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Social Support and Length of Hospital Stay among Schizophrenic Patients

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Abstract: Aim of present study was to examine the relationship between social support and length of hospital stay among schizophrenic patients. A descriptive correlational design was utilized for the study. The study was conducted at El-Maamoura hospital for Psychiatric Medicine in Alexandria. A total of 155 male and female patients from free and private wards were recruited randomly in the study. Norbeck Social Support Questionnaire (NSSQ) was used as a tool for data collection. Results of the study revealed that around one quarter of short and long stay hospitalized schizophrenic patients did not receive any support and the rest of sample received support from one or two persons. These support members were mainly siblings. As regards the network size, there was no significant difference between short and long stay hospitalized schizophrenia patients. The present study revealed significant difference between short and long stay hospitalized schizophrenia patients as regards functional properties of social support and frequency of contact. The study showed that duration of hospitalization was significantly negatively correlated with total functional support properties and frequency of contact. Conclusion: This study provides evidence of the strong relationship between length of hospital stay and social support provided to patients with schizophrenia.

Key words: Length of hospital stay · Schizophrenia · Social Support · Social Networks

INTRODUCTION

Mental health advocates, policy makers and researchers continue to raise concerns about the negative consequences of long term psychiatric hospitalization due to long or frequent hospital stays. The basic argument is that the longer psychiatric inpatients can stay in the community, the more time they have to gain necessary work experience, establish and maintain an active social life and learn other skills necessary for living independently [1].

The long-term psychiatric hospitalization seems detrimental for a number of reasons. Long in-patient stays are costly with respect to the direct and indirect treatment costs. Prolonged in-patient stay may isolate the patients from their social network and initiates maladaptive pattern in the patient as well as in the social surrounding. Because these may make long hospitalization unacceptable, so psychiatrists need to be reminded about the need to shorten length of stay and make treatment as efficient as possible [2-4].

Some studies have reported factors that could affect length of hospital stay; these include clinical factors and socio-demographic factors such as age and social support. In addition, they have identified the importance of social networks in providing social support at times of psychological crises and stress [2, 5].

The concept of social support has received increasing attention in the nursing literature. Social support is defined as "Support accessible to an individual through social ties to other individuals, groups and the large community" [6, 7]. It is related but not identical to the concept of social networks. Social networks, as usually defined, describe the direct and indirect ties linking a group of individuals over certain definable criteria, such as kinship, friendship and acquaintances. Social networks provide the structural framework within which support may or may not be accessible to an individual. Thus, social support extends beyond the structural characteristics of social networks and identifies the resources that are available to the individual in a crisis [8, 9].

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In general population, social support buffers against stressful life events, increases adherence to medical treatments and improves recovery from medical illness [10]. Social support as a basic aspect of human life is often lacking in the lives of people with serious mental illness. Numerous studies have found people with mental illness, particularly schizophrenic disorders, to be socially isolated. Their networks are small compared with those of persons without mental illness and relationships are often restricted to the immediate family, with few other social groups to refer to. The impact of social isolation ranges from poor outcomes in terms of quality of life and self-esteem to a less favourable illness course with more psychotic symptoms or more frequent and prolonged hospitalizations [11-13].

Some studies have noted that persons admitted frequently to mental hospitals or those with prolonged hospitalization have distinctly smaller networks composed of fewer close reciprocal relations than persons admitted for the first time. Also it will be difficult for individuals to reintegrate into community after hospitalization [8]. Another study found that people with a larger network, with high level of support located in family and outside the family, have been rarely hospitalized [14]. Moreover, only a few studies have examined the relationship between social support and network and length of hospital stay, leaving questions about whether the hospitalization affect social network and social support, or conversely, perhaps, social networks themselves precipitate hospitalization [13, 15].

Hence, social support is one area of study that may enhance understanding of caregiver of hospitalized schizophrenic patients. Investigation of the contribution of social support to hospitalized schizophrenic patients experience will increase the ability of health professional to assess the needs of families, caregivers and target interventions [16]. So the aim of present study was to identify the relationship between social support and length of hospital stay among schizophrenic patients.

MATERIALS AND METHODS

Research Design: This study followed a descriptive correlational design.

Setting: The study was conducted at El-Maamoura hospital for Psychiatric Medicine in Alexandria. The hospital is affiliated to the Ministry of Health.

