

The impact of coping strategies on burden of care in chronic schizophrenic patients and caregivers of chronic bipolar patients

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Objective: One of the principles of mental health programs is burden and coping of caregivers of chronically mental disorders patients.

In this regard, the aim of present study was to measure the amount of burden and relationship between burden and their coping strategies of caregivers.

Method and Materials: One hundred of main caregivers of patients (50 schizophrenic patients, 50 bipolar patients) from both Razi psychiatric hospital and clinic were enrolled to the study. The instruments were FBIS (Family Burden Interview Schedule) as well as Weintraub coping strategies check list (COPE). Chi-square, Pearson correlation coefficient and t-test were used for data analysis.

Results: The study showed that the mean of burden in caregivers of chronic schizophrenic patients was significantly ($P < 0.05$) higher than that of bipolar patients (35.5 vs. 28.9). There was inverse correlation (but not statistically meaningful) between burden and problem focused coping strategy.

Conclusion: There was also a direct correlation between burden and emotional-oriented and less benefit and not effective coping strategies, but was not meaningful. Regarding the higher burden in caregivers of chronic schizophrenic patients, social support and offering health services to them seems to be necessary. Training of caregivers for problem-focused copings can also reduce the burden.

Keywords: Caregiver, Schizophrenia, Bipolar disorder, Burden, Coping Strategy.

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Introduction

Caregivers of mental disorders patients such as schizophrenia and bipolar disorders often tolerate high burden against compatibility with signs of their patients.

Increase of burden has various subsequences for caregivers such as decrease in taking care of patients, family isolation, elusion of other relatives from them, decrease in social and mental supports of the patient and consequently to reject the patient and aggravation of disease which may be resulted in their homelessness (1). High burden in caregivers with a high expressed emotion may increase the probability of exacerbations and re-hospitalization (2).

A study conducted in Japan indicated that educating coping strategies to the schizophrenic patients caregivers is useful for all caregivers particularly caregivers with high expressed emotion (3).

Some factors in psychiatric patients may affect taking care of the patient (4, 5). Such factors may include caregivers' cognition estimation, coping approaches and social supports. Also upon assessment of the relation between such factors with mental burden and health of caregivers, it is specified that high level of mental burden may be related to: more repetition of negative and positive symptom behaviors, tending to application of coping approaches based on resolving the problem in facing with negative behaviors, not tending to application of coping approaches based on resolving the problem in facing with positive symptom behaviors. Falloon et al. (6) found that the caregivers who apply problem-centered approaches may show lower burden and better compatibility.

A lower level of caregivers' awareness may cause to more application of negative coping approaches by

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them which may be resulted in a high level of mental burden (7, 8).

The relatives of psychiatric patients may experience an expanded extent of emotional and practical tension (9).

The impact of caregivers' mental burden such as any other stress relates to recognition assessment of the problem by them and available resources for coping (10). Vulnerability of individuals against mental burden may be affected by coping strategies and available social supports (11). There is no direct relation between tension, mental burden feeling and their negative consequences, so that Lazarous and Folkman (12) believed that coping approaches by individuals may have intermediary role in the extent of mental burden feeling and their negative subsequences, so that application of problem-centered coping approaches may decrease extent of burden and emotional-centered and ineffective coping approaches may increase burden or may have no significant effect on compatibility.

Therefore, by taking the listed cases into account the burden tolerated by caregivers of chronic mental disorders patients (Schizophrenia and bipolar disorders) may differ proportional to applied coping strategies.

The study conducted by Lazarous and Folkman as stated by Hins and Co. indicated that application of coping strategies emphasizing on problem solving approaches is more compatible than emotional-centered coping approaches (12).

A number of papers were also conducted in Iran on application of coping strategies while facing with stress and these studies showed that particular coping approaches more compatible in specific conditions. By assessing the relevant texts, it seems that in circumstances that the available problem may be solved problem-centered coping approaches are more compatible but in some cases that the problem may not be solved the emotional-centered approaches may also be compatible.

