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Expressed Emotion and Burdens of Care among Family Caregiver's of Patients with Dementia

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Abstract

Background: Family caregivers of people with dementia face many problems as, stress, depression, anxiety and high level of burdens related to caregiving .The permanent burdens of caregiving is likely to generate negative expressed emotion toward the patient. **Aim:** the study aimed to assess the expressed emotion and burdens among family caregivers of patients with dementia. **Study design:** a descriptive study design was utilized to conduct this study. **Setting:** this study was conducted at the neuropsychiatric clinic at Beni-suef psychiatric hospital. **Subject:** convenient sample of 50 family caregiver's, admitted to the previously mentioned settings was recruited for conducting this study. **Data collection tools:** 1) socio-demographic questionnaire for patients with dementia and their family caregiver's. 2) expressed emotions scale. 3) Zarit burden scale .**Results:** the present study revealed that there was a higher level in expressed emotion and burdens among family caregivers. In addition, there were highly statistically significant positive correlations between caregiver's total expressed emotion and total burdens score**. Conclusion:** In the light of the current study, it can be concluded that family caregivers of patient with dementia had high level of expressed emotion and burdens. **Recommendations:** Designing a systematically continuous family intervention programs in psychiatric hospitals to provide proper information and psychological support that help the family caregivers to improve their understanding of the disorder, handle difficult thoughts and emotions, reduce negative expressed emotion and reduce sense of burden

Key words: Expressed emotion, Burdens, Dementia

Introduction

Dementia refers to disease process marked by progressive cognitive impairment in clear consciousness. Dementia does not refer to low intellectual functioning or mental retardation because these are developmental and static conditions, and the cognitive deficits in dementia represent a decline from previous level of functioning. Dementia involves multiple cognitive domains and cognitive deficit cause significant impairment in social and occupational functioning **(Lepore, Ferrell, Joshua, & Wiener, 2017).**

According to World Health Organization (WHO), The number of people living with dementia worldwide in 2015 was estimated at 47.47 million, this number is expected to rise to 75.6 million by 2030 and almost triple by 2050, reaching 135 million. With the aging population, the prevalence of dementia is rising. The of moderate to severe dementia in different population groups is approximately 5 percent in the general population older than 65years of age and 20 to 40 percent in the general population older than 85 years of age **(WHO, 2015).**

Majority of people with dementia live in their own home and most of their care is provided by family, caregivers in developing countries as Egypt spend a more time with the person to assisting with activities of daily living, provide personal care and higher levels of supervision. Also Family members play an important role in bringing the patient in contact with the mental health care professional and providing financial as well as psychosocial support to the patient during the process of treatment **(Erin, Shuman & Ignaczak, 2016).**

Furthermore roles of families in the care of people with dementia and the ensuing caregiver burden have been increasingly acknowledged in the research literature in the last three decades. The construct of burden of care has two distinct components. Objective burden of care is meant to indicate its effects on the household (such as effects on health, financial loss and daily chores), whereas subjective burden indicates the extent to which the caregivers perceive the burden of care. Cultural factors likely play an important role in determining both the perceived burden and relatives' attitudes towards patients **(Cheng, 2017).**

Moreover, expressed emotion (EE) is considered to be a measure of family environment, which takes into account the quality of interaction patterns and nature of inter-personal relationships among the family members and patients with dementia. EE is a significant characteristic of the family milieu that reflects key aspects in inter-personal relationships, expressed emotion composed of five components and its include; critical comments, hostility, emotional over involvement, positive remarks (regard) and warmth **(Safavi, Berry, & Wearden, 2017).**

Expressed emotion have effects on caregiving burdens among relatives of patients with dementia. Critical comments are associated with high levels of burden. Also, high expressed emotion caregivers found to have more burden than low expressed emotion caregivers .In addition high expressed emotion relatives reported higher levels of disturbed behavior in patients, more subjective burden, and perceived themselves as coping less effectively than low expressed emotion relatives **(Wang, Chen & Yang, 2017).**

Significance of the study

Dementia has become a major public health problem among the elderly in developing world. In Egypt nearly four million of the Egyptian population were above the age of 65, the prevalence rate was reported as 20.46% for those aging**.** Caregivers of people with dementia in Egypt often called the invisible second patients and face many psychological problem as stress, depression, anxiety and high level of burden ***(Elshahidi,*** **Elhadidi, Sharaqi, Mostafa & Eizhery, 2017**).