Subjects: Subjects of the study were "155" male and female patients from free and private wards. Patients were taken from the randomly selected wards, two male private wards and two male free wards, as well as one female private ward and one female free ward. These wards were included in the study, based on male wards to female wards ratio in El-Maamoura Hospital. The subjects were divided into two main groups: Short hospital stays, patients who have been staying in the hospital six months or less and long hospital stays, patients who have been in the hospital for at least one year or more. The subjects agreed to participate in the study and communicated clearly were included in the study.

Tools: Socio-demographic and clinical characteristics structured interview schedule which was developed by the researcher after review of literature. It included socio-demographic data such as patient's age, marital status, educational and occupational level and residence. As regarding clinical characteristics, these included duration of illness, number of hospital admission and duration of current hospitalization.

Norbeck Social Support Questionnaire (NSSQ): The tool was originally developed by Norbeck *et al.* [17] to measure social support and has been proved to be valid and reliable tool. The questionnaire was designed to measure two main variables; the functional components of social support and the network structure properties through which social support is provided. The functional components of social support are affection (the expression of positive effect of one person toward another), affirmation (endorsement of another person's behaviour, perception or expressed views) and aid (the giving of symbolic or material aids to another). Each of these properties were measured by two questions which covered the patient's perception of love and care, respect and confidence, in addition, to the support of thoughts or actions short term financial aid was provided by supportive person.

Each of these questions were rated on a5-point-likert scale ranging from 1 to 5 with 1 denoting the least support and its total scores ranged from 6 to 30.

As regards to the structural properties of the social support network, it consisted of the number of persons in the network and their relationships to the patient, duration of the relationships and frequency of contact. These properties were measured through the seventh and eighth questions. Each question was rated on a 5-point

likert scale separately ranged from 1 to 5, for the eighth question 1 indicated the minimum frequency of contact. Finally the last question covered the important relationships recently lost in the patient's social support network.

Methods: An official approval to carry out the study was obtained from the director of El-Maamoura Hospital after explanation of the purpose of the study. The socio-demographic and clinical characteristics structured interview schedule was developed by the researcher. Norbeck Social Support Questionnaire (NSSQ) was translated into Arabic language. A jury composed of 4 experts in the psychiatric field examined the content validity of the translated tool.

Pilot and Reliability Studies: A pilot study was carried out on 15 patients to assess the clarity and applicability of the study tool and some modifications were done. The validated tool was tested for its reliability; the Cronbach's alpha was 0.73.

In actual study, the psychiatric wards (4 male and 2 female wards) were chosen randomly for the study by simple randomization, picked up from 10 psychotic wards (six male wards and four female wards). The patients' records were checked to identify those who fulfilled the inclusion criteria, then gained the necessary information of socio-demographic and clinical data.

Ethical Consideration: Patients were assured that any data will be confidential and their privacy will be maintained. The purpose of the study was explained to the patients individually and then oral consent to participate in the study was obtained.

Data Management and Analysis: Data were coded and analyzed using SPSS version 18. Descriptive analyses were conducted to determine the frequency distributions of the study variables. Chi-square was used to determine whether significant difference existed between short and long stay regarding their source of support. In addition to this correlation analysis was done using person's correlation coefficient test to investigate the relationships among duration of hospitalization, number of supportive persons, frequency of contact and total functional support properties. The Anova test investigated the functional properties of social support, number of supportive persons and frequency of contact of short and long hospital stay patients. The significance level was set to or less than $P<0.05$.

RESULTS

Table 1 shows the socio-demographic and clinical characteristics of short and long hospital stay schizophrenic patients. About two thirds of long hospital stay patients were males comparing to 75.5% of short hospital stay patients. As regards patients' ages, the age of the total subjects ranges between 17-67 years with the mean of 34.03 ± 10.235 and 46.95 ± 9.773 respectively for short and long hospital stay patients. A statistical significant difference was found between the two groups where $\chi 2 = 42.509$. The majority of the patients were single (72.3%). A high percentage of short and long hospital stay patients were completed up to secondary school level (26. 6% & 31.1% respectively) as compared to 26.6 and 4.9% got primary school, with a statistical significant difference between them ($\chi 2 = 17.051$). More than half of the subjects (56.8%) were unemployed, 75.4% of them from the group of long-hospital stay as compared to 44.75 from the group of short-hospital stay. A statistical significant difference was found between the two groups ($\chi 2 = 20.752$). The majority of long-stays (93.4%) were living in urban as compared to 62.8% of short stays and there was a statistical significant difference ($\chi 2 = 18.488$).

