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FREQUENCY OF DEPRESSION AND GENERAL MENTAL HEALTH AMONG PRIMARY CAREGIVERS OF DISABLED PERSONS WITH BLAST INJURIES: A CROSS SECTIONAL STUDY

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ABSTRACT

Objectives: To determine the frequency of depression among the caregivers of disabled wounded persons. To find the association between socio demographic factors and depression among the primary care givers of disabled wounded persons.

Study Design: Descriptive cross sectional study.

Place and Duration of Study: This study was conducted in Armed Forces Institute of Rehabilitation (AFIRM), Combined Military Hospital (CMH), Pak Emirates Military Hospital (PEMH), Armed Forces Institute of Mental Health (AFIMH), Armed Forces Institute of Ophthalmology (AFIO) Pakistan, from Mar to Sep 2018.

Material and Methods: Sample size of 220 primary care givers was taken by using WHO sample calculator. Primary care givers who were the relatives (parents, wife, children, siblings) mentally fit between ages 16-74 years were included in the study. Hamilton rating scale for depression and General Health Questionnaire-12 were applied. This study is ethically approved by ethical institutional review board of AFPGMI and AFIRM.

Results: By using Hamilton rating scale for depression less than 20% had moderate depression less than half (40%) of the primary care givers had mild depression, quarter (30%) had no depression. Majority of the female primary caregivers (69%) were suffering from severe depression while only quarter (30%) of male primary caregivers were suffering from severe depression (p=0.001).

Conclusion: The study will help to provide an insight into the burden of the mental health issues like depression in order to formulate integrated, promotional and preventive interventions and services for the primary care givers of disable persons.

Keywords: Depression, Disabled, Mental health, Primary caregivers.

INTRODUCTION

World Health Organization recognizes "Handicap" an umbrella term covering debilitations, movement confinements and interest limitations. WHO characterizes disability as a relevant variable, dynamic after sometime and in connections to conditions and diseases causing mental health issues like depression[1]. WHO takes word health in a holistic manner including physical, mental, social, spiritual, and emotional and many other important dimensions into consideration[2]. These dimensions are known to influence wellbeing and mental health of individuals and affect quality of life and productivity, and claims health as the right of every human being regardless of race, gender, religion, political beliefs, economic or social status[3].

Over the last few decades "Blast Injuries" have been thrust into the forefront of the consciousness of the medical community and the general public[4]. The war injuries occur in large scale causing physical disabilities and create a devastating effect both on the soldiers and on their families, who are there primary caregivers as well[5]. High injury severity leads to complex courses of treatment that are distressing to families who are their care givers as well[6]. There may be alternating periods of medical stability and instability when complications occur, reco-

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very progress is limited, or additional treatments such as multiple reconstructive surgeries increase family distress[7]. Polytrauma rehabilitative centers have noted that multi-trauma injuries due to blasts[8] and high rates of co-morbidity among visible and invisible injuries, make treatment complex and family adjustments difficult[9].

Combat-injured families who are the primary caregivers are stressed by the injury themselves, starting with the initial shock of injury notification to longer term injury adjustment problems, children and families face difficult emotional and practical challenges[10]. The degree of reported stress likely depends upon time from the original injury, injury type, injury severity, and functional impact on the wounded and the developmental status of the family composition and preexisting parent, child, or family characteristics[11].

Families are also no less vulnerable to such risk factors, including depression, emotional deregulation, behavioral problems, and poor domestic performance. It is therefore important to clinically assess for such risk factors as well as those that may be more unique or extreme in the families of disabled[12]. Like other syndromes, these risk factors can also be classified into modifiable and non-modifiable risk factors. Age, gender, prior mental health illness history, ethnicity/race are among the factors about which not much can be altered[13]. Risks associated with poverty were mediated by disruptions in the quality of the care giving environment, particularly instability and disorganization of the family[14]. Such risks and vulnerabilities increase as a function if combat-related psychological or physical injury or death of the soldier occur. While flectional ties within the family and within extra familial informal support systems act as protective factors[10].