Numerous studies report that caring for a person with dementia is more stressful than caring for a person with a physical disability. The permanent burden of caregiving to a patient with dementia is likely to generate negative expressed emotions toward patient **(Borsje, Hems, Lucassen, Bor, Koopmans, 2016).**

Aim of the study

Assessing expressed emotion and burdens among caregivers of patients with dementia.

Research question:

1.What the level of expressed emotion among family caregivers of the patients with dementia?

2.What the level of burdens among family caregivers of the patients with dementia?

Subjects and Methods

Technical design:

Research design: Descriptive design was utilized to meet the aim of the study

Research Setting: The present study was conducted at the neuropsychiatric clinic at Beni-suef psychiatric hospital.

Subjects: Convenient sample was used in the current study. The sample was chosen as the number of available family caregiver's of patient with dementia, and the caregiver's of the present study included (50) family caregiver's who meet the following criteria:-

- Family caregiver's from both sex
- Family caregiver's and patient with dementia living in the same dwelling.
- Family caregiver's identified him/ herself as the main provider of care for the patient with dementia.
- Family caregiver's agree to participate in the study.

D-Tools for data collection:

- **Tool (1): Socio-demographic Questionnaire for patients with dementia and their family caregiver's:**

It was developed by the researcher, which includes items related to patient with dementia such as: age, marital status, economic status, education, occupation, onset and stage of disease. Also, socio-demographic questionnaire includes items related to family caregiver's of patient with dementia as: age, marital status, monthly income, education, occupation, relation to the patient and suffer from any disease.

- **Tool (2): Expressed emotions scale (EES)**

This tool was designed by ***Berksun, (1992)*** to be used for assessing expressed emotion characteristics of family caregiver's. This scale was adapted by the researcher after reviewing literature in this field. This scale it was divided into three parts, part (1) to measure the expressed emotion related to the hostility and criticism which composed of 21 items. Part (2): to measure the expressed emotion related to the over involvement which composed of 10 items. Part (3) to measure the expressed emotion related to the warmth and positive remarks which composed of 13 items.

- **Tool (3): Zarit Burden Interview (ZBI)**

This tool was designed by ***Zarit, (1980)*** to be used for assessing the level of burdens experienced by the family caregivers' of older person with dementia. This scale composed of (19) items was adapted by the researcher after reviewing literature in this field

Operational design:

The operational design includes: preparatory phase, validity, reliability, pilot study and fieldwork.

- **Preparatory phase:** It includes reviewing past, current, local and international related literature and theoretical knowledge of various aspects of the study using books, articles, internet, periodicals and magazines to develop tools for data collection

- **Validity:**

Assessing face and content validity of the suggested tools, through a group of experts. Validity was tested through a jury of 5 experts who composed of: (3 professors, 2 assistant professors) from psychiatric/ mental health nursing, Ain Shams University for the content validity. The jury reviewed the tools for clarity, relevance, comprehensiveness, and simplicity; then based on the opinion of the jury minor modifications were done, and then the final forms were developed.

- **Reliability:**

Alpha Chronbach test was used to measure the internal consistency of the 3 tools used in the current study.

- **Pilot study:**

A pilot study was under taken after the adaptation of the tools and before starting the data collection. It was conducted on (5) family caregiver's of patient with dementia. The purpose of the pilot study was to test the applicability, feasibility and clarity of the tools. After obtaining the result of the pilot study, the necessary modifications of tools as (excluded questions, added questions & revised) were done.

- **Field work:**

✓ The preparation and translation of the tools for data collection took about 3 months, starting from August 2017 to October 2017. Data collection (pre test) was started and completed within 3 months; from November 2017 until January 2018.

✓ The purpose of the study was simply explained to the family caregivers who agree to participate in the study prior to any data collection .

✓ The researcher was available at the neuropsychiatric clinic at Beni-suef psychiatric hospital 2days/week to collect data.

✓ The family caregiver's who fulfilled the inclusion criteria were selected. The researcher obtained the " oral consent for participating in this study after explaining the aim of the study.