Concerning the duration of illness, 56.4% of the short stays and only 4.9% of the long stays had been ill for "10 years or less", with a total mean of 10.04±7.832 and 21.38±7.785 respectively. However, there was a statistical significant difference ($\chi 2 = 52.224$). Regarding the number of previous hospitalization, patients who were admitted to hospital five times or more constituted the highest percentage of the sample (61.9%). The mean score was 4.38±2.282 and 5.25±2.203 respectively for short and long hospital stay patients. About 75% of the short stays were admitted to free wards comparing to 72.1% of long stays were admitted to private wards, with a statistical significant difference proved between them ($\chi 2 = 34.245$).

About three quarters of short and long stays received support from their social network. The table also shows that 51.7% of all subjects were satisfied from their social support. However, there was no statistical difference found between short and long hospital stay patients.

Table (2) reveals the distribution of studied schizophrenic patients according to their number of supportive persons. Less than one fourth of the studied sample reported no body in their social network as supportive to them. Meanwhile the majority of the patients reported receiving support from one person

(62.6%) as compared to only 8.4% of schizophrenic patients receiving support from two persons in their social network.

Table (3) shows the source of support as perceived by short and long stay hospitalized schizophrenic patients. The most supported persons perceived by the short stay patients were their siblings as they constituted 43.1% of the total number of their supportive persons. Next to siblings, fathers who constituted 25% of supportive persons. Friends/neighbours constituted 16.7% of supportive persons, while relatives constituted 13.9% of that population. As regards long stay patients, 47.9% of supportive persons were the siblings, next to them, the relatives (20.8%), then the friends/neighbours (10.4%). A statistical significant difference was found between the two groups as related to the supportive fathers and mothers ($\chi 2 = 7.013$ and 4.123 respectively).

Table (4) shows functional properties of social support, number of supportive persons and frequency of contact of short and long hospital stay schizophrenic patients. In relation to the size of social network, the short stay hospitalized patients had relatively higher mean score than long stay (1.42±0.946 and 1.15±0.412 respectively). As regards frequency of contact, the short stay patients received more contact from supportive persons than long stay, where their mean scores were 4.04 ±1.294 and 2.63 ±1.142 respectively. There was a statistical significant difference between the two group (F= 37.865).

The functional properties of social support were assessed by three dimensions namely affect, affirmation and aid. The short stay patients had higher mean scores of functional support on the three dimensions of affect, affirmation and aid than long stay patients with a statistical significant difference between them, where F=5.502, 6.932 and 5.448. Consequently, there was a higher mean score of total functional support of short stay patients (29.5 ±17.043) with a statistical significant difference between the two groups, where F=6.320* P=0.013.

Table (5) presents the correlation between duration of hospitalization, total functional support properties, number of supportive persons and frequency of contact. There was a negative statistical correlation between duration of hospital stay and total functional support properties and frequency of contact (r=0.159 P o.014, r=0.358 P =0.000 respectively). On the other hand, duration of hospital stay was not significantly related to the number of supportive persons, although there was a tendency for the duration of hospital stay to be inversely correlated with the number of supportive persons. The table also revealed a positive statistical significant correlation between number of supportive persons and total functional support properties and frequency of contact (r=0.305 P=0.00 r=0.178 P=0.027 respectively). In addition, a positive statistical significant correlation was found between total functional support properties and frequency of contact.

DISCUSSION

The previous researches have demonstrated that social support is a particularly important factor in assisting people with schizophrenia to decrease length of hospital stay and in turn, reintegrate in the community [14, 18]. Whereas it is the degree to which people with schizophrenia perceive themselves to be supported that is of crucial importance [12]. So, the present study focused on the relationship between perceived social support among short and long hospital stay schizophrenic patients. The present study revealed that around one quarter of short and long stay hospitalized schizophrenic patients reported that they did not receive any support and the majority of sample received support from one person. Meanwhile, the results did suggest that the study population was satisfied with the received support. This goes with the findings of Cresswel *et al.* [19] that people with schizophrenia have smaller networks, fewer clusters and more unsupported connections compared to non-schizophrenics. It seems that despite small networks, the perceived support in this sample of schizophrenic patients was adequate. Hence, support from one or two close ties may fully compensate for the lack of support from others. Additionally, it may be that this population usually found a lower level of support from close relationships more tolerable. This may be a protective mechanism, learnt over time so that a person with schizophrenia avoids engaging in too many stressful relationships. Furthermore, a study done by Gigantesco *et al*. [20] proved that approximately one third of psychiatric inpatients had no close relationships or social support.

