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Impact of expressed emotion on schizophrenic patients among primary caregivers in a national psychiatric hospital in Asmara, Eritrea

Abstract

Introduction: Schizophrenia is a mental disorder characterized by a breakdown in thinking, poor emotional responses, it burdens afflicted individuals, their families, and society. Expressed emotion refers to verbalization of strong feelings by patients of schizophrenia which often causes relapse.

Objective: The main objective of this study was to assess the socio-demography of the primary care givers, the impact of emotional expression, and the association of emotional expression of primary care givers in relation to relapse rate on schizophrenic patients in a National Psychiatric Hospital.

Methods: A Quantitative Descriptive Cross-Sectional Study was carried out to assess the level of expressed emotion of primary care givers towards schizophrenic patients at National Psychiatric Hospital in Asmara, from 17 November to 8 December 2016. Through face to face interview using structured (LEE-S) questionnaire.

Result and discussion: The study included three hundred twenty-three participants who are adult primary care givers of the schizophrenic patients in National Psychiatric Hospital. Majority of the respondents 68 (55.28%) were males and 91(73.98%) of them were married. The study findings showed a positive correlation (r= 0.288) and significant level of association (p value =0.001) between expressed emotion level and relapse rate, indicating that high expressed emotion which means that most aggressive patients can experience relapse frequently compared to less aggressive patients who present with low expressed emotion. A significant association between the gender of primary care givers and expressed emotion (p- value = 0.006) was identified. Further to this, the study findings indicated that age, marital status, residence and educational level of primary care givers had no significant association with expressed emotion. A significant association between drug compliance and relapse rate of high expressed emotion was observed (p-value =0.026) indicating that higher relapse rate in those who had high expressed emotion. A significant association (p-value = 0.013) was found between attitude towards illness and relapse rate; whereas there was no any association between intrusiveness, hostility and tolerance, and relapse rate.

Conclusion: This study concluded that high expressed emotion of primary care givers was found to have a positive significant association with relapse rate including the gender of primary care givers as well. The study further pinned down that, age, marital status, residence and educational level of primary care givers had no association with expressed emotion however still, there was a significant association between drug compliance and relapse rate of high expressed emotion. The following factors had an influence on this study, country climate, tradition, culture of the community caregivers as well as involvement of traditional remedies and practices towards schizophrenia.

Keywords: expressed emotion, relapse, health, caregivers, schizophrenia, drug compliance

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Yacob H Tesfaslasie,1 Berhane K Tesfasion2

[1]Ministry of Health, Saint Mary National Referral Specialized Psychiatric Hospital, Eritrea

[2]Ministry of Health, Haz-Haz General Referral Hospital, Eritrea

Correspondence: Yacob H Tesfaslasie, Ministry of Health, Saint Mary National Referral Specialized Psychiatric Hospital, Asmara, Eritrea, Email eliasteage@gmail.com

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Introduction

The term schizophrenia was coined in 1908 by the Swiss psychiatrist Eugen Bleuler.[1] Schizophrenia is a mental disorder characterized by a breakdown in thinking and poor emotional responses and it is a serious mental illness that burdens afflicted individuals, their families, and society.[2] Schizophrenia is a disabling group of brain disorders characterized by symptoms such as hallucinations, delusions, disorganized communication, poor planning, reduced motivation, and blunted affect.[3] Diagnosis is based on observed behavior, the person's reported experiences and total symptomatic clinical picture presented. Families are huge determinants of significant predictors of the course of the illness that stigmatize, particularly schizophrenia this is because families of people living with schizophrenia suffer a great deal from social prejudice and discrimination.[4]

Expressed emotion has a specific type of family interaction characterized by measuring the number of critical comments, hostility, emotional over involvements and warmth.[5] A person's attitude toward a person, especially when they are very critical, takes a long time to change their way of thinking. High expressed emotion is more likely to cause a relapse than low expressed emotion because of the aggressive verbal criticisms they made.[6] Low expressed emotion differs from high expressed emotion in that the relatives are more conservative with their criticism. Relatives feel that the family

member does not have control over the disorder and sympathize with them.[6] Family members with high expressed emotion are hostile, very critical and not tolerant of the patient. They feel like they are helping by having this attitude. They are not only blaming the disorder but also to individual's unique characteristics.[7]

The State of Eritrea has got only one neuropsychiatry hospital serving patients from all the regions with different psychiatric conditions. According to the prevalence rates from the World Mental Health Survey, it is estimated that at least 280,800 people in Eritrea (13 % of the adult population which is estimated at 6 % of the total (6 million populations) are likely to be affected by mental disorders, which require varying degrees of treatment and care. Approximately 64,800 people (3% of the adult population) are likely to be suffering from a severe mental disorder and a further 216,000 (10% of the adult population) from moderate to mild mental disorders. The state had 21679 schizophrenic patients registered, another report from statistics office of St. Mary Neuropsychiatry Hospital from 2000 to 2015 showed that, there were 9329 OPD and IPD schizophrenic patients. There are also some traditional beliefs regarding mental illness in Eritrean culture that includes attribution of mental illness to have supernatural spiritual predispositions, such as witchcraft, curse, evil eye and punishment from God or Allah. As a result, the mentally ill people especially schizophrenic patients are considered as useless and seen to be stigmatized and discriminated by their families and the society.