Prevalence of depression in primary care givers of disabled combat injured soldiers/ veterans is common but over looked and under estimated. Research has shown that spouses and children often exhibit greater symptoms of depression and anxiety, as well as increased use of medical and mental health clinics[15].

Many studies have been conducted to evaluate the mental health needs of disabled person but few studies have been carried out to evaluate the impact of mental health trauma on the primary care givers of the disabled person, therefore there was a paucity of research and need to conduct a contextually relevant study.

MATERIAL AND METHODS

A descriptive cross-sectional research study was conducted in Army hospitals of Rawalpindi such as Armed Forces Institute of Rehabilitation (AFIRM), Armed Forces Institute of Ophthalmology (AFIO), Combined Military Hospital (CMH), Pak Emirates Military Hospital (PEMH), Armed Forces Institute of Psychiatry (AFIMH). Primary caregivers who were relatives (parents, wife, children, siblings) between age groups 16-74 years mentally fit and had been taking care of the disabled person for at least more than 3 months were included in the study. A convenience sampling was carried out. Data was collected from primary care givers of disabled persons using questionnaires (Hamil-ton rating scale for depression and General Health Questionnaire-12).

The translated and adapted version of the tools was pilot tested before questionnaire administration. After collecting the information regarding demographic variables and basic covariates such as age, gender, education, marital status, socio-economic status, and number of children, following outcome measures had been administered. The Hamilton Rating Scale for Depression (HAM-D) and General Health Questionnaire (GHQ -12) were used as a tool for collecting data and rating depression. Hamilton rating scale of depression and GHQ12 are widely used in epidemiological, developmental and clinical researches as well as in routine clinical and educational practice. Both the scales were translated and adapted using WHO framework of translation to suit the local context.

The independent variables were age, gender, education, maritalstatus, relation with patient, number of children and duration of injury. Depression and wellbeing were taken as dependant variables.

The written informed consent was obtained from the caregivers of disabled persons with blast injuries. An information leaf was distributed among the study participants before obtaining the written informed consent.

Table-I: General Socio-demographics of primary caregivers (n=220).

S. No.	General Socio-demographics	Frequency(%) (n=220)
1.	**Gender**	
	Male	123 (56)
	Female	97 (44)
2.	**Education**	
	Middle	22 (10)
	Metric	97 (44)
	FA/FSC	35 (16)
	Others	66 (30)
3.	**Marital Status**	
	Unmarried	34 (15)
	Married	186 (85)
4	**Relation**	
	Father	10 (4)
	Mother	30 (13)
	Sister	9 (4)
	Brother	102
	Wife	61
	Son	8
5.	**Children number**	
	None	20
	less than three	166
	Less than six	34
6.	**Duration of the disease**	
	less than one year	81 (37)
	between one to four years	68 (31)
	between four to ten years	71 (32)

Table-II: Frequencies of general health of primary care givers (n=220).

S. No.	Question	n(%)	
		Yes	No
1.	Been able to concentrate on what you're doing?	206 (94)	14 (6)
2.	Lost much sleep over worry?	124 (56)	96 (44)
3.	Felt that you are playing a useful part in things?	212 (96)	8 (4)
4.	Felt capable of making decisions about things?	203 (92)	17 (8)
5.	Felt constantly under strain?	121 (55)	99 (45)
6.	Felt you couldn't overcome your difficulties?	45 (20)	175 (80)
7.	Been able to enjoy your normal day-to-day activities?	74 (34)	146 (66)
8.	Been able to face up to your problems?	211 (96)	9 (4)
9.	Been feeling unhappy or depressed?	105 (48)	115 (52)
10.	Been losing confidence in yourself?	18 (8)	202 (92)
11.	Been thinking of yourself as a worthless person?	3 (1)	217 (99)
12.	Been feeling reasonably happy, all things considered	167 (76)	53 (24)