The findings of present study for both short and long hospital stay indicate that immediate family, mainly siblings, next to them parents, are perceived as the best source of support which is congruent with the literature [11, 21]. However, only a small proportion of the participants had a spouse or children as about three quarters of the study patients were single. Pilisuk and Parks [22] reported that social network of those with psychotic illness is around four to five, almost all of them would be family members. Some researchers proved that

Table 1: Socio-demographic and Clinical of Short and Long Hospital Stay Patients

Socio-demographic Characteristics	Length of hospital stay: Short stay No (n=94)	%	Long stay No (n=61)	%	Total No (n=155)	%	χ^2
Sex							
Male	71	75.5	41	67.2	112	72.3	1.277
Female	23	24.5	20	32.8	43	27.7	0.258
Age (Years)							
<20	4	4.3	0	0	4	2.6	42.509*
20-	32	34	3	4.9	35	22.6	0.000
30-	30	31.9	12	19.7	42	27.1	
40-	21	22.3	19	31.1	40	25.8	
50-	6	6.4	23	37.7	29	18.7	
60+	1	1.1	4	6.6	5	3.2	
Min-Max Mean ± SD	34.03 ±10.235		46.95 ±9.773		39.3 ±11.856		
Marital Status							
Single	67	71.3	45	73.8	112	72.3	0.128
Married	13	13.8	8	13.1	21	13.5	0.938
Divorced/Widow	14	14.9	8	13.1	22	14.2	
Educational Level							
Illiterate /Read & write	27	28.7	16	26.2	43	27.7	17.051*
Primary	25	26.6	3	4.9	28	18.1	0.002
Preparatory	10	10.6	9	14.8	19	12.3	
Secondary	25	26.6	19	31.1	44	28.4	
University	7	7.4	14	2.3	21	13.5	
Occupation							
Working	33	35.1	4	6.6	37	23.9	20.752*
Student	3	3.2	0	0	3	1.9	0.000
Not working	42	44.7	46	75.4	88	56.8	
Housewife	16	17	11	18	27	17.4	
Residence							
Urban	59	62.8	57	93.4	116	74.8	18.488*
Rural	35	37.2	4	6.6	39	25.2	0.000
Clinical Characteristics							
Duration of Illness (Years)							
<10	53	56.4	3	4.9	56	36.1	52.224*
10-	26	27.7	20	32.8	46	29.7	0.000
20-	12	12.8	23	37.7	35	22.6	
30+	3	3.2	15	24.6	18	11.6	
Min-Max Mean ± SD	10.04 ±7.832		21.38 ±7.785		14.5 ±9.567		
Number of current Psychiatric Hospitalization							
One	14	14.9	4	6.6	18	11.6	6.531
Two	13	13.8	4	6.6	17	11	0.163
Three	11	11.7	8	13.1	19	12.3	
Four	4	4.3	1	1.6	5	3.2	
Five or more	52	55.3	44	72.1	96	61.9	
Min-Max Mean ± SD	4.38 ±2.282		5.25 ±2.203		4.83 ±2.313		
Ward							
Free	71	75.5	17	27.9	88	56.8	34.245*
Private	23	24.5	44	72.1	67	43.2	0.000
No. of supported patients							
Supported	72	76.6	48	78.7	120	77.4	0.093
Non supported	22	23.4	13	21.3	35	22.6	0.761
Patients' satisfaction from the received support							
▪Satisfied	37	51.4	25	52.1	62	51.7	0.034
▪Somewhat satisfied	16	22.2	10	20.8	26	21.7	0.983
▪Dissatisfied	19	26.4	13	27.1	32	26.6	

*= significant at 0.05

Table 2: Distribution of Studied Schizophrenic Patients According to The Number of Their Supportive persons

Number of supportive persons (size of social network)	Patients who received support	
	No (n=155)	%
No support	35	22.6
One person	97	62.6
Two persons	13	8.4
Three persons	3	1.9
Four persons	5	3.2
Five persons	2	1.3

