

 <p>INNOVATIVE JOURNAL ЮНКВАТ МЕДИЦИНСКИ И НАУЧНИ ВЕСТИ</p>	<p>Contents lists available at www.innovativejournal.in</p> <p>INTERNATIONAL JOURNAL OF NURSING DIDACTICS</p> <p>homepage: http://innovativejournal.in/ijnd/index.php/ijnd</p>	 <p>IJND ISSN: 2231-5454</p>
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Effectiveness of Psycho-Education intervention for Family Caregivers' of Schizophrenics on Their Burden, Coping and the Patients' Quality of Life

¹ Fatma Mahmoud El-Emary, ² Hanaa Hamdy Ali Elzeiny

¹ Assistant Professor of Psychiatric and Mental Health Nursing/Faculty of Nursing-Ain Shams University.

² Assistant Professor of Psychiatric and Mental Health Nursing/Faculty of Nursing-Zagazig University Egypt.

DOI: <https://doi.org/10.15520/ijnd.v9i10.2719>

Abstract: Background: There is considerable evidence that family psycho-education when combined with pharmacological intervention for patients with schizophrenia increases family understanding of the illness, reduces burden of care & strength coping strategies and in turn enhance quality of their patients' life and outcomes. **Aim of the study:** is to investigate effectiveness of psych education intervention for family caregivers of schizophrenics on their burden and coping process and their patients' quality of life **Design:** An intervention quasi-experimental research design with pre-post assessment was utilized in this study. **Setting:** the study was conducted at the outpatient clinics of Gamal Abou ELAayem psychiatric Hospital in 10th of Ramadan city, Egypt. **Subjects:** 69 schizophrenic patients and their caregivers. **Tools:** The data were collected using an interview questionnaire forms that included 1) Socio-demographic characteristics for caregivers and their schizophrenic patients, 2) The Caregiver Burden Scale .3) The Coping Process Scale, and 4) The Lehman Quality of Life Interview Scale **Results:** The results showed that the caregivers of schizophrenic patients suffer considerable burdens with low QOL among their patients. Caregivers' burden and coping are more related to patients' personal and disease characteristics at the pre and post intervention phases. **Conclusion:** The implementation of the psycho educational intervention was effective in decreasing caregivers' burden, and in improving their problem-focused and emotion-focused coping which led to significant improvements in patients' QOL, **Recommendation:** The study recommends continuity of such psycho-education intervention on a long term basis to confirm its effectiveness along with providing mental health counselling, and developing support for family caregivers of schizophrenics.

Key words: Schizophrenic patients, Family caregiver, Burden, Coping process and Quality of life.

INTRODUCTION

As per WHO estimates, around 450 million people are suffering from a mental or behavioral disorder worldwide (1). Schizophrenia is a chronic psychiatric disorder which is characterized by slow functional deterioration and episodes of relapse or acute exacerbation of psychotic symptoms. It is commonly begins in adolescence (2) and its effects can be classified at three levels; first the patient who undergoes personal suffering, secondly the caregiver and/families for the burden of care along with the added responsibility of transitioning the relative from inpatient to the outpatient treatment, and the thirdly the society as a whole for suffering from frequent hospitalizations and long-term financial and psychosocial support (2,3). Unfortunately, Schizophrenia is a severe mental illness which not only affects the patients but also causes significant distress to the caregivers themselves (4).

However, an estimated 50 to 80% of persons with schizophrenia and related psychotic disorders live with or have regular contact with a family caregiver (5, 6). The family caregiver is the most important person who cares for the person with schizophrenia and helps the patient in performing daily activities such as bathing, eating, cooking, dressing, taking drug, and checking up (7). As a result, these caregivers report high levels of burden of care (8) that may lead to negative consequences (9).

At the same time, the global push for the deinstitutionalization of schizophrenics has resulted in an increase in responsibility for care to be supplied by the

family and its members. (10-16) It is clearly that, this responsibility exposes caregivers to an intense burden with negative consequences concerning difficulty in coping and managing, impaired health, and low satisfaction with services (17, 18) As well, burden of care adversely affects family environment and quality of life of the caregivers. (19, 20) Therefore, caregivers need to increase their coping capabilities that may finally improve the burden and quality of life of not only the caregivers but also the patients (21).