✓ Collection of data was begun with the socio-demographic questionnaire, and it was completed by the researcher within (10 minutes for each caregiver's). After that, the expressed emotion scale was also completed by the researcher within about (15- 20 minutes. for each caregiver's); in the end the zarit burden scale took about (10-15 min. for each caregiver's) so, each caregiver's need about 40 to 45 minutes.

Administrative approval

An official approval was obtained from Dean of Faculty of Nursing, Ain Shams University. A letter containing the title and the aim of the study and was directed to the director of Beni-suef psychiatric hospital for obtained his approval for data collection to conduct the study.

Statistical Design:

The collected data were organized, analyzed using appropriate statistical significant tests. The data were collected and coded using the Computer Statistical Package for Social Science (SPSS), version 20, and was also used to do the statistical analysis of data to evaluate the studied subject's changes throughout the study phases (pre, post& follow up). Data were presented using descriptive statistics in the form of frequencies and percentages. Chi-square tests were used to compare frequencies and correlation between study variables.

Degrees of significance of results were considered as follow:

- p-value > 0.05 Not significant (NS)
- p-value ≤ 0.05 Significant (S)
- p-value ≤ 0.01 Highly Significant (HS)

Results

Table (1) shows that, the mean age of the studied patients of 57+7.6, majority of them (88%) their ages over than 60 years old and 12% with aged from 45 to 60 years old, while 68% of the studied patients were females. Concerning their level of education, 34% of the patients had secondary education, while 24% of them had university education and only 20% had primary education. Regarding their occupation, 88% of the studied patients were retired from work .In addition, almost half (46%) of their patients were married, while 16% were divorced.

Table (2) it was observed that that, the mean age of the studied family caregivers of 44+6.3, two thirds of them (66%) their ages ranged from 30 - < 40 years old and more than three quarters (76%) were daughters of the patients. Related to marital status, almost three quarters (70%) were married and only 4% were widowed. Moreover, 74% of the caregivers had no enough income.

Figure (1) represents that, more than half (56%) of family caregivers had secondary education, while 26% of them had university education and only 18% had primary education.

Figure (2) reveals that, nearly half (46%) of the studied family caregivers were workers, while 36% of them were un workers and only 18% were house wives.

Figure (3) clarifies that, 70% of studied family caregivers had high expressed emotion and 30% had low expressed emotion

Figure (4) clarifies that, 78% of family caregivers had high burden level while 12% had low burden level.

Table (3) represents that, there were highly statistical significant relations between family caregiver's total expressed emotion score and his\her age, degree of relation with the patient, occupation, family income and social status (P≤ 0.001). While there was no statistical significant relation between family caregiver's total expressed emotion score and their education (p ≥ 0.05).

Table (4) illustrates that, there were highly statistical significant relations between family caregivers total burden score with their age, income and social status (P≤ 0.001). While there was a statistical significant relation between family caregivers total burden score and their education (p≤ 0.05). Also, there was no statistical significant relation between family caregiver's total burden score with their degree of relation and occupation (P ≥ 0.05).

Table (5) denotes that, there was highly statistical significant correlation between studied family caregivers total burden score and their patterns of expressed emotion during pre, post and follow up phases of intervention (P≤ 0.001).

Table (1): Distribution of patients having dementia according to their socio-demographic characteristics **(n=50).**

Items	N	%
Age:		
45-60 years	6	12
Over 60 years	44	88
Mean + SD :57+7.6		
Sex:		
Male	16	32
Female	34	68
Level of education:		
Illiterate	11	22
Primary	10	20
Secondary	17	34
University& above	12	24
Occupation:		
Unemployed	14	8
Workers	2	4
Retirement	44	88
Marital status:		
Married	23	46
Widowed	19	38
Divorced	8	16

Table (2): Distribution of studied family caregivers according to their socio-demographic characteristics **(n=50).**

Items	N	%
Age:		
20 - < 30	9	18
30 - < 40	33	66
More than 40	8	16
Mean + SD: 44 + 6.3		
Degree of relation:		
Daughter	38	76
Son	12	24
Marital status:		
Married	35	70
Divorced	13	26
Widowed	2	4
Family income:		
Enough	13	26
Not enough	37	74