Table 3: Source of support as perceived by short and long stay hospitalized Schizophrenic Patients

	Length of hospital stay						
	Short stay		Long stay		Total		
Source of support +	No (n=72)	%	No (n=48)	%	No (n=120)	%	χ^2
Father	18	25	3	6.3	21	17.5	7.013**
Mother	14	19.4	3	6.3	17	14.2	4.123*
Siblings	31	43.1	23	47.9	54	45	0.275
Spouse	3	4.2	2	4.2	5	4.2	0.000
Children	2	2.8	4	8.3	6	5	1.871
Relatives	10	13.9	10	20.8	20	16.7	1.000
Friends/Neighbours	12	16.7	5	10.4	17	14.2	0.925
Religious Person	0	0	1	2.1	1	0.8	1.513

+ multiple responses

* = significant at =0.05 ** = Highly significant at =0.01

Table 4: Functional and structural properties of social support of short and long hospital stay schizophrenic patients.

Functional and structural properties of social support	Length of hospital stay			
	Short stay (n= 72) Mean ± SD	Long stay (n= 48) Mean ± SD	Total (n= 120) Mean ± SD	ANOVA F
1- Functional properties of social support				
Affect	10.02 ±5.704	7.77±4.168	9.12 ±5.244	5.502* 0.021
Affirmation	9.56 ±5.802	7.03 ±3.952	8.55 ±5.272	6.932* 0.010
Aid	9.47 ±6.44	7.15 ±4.079	8.54 ±5448	5.448* 0.012
Total Functional Support	29.5 ±17.043	26.21 ±15.493	26.21 ±15.493	6.320* 0.013
2- No. of supportive persons	1.42 ±0.946	1.15 ±0.412	1.31 ±0.786	3.487 0.064
3- Frequency of contact	4.04 ±1.294	2.63 ±1.142	3.48 ±1.414	37.865* 0.000

*= Significant at $\leq$0.05

Table 5: Correlation coefficient (r) between duration of hospitalization, number of supportive persons, total functional support properties and frequency of contact

	Duration of hospitalization	No. of supportive persons	Total functional support properties	Frequency of contact
Duration of hospitalization		- 0.42	- 0.159*	- 0.358*
		0.576	0.014	0.000
No. of supportive persons			0.305*	0.178*
			0.000	0.027
Total functional support properties				0.216*
				0.002

*= Significant at 0.05

Some researchers proved that most support is perceived in intimate relationships with a partner or spouse. However, many people with mental illness lack Such a relationship [13, 23]. In controversy to this finding, the study of Adegunloys *et al*. [2] stated that families are likely to find it increasingly difficult to maintain their supportive role.

The present study findings showed that friends /neighbours were perceived more as a source of support in short stay schizophrenic patients than long stay schizophrenic patients. The importance of non-family members have been highlighted in other studies [13, 15]. This could be explained in the light of the more the duration of hospitalization increases, the more the links with the outside community dissolve. Moreover, it is known that the illness characteristics of schizophrenia like negative symptoms, withdrawal and blunted affect contribute to difficulties in relating socially and thus to the reduction of social networks with the other patients inside the hospital. Additionally, the stigma of mental illness may cause the patients' friends to withdraw from the network. The present study is consistent with the finding of Holmes-Eber and Stephanie [5]. who have looked in more detail at exactly how network composition changes with hospitalization. They found that those patients with repeated hospital admissions and long hospital stays had networks composed of fewer friends and relatives. In the current study only one patient mentioned that he received support from the nursing staff. This is in contrast with the study of Holmes-Eber and Stephanie [5] who stated that patients with repeated hospital admissions have networks composed of more mental health and service professionals.

Most investigators defined social support as a multidimensional construct consisting of the provision of informational, emotional and tangible Aid [24, 25]. Social support has been found to be important in keeping mentally ill persons functioning well in the community and in reducing the likelihood of recurrence of mental illness symptoms [15] as well in decreasing the frequency of hospitalizations [26].

The main results of this study are that the size of the social network of patients with schizophrenia was small with no significant difference between short and long stay hospitalized schizophrenia patients. On the other hand there was a significant difference between short and long stay hospitalized schizophrenia patients and functional properties of social support (affect, affirmation and aid) and frequency of contact.