Caregiver predictors of burden have been found to be related to coping strategies or expressed emotion (22). Coping is a cognitive-behavioral process that unfolds in the context of a situation or condition perceived as personally relevant and challenging or that exceeds the individual's resources to handle the particular demand. If an individual believes he/she possesses the coping resources necessary to manage an event, the stimulus will not be perceived as threatening (23).

Schizophrenia also affects functioning and health of schizophrenics' caregivers, mainly because the caregivers supply the patient with care and support [24, 25]. The impact of caregiving on caregivers' quality of life (QoL) is substantial [26-30], especially when experiencing a significant burden [31,32], Moreover, caregivers' negative experience may affect their ability to care for the patients [33,34].

Therefore, family psychoeducation activities have been found to be effective in improving social functioning and help reduce the family's burden of care. (35- 39) The

intervention provides caregivers of those with the disorder with information, coping strategies, and support, thus enhancing therapeutic alliances and broadening their knowledge and understanding of patients, thereby reducing negative consequences of burden of care for persons with schizophrenia (40, 41).

Significance of the study:

Schizophrenia is a disabling and severe psychiatric disorder that is a major cause of suffering for patients. Schizophrenia also affects functioning and health of family caregivers, mainly because the caregivers have assumed functions that were performed in the past by psychiatric institutions. Caregivers supply the patient with care and support (42), and in turn the family caregiver experience high levels of burden (43). Therefore, the present study is an effort in this direction and is designed to investigate the effectiveness of psycho education intervention for family caregivers of schizophrenics on their burden of care & coping strategies employed by them and sequentially its effects on their patients' quality of life.

Aim of the study

The present study aims to investigate effectiveness of psycho education intervention for family caregivers of schizophrenics on their burden of care and coping process and their patients' quality of life. This has been achieved through pre-assessment of the caregivers' burden, and coping patterns and patient's quality of life(QoL); developing and implementing a psycho education intervention for family caregivers; and post-assessment of the effectiveness of such intervention on caregivers' burden and coping patterns, and sequentially its effects on the patients' QoL.

Research hypothesis:

Psycho education intervention has a positive effect on the schizophrenics' caregivers to reduce their burden and improve coping process as well enhance quality of life of their patients.

SUBJECTS AND METHODS

Research design: An intervention quasi-experimental research design with pre-post assessment was used.

Setting: The study was conducted at the outpatient clinics of Gamal Abou ElAzayem psychiatric Hospital in 10th of Ramadan city, Egypt.

Study subjects: The study population consisted of 69 patients monitored and treated with a diagnosis of schizophrenia and the family caregivers caring for them for at least two years. The sample size was estimated to detect a difference of 10 points between the mean level of burden or coping score before and after the intervention, with a standard deviation 16 (44), at a 95% level of confidence (α error = 5%), and a study power of 90% (β error=10%), and a dropout rate of 20%.

Tools of data collection:

Four different tools were used for data collection. These include 1) socio-demographic characteristics of caregivers of schizophrenic patients and demographic characteristics of schizophrenic patients & their health data, 2) The Caregiver

Burden Scale ,3) The Coping Process Scale ,and 4) The Lehman Quality of Life Interview Scale

I-Socio-demographic characteristics:

This sheet was constructed by the researchers to elicit data about firstly, demographic characteristics of caregivers of schizophrenic patients such as age, gender, educational level, marital status, number of children, residence, job status, monthly income, crowding index , have chronic illness and on regular medication. Secondly, demographic characteristics of schizophrenic patients and their health data such as age, gender, educational level, marital status, job status, duration of illness, age at diagnosis, initiation of treatment, treatment modality, had previous hospitalization and previous relapse.