As mental burden tolerated by caregivers of schizophrenic patients have been pointed out in papers mental burden tolerated by caregivers of bipolar patients have also been considered (13, 14, 15, 16).

Method

100 caregivers (50 schizophrenic patients' caregivers and 50 bipolar patients' caregivers) referred to psychiatric clinic or Razi hospital was selected through convenient sample group method. The tools and instruments include a questionnaire on caregivers' burden and Weinteraub coping strategies check list

(COPE). By use of T test and chi-square and Pierson correlation coefficient of findings were analytically analyzed.

All samples are psychiatric patients' caregivers whose patients were considered as schizophrenic or bipolar patients according to psychiatrist interview and according to DSM-IV diagnostic criteria and recourse to Razi psychiatric hospital or were hospitalized there.

Studies were conducted on caregivers of such patients who have conditions for selection.

Selection conditions

1. To meet DSM-IV criteria (in order to diagnose schizophrenic and bipolar disease),
2. The caregiver must be between 20-75 years old.
3. At least two years have passed from disease.
4. The caregiver must be in sound physical conditions.
5. The caregiver must not be dependent to any psychedelic drugs.
6. Each caregiver shall care only one patient.

Taking samples was performed by use of convenient group sampling method. All caregivers declared their consent concerning filling questionnaire.

100 people were selected. 50 schizophrenic patients' caregivers and 50 bipolar patients' caregivers were selected and then assessed.

Measurement Tools

The following tools were applied for evaluating extent of burden and assessment of coping approaches applied by 50 schizophrenic and bipolar patients' caregivers in this study:

- Questionnaire concerning individual particulars (patient-caregiver),
- Family burden interview schedule (FBIS)
- Weinteraub coping strategies check list (COPE).

Caregiver Burden Schedule

This questionnaire was prepared by Pais and Kapur (17) which may be filled in form of a semi-constructed interview. This questionnaire may analyze caregivers' burden in two objective or subjective dimensions. Each includes 24 clauses and 6 classes in total that each includes 3 options which evaluate the said dimensions in 0-2 scale in each clause. The maximum point in this scale is 48 and the minimum point is 0. The greater point indicates the higher extent of burden.

This scale has a high static coefficient (72%) which was translated and applied in Iran by Malakouti and et. al

(18). According to the points gained in this scale, three categories including low burden (0-16), mean burden (17-32) and high burden (32-48) are achieved.

Coping Strategies Check List

This questionnaire is a multi-dimensional tool which analyzes various types of responding people to stress which was prepared by Carver, Schier and Weinteraib (19) and translated by Zolfaghari, Mohammadkhani and Ebrahimi Mohammadkhani (20) and revised by taking Iranian culture into account and by use of other available coping schedules. Since, the list does not contain all coping behaviors, the schedules analyzed in the study conducted by Epstein and Majer (21). This check list includes 72 clauses and 18 categories in total that each includes 4 options. Besides, according to theoretical scheme of the test, this list includes 4 general subjects including:

Problem-Centered Coping

5 conceptual scales were allocated to problem-centered coping evaluation including the following categories: A) Active coping; B) Scheduled coping; C) Ceasing semi-ordinate activities; D) Avoiding impatient facing with problem or patience; and E) Seeking for operative social support.

Emotional-Centered Coping

5 scales were allocated to emotional-centered coping evaluation including the following categories: A) Coping based on deny; B) Coping through seeking emotional social support; C) Coping through tending to religion; D) Coping based on acceptance; and E) Coping through positive re-interpretation.

Low-Effective Coping and Ineffective Coping

3 scales were allocated to low-operative coping responses including the following categories: A) Centralizing on emotion and its express; B) mental non-engagement; C) behavioral non-engagement. 5 scales were allocated to inoperative coping responses including the following categories: A) Impulsiveness; B) Superstitious Thinking; C)

Wishful Thinking; D) Negative Thinking; and E) Using medicine and substances.

