
Domain of PANSS	Positive symptom of PANSS	9	23	14.87±3.50	7	23	15.33±4.45
	Negative symptom of PANSS	22	37	29.90±3.60	24	38	30.83±3.38
	Composite score of PANSS	-23	-7	-15.03±4.57	-30	-6	-15.43±5.77

Variables		Control Group(n=30)			Experimental Group(n=30)		
Domain of PANSS		Minimum	Maximum	Mean ±SD	Minimum	Maximum	Mean ±SD
	General psychopathology of PANSS	34	98	51.20±10.72	38	64	51.47±6.66
	Total score of PANSS	76	139	95.90±11.40	74	116	97.40±10.23
	Composite score of PANSS	-23	-7	-15.03±4.57	-30	-6	-15.435.77
Domain of SANS	Affective flattening score of SANS	21	32	26.13±2.90	17	34	25.63±4.07
	Alogia score of SANS	10	19	15.20±2.52	3	25	15.40±4.15
	Avolition score of SANS	9	17	13.40±1.90	4	18	13.43±2.83
	Anhedonia score of SANS	3	21	17.30±3.60	15	21	18.33±2.35
	Attention score of SANS	7	13	9.93±1.41	6	15	9.90±1.86
	Total score of SANS	52	100	81.33±9.99	55	113	82.77±12.35

Table 5: Description of family attitude score for family members of persons with negative symptoms of schizophrenia. N=30+30=60

Variable	Control Group (n=30)			Experimental Group (n=30)		
	Minimum	Maximum	Mean ±SD	Minimum	Maximum	Mean ±SD
Family Attitude Score	28	68	43.67±7.82	27	56	41.63±8.88

Table 6: Mean, standard deviation and paired '*t*' test value of pre test and post test family attitude score in control and experimental group.

Parameters	Control Group n=29				Experimental Group n=27			
	Mean	SD	'*t*'(df)	P value	Mean	SD	'*t*'(df)	P value
Pre-test family attitude score	43.97	7.78	-0.029(28)	0.977	40.67	8.76	5.51(26)	**<0.001***
Post test family attitude score	44.00	8.81			28.04	11.11		

Note:=Significant*

Table 7: Mean, standard deviation and independent '*t*' test value of pre test and post test family attitude score in control and experimental group. N=29+27=56

Group	Pre test FAS score Mean ±SD	*t*(df)	P value	Post test FAS score Mean ±SD	*t*(df)	P value
Control group	43.67±7.82	0.941 (58)	0.351	39.00±14.65	5.97 (54)	**<0.001***
Experimental group	44.00±8.86			28.04±11.11		

Note:=Significant*

Table 8: Correlation between the socio-demographic of family members of persons with negative symptoms of schizophrenia and family attitude as measured by FAS for control group. N=30

Variables	Pearson r value for Family attitude score	P value	Significance
Age in years	0.313	0.09	NS
Duration of care giving	0.716	0.35	NS
Total hours taken to reach hospital	0.266	0.155	NS

Table 9: Correlation between the socio-demographic of family members of persons with negative symptoms of schizophrenia and family attitude as measured by FAS for experimental group. N=30

Variables	Pearson r value for Family attitude score	P value	Significance
Age in years	-0.274	0.144	NS
Duration of care giving	-0.038	0.843	NS
Total hours taken to reach hospital	-0.139	0.463	NS

Table 1 describe the socio demographic variables of the participants in terms of frequency and percentage.

Table 2 summarize the socio demographic variables of the participants for the continuous variables.

Table no 3 showed no significant difference in the composition of the control and experimental group in respect with the socio demographic variables.

Table no 4 described the mean negative symptoms score of the persons with negative symptoms of schizophrenia measured by PANSS and SANS scale.

Table no 5 showed the mean pre test family attitude score for the control and experimental group. In both the group the mean was less than 60 which interprets low expressed emotion towards their clients.

Table no 6 paired 't' test showed a significant difference in the pre-test and post- test family attitude score in the experimental group. No significant difference was found in the control group.

Table no 7 independent 't' test revealed no significant difference in the pre test score between the groups. However, a

significant difference was post test score between the groups.

Table no 8 and 9 shows no significant correlation between the selected socio demographic variables and the family attitude score for control and experimental group.

