The Relationship of Relatives’ Illness Perception, Expressed Emotion and Their Burden in Caring for Patients with Schizophrenia

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Abstract  Background: The chronic burden of care to a patient with schizophrenia which produce negative emotions. As a result of de-institutionalization, caregivers have greater burden for the care of their mentally ill relatives. Objective of this study was to explore the relationship of relatives’ illness perception, expressed emotion and their burden in caring for patients with schizophrenia. Design: This study followed a correlation descriptive research design. Setting: This study conducted at inpatient and outpatient psychiatric department of Tanta University Hospital. Subject: The study subjects consist of 100 relatives of patient with schizophrenia. Tools: Tool 1 consisted of 2 parts: Part 1 Socio-demographic and general characteristics of studied participants, Part 2 Illness Perception Questionnaire-Schizophrenia Carers Version (IPQ-SCV), Tool 2 Family Questionnaire (FQ), Tool 3 Caregiver Burden Interview. Results: it was found that the studied participants had poor illness perception total score, it was found that the studied subjects (47%) had high emotional over-involvement level while it was observed that the two thirds of the studied relatives (61%) had high level of family criticism. majority of studied participants had moderate level of family burden. Conclusion: The results concluded that there was a significant positive correlation between family illness perception and family expressed emotion, also there was a significant positive correlation between family emotional expression and family burden level. Recommendations: this study recommended future studies to investigate distress and burden among caregivers with high emotion expression for intervention, reducing family stress and burden.

Keywords: caregivers, burden, emotional expression, illness perception

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1. Introduction

Schizophrenia has a serious effect on the patients and their families. Essentially, schizophrenia is a form of psychosis, where patients suffering from symptoms distress such as hallucinations, delusions, and bizarre thought processes [1]. Continuously, patients have a distortion of thought processes and perceptions, leading to a loss of boundaries between the person and the external world [2]. Family environment plays a crucial part in the onset, as well as course of mental illness, particularly in schizophrenia [3].

Expressed emotion, involving criticism and emotional over-involvement, is a serious predictor of poor prognosis and relapse in schizophrenia [4]. The two dimensions of high emotional expression are emotional over-involvement and critical comments. Expressed emotion, is a “qualitative measure of the 'amount' of emotion displayed, typically in the family setting, usually by a family or care takers”. “A high level of emotional expression in the home might worsen the prognosis or act as a risk factor predicting psychiatric disease”. [5]

Emotion expression is a psychosocial predictor of relapse. When patients live in a family environment that is characterized by critical, hostile, or emotionally over involved or intrusive attitudes (i.e., in high-emotion expression families), they are at elevated risk of early relapse [6]. So, criticism and hostility describe more angry attempts of the caregiver to force the individual into normative manner of behaviors, whereas emotional over-involvement is their awareness of deteriorating of health status and over concern. Emotional over-involvement is over-emotionality and extreme overprotective behavior with the patient. The family members feel that illness is their fault and suffer from chronic guilt [1]. This is the opposite of a hostile attitude and the family member is open minded about the illness, but still has the same negative effect on the patient. Unfortunately, in the long run, over protectiveness hampers the recovery by increasing dependence of the patient on their caregiver [7].
Perceptions of illness by relatives are important in explaining their reactions to illness, and have implications for designing strategies that might improve their well-being. Their emotion expression levels seem to be related to beliefs about their own or the patient's control over the illness [8]. Association between relatives' illness attribution and emotion expression; relatives who were highly critical, might to attribute that psychotic disorder was controllable by the patient [9]. Attribution model is related to relatives' emotional attitudes towards patient's problematic behavior; critical relatives are more likely to blame for patient's behaviors and view symptoms as controllable by the patients, rather than as a result of the illness. Consequently, family attempt to change those behaviors by critical comments [10]. In contrast, relatives who feel excessively guilty regarding the patient's illness has over-involvement or self-sacrificing attitudes. Positive symptoms, elicit attributions by relatives that symptoms are uncontrollable, and therefore, engender emotional over involvement attitudes (i.e., exaggerated emotional responses or over protectiveness). Conversely, disturbances such as negative symptoms are more likely to be considered under the patient's control, eliciting more critical attitudes from relatives [11].