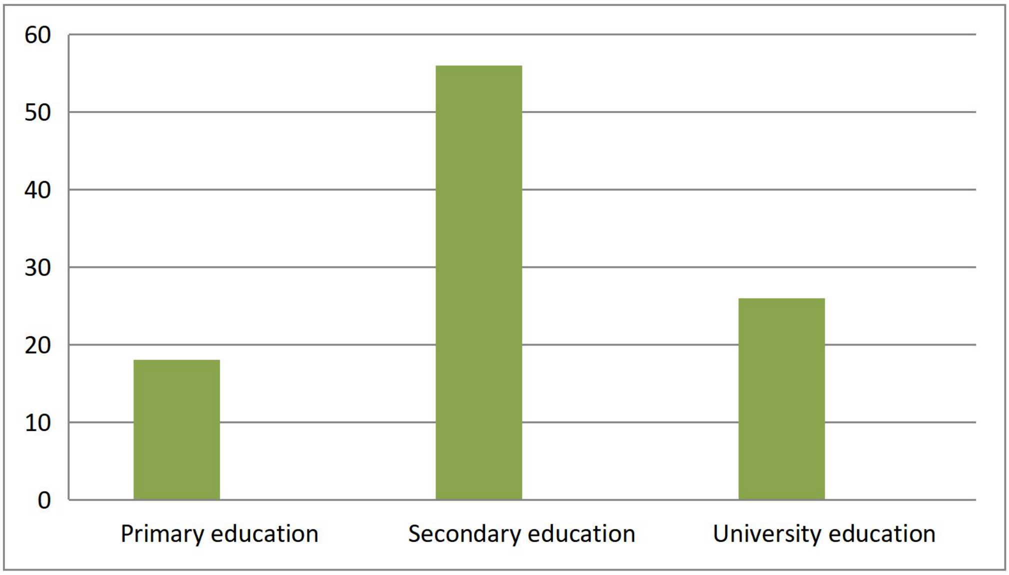

Figure (1): Distribution of studied family caregiver's according to their level of education **(n=50).**

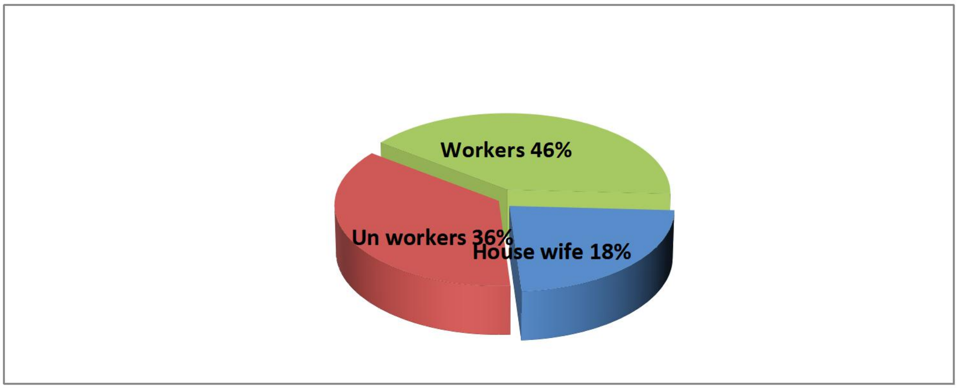

Figure (2): Distribution of studied family caregiver's according to their occupation **(n=50).**

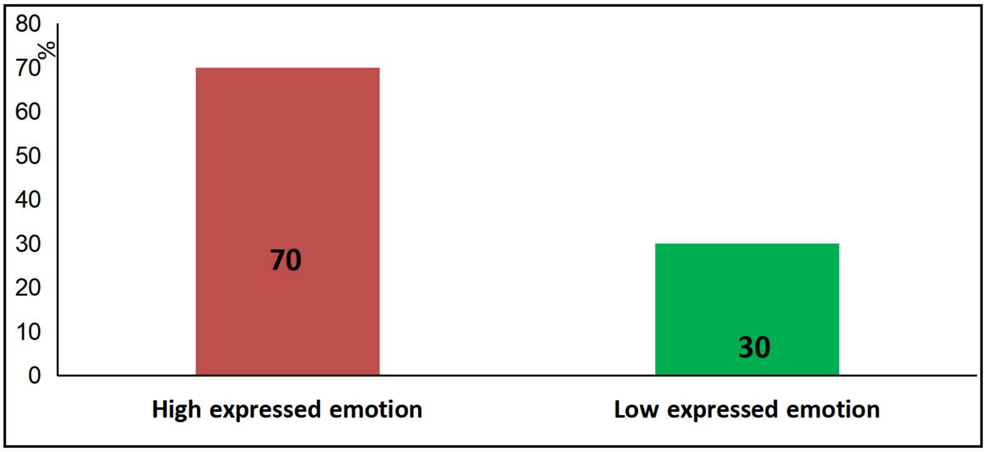

Figure (3): Percentage distribution of family caregivers regarding total expressed emotion score **(n=50)**