II- The Caregiver Burden Scale:

Burden of care giving was identified using caregiver burden scale that developed by (45), has 35 items categorized into patient problematic behavior, resources demand, troubled daily life activities, and perception of patient utility subscales. The tool was translated into Arabic using the translation-back-translation technique to preserve its validity (46). The responses are on a 5-point Likert scale ranging from "never" to "always," scored 0 to 4. The scores of the items were summed-up and converted into a percent score. The caregiver was considered to have a high burden if the percent score was 60% or more (corresponding to usually/always) and low if less than 60% (corresponding to sometimes/ rarely/never).

III-The Coping Process Scale:

Coping strategies that are employed by the caregivers of schizophrenics were identified using coping process scale. It is developed by (47), is an Egyptian standardized scale consists of 42 items categorized into two major subscales. The problem-focused subscale involves seeking out information and social support (3 items), positive reinterpretation (5 items), exert of restraint (4 items), denial (3 items), and active coping (3 items). The emotion focused subscale encompasses helplessness (6 items), mental disengagement (5 items), wishful thinking (4 items), turning to religion (3 items), emotional discharge (3 items), and acceptance (3 items). The responses are on a 5-point scale ranging from "never" to "always," scored 0 to 4 respectively. The scores of the items were summed-up and converted into a percent score. The caregiver was considered to have a high coping if the percent score was 60% or more (corresponding to usually/always) and low if less than 60% (corresponding to sometimes/rarely/never).

IV-The Lehman Quality of Life Interview Scale:

Quality of life for the schizophrenia patients was identified by Lehman Quality of Life Interview Scale. It was developed by (48), consists of 49 items divided into six subscales: performance at work (7 items), activities of daily living (7 items), social relations (13 items), personal hygiene (5 items), and interest in surrounding events (7 items), and interest in recreational activities (10 items). The responses are on a 7-point Likert scale ranging from "totally satisfied" to "totally dissatisfied," scored 0 to 6 respectively. The scores were reversed for negative items. A higher score means better QOL. The scores of the items of each domain were summed-up and converted into a percent score. The

QoL was considered high if the percent score was 60% or more, and low if less than 60%.

Preparatory phase and pilot study:

Based on review of related literature, the researchers developed the tool with the adopted scales. The tool was then pilot tested to assess the clarity of the scales and the feasibility of the study. Based on the pilot results, the tools were finalized. Since some modifications in the phrasing of some items were done, the pilot subjects were not included in the main study sample. The pilot also helped in assessing the reliability of the scales through measuring their internal consistency by calculating Cronbach alpha coefficients. The reliability of the three scales proved to be high (Burden:0.901, Coping: 0.800, QoL: 0.949).

Field work:

The study was conducted through assessment, planning, implementation, and evaluation phases during the period from May 2018 to September2018.The assessment phase involved pre-intervention data collection for baseline assessment. Every participant was met individually and informed consent for participation was obtained prior to administration of tools their privacy was taken care of. The data were preliminarily analyzed to provide the basis for the design of the psycho education intervention. Based on the results of the assessment phase, the researcher designed the family-based psycho education intervention and sessions contents according to the identified caregivers' needs. Such interventions are built around important subjects like understanding the patient's illness, treatment, burden of care and coping, and handling communication and expressed emotion.

The psycho educational approach was then implemented in 16 sessions whereas; each session took approximately 40-60minutes.Training methods included demonstration-re-demonstration, individual discussion, role-play, and reinforcement. The sessions were aided by using pictures and posters. Motivation and reinforcement techniques were used as praise and recognition during the session to enhance interest and learning. The evaluation of the intervention was done immediately after its implementation by comparing the change in caregivers' burden level and coping abilities and patient's quality of life using the same tools of the pre-test.

Ethical considerations: The purpose of the study was explained to the participants and oral consent to participate in the study was obtained from them. Confidentiality and anonymity of participants; as well as their right to withdraw from the research at any time were ensured

Statistical analysis: Data entry and statistical analysis were done using SPSS 16.0 statistical software package. Spearman rank correlation analysis was used for assessment of the inter-relationships among scales and with ranked variables. In order to identify the independent predictors of the QoL score, multiple linear regression analysis was used after testing for normality and homoscedasticity, and analysis of variance for the full regression models were done. Statistical significance was considered at p-value <0.05.