RESULTS

Out of 220 primary care givers of disabled persons due to blast injuries majority 123 (56%) were males while less than half 97 (44%) were females, among the primary care givers less than half 97 (44%) were metric and quarter 66 (30%) had other qualifications. Majority 186 (85%)of primary care givers were married and 34 (15%) were unmarried. Majority (59%) had only one child and 20 had no child. More than quarter 81 (37%) had less than one year of duration being primary care giver. The depression among the primary care givers of war wounded disabled persons <20% had moderate depression, less than half 81 (40%) of the primary care givers had mild depression while quarter 65 (30%) primary care givers had no depression. Among all the primary care givers quarter 14 (31%) male primary care-givers were suffering from severe depression and 31 (69%) of female primary caregivers were suffering from severe depression (*p*-value 0.001). Less than half (56%) of primary caregivers who had education metric and above were suffering from severe depression while less 15 (13%) who had education middle were suffering from severe depression (*p*-values of 0.001).

Table-III: Associationof socio demographic characteristics and depression among primary care givers of wounded disabled persons

	Normal	Mild Depression	Severe Depression	Very Severe Depression	*p*-value
Gender					
Male	30 (46)	39 (55)	14 (31)	0 (0)	0.001
Female	35 (54)	48 (45)	31 (69)	7 (100)	
Education					
Middle	9 (14)	7 (8)	6 (13)	0 (0)	0.001
Metric/others	26 (40)	36 (41)	25 (56)	7 (100)	

According to General Health Questionnaire less than 20 (17%) had good general mental health. Less than 70 (65%) of the participants had better mental health less than 20 (18%) had poor general mental health.

The mean age of the primary care givers was 34.3 with a standard deviation of 11.7 (R=16-74 years) (table-I).

The table shows that out of 220 primary care givers less than half (56%) were males while less than half (44%) were females, less than half (44%) were metric and quarter (30%) had other qualifications, majority (85%) were married and less than 20 (15%) un married, majority (166) had children less than three and few (20) had no children. Less than 40 (37%) had less than one year of duration being primary care giver while >quarter 32% had been primary care givers for more than four years (table-II).

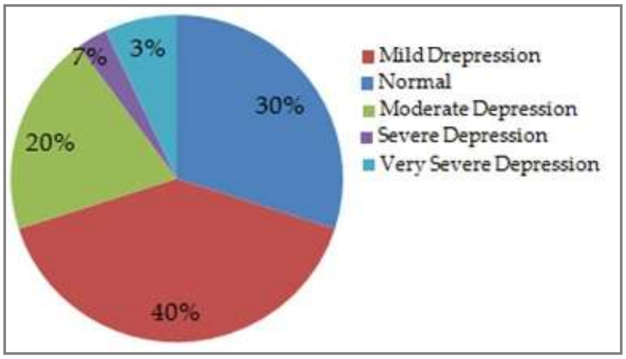

Figure-1: Pie Chart showing over all frequencies/ percentages of depression in the primary care givers.

According to General Health Questionnaire, majority (66%) of primary care givers were not been able to enjoy their normal day to day activities, less than half (48%) felt unhappy or depressed.

The pie-chart depicts that only few (3%) had very severe depression, less than quarter (20%) had moderate depression, less than half (40%) of the primary care givers had mild depression while quarter (30%) had no depression.

Association Between Demographic Characteristics and Depression of Respondents/ Caregivers of Disabled Persons/Veterans.

Sum the score from the 17 items of HAM-D questionnaires

0-7	=	Normal
8-13	=	Mild Depression
14-18	=	Moderate Depression
19-22	=	Severe Depression
>23	=	Very severe Depression

The table depicts that majority 31 (69%) female primary caregivers were suffering from severe depression while >quarter 14 (31%) of male primary caregivers were suffering from severe depression (*p*-value <0.001). The majority (56%) primary caregivers who had qualification metric and above were suffering from severe depression while <15 (13%) who had education middle were suffering from severe depression (*p*-value<0.001).

DISCUSSION

Depression is a glaring contributor to the global burden of disease and affects people in all communities across the world. Today, depression is estimated to affect 350 million people around the globe[16]. The World Mental Health Survey conducted in 17 countries found that on average about 1 in 20 people reported having an episode of depression in a year[17].