Objective

The main objective of the study was to assess the socio-demography of the primary care givers, the impact of emotional expression, the association of emotional expression level of primary care givers and the relapse rate on schizophrenic patients in a National Psychiatric Hospital.

Methodology

Study area and study design

National Referral Specialized Psychiatric Hospital in Asmara, Eritrea whereby a Quantitative Descriptive Cross-Sectional Study was carried out and data was collected by face to face interview using structured (LEE-S) questionnaire. The questionnaire included the relapse rate of Schizophrenic patients. Variables like expressed emotion level, and demographic data that included age, gender, residence, educational back ground, and the primary care givers of schizophrenic patients.

Study population

In this study had a target population of 9329 primary caregivers of schizophrenic patients in a National Referral Psychiatric Hospital in Asmara, Eritrea. A sample size of 123 primary caregivers of schizophrenic patients was obtained from those who were on duty during the period of data collection was calculated. Most of schizophrenic patients were diagnosed within the past 15 years on routine follow up. A simple random sampling method was used to select the study participants among caregivers.

Data collection techniques

Data was collected from 17 November to 8 December 2016, by face to face interview using a structured questioner to the individual primary care givers of schizophrenic patients. The instrument used for data collection was LEE scale. The first part of the tool consisted of background information and demographic variables (age, gender, education, religion, residence, occupation, marital status) of the primary caregivers.

Data analysis

Data was analysed using Statistical Package for Social Sciences (SPSS) version 20 to generate descriptive statistics. The findings were described by measures of central tendency, measures of dispersion, coefficient of correlation and percentage.

Ethical consideration

Ethical clearance was obtained from the research ethical review committee of Asmara College of Health Science. Permission to conduct the study was obtained from the Asmara College of health science and the site which was the National Referral Psychiatric Hospital in Asmara, Eritrea. Participants who agreed to participate in the study were requested to sign the written and verbal informed consent form to agree for an interview with all eligible participant.

Results and discussion

Socio-demographic characteristics

The total of number of adult primary care givers was one hundred twenty three (123) in National Referral Psychiatric Hospital from 17 November to 8 December 2016 were included. The majority of the respondents 68 (55.28%) were males and 91(73.98%) were married. Seventy one (57.72%) of the study participants were in the age range of 39 to 65 years old. The majority of the patients 89 (72.63%) lived in urban area. Majority of the respondents 108 (87.8%) were literate of which 18 (14.63%) had completed college. (Table 1)

Table 1 Socio-demographic characteristics of the study participants

Variable	Saint Mary national referral specialized psychiatric hospital	
	Frequency (N)	Percentage (%)
Gender		
Female	55	44.72%
Male	68	55.28%
Total	123	100%
Age		
21-39 Early adult hood	32	26.01%
39-65 Middle adult hood	71	57.72%
> = 65 Late adult hood	20	16.91%
Total	123	100%
Marital status		
Divorced	2	1.63%
Married	91	73.98%
Single	26	21.14%
Widowed	4	3.25%
Total	123	100%
Residence		
Rural	34	27.64%
Urban	89	72.36%
Total	123	100%
Educational level		
Illiterate	15	12.20%
1-5 Grade	27	21.96%
6-8 Grade	32	26.02%
9-12Grade	31	25.20%
>12 Grade	18	14.63%
Total	123	100%

Determining the expressed emotion level of primary care givers

The findings shown in Table 2 revealed clearly that the primary care givers of schizophrenic patients with low expressed emotion were 101 (82%) out of the total 123 study participants, which was low expressed emotion level of the primary care givers toward their schizophrenic patients. The result of t- distribution showed that there was no any expressed emotion of the primary care givers toward their schizophrenic patients. (Table 2) The findings of this study are similar to a study conducted in Northern India and Japan that revealed 77% of primary care givers and 63% of primary care givers, respectively.[8,9] Both studies found out low estimates of expressed emotions toward the schizophrenic patient from family members. In another study done on "Assessment of correlation of general health and expressed emotion in family members of patients with schizophrenia in selected medical college hospitals in Assam" by Gogoi & Khanikor[10] reveled a higher percentage of (90.3%) of low level of expressed emotion. Other similar studies and literature review stated that expressed emotions level across different national and ethnic groups have suggested that the socio cultural context may influence the family's emotional climate and levels of expressed emotions. For instance, low estimates of expressed emotions were particularly found in Eastern cultural contexts however, the highest estimates were found in European cultural contexts.[11] In a study done by Sadiq, et al.[12,13] revealed that most of the people were rated as high expressed emotions. The findings indicated that sociocultural context had an influence on the family's expressed emotion levels. In this study, low level of expressed emotions among the primary care givers were due to greater social interaction, extended family support, sharing of cultural beliefs a collective way of responsible family life as well as care of the sick persons in social Eritrean atmosphere.