RESULTS

Table 1 shows that caregivers' age ranged between 18 and 80 years, with mean±SD 47.5±14.7. Slightly more than half of them (55.1%) were females. More than one-third of the caregivers were illiterate (36.2%), while 5.8% had a university degree. The majority was married (71.0%), and had three or more children (71.4%). More than half of them were from urban areas (68.1%), and unemployed (56.5%), and having a crowding index less than two persons per room (59.4%). Their monthly income ranged from none to 3000 LE, with a mean±SD 667.0±600.1 LE. As regards caregivers' medical history, more than one-third of them were having chronic diseases (37.7%) and were on regular medication (34.8%).

Table 1: Socio-demographic Characteristics of Caregivers of Schizophrenic Patients (N=69)

	Frequency	Percent
Age (years):		
<50	36	52.2
50+	33	47.8
Range	18.0-80.0	
Mean±SD	47.5±14.7	
Gender:		
Male	31	44.9
Female	38	55.1
Educational level:		
Illiterate	25	36.2
Read/write	12	17.4
Basic	8	11.6
Secondary	20	29.0
University	4	5.8
Marital status:		
Single	6	8.7
Married	49	71.0
Divorced/widow	14	20.3
No. of children:		
0	5	7.9
1-2	13	20.6
3+	45	71.4
Residence:		
Urban	47	68.1
Rural	22	31.9
Job status:		
Unemployed	39	56.5
Working	30	43.5
Monthly income (LE):		
<250	19	27.5
250-	31	44.9
1000+	19	27.5
Range	0-3000	
Mean±SD	667.0±600.1	
Crowding index:		
<2	41	59.4
2+	28	40.6
Have chronic diseases	26	37.7
On regular medication	24	34.8

Table 2 shows that approximately two-thirds of schizophrenia patients were males (63.8%), and their age ranged between 16 and 65 years. Slightly more than half of the patients were either illiterate (26.1%) or just could read and write (27.5 %), while 2 (2.9%) had a university degree. Only about one-fourth of the patients (26.1 %) were married, and 13.0% were divorced/widows. The majority of the patients were unemployed (78.3%). Regarding duration

of illness more than half of patients having it for more than 10 years (56.5%). The mean age at diagnosis was 24.1 years. Slightly more than half of the patients started treatment immediately after diagnosis (53.6%), and this was mostly medication alone (88.4%). The majority of the patients had previous hospitalization (71.0%), and 78.3% had previous relapse.

Table 2: Socio-demographic Characteristics of Schizophrenic Patients (N=69)

	Frequency	Percent
Age (years):		
<40	45	65.2
40+	24	34.8
Range	16.0-65.0	
Mean±SD	37.0±10.1	
Gender:		
Male	44	63.8
Female	25	36.2
Educational level:		
Illiterate	18	26.1
Read/write	19	27.5
Basic	13	18.8
Secondary	17	24.6
University	2	2.9
Marital status:		
Single	42	60.9
Married	18	26.1
Divorced/widow	9	13.0
Job status:		
Unemployed	54	78.3
Working	15	21.7
Duration of illness (years):		
<5	9	13.0
5-	21	30.4
10+	39	56.5
Range	1.0-40.0	
Mean±SD	12.8±8.7	
Age at diagnosis (years):		
<25	42	60.9
25+	27	39.1
Range	14.0-56.0	
Mean±SD	24.1±7.7	
Initiation of treatment:		
Immediately after diagnosis	37	53.6
Delayed	32	46.4
Treatment modality:		
Medication	61	88.4
Medication + ECT	8	11.6
Had previous hospitalization	49	71.0
Had previous relapse	54	78.3

Table 3 demonstrates that caregiver's highest burden at the pre-intervention phase was for perception of patient's utility (91.3%), whereas the lowest was for resource demand (26.1%). At the post-intervention phase, there were decreases in all types of burdens, but the statistically significant improvements were for problematic behavior (p=0.001), and troubled daily life activities (p=0.003). In

total, the percentage of caregivers with high burden dropped from 58.0% before the intervention to 23.6% after the intervention (p<0.001).