Validity and Stability

Carver and et al. (19) assessed the validity and stability of these tools through three separate studies on a group of students. The results of stability assessment through re-evaluation method indicated that the stability coefficient was between $r=0.42$ and $r=0.76$ for various scales. The results of the study conducted by Mohammadkhani (20) showed that this scale is a valid tool for evaluation of coping strategies. Also the stability of all its scales was assessed on a sample including 20 students through re-evaluation with a two-week interval. The highest stability coefficient was tending to religion i.e. $r=0.95$ and the lowest but the most meaningful stability coefficient relates to behavioral non-engagement i.e. $r=0.63$. The stability coefficient for the whole scale was reported as 0.93.

Results

The studies indicated that there is an inverse relation between extent of burden and problem-centered coping approaches, but it was not statically meaningful and there is a direct relation between extent of burden and emotional-centered, low-effective and ineffective coping approaches. Demographical study relating to the patients and caregivers of both groups indicated that notwithstanding the equal number of patients in both groups but the average age of schizophrenic patient is higher and that the number of employed bipolar patients is four times more than employed schizophrenic patients. Of course both groups were analyzed based on age category. Their caregivers were often illiterate. As to schizophrenic patients the father played role of caregiver (28%) more than mother (22%).

The table 1 indicates that chronic schizophrenic patients' caregivers meaningfully tolerate higher burden ($p < 0.050$) than chronic bipolar disorders patients' caregivers (averagely 35.5 versus 28.9).

Table 1- Comparison of Burden Average of Schizophrenic and Bipolar Disorders Patients Caregivers

| Group | Number | Average | Standard Deviation | Extent | Freedom degree | Meaningfulness level |
|---|--------|---------|--------------------|--------|----------------|----------------------|
| Chronic Schizophrenic Patients Caregivers | 50 | 35.54 | 8.6 | 3.14 | 49 | 0.003 |
| Chronic Bipolar Patients Caregivers | 50 | 28.94 | 11.5 | | | |

Tables 2 and 3 indicate that although applying problem-centered coping approaches has an invert relation with the burden extent but it is not meaningful, and that the relation between emotional-

centered, low-effective and ineffective coping approaches applied by caregivers of both groups is direct but not meaningful.

Table 2-Relationship between Extent of Burden and Coping Approaches Applied by Schizophrenic Disorders Patients Caregivers

| Coping Approaches of Chronic Schizophrenic Disorders Patients Caregivers | Number | Correlation coefficient | Reasonability level |
|--|--------|-------------------------|---------------------|
| Problem-centered coping approaches | 50 | -0.066 | 0.65 |
| Emotional-centered coping approaches | 50 | 0.082 | 0.57 |
| Low-effective and ineffective coping approaches | 50 | 0.045 | 0.75 |

Table 3- Relationship between Extent of Burden and Coping Approaches Applied by Bipolar Disorders Patients Caregivers

| Coping Approaches of Chronic Bipolar Patients Caregivers | Number | Correlation coefficient | Reasonability level |
|--|--------|-------------------------|---------------------|
| Problem-centered coping approaches | 50 | -0.164 | 0.254 |
| Emotional-centered coping approaches | 50 | 0.005 | 0.972 |
| Low-effective and ineffective coping approaches | 50 | 0.189 | 0.188 |

Discussion

The study indicated that burden tolerated by schizophrenic patients' caregivers is meaningfully higher than chronic bipolar patients' caregivers, so that burden average is 35.5 in schizophrenic patients' caregivers and 28.9 in chronic bipolar patients' caregivers. Since most human disorders are related to stress in some aspects (22) and the higher stress (23) and longer (24, 25) has more negative psychiatric and physiologic effects. Malakouti et al. (18) discovered in their studies that the extent of burden tolerated by chronic schizophrenic patients' caregivers is higher than burden tolerated by other chronic mental disorder patients caregivers. A study conducted in India indicated that although in most studies the quality of chronic sever diseases such as schizophrenia and characteristics of caregivers in coping with mental disorder were pointed out but similar disorder like bipolar mood disorder are rather ignored (26).