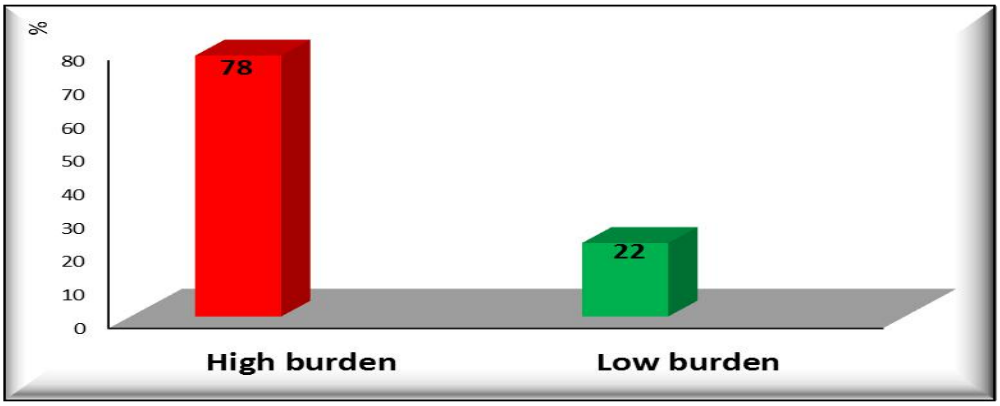

Figure (4): Percentage distribution of studied family caregivers regarding total burden score **(n=50).**

Table (3): Relations between family caregiver's total expressed emotion score and their socio-demographic characteristics **(n=50).**

Demographic items		**Total score of expressed emotion** **High** **N**	**%**	**Low** **N**	**%**	**X^2**	**P value**
Age	**20 – < 30**	2	4	7	14	20.6	< 0.001
	30 – 40	30	60	3	6		
	More than 40	3	6	5	10		
Degree of relation	**Daughter**	33	66	5	10	21.3	< 0.001
	Son	2	4	10	20		
Education	**Primary**	7	14	2	4	4.7	.09
	Secondary	22	44	6	12		
	High education	6	12	7	14		
Occupation	**Workers**	7	14	9	18	14.2	< 0.001
	Un workers	25	50	2	4		
	House wife	3	6	4	8		
Family income	**Not enough**	35	70	4	8	24.8	< 0.001
	Enough	3	6	8	16		
Social status	**Single**	7	14	4	8	11.4	< 0.001
	Married	27	54	5	10		
	Divorced	5	10	2	4		

- Highly statistical significant difference P≤ 0.001 * No statistical significant difference P ≥ 0.05

Table (4): Relations between family caregiver's total burden score and their socio-demographic characteristics **(n=50).**

Total score of burdens						X^2	P value
Demographic items		**High**		**Low**			
		N	%	N	%		
Age	**20 – < 30**	1	2	8	16	9.1	.01
	31 – 40	28	52	5	10		
	More than 40	3	6	5	10		
Degree of relation	**Daughter**	31	62	7	14		
	Son	8	16	4	8	1.1	.27
Education	**Primary**	8	16	1	2	10.3	.005
	Secondary	25	50	3	6		
	High education	6	12	7	14		
Occupation	**Workers**	10	20	6	12	3.2	.10
	Un workers	23	46	4	8		
	House wife	6	12	1	2		
Family income	**Not enough**	30	60	7	14	29.6	< 0.001
	Enough	3	6	10	20		
Social status	**Single**	8	16	7	14	17.4	< 0.001
	Married	30	60	3	6		
	Divorced	1	2	1	2		

- Statistically significant difference p≤ 0.05
- Highly significant difference p≤ 0.001
- No statistical significant difference P ≥ 0.05

Table (5): Correlation between family caregiver's expressed emotion score and their burden score **(n=50).**

