EFFECTS OF FAMILY PSYCHO EDUCATION ON RELAPSE PREVENTION OF SCHIZOPHRENIA PATIENTS IN PAKISTAN

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ABSTRACT

Objective: To examine efficacy of psycho educational interventions, in relapse prevention in patients with Schizophrenia in Pakistan.

Design: Between Group Design and Open label trial of psychoeducation versus treatment as ususal.

Place and duration of study: This study was carried out in Mayo Hospital Lahore from December 2005 to September 2006

Subjects and Methods: 108 patients with schizophrenia and their family members were recruited and randomly allocated to two groups. One group received psycho education and the other group was getting treatment as usual but did not receive psycho education. Patients were rated on PANSS scale before and after the delivery of family psycho educational intervention.

Results: Relapse rate in psycho education was lower (5.8%) compared with control group (35.7%) at six month follow up. Their symptoms were significantly less severe on PANSS.

Conclusion: Combining family psycho educational intervention with routine treatment has proved efficacious for patients with schizophrenia in Pakistan.

Key words: Psychoeducation, Schizophrenia, Pakistan, Family.

INTRODUCTION.

Schizophrenia is a chronic mental illness with symptoms which affects patient as well family in multiple and complex ways. Though new medication have improved the course of illness for many patients, relapses are still common. In the last few decades significant advances have been made in area of family interventions. Several well-controlled long-term studies have been carried out, in which families were educated and involved in treatment programs[1,2]. These studies report positive effect on the course of illness, well being of the patient and the family and in reduction of relapses. A Meta analysis provides strong evidence that when family members are included in treatment program the relapse rate decreases markedly[3]. It is well documented that family environment influences the prognosis of schizophrenia[4-6]. A substantial body of research on expressed emotion (EE) has documented the important role of the family_and studies have noted that level of expressed emotions in a family is highly predictive of relapse in recently discharged patient with schizophrenia who are in contact with their relatives[7-11].

Research suggests that adding psycho education to pharmacological interventions has beneficial effect for patient as well for family [7, 12] .The psycho educational approach views family as an important source for information, collaboration, and support for the patient. This model strives to empower family member to participate actively in the treatment of patient. In Pakistan the families are the main carers of people with any disability including psychiatric illness. Majority of the individuals suffering from schizophrenia in Pakistan are living with their families. Some family member accompanies almost every patient accessing the psychiatric services. There are no community based mental health services in Pakistan and there are no family support organizations to help the families. Family interventions in this situation can have significant benefit for the family and the patient. The present study aimed to adopt the Leff's model of psycho education[13] and to see its effectiveness in Pakistan.

SUBJECTS AND METHODS

Setting

Patients and their relatives were recruited from the department of psychiatry Mayo Hospital Lahore that provides regular out patient services through out the week.

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Informed written consent for participating in the study was sought from the patient as well the concerned relative.

Research Design:

This study had between group designs and compared two sets of participants i.e. patients and their family members. One group of family members received psycho education and the other group did not receive psycho education. Both groups were assessed twice i.e. before and after.

Sample:

Sample consisted of 108 patients and their accompanying family members, psycho education group (n =52) and non-psycho education (n= 56).

DSM IV TR diagnostic criteria were used for the selection of patients with Schizophrenia.

Inclusion Criteria

The participants were aged between 18 to 45 years and had to have a history of two or more relapses during the course of their illness despite getting medical treatment.

Selection criteria of families:

One adult relative living with the patient in the same premises and who had maximum interaction with the patient or who was directly involved in caring for the patient was included. These were parents, spouses, siblings or any other significant relative. We selected the family member who had schooling of at least primary level.

Exclusion criteria:

1. Schizophrenia like symptoms due to an organic disorder such as dementia or any other cognitive impairment.
2. Psychotic symptoms following use of illicit drugs.
3. Clinical evidence of epilepsy or Learning Disability.

Outcome measures

Scores on PANSS and relapse rate.