Regarding caregivers' coping, this table shows that the highest problem-focused coping approach used before the intervention was exerting restrain (76.8%), while the lowest

was denial (42.0%). At the post-intervention phase, all approaches changed significantly with higher use of positive ones and less use of negative ones as exerting restrain and denial. Overall, the use of problem-focused coping increased from 81.2% at the per-intervention to 94.5% at the post-intervention phase and this increase was statistically significant ($p=0.03$). As regards emotion-focused coping, the most used approach before the intervention was turning

to religion (68.1%), while the lowest was wishful thinking (14.5%). The post-intervention demonstrated statistically significant increases in all approaches, with the only exception related to mental disengagement. Overall, the use of emotion-focused coping increased from 59.4% at the per-intervention to 89.1% at the post-intervention phase and this increase was statistically significant ($p<0.001$).

Table 3: Comparison of Caregivers' Burden of Care and Coping process before and after Psychoeducation intervention

	Time				X ² Test	p-value
	Pre (n=69)		Post (n=55)			
	No.	%	No.	%		
Burden:						
Problematic behavior	19	27.5	3	5.5	10.23	0.001*
Resources demand	18	26.1	8	14.5	2.46	0.12
Troubled daily life activities	23	33.3	6	10.9	8.59	0.003*
Perception of patient utility	63	91.3	46	83.6	1.69	0.19
Total burden:						
High (60%+)	40	58.0	13	23.6		
Low (<60%)	29	42.0	42	76.4	14.74	<0.001*
Coping:						
Problem focused coping:						
Seeking information and social support	38	55.1	41	74.5	5.02	0.025*
Positive re-interpretation	36	52.2	48	87.3	17.25	<0.001*
Exert of restrain	53	76.8	23	41.8	15.80	<0.001*
Denial	29	42.0	8	14.5	11.04	<0.001*
Active coping	51	73.9	51	92.7	7.42	0.006*
Total problem-focused:						
High (60%+)	56	81.2	52	94.5		
Low (<60%)	13	18.8	3	5.5	4.88	0.03*
Emotion-focused coping:						
Helplessness	11	15.9	31	56.4	22.33	<0.001*
Mental disengagement	30	43.5	17	30.9	2.05	0.15
Wishful thinking	10	14.5	32	58.2	26.08	<0.001*
Turning to religion	47	68.1	51	92.7	11.19	0.001*
Emotional discharge	16	23.2	24	43.6	5.86	0.02*
Acceptance	44	63.8	47	85.5	7.37	0.007*
Total emotion-focused:						
High (60%+)	41	59.4	49	89.1		
Low (<60%)	28	40.6	6	10.9	13.54	<0.001*

(*) Statistically significant at $p<0.05$

Table 4 shows generally low patients' QOL in all domains, particularly with the social roles and functioning before the intervention (7.2%). At the post-intervention phase statistically significant improvements were demonstrated in five of the six domains of QOL. The domain of personal

hygiene improved, but the difference did not reach statistical significance ($p=0.051$). In total, the percentage of patients with high QOL increased from 11.6% before the intervention to 50.9% after the intervention ($p<0.001$).

Table 4: Comparison of QOL of Schizophrenic Patients before and after Psychoeducation intervention

	Time				X ² Test	p-value
	Pre (n=69)		Post (n=55)			
	No.	%	No.	%		
Quality of life:						
Work performance	12	17.4	19	34.5	4.80	0.03*
Daily life activities	19	27.5	37	67.3	19.51	<0.001*
Social roles and functioning	5	7.2	26	47.3	26.15	<0.001*
Personal hygiene	28	40.6	32	58.2	3.80	0.051
Interest in outside events	11	15.9	23	41.8	10.30	0.001*
Morale	27	39.1	33	60.0	5.34	0.02*
Total QoL:						
High	8	11.6	28	50.9		
Low	61	88.4	27	49.1	22.96	<0.001*

(*) Statistically significant at $p<0.05$

No correlations of statistical significance could be revealed between any of the scores and caregivers' characteristics. Meanwhile, **Table 5** indicates a number of statistically significant correlations between the scores of coping, QOL and burden and patients characteristics at the pre and post-intervention phases. The burden scores have weak statistically significant positive correlations with the number

of relapses at both phases. The problem-focused coping has a weak statistically significant negative correlation with patient age and negative correlation with the number of hospital admissions at the pre-intervention phase. As for the QOL score, it had weak statistically significant negative correlations with the duration of illness and the number of relapses at the post intervention phase.