	Correlations					
	Caregiver's total burden score					
Pattern of expressed emotion	**Pre**		**Post**		**Follow up**	
	R	**P-value**	**R**	**P-value**	**r**	**P-value**
Criticism & hostility	0.419	<0.001	0.745	<0.001	0.680	<0.001
Over involvement	0.514	0.001	0.764	<0.001	0.740	<0.001
Warmth & positive remarks	0.406	<0.001	0.766	<0.001	0.734	<0.001
Total	0.386	<0.001	0.772	<0.001	0.730	<0.001

- Highly significant difference p≤ 0.001

Discussion

The study findings **(Table 1)** revealed that majority of the studied patients with dementia their ages over than 60 years, and more than two thirds of them were females. This findings were consistent with **Ali & Bokharey, (2015),** in descriptive cross sectional study entitled "Efficacy of cognitive behavior therapy among caregivers of dementia in Pakistan" which included 50 dementia patient and their family caregivers, and found that two thirds of the patients with dementia their ages ranging from 67 to 89 years and the majority of them were females.

This result could be due to the older age is strongly associated with dementia. Furthermore, women are more likely than men to develop dementia in their lifetimes for many reasons as, comparatively higher longevity of life in females and lack of the estrogen hormone after the menopause stage, this may be linked to occurs of dementia among women.

However, the findings of the current study contradicted **Amr, El-Gilany, Sallam, & Shams (2014),** in the study entitled "Characteristics of patients with dementia attended in a tertiary outpatient clinic in eastern region in Saudi", they emphasized that the majority of the sample were males, this result might be due to higher prevalence rates for dementia among females in several geographical areas may not reflect the true prevalence of dementia of course. Women may not attend hospitals as frequently as men since for Saudi cultural reasons.

Regarding the studied patients level of education and occupation **(Table 1),** it was found that one thirds of the studied patients had secondary education while majority of them were retired from work. This results were in accordance with **Alfakhri, (2018),** who carried out a study about depression among caregivers of patients with dementia, who reported that one third of the studied sample had secondary education and majority of them were retired from work.

On the other hand, the results of the current study inconsistent with the study conducted by **Kallianezos, (2017)**, about the burden on family caregivers to the patients with Alzheimer's disease and other dementias, who mentioned that the majority of the studied patients with dementia were university education. This inconsistent might be due to difference in culture factor and education level in population group from country to another country. Concerning to marital status **(Table 1)**. The result of current study showed that, almost half of dementia patients were married, this finding was agreement with **Elsayed, Ibrahim, Abu-Hegazy & Amr, (2017),** which conducted study about the behavioral and psychological characteristics of patients with different types of dementia in Egypt, they found that, half of the patients with dementia were married

Regarding to the socio demographic characteristics of the family caregivers **(Table 2)**, revealed that two thirds of the studied caregivers their ages ranged from 30 to 40 years and majority of them were daughters of the patients .This results were supported by the study of **Moustafa & Shawki, (2018)**, they assessed depression, anxiety, and stress among some elderly caregivers in Egypt who found that the majority of the studied sample ranging from 30-39 years and they were daughters of the patients.

This result can attributed to that younger family caregivers are un able to take the responsibilities of caregiving of older adults. Also, the car given is often expected and performed by females because the women provide more intensive care than do men for example, Women are more likely to perform tasks such as cooking and cleaning.

The results of the current study **(Table2)** came in agreement with to **Siritipakorn & Muangpaisan, (2015),** they investigate the associated factors of caregiver burden among family caregivers of dementia patients in a geriatric clinic, Siriraj hospital. Which revealed that, three quarters of the participant have insufficient income. This result may be due to, many caregivers often have tend to reduce working hours, take time off because of caregiving responsibilities . Also, medical treatment and the care of the patient with dementia require high costs, all of that can cause insufficient income.

On the other hand, this findings were contradicted with the study conducted by , **Weintraub, Maura, Andino & Brown, (2017)**, in the study entitled "Stigma, expressed emotion, and quality of life in caregivers of individuals with dementia in United States" who found that the majority of family caregivers have sufficient income. This result might be due to difference in economic level and social support from country to another.

Concerning to education and occupation of family caregivers **(Figure 3, 4),** it was found that more than half of family caregivers had secondary education, while nearly half were workers. This findings were harmony with **Abd-Allah, Mohammed & Ahmed (2017),** which assessed the effect of elderly health problems on caregivers' health at rural areas in Egypt, they stated that majority of the studied family was secondary education and worker.