Family burden as a consequence of mental illness for patients' caregivers. refers to “a psychological state by the combination of physical work, emotional pressure, social restrictions and financial difficulties arising from giving care of an ill relative”. It involves embarrassment, self-blame, reduction leisure time, daily routine and social contacts, occupational problems, and coping with the patients’ problems [12,13]. The emotion expression of the patients’ relative is closely related to burden of disease. More negative affect is associated with less helping and more positive affect is associated with more helping and in turn greater helping would be associated with greater caregiver burden [14,15]. Considering the crucial role of family environment in the prognosis of psychosis and the early family intervention tailored by mental health nurses could preventing the development of wrong beliefs and negative emotions in relatives at the early stages of the psychotic process. Therefore, the role of psychiatric nurse is designating interventions to elicit the relative ‘beliefs to have more benign attributions toward patients with mental health problems and to understand how to respond to patient’s behavior. [16]. Family psycho-education to acquire additional skills to create warm environments, as well as personalized to the individual's stage of psychosis and the caregivers’ appraisal of the condition could help long-term outcomes for both patients and their relatives [17].

1.1. The Significance of the Study

Family relatives might be positively supportive to patients by providing care but might negatively influence clinical outcomes by negative emotions toward patients. Also mental illnesses are a disturbing and disabling conditions for patients and a severe burden for their family and society. So this study explored the relationship of relatives’ illness perception, express emotion and their burden in caring for patients with schizophrenia.

1.2. The Study Aim

To explore the relationship between relatives’ illness perception, expressed emotion and their burden in caring for patients with schizophrenia.

1.3. Research Questions

Is there a relation between relatives’ illness perception, expressed emotion and their burden in caring for patients with schizophrenia?

2. Subjects and Method

2.1. Research Design

A correlation descriptive research design was used in the study.

2.2. Setting

The present study conducted at psychiatric inpatient and outpatient department of Tanta University Hospital with a capacity of 31 beds divided into two wards for men (17 beds) and two wards for women (14 beds). This hospital is under supervision and direction of the ministry of higher education, and provides health care services to three governments, namely Gharbya, El-Menofeya, and Kafr- El-sheikh. It works 7 days/ week, 24hrs/ day.

2.3. Subjects

The study subjects consist of (100) relatives of patient with schizophrenia selected randomly according to the EpInfo statistic program. The participants had the following:

2.3.1. Inclusion Criteria for Caregivers

- Primary caregivers (Parents/Spouse/Sibling/Children) staying with the patient since the onset of illness are included.
  - Age group above 18 years
  - Living with the patient for at least last one year
  - informed consent to participate in the study.

2.3.2. Exclusion Criteria for Caregivers

- Caregivers with psychiatric conditions, organic syndromes, mental retardation, substance dependence or chronic physical illness.
- Participants did not give consent.

2.4. Tools

Tool (1): consisted of 2 parts:
Part (1): Socio-demographic and general characteristics of studied participants include; e.g. (age, sex, residence,
level of education, marital status, family income, family arrangement, relation to patient).

Part (2): Illness Perception Questionnaire - Schizophrenia Carers Version (IPQ-SCV) 23-items developed by Barrowclough et al. 2001 [18], it is a measure of relatives' beliefs about the disorder whose items are rated from (1) 'strongly disagree' to (5) 'strongly agree'. The scale composed of the following six subscales: timeline acute/chronic (2 items) and timeline cyclical (2 items) (perception of the pattern and duration of the disorder), consequences for both patients and relative (12 items) (the expected effects and outcome of the disorder). Personal control-patient and personal control-relative (7 items) (control over the disorder).

Scoring system:
Addition of scores of various items yield subscale scores
- <60% Poor perception, (60-70) % Fair perception,
- >70% Good perception
  - A high score reflects a perception of a more chronic timeline.
  - A high score reflects a perception of greater negative consequences for the patient/relative.
  - A high score reflects a perception of greater control by the patient/relative.