Furthermore, the duration of hospitalization had a significant negative correlation with total functional support properties and frequency of contact, this means that short stay hospitalized schizophrenia patients have more support as well as frequent contact. Also, results showed all dimensions of social support (affect, affirmation and aid) were significantly positively correlated with the frequency of contact.This may be explained by the fact that the study sample was receiving more social support due to increase frequency of contact despite network was small. These findings suggested a powerful argument that despite small network, support from one or two close ties can fully compensate for the lack of support from others. So enhancement of the benefits of social support to people with mental illness is important because people with mental health problems are known to have restricted social networks. Hence, nurses should include an assessment of a person's social network and social support on a regular basis, such an assessment would also contribute to interventions designed to address health status of serious mental ill patients [15].

One focus of present study has been on socio-demographics and clinical characteristics of schizophrenic patients and their relationships with length of hospital stay. More than one third of the long stay patients were in the age group of "fifty years and more". This result is not surprising as older people have been found to stay longer lengths of hospitalization. This goes with the finding of Jimeneze *et al.* [27] who classified age as one of the five variables significantly predicting length of hospital stay steadily over time.

Our findings indicated that unmarried status is associated with long hospital stay which is consistent with results from several previous studies [3, 20]. The current results indicated that about three quarters of the long-hospital stay patients have been admitted to private wards. Our finding is consistent with Gigantesco *et al.* [20] as they stated that admission to a private inpatient facility during hospital stay was the most powerful predictor of long stay.

As predicted, the results suggested that the length of hospital stay is related to the source of support, functional properties of social support and the frequency of contact with the supportive persons.

The present study has shown the importance of social support perceived by schizophrenic patients as a determinant of length of hospital stay. Also it emphasizes

that despite small network, support from one or two close ties can fully compensate lack of support from others. Education programs are needed to help schizophrenic patients to adjust in the community. A longitudinal study designed to track patients and their networks over time could clarify the exact mechanisms by which patients' social support affect and are affected by length of hospital stay.

The findings suggest ways for improving the social support available for schizophrenic patients. Firstly, When hospitalization is necessary, both client and network members should be encouraged to remain in contact with each other throughout. The nurse role should include an assessment of a patient's social network and social support on a regularly basis. Improving the client's network building skills through social skills training. This includes strategies to assist clients in improving communication skills, patterns of eye contact, patterns of physical proximity, posture and grooming. The nurse should design strategies to strengthen the linkages between the client's professional and personal social networks. This can be achieved through family group therapy, where clients' families meet together for the purpose of sharing information and gaining social support. Enhance role of out-patient psychiatric centres / units to play crucial role in decrease hospitalization among schizophrenic patients.

Limitations of the Study: Assessment of negative and positive symptoms of schizophrenia could be helpful because it may affect the length of hospital stay and the social support available to those patients.

REFERENCES

1. Thompson, E.E., H.W. Neighbors, C. Munday and S. Trierweiler, 2003. Length of stay, referral to after care and rehospitalisation among psychiatric inpatients. Psychiatric Services, 54: 12271-12276.
2. Adegumloye, D.A., A.D. Yussuf, P.O. Ajiboye, B.A. Issa and O.I.N. Buhari, 2009. Correlates of Length of stay among psychiatric In-Patients in A tertiary Health Institution in Nigeria. Research Journal of Medical Sciences, 3: 56-61.
3. Stevens, A., K. Hammer and K. Buchkremer, 2001. A statistical model for length of psychiatric inpatient treatment and an analysis of contributing factors. Acta Psychiatrica Scandinavica, 103: 203-211.
4. Bartusch, S., B.R. Brugemmanm, H. Elgeti, M. Zeigenbein and W. Machleidt, 2007. Hannover study on long-stay hospitalization-part II: characteristic and care conditions of long-stay hospitalization in cases of chronic mental illness. General Practice and Epidemiology in Mental Health. Available at: http://www.cpemental health. com/ content/3 /1/27. Retrieved on: 11/7/2010.
5. Holmes-Eber, P.H. and R. Stephanie, 1990. Hospitalization and Composition of Mental Patients' Social Networks. Schizophrenia Bulletin, 18: 157-164.
6. Buchanan, J., 1995. Social Support and Schizophrenia: A review of the literature. Archives of Psychiatric Nursing, 9: 68-76.
7. Lin, N., M. Woefel and S. light, 1985. The Buffering effects of Social Support subsequent to an important life event. Journal of Health and Social Behaviour, 26: 247-263.
8. McCorkle, B., E.S. Tugers, E.C. Dunn, A. Layas and Y.M. Wan, 2008. Increasing social support for individuals with serious mental illness: Evaluating the compeer model of intentional friendship. Community Mental Health Journal, DOI 10.1007/s-008=9137-8.
9. Magliano, L., F. Andrea, M. Claudio, D.R. Corrado and M. Mario, 2006. Social network in long-Term Diseases: A Comparative study in relatives of persons with schizophrenia and physical illnesses versus a Sample from the general population. Social Science and Medicine, 62: 1392-1402.
10. Di Matteo, M.R., 2004. Social Support and Patient adherence to Medical Treatment: A meta-analysis. Health Psychology, 23: 207-218.
11. Sawant, N.S. and K.S. Jethwani, 2010. Understanding family functioning and Social Support in unremitting schizophrenia: A study in India. Indian J. Psychiatry, 52: 145-149.
12. Chinuman, M.J. R. Eingarten, D. Stayner and L. Davidson, 2001. Chronicity reconsidered: improving person-environment through a consumer-run service. Community Mental Health Journal, 37: 215-29.
13. Muller, B., C. Nordt, C. Lauber and W. Rossler, 2007. Changes in Social Network Diversity and perceived Social Support after psychiatric. Hospitalization: Results from a longitudinal Study. International J. Soc. Psychiatry, 53: 564-575.
14. Cechnickim, A. and A. Wojciechowska, 2007. Correlations between features of social network and outcomes in those suffering from schizophrenia seven years from the first hospitalization. Psychiatric Policy, 41: 513-525.