In developing country as Egypt the low education level may contribute to the role of caregiver being assigned to family members. Thus, it is more probable that these people dedicate themselves to housework and caring for dependent family members as an extension of this activity. Moreover, this result disagreement with study by **Chao & Lewis, (2013),** in the study entitled "Expressed emotion, depression, burden and perceived health in family caregivers of older adult with dementia in Taiwan", who considered that the majority of studied caregivers had university education.

Possible explanation of such result is that family caregivers with a higher educational level now days may not be engaged in job, and they may have a responsibility towards their children and home, also they may be trusted more in their ability to understand doctor's directions regarding medication schedule compared to those with lower educational level.

In relation to total expressed emotion score of family caregivers of patient with dementia the findings of the present study **(Figure 3),** clarified that, nearly three quarters of the caregivers reported higher level of expressed emotion. This results were consistent with **Lewis & Chao, (2013),** in the study entitled "Expressed emotion and depression in caregivers of older adults with dementia in Taiwan". They noted that, individuals of family caregivers of patient with dementia reported high level of stress, depression, and higher level of expressed emotion. This result might be due to the nature of dementia and its symptomology place heavy demands on family caregiver and these demands can lead to negative expressed emotion toward their patients.

But, this results not in the same line with the study by **Martínez, Pradas, Kwapil & Vidal, (2017)**, which entitled" Expressed emotion, distress and attributions in dementia in Mexico. They stated that, family caregivers of patient with dementia experienced low expressed emotion toward their patients. This result could be due to, some individual who carried the patient with dementia accept the car given with out any negative emotions toward the patient. Also different in levels of education and culture from people to others.

Regarding the level of burdens among family caregivers, the findings of the present study **(Figure 4)**, revealed that, more than three quarters of the caregivers reported higher level of burdens. This finding was consisted with the study conducted by **Hamza, Mahmoud, Rafaat & Mohamed, (2018),** which entitled" Assessment of level of function of dementia patients has an impact on the caregiver burden in Egypt" they, reported that majority of the participants suffer from sever burden . From the researcher point of view, this results could have been due to, caring for a person with dementia doesn't easy task and requires a lot of understanding and it impose a lot of burden on caregivers, also, behavioral and psychological symptoms of dementia seem to be challenging behaviors for the caregivers, It may become a main source of caregiver's burden. Furthermore the burden may be arise from the imbalance of caring demands in areas such as caregivers’ personal time, social roles, physical and emotional status, financial resources, and formal care resources available for undertaking multiple roles.

On the other hand, these result was contradicted with study conducted by **Siritipakorn & Muangpaisan, (2015)** entitled as "Associated factors of caregiver burden among family caregivers of dementia patients in a geriatric clinic, Siriraj hospital", they clarified that, caregivers of patient with dementia reported low level of burden. This inconsistency may be due to difference in cultures, level of economic status, nature of burden and social support from country to another. Furthermore, in some countries have accepted symptoms of dementia as part of normal ageing, thus reducing sense of helplessness, frustration and reducing level of burden.

Regarding to the relationship between demographic characteristics of the studied family caregivers with their total expressed emotion **(Table 3),** this results of the present study illustrated that, there was highly statistical significant relations between the family age, degree of relation with the patient, occupation, income and social status with their total scores of expressed emotion ($p \leq 0.001$), also there was no statistical significant relations between total expressed emotion score and education ($P \geq 0.05$) .This result consistent with **Chao & Lawis, (2013),** in study entitled "Expressed emotion and depression in caregivers of older adults with dementia in Taiwan", who found that, higher expressed emotion associated with lower family income and young age.

This results may be due to in some developing countries as Egypt the personal characteristics may influence the direction of the expressed emotion and play an exacerbating or buffering role in caregivers’ emotional reactivity to daily life stress, when the caregivers are unemployment this cause negative impact on the financial situation of the family, that correlated with more worry, stress and negative expressed emotion. On other hand the degree of relation with the patient was very important in determine level of expressed emotion as the female caregivers were more involved in the supervision of the patient, so expressed more worry and emotional over involvement toward patient.