Tool (2): Family Questionnaire (FQ) developed by Wiedemann et al, 2002 [19]
Emotional Expression was assessed with the Family Questionnaire (FQ) Which comprises 20-items equally distributed in two subscales (criticism and EOI); critical comments (CC 10 items) is defined as unfavorable comments on the behavior or the personality of the patient. EOI (10 items) includes over-intrusive, self-sacrificing, overprotective behavior, or exaggerated emotional responses, and over-identification with the patient. FQ scored on a 4-point scale ranging from 1 ‘never/very rarely’ to 4 ‘very often’. The total score therefore has a potential range of 0-80, with higher scores reflecting high level of expressed emotion toward the patient.

Scoring system:
Each subscale items are scored from 1 to 4 yielding a maximum score of 40 in each subgroup. Caregivers are classified as:
- high EE in : CC subscale (Score 23 or greater)
- high EE in: EOI subscale (Score 27 or greater)
- high EE if they score 23 or greater on the CC subscale or 27 or greater on the EOI subscale.

Tool (3): Caregiver Burden Interview (Zarith et al. 1980, Alpuche-Ramirez et al. 2008) [20]. Burden scale was measured with the Caregiver Burden Interview. It is used with relatives of patients with schizophrenia. It includes 22 items about relatives' relationships with the patient, physical and psychological well-being, finances, social life and expectations. The ZBI-22 items with five ordered frequency-related response categories scored 0 (never) to 4 (nearly always). The total score ranges from 0 to 88 with higher scores indicating higher burden.

Interpretation of Score:
- 0 - 21 little or no burden
- 21 - 40 mild to moderate burden
- 41 - 60 moderate to severe burden
- 61 - 88 severe burden.

2.5. Method
- Official permission to conduct the study was obtained from Tanta University hospital.
- Ethical consideration:
  * Approval of research study form the ethical committee in the faculty of nursing Tanta University
  * Participation in the study was voluntary and informed consent was obtained from the studied care giver to participate in the study.
  * Explanation the purpose of the study and emphasizing the right to withdraw at any point during the study.
  * Assuring studied caregiver about their privacy and confidentiality of the obtained data.
- The participants were oriented about date, time and place of data collection and collected data will be used only for the purpose of scientific research.
- The study tools were tested for content validity by a jury composed of five experts in psychiatric nursing field.
- The internal consistency (Cronbach's alpha) for these subscales of illness perception was good (from 0.62 to 0.88).
- The internal consistency (Cronbach's alpha) of the scores for the two subscales of family questionnaire (emotion expression) was of 0.80 for emotional over involvement and 0.87 for criticism.
- The internal consistency (Cronbach's alpha) of the Caregiver Burden Interview was of 0.73
- The pilot study was conducted on 10% of patient's relative's and excluded from the actual study subjects. After its implementation and according to its results, the necessary modifications were done.

2.6. Actual Study
- A written consent was obtained from each selected caregiver for participation in the study after explaining the aim of the study, establishing rapport and trusting relationship with each participant. The form of the study tools was distributed and explained to caregiver (n = 100).
- Tools of the study were implemented by the researcher using the questionnaires to determine the relation between study variables -Each interview was implemented on an individual basis and lasted for about 40-50 minutes according to participants’ attention and willing to cooperate or talk with the researcher. Data were collected over a period of about 4 months starting from March 2019 and ending in June 2019.

2.7. Statistical Analysis
The collected data were organized, tabulated and statistically analyzed using SPSS software statistical computer package version 26. For quantitative data, the range, mean and standard deviation were calculated. For qualitative data, comparison was done using Chi-square test ($\chi^2$). Correlation between variables was evaluated using Pearson and Spearman’s correlation coefficient r. A significance was adopted at P<0.05 for interpretation of results of tests of significance (*).
3. Results

Table 1 shows Socio-demographic characteristics of schizophrenic patients’ relatives. It was observed that among the studied participants, nearly half of the studied participants were male (55%), half of them were father and mother (36 %) aged 40-<50 years. In relation to level of education, 28% and 27.7% were had secondary and university degree of education respectively. Regarding residence and marital status, 67% were urban and 69% were married. The majority of them were living with patient, staying with patient more than one year (47%). and more than 28 hours per week (44%).