DISCUSSION

In the control group and experimental group 60 % of the primary caregivers were male and mean age was (47.27±13.18) for control and (42.73±13.61) years for experimental group. Zahid et al.[18] reported that 80% of the caregivers were male by gender. Nirmala et al.[19] found that mean age of the caregivers was (47.3±13.2) years.

With regard to the relationship with patient in the control group 60% were parents and 56.7% in experimental group. Similar findings was found by Saddath et al.[20] in which 80.3% of the family members were parents who were providing care to the patients. Hsiao et al.[21] also found 63% were parent in relation with patient.

In the control group 40 % had studied up to primary school and 33.3% in the experimental group. Hsiao et al. [21] found that 52.6% of the primary caregivers studied up to junior school or below. Gogoi.[22] also reported that 34% of family members studied up to primary school.

Majority 90% of the primary caregivers were married, 66.7 % were currently employed and 90% belong to rural background for the control group. In the experimental group 56.7 % were married and 63.3% were employed and 86.7% were from rural background. In the study as the mean age in both the group was above 40 years which might be the factor that majority of the primary caregivers were married. The study finding is supported by Saddath et al.[20] in which 80.3% of the family members were married.

In the control group the mean time spend for giving care to patients per day was (114.00±77.35) minutes and total time taken to reach hospital from home was (4.70±2.99) hours and 80% had not received any psychosocial treatment before. For the experimental group mean total time spend for giving care per day was (78.00±41.39) hours, mean total time taken to reach hospital from home was (4.53±2.64) hours and 93.3% had not received any psychosocial treatment before. Caqueo-Urizar et al.[23] found that 58% (24) of the caregivers of schizophrenia clients had not received any psychosocial treatment. Contradictory study results were shown by Gogoi.[22] that 75% had contact of about ten hours with the patient.

It was found that mean composite score of Positive and Negative syndrome scale (PANSS) for control and experimental group was (15.03±4.57) (15.43±5.77). Mean total score of SANS for control group was (81.33±9.99) and (82.77±12.35) for experimental group. The study findings are consistent with Nath et al.[24] in which the mean total score of SANS in control group was 78.80±15.54 and 74.83±17.01 for the experimental group.

Attitude of the primary caregivers towards the client is measured by Family Attitude Scale which expresses their reciprocal attitude towards the patient. The tool interprets that the presence of high expressed emotion when the total score is more than 60 and low expressed emotion when the score is less than 60. In the present study it was found that the mean family attitude score for control group was (43.67±7.82) and (41.63±8.88) for experimental group. The score interprets that primary caregiver had low expressed emotion towards their patients. The findings of the study are supported by Gogoi.[22] that the family members of persons with schizophrenia 79% had low expressed emotion and 21% had high expressed emotion. However, a contradictory results is provided by Nirmala et al.[19] where mean total score of Family emotional involvement and criticism scale (FEICS) was 55.6±5.5 which revealed high

expressed emotion by the caregivers towards patients.

Independent 't' test computed between the pretest family attitude score of control and experimental group showed that no significant difference t(df)=0.941(58), P=0.351.However, for the experimental group paired 't' test between the pre test and post test family attitude score shows a significant difference t(df)=5.51(26), P<0.001. Worakul et al.[25] found a significant difference in the attitude score (P=0.000) of schizophrenia patients caregivers after the psychoeducational program. Ran et al.[26] also found a significant change in relative caring attitude, gain in knowledge towards the patients by the family members after the psychoeducation program.

Contradictory results were found in which Cozolino et al.[27] showed no significant main effect of education on high and low level expressed emotion parents and siblings of schizophrenia patients.

A Pearson correlation was computed between the selected socio demographic variables with family attitude of the primary caregivers for both the experimental and control group. No significant correlation was found in the control and experimental group.

Although the study has contributed on the effectiveness of psychoeducation on the family members attitude towards the persons with negative symptoms of schizophrenia. There are some limitations to the study. Long term follow up assessment of the effectiveness of the interventions after one month can be carried out to ascertain how long the impact of the intervention is maintained. Family members who accompanied the client during the time of hospitalizations were only included in the study.