But this results contradicted with **Knippenberg, Vugt, Ponds, Verhey & Germeys, (2018),** in study entitled "Emotional reactivity to daily life stress in spousal caregivers of people with dementia in Germany", which emphasized that, age, gender, occupation, income and care intensity (i.e. weekly hours of contact with and care for the patient with dementia) didn't impact on caregivers' emotional reactivity to daily life stress. This result might be due to the nature of the factors that effect on the expressed emotion differs from country to country. In some country the caregiver resources, such as sense of competence, mastery, and coping strategies, may play important role in expressed emotion, more sense of competence, and higher levels of mastery appeared to be less prone to experiencing negative affect when they encountered minor disturbances in daily life. Caregivers' sense of competence and mastery have been considered to influence the appraisal of stressful situations and the way in which caregivers cope with distress and reduce negative expressed emotion.

Concerning the relationship between demographic characteristics of the studied family caregivers with their total burden score **(Table 4)**, the findings present study noted that, there was highly statistical significant relations between family caregivers total burden score and age, social status, family income and education ($p \leq 0.001$). Also, there was no statistical significant relation between family caregiver's total burden score and occupation, degree of relation ($P \geq 0.05$).

This finding were agreement with **Reed, (2014),** in study entitled "Caregiver burden in Alzheimer's disease in Germany", which found that, married and younger caregivers reported a greater level of burden. This findings could be due to, demographic characteristics of family caregivers which play on important role in determine the level of burden. When caregiver becomes older, they are worried about who will take care of their ill family member in the future, and the low salary would increase the financial problem related to providing care for patient with dementia. Also, level of education of the caregiver can support to have a more knowledge to deal with the stressful event. Furthermore, caregivers with higher income probably have more access to supportive services like home health aids and adult day health that may help minimize the burdens of caregiving.

On the other hand, this results disagreement with the study conducted by **Rosdinom, Norzarina, Zanariah & Ruzanna, (2013)**, which assessed the socio demographic profiles of caregivers and their association with burden of care in dementia in Malaysia, they found that no statistical significant relation between family caregiver's total burden score and their demographic characteristics. This dis-agreement may be due to in some places the level of burden in caring of patients with dementia was not significantly determined by the socio demographic characteristics of their caregivers, but other factors suspected to be related to burden, such as behavioral problems or cognitive impairment in patients.

Concerning to correlation between expressed emotion and level of burden among family caregivers of patient with dementia **(Table 5)**, the present study represented that, there was highly statistical significant correlation between studied family caregivers total burden score and their patterns of expressed emotion during pre, post and follow up phases of intervention. This finding in harmony with the study conducted by **Cinar, Guzelkucuk, Demir & Dandinoglu, (2016)**, which investigate the impact of family functioning and expressed emotion on caregiver burden in

Bursa. They noted that, expressed emotion were determined as significant contributory factors with the burden.

This result might by due to, expressed emotion and the burden of care are related to each other, also expressed emotion and burden measure aspects of the relationship between relatives and patients, families who have high level of worry, tension, negative feelings and expressed emotions experience cycles of grief, disappointment, also perceived their caring situation as more stressful situation, all of that can cause higher level of burden.

On the other hand this results disagreement with the study conducted by **Nirmala, Vranda & Reddy, (2013)**, who assessed the expressed emotion and caregiver burden in patients with dementia in India and found that subjective and objective burden of the caregivers was not associated with the level of expressed emotions. This result might be due to differ in perceived of expressed emotion and burden from people to other. Furthermore, in some country the cycle of expressed emotion during stages of the dementia is more related to personal reactions to caregiving than to the direct and indirect tasks of care or the burden level.

Conclusion

In the light of the current study, it can be concluded that family caregivers of patient with dementia had high level of expressed emotion and burdens.

Recommendations

- Replication of the current study on a larger sample is recommended to achieve generalization of the results and wider utilization of the designed program.
- Designing a systematically continuous family intervention programs in psychiatric hospitals that provide proper information and psychological support to help caregivers of patient with dementia to improve their understanding of the disorder, handle difficult thoughts and emotions, reduce negative expressed emotion and reduce sense of burden
- Support system and service should be available and easily accessed to help the family caregivers to cope with their patients
- A simplified, comprehensive and illustrated Arabic guided images booklet about expressed emotion and types of burden related to dementia, should be distributed for each newly admitted family caregivers of patient with dementia.

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