Table 2 shows distribution of the studied subjects according to their total level of Illness Perception Questionnaire (IPQ).

### Table 1. Distribution of the studied subjects according to their socio-demographic characteristics

| Characteristics                        | The studied subjects (n=100) |   |   |
|----------------------------------------|-----------------------------|---|---|
| **Age (in years)**                     |                            |   |   |
| * (20–<30)                             | 16                          | 16.0 |   |
| * (30–<40)                             | 29                          | 29.0 |   |
| * (40–<50)                             | 36                          | 36.0 |   |
| * ≥50                                  | 19                          | 19.0 |   |
| **Gender**                             |                            |   |   |
| * Male                                 | 55                          | 55.0 |   |
| * Female                               | 45                          | 45.0 |   |
| **Residence**                          |                            |   |   |
| * Rural                                | 33                          | 33.0 |   |
| * Urban                                | 67                          | 67.0 |   |
| **Relationship to patient**            |                            |   |   |
| * Father                               | 25                          | 25.0 |   |
| * Mother                               | 25                          | 25.0 |   |
| * Brother                              | 17                          | 17.0 |   |
| * Sister                               | 11                          | 11.0 |   |
| * uncle                                | 21                          | 21.0 |   |
| * Friend                               | 1                           | 1.0  |   |
| **Marital status**                     |                            |   |   |
| * Married                              | 59                          | 59.0 |   |
| * Single                               | 26                          | 26.0 |   |
| * Widow                                | 5                           | 5.0  |   |
| * Divorced                             | 10                          | 10.0 |   |
| **Having children**                    |                            |   |   |
| * Yes                                  | 66                          | 66.0 |   |
| * No                                   | 34                          | 34.0 |   |
| **Number of children**                 |                            |   |   |
| Range                                  | (1-6)                       |   |   |
| Mean ± SD                              | 3.11±1.326                  |   |   |
| **Educational level**                  |                            |   |   |
| * Illiterate                           | 20                          | 20.0 |   |
| * Read & write                         | 25                          | 25.0 |   |
| * Secondary                            | 28                          | 28.0 |   |
| * University                           | 27                          | 27.0 |   |
| **Occupation**                         |                            |   |   |
| * Work                                 | 41                          | 41.0 |   |
| * Not work                             | 59                          | 59.0 |   |
| **Co-habitation (Living with the patient)** |                |   |   |
| * Yes                                  | 84                          | 84.0 |   |
| * No                                   | 16                          | 16.0 |   |
| **Number of hours of stay with patient/week** |                |   |   |
| * (1-14)                               | 34                          | 34.0 |   |
| * (15-27)                              | 19                          | 19.0 |   |
| * ≥28                                  | 47                          | 47.0 |   |
| **The period of stay and care**        |                            |   |   |
| * None                                 | 3                           | 3.0  |   |
| * 6 months                             | 32                          | 32.0 |   |
| * Until 1 year                         | 21                          | 21.0 |   |
| * More than 1 year                     | 44                          | 44.0 |   |
| **Family type**                        |                            |   |   |
| * Threaded/knit                        | 83                          | 83.0 |   |
| * Disjointed                           | 17                          | 17.0 |   |
| **Suffering from organic/chronic diseases** |                |   |   |
| * Yes                                  | 26                          | 26.0 |   |
| * No                                   | 74                          | 74.0 |   |
| **Suffering from mental illness**      |                            |   |   |
| * Yes                                  | 27                          | 27.0 |   |
| * No                                   | 73                          | 73.0 |   |

<60% poor, (60-70) % Fair, >70% good.
also it was observed that the highest poor scores were consequences-patient and consequences-relative domain (22.19±4.728) followed by Control-cure of illness by patient (15.97±3.828) and Control-cure by relative (6.45±2.204). The lowest scores were for timeline-episodic (5.81±1.727) and Timeline acute/chronic (6.61±2.403).