Relapse was defined as one of the following ;

1. Reemergence or exacerbation of psychotic symptoms as it occurred for at least seven days during the six months follow up. This was assessed by the researcher and confirmed by the accompanying relative at the time of follow up.
2. Hospitalization of the patient due to aggravation of symptoms.
3. If the patient had a score of more than 4 on any category of PANSS scale at follow up assessment at 6 months.

Assessment and Intervention measures:

At the time of first assessment, demographic information questionnaire was used to collect information about the patients' age, sex, educational level, birth order, number of siblings, marital status, if married, number of children, occupation, work status and details of the illness (age at onset, number of admissions, number of relapses, family history of mental illness etc.).

Symptoms were assessed on widely accepted and standardized measure of symptoms Positive and Negative Syndrome Scale (PANSS)[14]. (Kay, Opler & Fisben1987) . This is comprehensive symptoms rating scale, measuring mental state and general psychopathology specifically associated with schizophrenia.

Psycho education intervention:

The model of therapy which has been used in this study is a part of psychosocial family intervention package used by Leff and Vaughn[15]. The booklet of psycho education was translated into Urdu.

Procedure:

The study received ethical approval from the relevant research ethics committee. Preliminary assessment was done to recruit patient and their relatives who met the inclusion criterion of the study. The diagnosis was confirmed using DSM-TR criterion. The information was provided to the patients and their relatives about the study and written consent of the patient and the accompanying family member was sought for participation in the research.

The PANSS rating scale was administered at the commencement of treatment as well after the six months of completion of treatment.

Psycho education sessions were arranged in hospital setting. Psycho education to the family members was provided in the presence of patient. Education sessions were based on a specially designed information booklet. First session was aimed to provide general orientation towards schizophrenia, its nature, types and causes. Common stereotypes were discussed and dispelled providing accurate information about illness.

In the second session, schizophrenia was explained as a syndrome affecting thoughts and emotions which in turn relate to disturbed behavior. Distinction between positive and negative symptoms was explained so that relatives could understand the illness. Major symptoms as well as early signs and symptoms were described for early identification to prevent relapse.

Third session focused on the importance of pharmacological treatment, information about side effects and likely benefits of medication in acute and maintenance phase as well in preventing relapse were out lined. The important role of family in recovery and rehabilitation of the patient was emphasized.

Fourth educational session provided general advice encouraging family members to address their personal and social needs to improve their well being and to resume their formal social interests. Basic guide lines regarding management of residual symptoms and to improve the patient's quality of life were provided.

The family of the group who received psycho education attended a total of nine therapeutic sessions. Four sessions on weekly basis to impart information was delivered by researcher herself. Teaching was individualized. The sessions were interactive and participation was encouraged, which gave rise to further discussions. Families were encouraged to ask questions.

Follow up was for six months and consisted of monthly formal contacts with the patient and the family. In these follow-up sessions the clinical condition, social functioning, social communication, patient's interaction with family members, his participation in house hold chores and interest in personal hygiene was recorded as reported by family and patient himself.

Another aim of the intervention was to improve the communication and family members' listening skills so during these sessions it was addressed and role played to enhance and facilitate communication in family and patient. Living with schizophrenia gives rise to a wide variety of emotional responses. Relatives often feel guilty and blame themselves for the problem. The emphasis during these sessions was to normalize these emotions especially the negative ones. During the sessions overtly negative statements were picked up and reframed by the therapist. Family as well as the patient was invited to discuss any problems which they encountered during that period, like any emotional upset, communication problem or the relationship problem and they were counseled accordingly.

An average time for the initial four educational sessions was an hour and a half, and 30 to 40 minutes for subsequent sessions.

When the patient was in a stable phase a session individually was conducted with him\her in which he\she was also educated regarding the nature and process of his/her illness using same educational pattern as was used for the family. The main emphasis was on the compliance with the drugs and the likely benefit of taking drugs; as well advise for regular follow ups and to resume the normal routine as soon as possible.