Table 2 Level of expressed emotion of the primary care givers

EE level	Frequency	Percentage	Mean	Standard deviation	t-tail
High	22	18%	25.18	2.4	-13.59*
low	101	82%	9.93	5.27	
Total	123	100%			

Level of expressed emotion and relapse rate

A positive correlation coefficient r= 0.288 and significant association at p value =0.001 between expressed emotion level and relapse rate was found. (Table 3) Our finding indicated that the high expressed emotion of primary care givers had a positive significant association with relapse rate at (p value = 0.001) and (r=0.288). When the expressed emotion level increases simultaneously the relapse rate also increases. Relapse rate in this case refers to the frequency or number of times the patient's express signs and symptoms of schizophrenia as a result of trigger factors from their environment. This indicated that high expressed emotion is more likely to cause a relapse than low expressed emotion because of the aggressive verbal criticisms made by attitude towards illness (ATI) at p value= 0.013.

Table 3 Association between the level of expressed emotion and relapse rate

Expressed emotion level	N	Mean of relapses rate	Standard deviation of total relapses	p-value	Pearson correlation
High	22	1.41	1.42	0.001	0.288**
low	101	0.72	0.67		

** Correlation is significant at the 0.01 level (2-tailed).

The study finding showed similar results with a study conducted in the United Kingdom by Brown et al.[14] which suggested that the relapse rate for patient in families exhibiting high expressed emotion was higher as compared to families with low expressed emotion. Though the level of expressed emotion vary globally, it remains a significant predictor of relapse. The association between high expressed emotion of care givers and patient relapse could be family members who are hostile, very critical and not tolerant of the patient and the communication patterns in families. Another study by Barbato and D'avanzo[15] revealed that patients living in high expressed emotion environments have three to five times more risk of relapsing than do patients living in low- expressed emotion environments. A number of studies carried out on expressed emotions have demonstrated that a high level of expressed emotion from family members' correlates positively with schizophrenia relapse.[16] This study highlighted the perceptions of the caregivers on patients with schizophrenia, and about factors that mostly influence relapse. The finding showed both high and low expressed emotions caused relapse among other factors attitude towards illness (ATI) had a significant influence in the repalse. This could be poor, family or peer support, poor adherence to antipsychotic medication, inadequate psycho education, prolong stay from community or home and poor knowledge and attitude as well as perception towards the sick persons.

Association between gender of the primary care givers and the level of expressed emotion

A significant association between the gender of primary care givers with their expressed emotion level at (p- value = 0.006) (Table 4). This finding shows that the gender of primary care givers had significant association with their expressed emotion level at (p- value = 0.006). Females were found to have high expressed emotion at a (mean= 14.73) than males, (mean 10.99). Similarly studies reported that female caregivers perceived less adequate social support.[17] Another similar study by Bharti[18] argued that females have higher emotional over-involvement toward their ill family member. This led to the impression among the general public that female caregivers need more assistance and support from both formal and informal resources. A study done in the U.S by Kring & Gordon[19] revealed that women show emotion more than men. In the Eritrean culture the role of mothers has been considered as nurturing and caring and this makes them to spend more time on caring the patients. In case of low social support, they might exhibit abnormal emotional characteristics due to difficulty in tolerating the burden of care. Hence they could have higher stress and, consequently, developed higher expressed emotion.

Table 4 Gender of primary care givers versus level of expressed emotion

Gender	Mean of expressed emotion	SD of expressed emotion	P value
Male	10.99	6.67	0.006
Female	14.73	8.27	

The study findings indicated that age, marital status, residence and educational level of Primary Care givers were found to have no significant association with expressed emotion of the primary care givers. (Table 4& 5) Similar study conducted by Sepulveda et al.[20] also revealed the same result by indicating that there is no association between age, residence and expressed emotion. a study in Nigeria.[21] A study done by Wearden et al.[22] argued that the urban care givers were found to show high global expressed emotion than the rural sample The results of this study are not similar because of life style, social integration and cultural supporting network of the Eritrean society. There are similar studies that showed no significant association

between marital status, educational level and expressed emotions The expressed emotions of the caregiver were unrelated to caregiver marital status, years of education, and relationship to the patient.[23] In this study the possible reasons for not having an association between age, marital status, residence, educational level of primary care givers and expressed emotion might be, the expressed emotion of the care givers toward sick family members was related and influenced by the cultural value and norms of the society.[23] A study by Suro[24] indicated that families with a high educational level appeared to have low expressed emotion.