Table 3. Distribution of the studied subjects according to their total level of Family Questionnaire (FQ) domains

| Family Questionnaire domains | The studied subjects (n=100) | N  | %   |
|-----------------------------|-----------------------------|----|-----|
| Total level of EOI          |                             |    |     |
| Low                         | 34                          | 34.0|     |
| Fair                        | 19                          | 19.0|     |
| High                        | 47                          | 47.0|     |
| Range Mean ± SD             | (9-30)                      | 20.43±5.131 |
| Total level of criticism    |                             |    |     |
| Low                         | 61                          | 61.0|     |
| Fair                        | 26                          | 26.0|     |
| High                        | 13                          | 13.0|     |
| Range Mean ± SD             | (1-27)                      | 14.89±6.215 |
| Total FQ level              |                             |    |     |
| Low                         | 53                          | 53.0|     |
| Fair                        | 20                          | 20.0|     |
| High                        | 27                          | 27.0|     |
| Range Mean ± SD             | (17-51)                     | 35.32±8.689 |

<60% low, (60-70) % Fair, >70% high.

Table 3 shows distribution of the studied subjects according to their total level of Family Questionnaire (FQ) domains. Regarding the emotional over involvement mean score, it was found that the studied subjects (47%) had high EOI level with mean score (20.43±5.131). In relation to the level and mean score of family criticism, it was observed that the two thirds of the studied relatives (61%) had high level of family criticism, with mean score (14.89±6.215). Finally, in relation to total family questionnaire level and mean score (expressed emotion), it was found that the above half (53%) of the studied participants had low expressed emotion with total family questionnaire with mean score (35.32±8.689).

Figure 1 shows distribution of the studied subjects according to their total level of family burden scale. Regarding level of family burden, it was found that the majority (66%) of the studied relatives had moderate level of family burden. Also (24%) of them had severe level of family burden, and slightly of them (10%) had mild level of family burden.

Table 4 shows correlation between total IPQ scores, total FQ scores, and total burden score among the studied participants. There was a significant positive correlation between IPQ and FQ total scores (r=0.293, p=0.003). On the other hand regarding correlation between FQ total scores and total burden scores, also there was a significant positive correlation between FQ total scores and total burden scores (r=0.295 and p= 0.003, respectively).

Table 5 shows Correlation between IPQ domains and FQ domains among the studied participants. there was a positive significant correlation between illness perception and family questionnaire sub-items as emotional over involvement and sub-items of illness perception as Consequences-patient (r=0.367, p=0.000) Consequences-relative, (r=0.237, p=0.018) and Control-cure of illness by patient,( r=0.278, p=0.005), Timeline-episodic (r=0.247, p=0.013) respectively. While it was observed that there was a positive significant relation between Timeline-acute / Chronic and criticism, ( r=0.239, p=0.017) . On the other hand, it was observed that a negative not significant relation between Control-cure of illness by patient (r=-0.027, P=0.787), Control-cure by relative (r=-0.099, P=0.328) and Criticism.

Figure 1. Distribution of the studied subjects according to their total level of family burden scale
Table 4. Correlation between total FQ, total burden and total IPQ scores among the studied subjects

|                        | r     | P     |
|------------------------|-------|-------|
| Total burden score     | 0.295 | 0.003 **|
| Total IPQ score        | 0.293 | 0.003 **|

* Significant at level P < 0.05
** Highly significant at level P < 0.01.

Table 5. Correlation between FQ domains and IPQ domains among the studied participants

| IPQ domains          | Total score of EOI | Total score of Criticism |
|----------------------|--------------------|--------------------------|
|                      | r      | p     | r      | p     |
| Consequences-patient | 0.367  | 0.000 **| 0.133  | 0.187 |
| Consequences-relative| 0.237  | 0.018 * | 0.102  | 0.311 |
| Control-cure of illness by patient | 0.278  | 0.005 **| -0.027 | 0.787 |
| Control-cure by relative | 0.103  | 0.306  | -0.099 | 0.328 |
| Timeline acute/chronic | 0.054  | 0.594  | 0.239  | 0.017 *|
| Timeline-episodic    | 0.247  | 0.013 *| 0.192  | 0.056 |

* Significant at level P < 0.05
** Highly significant at level P < 0.01.