In 2004 mental health disorders contributed to 13% of the global burden of disease. When disability factor was taken into account as basis of the disease burden estimation, mental health disorders contributed 25.3% for low income countries and 33.5% of middle-income countries for all years lived with a disability[18]. These are recognized as important public health problem of the globe especially the low and middle income countries where problem of higher disease burden is coupled with poor mental health resources and stigmatization[19].

The scenario in Pakistan is equally bleak. The general profile of mental illnesses depicts a gloomy picture with 6% prevalence of′ depression, 1.5% schizophrenia, 1 to 2% epilepsy and 1% from Alzheimer's disease[20]. These mental morbidities culminate in high suicide rate. Suicide rates have surged in Pakistan in recent years from a few hundred pre- 1990s to almost 7000 till 2006[21]. A scientific studyreveals high rates of depression followed by schizophrenia and substance abuse[22]. A country wide study also supports this fact[20]. Percentages of sufferers who have access to treatment vary from 5 to 40%[23].

In this study it was found out that >quarter 32% of the participants had depressed mood, and <5 (3%) showed ideas of gilt. Majority of participants (81%) of the participants showed no feelings of guilt, suicide tendency is absent in majority (87%) of the participants and only few (6%) wishes he /she were dead, majority (66%) of the participants had no difficulty in falling a sleep. <quarter (25%) complains of occasional difficulty falling asleep, quarter (31%) of the participants had no difficulty in carrying out work and activities only few 2% had stopped working, majority (62%) had mild anxiety, <quarter (20%) had moderate, <20 (16%) had no anxiety and only few (2%) had severe anxiety, majority (81%) of the participants denied being ill at all, few (11%) acknowledge being depressed. Also there was a significant association found between gender, education and depression.

Similar results were found in one of the prospective study which was conducted on the caregiver spouses of veterans with spinal cord injury in Iran, Iraq war. The study showed that majority (70%) out of 100% primary care giver spouses were suffering from depression[21].

In a research on spouses and children of disabled persons who are the primary care givers as well often exhibit greater symptoms of depression and anxiety, as well as increased use of medical and mental health clinics, results of the study were out of 940 spouses, 155 (16.9%) reported that they were currently experiencing a moderate to severe emotional, alcohol, or family problem. Additionally, 176 (19.3%) spouses reported that they were currently interested in receiving help for a stress, emotional, alcohol, or family problem. One hundred ninety-seven (21.7%) spouses reported that the stress or emotional problems impacted negatively on the quality of their work or other activities[24].

In another study conducted in United States of America shows the association of hospital stay of primary care givers of patients and depression, 174 caregivers of disabled patients were included and it was found out that the caregivers of patients enrolled with a hospice within 3 or fewer days of their death were significantly more likely to have major depressive disorder at the follow-up interview than the caregivers of patients who enrolled with a hospice earlier in the course of their disability and terminal illness, with a prevalence rate of major depressive disorder at follow-up of 24.1% and 9.0%, respectively[25].

The current study has found some resilience and adaptation also. Our aim should be to encourage these positive developments and create an ecology that would engender resilience. Improvement in mental health and psychosocial well-being would motivate the primary care givers and enable better participation in rehabili-tation and development programs. However, our data suggests that rather than exclusively targe-ting patients' symptoms, reducing caregivers feelings of burden and "stigma" is also likely to yield significant payoffs in terms of reducing caregivers psychological distress or depression and thus may be a worthy intervention focus too.

CONCLUSION

As the world is facing the global war on terror there was a need to conduct a contextually relevant study focusing solely on the primary care givers of disabled persons. The memories of what had happened and the emotions they had felt were still affecting their behavior as much as the ongoing post war disability context and stressors. These issues have to be addressed if the primary care givers of the disabled persons have to be psychosocially recovered and get benefit from rehabilitation and development programs.

CONFLICT OF INTEREST

The study has no conflict of interest to declare by any author

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