In a study conducted by Webb et al. (4) on the relationship between mental burden and mental health of chronic mental disorder patients caregivers and its relation to social support and coping approaches, they founded that mental burden along with higher frequency of positive and negative symptoms and mental health is related to lower frequency of positive symptoms and social support than coping approach applied by the caregiver. In this study the burden source in caregivers of both groups was more objective rather to be subjective that may be resulted from poor social supports such as out-patients, rehabilitation and long-term and

short-term hospitalization services or permanent care of the patient also the impact of presence of a mental patient on family's income and caregiver's gender. These findings conform to demand of schizophrenic patient caregivers who have severed symptoms and their caregivers must tolerate higher burden.

A study conducted in Chili indicated that the extent of mental burden arises by lacking social rehabilitation schedules for mental disorders patient caregivers (27).

The major hypotheses of the study was assessment of relationship between extent of burden with coping approaches that an invert but non-meaningful relation was recognized between problem-centered coping approaches and caregivers burden of both schizophrenic and bipolar patients groups in this research. Similarly there was a direct relation between emotional-centered, low-operative and inoperative coping approaches and extent of burden that was not statically meaningful. This result applies to both groups of schizophrenic and bipolar patients caregivers.

A study conducted in India indicated that problem-centered coping approaches were rather applied by bipolar patients' caregivers and emotional-centered coping approaches were rather applied by schizophrenic patients' caregivers (28).

Non-meaningfulness of these findings may be due to the low mass of sample in this study (100 samples), on the other part, the current sampling method was convenient group method from two centers, psychiatric hospital and Razi clinic that individuals who refer to this clinics due to their special

geographic location, are of a lower social – economic level as well as literature level. As indicated in tables relating to demographic specifications of samples, caregivers (whether male or female) are often illiterate that may be a factor influencing applied coping strategy and extent of burden.

Of course, caregivers of such patients by referring to the said centers indeed applied problem-centered coping approach, but the domain of low or high application of this approach is limited among them that may be considered as another factor of non-meaningfulness of this relation.

Vulnerability of individuals against mental burden may be affected by their coping strategies and available social supports (11). Thus the extent of burden arising from caring chronic mental patients may be different depending on coping approaches applied (29). In a study conducted in Japan indicated that in order to provide effective support for reducing caregiver burden the necessity of nursing and social support must be emphasized (30). In other words, a number of factors such as gender, race, social supports, level of literature, education and social class as well as characteristics of individuals and disease nature may all affect the type of applied approach that we could not control them due to restrictions of study.

Restrictions of study

1- Disability in selecting cases randomly which require a national and comprehensive plan. Two centers i.e. Razi hospital and Razi clinic were

selected for sampling that may be considered as a factor for bias of choosing cases.

2- The sampling place is located at southern side of the city and the referees are generally chronic patients with multiple history of hospitalization. A great number of families refer to these centers for permanent care; also the geographical situation of Razi Psychiatric Hospital is an effective factor for selection of referees.

Conclusion

By use of the impact of type of coping strategies on extent of burden sustained to chronic schizophrenic and bipolar caregivers, training problem-centered coping strategies to caregivers may be considered as an approach for reducing burden tolerated by caregivers.

Chronic mental disorder caregivers are a specific group in the society who has specific demands which must be recognized. As the starting point, development of supports such as training families, short-term hospitalization, psychiatric and professional rehabilitation and rendering services to patients at home may be pointed out. Also, the burden sustained to them may be reduced by planning medical sessions based on increasing use of problem-centered coping approaches, particularly concerning schizophrenic caregivers who tolerate higher burden.

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