Patients in the other group who did not receive psycho education were also called for monthly follow ups .The clinical condition and social functioning of these patients was also recorded.

The psycho education booklet was distributed to family of psycho education group to read at home to disseminate knowledge to other family members also.

Statistical Analysis:

Descriptive & inferential statistical analyses were performed .The frequencies and percentages were calculated for the demographic characteristic. The clinical variables were assessed using PANSS rating scale and scores were derived according to the standardized described method. A score of one indicates that symptom is absent .The rating point 2 – 7 manifest the incremental level of symptom severity. The scores were derived referring to the particular rating points. The cumulative scores of all the sub scales were calculated. We used intention to treat analysis. A series of " t test "was carried out separately for each sub scale of PANSS. For comparison of two groups "independent t – test" was computed.

The chi – square analysis was carried out to compare relapse rate in two group's .Fishers exact test score was used due to small number of relapses in the group who received psycho education.

We used analysis of covariance to compare the PANNS scores between two groups at follow up while scores at baseline were controlled.

RESULTS

A total sample of 108 patients were recruited and randomly assigned to the psycho- education group (n = 52) and the non psycho-education group (n = 56). One hundred patients completed the treatment. One patient from psycho-education group died at the 6-month follow up period. Of the 108 patients, 58(57.3%) were males and 50 (46.7%) were females. Mean age of treatment group patients was 25.31 years (*SD* = 7.02) and for control group was 27.00 years (*SD = 7.29*). Table 1 gives the characteristics of the two groups.

The two groups were similar and comparable in demographic characteristics. There were no significant differences between the two groups, in age, gender, educational level, marital status and length of illness.

Most of the relatives were females (mothers, sisters and daughters). Relatives were living in the same household with patient. Majority of the relatives had primary level of education and about one third had completed their education up to secondary.

An "independent sample t – test" revealed a significant differences between the two groups on the PANSS positive symptoms scores. There was no difference in other sub-scales.

Table 4 gives the comparison of scores on PANSS between two groups six months after assessment. There is a significant difference between two groups on all the sub-scales.

Table 5 shows the effect of treatment on all subscales while the baseline scores are controlled. The

Table 1: Demographic Characteristics of the patients

Variable		Groups		P values
		Experimental N = 52	Control N = 56	
Sex	Male N %	26 (50%)	32 (57.1%)	P 0.56
	Female N %	26(50%)	24 (42.9%)	
Age (years)				
	Mean (SD)	25.31 (7.02)	27.00 (7.29)	P 0.22
Current Work Status				
	Working N %	5 (9.6%)	8 (14.3%)	P 0.45
	Not working	47 (90.4%)	48 (85.7%)	
Education N %				
	Up to 5 yrs	5 (9.6%)	9 (16.1)	
	5 to 10 yrs	28 (53.8%)	28 (50%)	
	More than 10 yrs	19 (36.5%)	19 (33.9%)	
Family Income in Pak Rupees				
	Mean (SD)	9569 (5032)	8335 (5983)	P 0.25
Marital Status N %				
	Married	11 (21.2%)	12 (21.4%)	0.27
	Un-married	40 (76.9%)	39 (69.6%)	
	Divorced	1 (1.9%)	5 (8.9%)	
Lives with N %				
	Spouse	9 (17.3%)	8 (14.3%)	
	Parents	42 (78.8%)	45 (80.4%)	P 0.86
	Siblings	2	3 (5.4%)	