Table 6. Comparison between total FQ level, total IPQ level and total family burden level among the studied subjects

| The studied subjects (n=100) | The studied subjects (n=100) | The studied subjects (n=100) | The studied subjects (n=100) | The studied subjects (n=100) |
|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Low (n=53)                  | Fair (n=20)                 | High (n=27)                 | Z² P                        |
| N                           | %                           | N                           | %                           | N                           | %                           | 16.44 | 0.002 **|
| Total IPQ level             |                              |                              |                              |                              |                              | 24.71 | 0.000 *|
| Poor                        | 38                           | 38.0                         | 14                           | 14.0                         | 8                             | 8.0   | 16.44 | 0.002 **|
| Fair                        | 10                           | 10.0                         | 2                             | 2.0                          | 13                            | 13.0  | 24.71 | 0.000 *|
| Good                        | 5                            | 5.0                          | 4                             | 4.0                          | 6                             | 6.0   | 16.44 | 0.002 **|
| Total family burden level   |                              |                              |                              |                              |                              | 24.71 | 0.000 *|
| Mild burden                 | 6                             | 6.0                          | 0                             | 0.0                          | 4                             | 4.0   | 24.71 | 0.000 *|
| Moderate burden             | 44                            | 44.0                         | 12                            | 12.0                         | 10                            | 10.0  | 16.44 | 0.002 **|
| Severe burden               | 3                             | 3.0                          | 8                             | 8.0                          | 13                            | 13.0  | 24.71 | 0.000 *|

* Significant at level P < 0.05.
** Highly significant at level P < 0.01.

4. Discussion

Mental illness is upsetting and disabling conditions for patients which, in turn, causing a severe burden for their family and society [21]. Caring for a family member with schizophrenia has day-to-day challenges and requires adjustments on the part of relatives, especially in the first-onset of the illness. Relatives' perceptions of illness are crucial in their reactions to illness, risk of poor adaptation and strategies that might improve their well-being. Relatives' well-being and adaptation are perceptions of the magnitude of the illness consequences for themselves, whereas their emotion expression levels is related to beliefs about their own or the patient's control [22]. The patient's family experiences feelings of loss and sadness, uncertainty and feelings of shame, guilt, and anger. Like schizophrenic patients themselves, they feel disregarded and socially isolated. Their lives can be disrupted by providing more than usual care that is appropriate for the patient's age [23].

The chronic caregiver burden with a patient with schizophrenia generates negative emotions as greater responsibility for the care of their mentally ill relatives cause of stress manifested in heightened emotion expression [24]. So the aim of this study was to explore the relation between illness perception, expressed emotion and caregivers’ burden in patients with schizophrenia.

The present study revealed that the studied participants had poor illness perception, and the highest poor score were consequences-patient and consequences -relative domains followed by control-cure of illness by patient and control-cure by relatives. this may be due to critical relatives might blame patients for their behaviors and view
symptoms as controllable by the patients, rather than as a result of the illness. As patient behaviors that were undesirable and perceived by relatives to be potentially able to be changed were considered to be targets for criticism. This is in accordance to Martínez D T, 2017 [25], who found that caregivers are likely to make attributions that psychotic symptoms are under the patient control or are their responsibility. In consequence, relatives who believe that patients might control over their behaviors or blame them for their symptoms may react with criticisms in an attempt to reduce those behaviors.

The lowest score was for timeline episodic and timeline acute/chronic may be due to over-involvement or self-sacrificing attitudes. This is in consistent with Martínez D T, 2017 [25], who stated that their findings indicated that expressed emotion was related to a perception of a cyclical/episodic pattern of the disorder over time, probably because of the unstable nature of the early psychosis stages in general.