15. Huang, C.Y., V.D. Sousa, C.C. Tsai and M.Y. Hwang, 2008. Social support and adaptation of Taiwanese adults with mental illness. Journal of Clinical Nursing, 20: 1795-1802.
16. Tulloch, A.D., P. Fearon and A.S. David, 2008. The determinants and outcomes of long stay psychiatric admissions. Social Psychiatric Epidemiology, 43: 569-574.
17. Norbeck, J.S., A.M. Lindsey and V.L. Carrieri, 1981. The development of an instrument to measure social support. Nursing Research, 30: 264-269.
18. Hiroaki, M., T. Hisateru and T. Tadashi, 2008. Providing support to psychiatric patients living in the community in Japan: Patient needs and care providers' perceptions. International Journal of Mental Health Systems, 10: 1752-1771.
19. Cresswell, C.M., L. Kuipers and M.J. Power, 1992. Social networks and support in long-term psychiatric patients. Psychological Medicine, 22: 1019-1026.
20. Gigantesco, A., G. De Girolamo, G. Santone, R. Miglio and A. Picardi, 2009. Long-stay in short-stay inpatient facilities: risk factors and barriers to discharge. BMC Public Health. Available at: http://creativecommons. Retrieved on: 15/5/2010.
21. Linda, E.R., 1997. Caring for Caregivers: Perceptions of Social Support.Journal of Psychosocial Nursing, 35: 17-24.
22. Pilisuk, M. and S.H. Parks, 1986. The hearing web-social networks and human survival. University Press of New England. Hanover. New Hampshire.
23. Agerbo, E., M. Byrne, W. Eaton and P. Mortensen, 2004. Marital and labor market status in the long run in schizophrenia. Archieves of General Psychiatry, 61: 28-33.
24. Calsyn, R.J. and J.P. winter, 2002. Social support, psychiatric symptoms and housing: a causal analysis. Journal of Community Psychology, 30: 247-259.
25. Giate, L., J.L. Vazquez, C. Bora, J. Ballesteros, A. Schene, B. Welcher, G. Thornicroft, T. Becker, M. Ruggen and A. Herran, 2002. Quality of life in patients with schizophrenia live in European countries. Acta Psychiatrica Scandinivica, 105: 283-292.
26. Cohen, A.N., C.Hammen, R.M. Henry and S.E. Daley, 2004. Effect of stress and social support on recurrence in Bipolor disorder. Journal of Affective Disorders, 83: 143-147.
27. Jimenez, R.E., R.M. Lam, M. Marot and A. Delgado, 2004. Observed-predicted length of stay for an acute psychiatric department, as an indicator of patient care inefficiencies. Retrospective case-series study. BMC Health Services Research. Available at: http://www.biomedcentral.com/1472-6963/4/4. Retrieved on: 11/7/2010.