Table 2: Demographic characteristics of the participant family member

Variable	Psycho education Group N =52		Non psycho education group N = 56		pvalues
	Number	Percentage	Number	Percentage	
Sex				0.54	
Male	16	(30.8%)	21	(37.5%)	
Female	36	(69.2%)	35	(62.5%)	
Age of the Relative					
Mean	41.84 Years		44.25 Years		0.31
S.D	11.31		13.29		
Education					
Up to 5 yrs	15	(28.7%)	22	(39.3%)	
5 -10 yrs	20	(38.5%)	18	(32.1%)	
Over 10 yrs	17	(32.7%)	16	(28.6%)	0.51
Relation with patient					
Father	8	(15.4%)	12	(21.4%)	
Mother	24	(46.2%)	25	(44.6%)	
Spouse	6	(11.5%)	2	(3.6%)	
Sister	6	(11.5%)	5	(8.9%)	0.59
Brother	4	(7.7%)	7	(12.5%)	
Daughter	4	(7.7%)	5	(8.9%)	

Table 3: independent sample t – test comparing two groups at pre assessment level on PANSS sub-scale

Variable Category	Psycho education Group n= 52		Non psycho education Group n= 56			
PANSS Subscale	Mean	S .D	Mean	S .D	t - values	P values
Positive Scale	26.5385	4.99985	28.5714	5.30474	-2.05	.043
Negative Scale	24.0769	6.97572	22.9821	7.3199	0.79	0.42
General Psych Pathology Scale	51.7308	9.62251	52.4643	10.80398	-.37	.71

df=106

Table 4: Independent sample t –test showing difference in two groups on PANSS Scale at post assessment level

Variable Category	Psycho education Group n=52		Non psycho education Group n= 56			
PANSS Subscale	Mean	S .D	Mean	S .D	t- values	P values
Positive Scale	10.3654	5.62567	23.6964	8.77998	-9.46	.000
Negative Scale	11.9038	4.93590	19.0536	8.62221	-5.33	.000
General Psycho Pathology Scale	26.1923	11.27558	42.5357	14.90206	-6.45	.000

df =106

Table 5: Analysis of Covariance comparing two groups post assessment while baseline scores are controlled.

Subscale	F and degrees of freedom	p	Effect size
Positive	78.73 (1,105)	0.000	0.65
Negative	48.62 (1,105)	0.000	0.56
General Psychopathology	50.51 (1,105)	0.000	0.56

Table- 6: Difference in groups in number of relapses

Variable	Psycho education group		Non Psycho education			
	Yes	No	Yes	No	$\chi 2$ value	Significant
Patient relapse	3(5.8)	49(94.2)	20(35.7)	36(63.3)	12.42	.000

difference in scores remained significant for all the subscales when controlled for the baseline scores. The effect size of the intervention is over 0.5 in all the subscales.

Table 6 shows that 35.7% of the patients in the group who did not get psycho education had at least one relapse in the period of six months at the time of post assessment. The relapse rate in psycho-education group was 5.8.

DISCUSSION

The main aim of this study was to provide psychoeducation to the families to prevent relapse in schizophrenia. In line with the past studies the relapse rate of schizophrenia in the group, who received psycho education, was very low[16, 17].

This evidence is important for two reasons. It is the only trial of such an intervention in Pakistan after the intervention was adapted. Secondly families are the

main source of support for patients suffering from Schizophrenia and such an intervention is very relevant. A number of trials have looked at family intervention in conjunction with maintenance neuroleptics for schizophrenia[18-20]. The out come of family intervention in six studies was remarkably consistent with relapse rate of 12% or less over a year or so compared with about 50% for control patients. As the duration of our follow up is shorter the relapse rate is somewhat lower.

The results of present study support the importance of psycho education and including family members in the community care of patients with schizophrenia in Pakistan.

Preventing or delaying psychotic symptoms exacerbation appears to have an important prognostic value, as documented in a review of the treatment research literature[21].

Our study has a few strengths. The sample is representative of a typical secondary care psychiatric population in Pakistani context and we believe that these findings are generalisable to other psychiatric patients in Pakistan.

This study lacks the information about emotional climate within the family and the support given to the key care giver by the other members of the family. The assessment and treatment was provided by one person which can be a source of bias in the study, however within the resource constraints this was the best we could achieve.

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