About half of the studied participants had high emotional over involvement, this is related to relatives had emotional over involvement as a way to control their behavior by doing things for the patient (over-protection) as a consequence of the over-concern about their well-being and their responsibility to deal with the disorder. This is in consistent with Domínguez M, T, et al 2014 [26], stated that positive symptoms, are might elicit attributions by relatives that symptoms are uncontrollable, and therefore, exaggerated emotional responses or overprotectiveness.

Two thirds of the studied participants in this study had high level of family criticism, this may be; It seems that critical relatives are blaming patients for their behaviors and view symptoms as controllable by the patients, rather than as a result of the illness. Consequently, family members attempt to change patient’s behaviors by employing critical comments. This is in consistent with Domínguez M, T, et al 2014 [26] who stated that relatives' criticism lead to poor illness severity and functioning; using criticism as a mechanism to coerce the patient to change their behavior. This is in contrast with Kuipers E et al 2007 [27], who found that Carers were predominantly low emotional expression and revealed relatively low levels of criticism.

It was found that the majority of studied participants had moderate level of family burden and little of them had severe level of family burden, and that related to relative might feel overwhelmed, confused or distressed by patient's residual symptoms and poor functioning, and how much longer it will take to recover. This is in consistent with L. Gómez-de-Regil, et al (2014) [22], Who stated that burden with the relatives' perception of illness as chronic and that relatives could suffer from a long-lasting state of alarm, which deteriorating patient’s symptoms stability.

There was a significant positive correlation between emotional over involvement and illness perception sub items: consequence -patient, consequence -relatives, control-cure of illness by patient and timeline-episodic. Also, there was a positive significant correlation between total score of criticism and time-line /chronic. this may be due to high emotional expression in carers was related to negative perceptions of cure control. It should not be assumed that the negative attributions of the relative are always wrong. It may also be unrealistic to expect relatives to make all the changes. This is in the same line with Carrà G et al 2012 [28], who stated that high family emotional expression was related to personal reactions than to actual caregiving itself. There was a significant positive correlation between family illness perception and family emotional expression, this may be due to relatives might react negatively which enhanced by the strain of care of an ill relative. This is in the same line with Carra 2012 [28], who found that the two dimensions were dependent on relatives’ appraisal of the patients’ condition rather than on his/her illness severity. This is in contrast with Kuipers E et al 2007 [27], who found that there were no significant relationships between family emotional expression and family illness perception variables.

The present study found that there was a significant positive correlation between family emotional expression and family burden level this may be related to: as if family had high level of worry about patient illness as if their burden increased and if long-term carers believe uncontrolled of patient’s illness, more stress and depression and the lack of proactive strategies which may increase their levels of burden. Also this may be related to caregiver criticism may be prove to be the significant predictor of burden. More criticism may be associated with greater burden. This is in consistent with Bianca T. Villalobos, et al 2017, who stated that their findings demonstrated that the high emotional expression or criticism link with caregiver burden [29].

In the same line Darwin 2013 [30], showed a significant relationship between the care burden with the emotional expression in the family of patients with schizophrenia. And Carra 2012 [28], showed the great reality in southern Europe that there is a relationship between the expressed emotion of a high caregiver with subjective burden. Also Nuralita et al 2019 [23], who found that that there was a significant relationship between the burden of treatment with expressed emotion in the families of schizophrenic patients.

5. Conclusion

The present study concluded that the studied participants had poor illness perception. And about half of the studied participants had high emotional over involvement. While it was found that the above half of the studied participants had low expressed emotion It was found that the majority of studied participants had moderate level of family burden and little of them had severe level of family burden. There was a significant positive correlation between family illness perception and family emotional expression. The present study found that there was a significant positive correlation between family emotional expression and family burden level.

6. Recommendations

- Helping both relatives and patients to modify problematic behaviors and cognitions will be the optimum strategy for families with care burden.
- Develop family intervention programs to improve illness perception that reduce relatives' emotional expression levels, reducing family stress as much as improving patient outcomes and burden.
- Future research should investigate the subjective experience of distress and burden among high emotion expression caregivers as a target for intervention,
- Family interventions that provide proper counselling and psychological support to improve relatives understanding of the disorder, reduce negative appraisals, and prevent EE over the psychotic illness burden.

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