Table 5: Correlation between Coping, QOL and Burden Scores Pre- and Post- Psychoeducation intervention and the Schizophrenic Patients' Characteristics

	Spearman rank correlation coefficient			
	Burden	Problem-focused coping	Emotion-focused coping	QOL
Pre-intervention:				
Patient age	-0.138	-.248*	-0.184	0.012
Patient education	-0.045	-0.178	-0.054	0.038
Duration of illness	0.038	-0.116	-0.182	-0.15
Age at diagnosis	-0.147	-0.215	0.035	0.168
Hospital admissions	0.152	-.284*	0.202	-0.078
Relapses	.267*	0.071	-0.109	-0.221
Post-intervention:				
Patient age	0.007	-0.115	-0.19	-0.155
Patient education	-0.056	-0.077	0.053	0.194
Duration of illness	0.138	-0.055	-0.185	-.276*
Age at diagnosis	-0.056	-0.099	-0.038	0.01
Hospital admissions	0.187	0.143	-0.168	-0.236
Relapses	.283*	-0.055	-0.1	-.329*

(*) Statistically significant at p<0.05

Table 6 displays the best fitting linear regression model for QOL scores. It shows that the statistically significant independent positive predictors are the scores of emotion-focused coping, crowding index, and patient marital status.

On the other hand, the negative predictors are the burden score and patient sex. The model explains 76% of the variation in QOL scores.

Table 6: Best fitting multiple linear regression model for patients' QOL scores

	Unstandardized Coefficients		Standardized Coefficients	t-test	p-value	95% Confidence Interval for B	
	B	Std. Error				Lower	Upper
Constant	60.33	6.65		9.07	<0.001	47.15	73.54
Emotion-focused coping	0.43	0.12	0.18	3.61	<0.001	0.19	0.65
Burden	-0.93	0.06	-0.77	15.50	<0.001	-1.04	-0.81
Crowding index	3.04	1.45	0.10	2.10	0.038	0.17	5.91
Patient sex (reference: male)	-2.78	1.54	-0.09	1.81	0.073	-5.83	0.27
Patient marital status (reference: single)	6.20	1.63	0.18	3.81	<0.001	2.97	9.42

r-square = 0.76

Model ANOVA: F=71.12, p<0.001

Variables entered and excluded: caregiver's age, sex, marital status, problem-focused coping score, intervention

DISCUSSION

Schizophrenia is a debilitating mental illness that has a significant impact not only in the patient but also in the entire family as well. Caregivers assume almost the totality of the patient care. This responsibility exposes caregivers to an intense burden with negative consequences for them and the rest of the family system (18).The aim of this study was to investigate effectiveness of psychoeducation intervention for family caregivers of schizophrenics on their burden of care and coping process and their patients' quality of life. The results demonstrated improvements in caregivers'

burden and coping, which was positively reflected on their patients' quality of life.

The present study found that more than half of the caregivers suffered from a high burden due to care giving. An explanation may be that family caregivers view their caregiving role as an obligation hence, their reluctance to report negative experiences of caregiving. In this regard (49), stated that people who care for another with a serious mental disorder have high levels of burden, which leads to a series of psychological, physical, economic and social factors that negatively affect the caregiver. The finding is in agreement

with (50) who conducted the study to determine burden of care and its correlates in caregivers of the first-degree relatives of schizophrenic patients with schizophrenia, and found that nearly half of the studied caregivers reported significant burden. And, (51) who reported a similarly high level of burden in their study. Contrary to current results the rate is even higher compared with the rate reported by (52) in Nigeria (47.3%), whereas a higher rate (73.5%) was reported in Kuwait (53). However, it was observed a significant decrease in caregivers' burden to less than one-fourth of them following implementation of psychoeducational activities. The results might be attributed to attendance of the participants to psychoeducational activities helped them to express their held feeling related to care giving duties and burdens, raising their awareness about strategies for dealing with daily problematic situations.