CONCLUSION

The study demonstrates the efficacy of psychoeducation on attitude towards persons with negative symptoms of schizophrenia among their family members. Understanding and knowing about the illness and responsibilities of the family members will help them to change a positive outlook towards the symptoms, functioning and abilities of the clients. Develop structured module on the family psychoeducation can be used by mental health nurse at different settings to help the family members educate, dealt with the burden and stress related to the care of the clients. The study also complements to the existing literature on the family psychoeducation efficacy for the family members.

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REFERENCES

1. Lieberman JA, Stroup S, Perkins DO. Essentials of Schizophrenia. United States Of America. American Psychiatric Publishing, Inc. 1000 Wilson Boulevard; 2012.
2. Mueser KT, JesteDV.Clinical Handbook of Schizophrenia. 2008.United States Of America.The Guilford Press, A Division of Guilford Publications, Inc.72 Spring Street, New York.
3. Krikpatrick B, Miller B, Garcia RC, Fernandez –Egega E. Schizophrenia : A Systemic disorder. ClinSchizophrRelat Psychosis [Internet] 2014[Cited on 2019 April 21];8(2):73-79.Available from: https://doi:10.3371/CSRP.KIMI.031513
4. Provencher HL, MueserKT.Positive and negative symptom behaviors and caregiver burden in the relatives of persons with schizophrenia. Schizophrenia Research [Internet].1997[cited on 2020 Sep 12];26(1): 71-80. Available from: https://doi.org/10.1016/S0920-9964(97)00043-1

5. Hatfield AB. Family education in mental illness.1sted.United states of America. The Guilford Press. A Division of Guilford Publications,Inc;2009.
6. Weisman A G, Nuechterlein K, Goldstein, M J, Snyder K. Expressed emotion, attributions, and schizophrenia symptom dimensions. Journal of Abnormal Psychology[Internet].1998[cited 2019 Feb 20];107(2):355–359. Available from: https://doi.org/10.1037/0021-843X.107.2.355]
7. Harrison CA, DaddsMR.Attributions to symptomatology: An exploration of family factors associated with expressed emotion.Australian and New Zealand journal of psychiatry[Internet].1992[cited 2019 Feb 25].Available from: https://doi.org/10.3109/00048679209072063
8. Indra S. Effect of family intervention package on family functioning among caregivers of chronic schizophrenia. Indian Journal of Psychiatric Nursing.2016.11(6).
9. Budoino W, Kantono K, Kristianto FC, Avanti C, Herawati F. Psychoeduation Improved Illness Perception and Expressed Emotion of Family Caregivers of Patients with Schizophrenia. International Journal of Environmental Research and Public Health.[Internet]2021[cited on 2021 June 5] .18:7522.Available from : https://doi.org/10.3390/ijerph18147522
10. Bulut M, Arslantas MH, Dereboy IF. Effects of Psychoeducation Given to Caregivers of People With a Diagnosis of Schizophrenia. Issues mental health nursing [Internet]. 2016 [cited on 2018 August 21]; 37(11).Available from: https://doi/fig.org/10.1080/01612840.2016.122203
11. Cozolino LJ, Goldstein JM, Nuechterin KH, West KL, Snyder KS.The Impact of Education About Schizophrenia on Relatives Varying in Expressed Emotion. Schizophrenia Bulletin[Internet].1998[cited 2018 Feb 14];14(4).Available from https://academic.oup.com/schizophreniabulletin/article-abstract/14/4/675/1871107
12. Kay SR, Fiszbein A, OplerLA. The positive and negative syndrome scale(PANSS) for schizophrenia. Schizophrenia Bulletin [Internet].1987 [cited on 2018 Jan 6];13(2). Available from: https:// doi: org/10.1093/schbul/13.2.261
13. Andreasen NC. The scale for the assessment of negative symptoms (SANS):Conceptual and theoretical foundations. The British Journal of Psychiatry [Internet]. 1989 [cited on 2018 Jan 6];155(7). Available from :https://www.cambridge.org/core
14. Kavanagh DJ, Pourmand D, White A, Robertson D, Halford K, Vaughan K. Predictive validity of the Family Attitude Scale in people with Psychosis.Psychiatry Res[Internet]2008[cited on 2017 Dec3];160:356-63.Available from: https://doi:10.1016/j.psychres.2007.08.003
15. Vandeleur CL, Kavanagh DJ, FavezN, Castelao E, Preisig M. French version of the family attitude scale: psychometric properties and relation of attitudes to the respondent's psychiatric status.Psychaitry Research.[Internet]. 2013[cited on 2018 March 12];210: 641-646.Available from: http://dx.doi.org/10.1016/j.psychres.2103.07.008
16. Yu DSF, Kwok T, Choy J, Kavanagh DJ. Measuring the expressed emotion in Chinese family caregivers of persons with dementia: Validation of a Chinese version of the Family Attitude Scale. International Journal of Nursing Studies. [Internet] 2016 [cited on 2019 June 5];55:50-59.Available from: http://dx.doi.org/10.1016/j.ijnurstu.2015.11.005
17. Kavanagh DJ, Halloran PO, Manicavasagar V, Clark D, PiatkowskaO, Tennant C et al. The family attitude scale:reliability and validity of new scale for measuring emotional climate of families. Psychiatry Research.1997;70:185-195
18. Zahid MA, Ohaeri JU. Relationship of family caregiver burden with quality of care and psychopathology in a sample of Arab subjects with schizophrenia. BMC Psychiatry [Internet].2010[cited on 2020 September 15];10:71.Available from http://www.biomedcentral.com/1471-244X/10/71
19. 19.Nirmala BP, Vranda MN, Reddy S. Expressed emotions and care givers burden in patients with schizophrenia. Indian Journal of Psychosocial medicine [Internet]. 2011[cited on 2019 June 3];33(2). Available from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3271483