Table 5 Age, marital status, residence and educational level of primary care givers versus level of expressed emotion

Variable	Saint Mary national referral specialized psychiatric hospital	
	Mean of expressed emotion	P value
Age		
Early adult hood(21-39)	6.45	0.181
Middle adult hood(39-65)	4.45	
Late adult hood(>=65)	6.88	
Marital status		
Single	13.73	0.109
Married	11.91	
Divorced	19.75	
Widowed	16.5	
Residence		
Urban	12.83	0.686
Rural	12.21	
Educational level		
Illiterate	1.9	0.35
0-5 grade	2.46	
6-8 grade	1.25	
9-12 grade	1.59	
>12 grade	2.82	

Drug compliance with expressed emotion -level and relapse rate

A significant association between drug compliance and relapse rate of high expressed emotion was observed at p-value =0.026 indicating that higher relapse rate in those who had high expressed emotion. (Table 6) This study showed that those who have high expressed emotion primary care givers and non-compliant schizophrenic patient had high relapse rate than low expressed emotion and compliant patients. A study conducted by Christopher[25] indicated that the relapse risk was substantially lower when a patient was adherent properly to the antipsychotic medication. The reasons could be drug compliance which helped patients to be stable in their mental state, good communication pattern and increase social interaction among the patients and their family. Another study by Hogarty et al.[26] in China indicated that the relapse rate to be the lowest in the schizophrenic patients who were receiving combined family therapy and social skill training, whose care givers were with high expressed emotion. Hence the presence of poor antipsychotic drug adherence due to medication side effects, belief of being cured and, poor family support, stressful life events and substance use appear to be the factors mostly likely to increase the risk of relapse.

In this study a significant association at p-value = 0.013) was found between Attitude towards illness and relapse rate; whereas there was no association between intrusiveness, hostility and tolerance, and relapse rate (Table 7) these results have consistently to a study conducted by Wearden et al.[22] recorded that majority of caregivers with high expressed emotion had critical attitude rather than high emotional over involvement. In the Eritrean society some of the caregivers are involved in traditional treatment and practices for mental illness which are rooted on the belief that they have in the cause and prognosis of mental illness.[27] Therefore this may influence the outcome of treatment negatively and cause relapse.

Table 6 Association between drug compliance with expressed emotion -level and relapse rate

Drug compliance	Mean of expressed emotion level	Mean of relapse	Relapse rate of high expressed emotion	Relapse of low expressed emotion	P. value
Compliance	11.06	0.81	1.28	0.7	0.026
Non compliance	16.24	0.91	1.54	0.76	

Table 7 Components of level of expressed emotion vs. relapse

Factors	P. value
Attitude towards illness (ATI)	0.013
Intrusiveness(I)	0.914
Hostility(H)	0.241
Tolerance (T/CI)	0.062

Conclusion

The study findings indicated that high expressed emotion of primary care givers had a positive significant association with relapse rate. Relapse rate in this case refers to the frequency or number of times the patient's express signs and symptoms of schizophrenia as a result of trigger factors from their environment. A significant association between the gender of primary care givers with their expressed emotion level was found. Expressed emotion refers to verbalization of strong feelings by patients of schizophrenia towards their relatives or care givers or vice versa which often causes relapse. The study results indicated that age, marital status, residence and educational level of Primary care givers were found to have no any significant association with expressed emotion of the primary care givers; Whereas a significant association between drug compliance and relapse rate of high expressed emotion was observed. This might be due climate , tradition culture of the community and mainly in the Eritrean society some of the caregivers might be involved in traditional treatment and practices to treat mental illness which could rise from the belief that they have in the cause and prognosis of the illness. Though the low emotional expression scale had four measurement factors only Attitude towards illness was found to have a significant association with relapse rate. Furthermore based on patient's drug compliance those who have high emotional expression of the primary care givers and non-compliant schizophrenic patient had high relapse rate than low emotional expression and compliant patients. The above differences might be due climate, tradition, culture of the community and mainly in the Eritrean society some of the caregivers might be involved in traditional treatment and practices to treat mental illness which could rise from the belief that they have in the cause and prognosis of the illness.

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Conflicts of interest

The authors declare that there is no conflicts of interest.

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