Similar successes of such interventions have been reported through the study findings of (54) who revealed that the family psychoeducation demonstrated positive effects in reduction of family burden and patients symptoms immediately and one month after the intervention.

In terms of our findings concerning caregivers' coping, the current study results revealed generally acceptable levels prior to the intervention and significant improvements in caregivers' problem-focused as well as emotion-focused coping. Such improvements might be attributed to psycho-education interventions increased the relatives' understanding of the illness, which increases the level of acceptance about the illness and reduces denial." And also helped the caregivers to learn effective techniques of problem solving and to deal with situation in a positive rather than in a negative way. Similar success of psycho-education program have been reported by (55) who stated that there were significant improvement occurred in the majority of domains of the burden assessment schedule and the coping checklist following psycho-education.

An issue concerning whether the schizophrenic caregivers' psychoeducational intervention would positively affect the quality of life of their patients. The obtained results pointed to post-intervention significant improvements in most domains of patients' quality of life. This has also been confirmed through multivariate correlation and regression analyses, which identified the scores of emotion-focused coping as significant positive independent predictors of the score of QOL, while the score of burden was a negative predictor of this score. Therefore, the increased caregivers' ability to cope with patients' problems led to reduction in their care giving burden, and this was positively reflected on patients' QOL. This confirms our hypothesis that psychoeducation of schizophrenic patients' families improves the quality of life for both of them. Because of such intervention could be considered as an important intervention for the management of schizophrenic patients as it improves their quality of life and supports the caregivers. This is in line with findings of various studies [56-61] have shown that psychoeducation of schizophrenic patients' families not only enhances the social and global functions of the patients, but also improves the quality of life for both of them.

The present study findings highlighted the positive predictors of quality of life were emotion-focused coping, crowding index and the patient marital status. In this regard the adaptive function of coping strategies may depend on environmental context and individual characteristics. An alternative for understanding coping is categorizing "approach" strategies (including both problem-focused and emotion-oriented coping strategies such as seeking support and expressing emotions) vs. "avoidant" strategies (denial, disengagement) (62). Approach strategies predict better adjustment over time (63), though others have suggested that denial and avoidance may be adaptive after an acute stressor such as a new diagnosis (64). Otherwise, emotional coping strategies have less influence than problem-focused strategies (65). Generally, this is consistent with findings of the study conducted by (66) Problem-focused coping strategies were more common in caregivers of bipolar patients meanwhile emotion-focused strategies in caregivers of schizophrenic patients.

Quality of schizophrenic patients' in relation to sociodemographic variables. In term of crowding index found to be a positive indicator that it meant a bigger family is better for schizophrenic patient than smaller family, where the care giving situation in large family households reduced burden levels with a subsequent positive impact on the patient. Concerning marital status, a better quality of life is predicted by being married. In this context, being married is predictive of better quality of life, indicating the importance of family and supportive interpersonal relationship in better perception of life circumstances. In agreement with (67) reports that pointed to patients' quality of life was significantly affected by sociodemographic data, sex, marital status, socioeconomic status, educational level and employment.

In term of family caregivers' burden found to be as an independent negative predictor of their patient's quality of life. The findings indicated the higher the caregiver burden, the lower the quality of life experienced by the patients with schizophrenia. This is explained as higher burden influence negatively on ability to cope with more chances of conflicts and high expressed emotions. Consequently, lead to negative impact on the patients' course of illness with higher probabilities of relapses and more frequent hospitalizations. In agreement with the study conducted by (68) to identify relationship between caregivers' burden of schizophrenia patient with their quality of life in Indonesia and reported that the higher the caregiver burden, the lower the QOL experienced.

CONCLUSION

Psycho education intervention was effective in reducing the schizophrenics' caregivers' burden, and in improving their coping process which led to significant improvements in patients' quality of life.

RECOMMENDATION

The study recommends continuity of such psycho-education intervention on a long term basis to confirm its effectiveness along with providing mental health counselling, and developing support for family caregivers of schizophrenics.

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