20. Sadath A, Muralidhar D, Varambally S, Gangadhar BN, Jose JP. Do stress and support matter for caring? The role of perceived stress and social support on expressed emotion of carers of persons with first episode psychosis. Asian Journal of Psychiatry [Internet]. 2017 [cited on 2020 Jan 17];25. Available from https://www.researchgate.net/profile/Anva
21. Hsiao CH, Lu HL, Tsai YF. Factors associated with family functioning among people with a diagnosis of schizophrenia and primary family caregivers. J Psychiatric Mental HealthNurse[Internet].2020[cited on 2021 Feb 21]; 27:572-583.Available from: https://doi.org/:10.1111/JPM.1260
22. Gogoi K. Assessment of expressed emotions in family members of patients with schizophrenia in a selected Medical College Hospital,Assam.Open Journal Of Psychiatry and Allied Sciences[Internet].2017[cited on 20120 Jan 15]:8(1).Available from https://www.researchgate.net/publication/312073862
23. Caqueo-Urizar A, Alessandrini M, Urzua A, Zendjidjian X, Boyer L, Williams DR. Caregiver's quality of life and its positive impact on symptomatology and quality of life of patients with schizophrenia. Health and quality of life outcomes [Internet].2017[cited on 2021 Jan 21];15:76. Available from: https://doi.org/10.1186/s1295-017-0652-6
24. Nath B, Baruah A, Ahmed N. A study to assess the effectiveness of planned exercise programme in patients with schizophrenia. Open Journal of Psychiatry and Allied Sciences.2015 :5;(6):28-34
25. Worakul P, Thavichachart N, Lueboonthavatchai P. Effects of Psycho-educational Program on Knowledge and Attitude upon Schizophrenia of Schizophrenic Patients' Caregives. J Med Assoc Thai [Internet]. 2007[cited on 2018 July 25]; 90(6): 1199-204. Available from: https://pubmed.ncbi.nlm.nih.gov PMID: 17624218
26. Ran MS, Xiang MZ, Chan CL, Leff J, Simpson P, Huang MS et al. Effectiveness of psychoeducational intervention for rural Chinese families experiencing schizophrenia. Social Psychiatry and Psychiatric Epidemiology [Internet].2003 [cited 2019 Feb 6];38:69-75.Available from :https://doi.org/10.1007/s00127-003-0601-z
27. Cozolino LJ, Goldstein JM, Nuechterin KH, West KL, Snyder KS.The Impact of EducationAboutSchizophreniaon Relatives Varying in Expressed Emotion. Schizophrenia Bulletin[Internet].1998[cited 2018 Feb 14];14(4).Available from https://academic.oup.com/schizophreniabulletin/article-abstract/14/4/675/1871107

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