



## DEPRESSION AND ANXIETY IN CAREGIVERS OF SUBSTANCE USERS

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### ABSTRACT

#### OBJECTIVE

To determine the frequency of depression and anxiety in caregivers of substance users.

#### STUDY DESIGN

Cross-sectional study

#### PLACE AND DURATION OF STUDY

The study was conducted in the department of Psychiatry, Dr Ruth K. M. Pfau Civil Hospital Karachi in a duration of six months i.e. 14th Sep 2015- 14th March 2016.

#### SUBJECTS AND METHODS

The total 175 Caregivers of the patients with substance use disorder who visited the Psychiatry department, civil hospital Karachi during study period were approached and enrolled after fulfilling the selection criteria. The semi structured proforma was used for demographic details while Patient Health Questionnaire (PHQ-9) and Generalized Anxiety Disorder (GAD-7) were administered for evaluation of Depression and anxiety respectively.

#### RESULTS

Among 175 caregivers, majority were females (70.2%), married (54%), illiterate or poorly educated (55%), employed (60%) and of low to middle socioeconomic class (93%). The frequency of depression and anxiety was found to be 65% and 46.2% respectively among caregivers of substance use disorder.

#### CONCLUSION

This study reveals the significant presence of 'depression and anxiety' among 'caregivers' of substance use disorder. The strategies should be implemented for the wellbeing of caregivers as well in order to improve the overall process of recovery.

#### KEY WORDS

Caregivers, Depression, Anxiety, Substance use, PHQ-9, GAD-7

### INTRODUCTION

The substance use disorder can be considered as a "Family Disease"<sup>1</sup> because it not only affects the substance user's life but also that of its intimate family members. They suffer financially, psychologically and socially. This suffering lead to the occurrence of various mental health issues. Negative impact of patient's behavior leads to emergence of depressive symptoms in caregivers.<sup>2</sup>

The Substance use is increasing with time and stressors, according to BBC worldwide, the UN estimates that there are more than 50 million regular users of morphine diacetate (heroin), cocaine and synthetic drugs. This is seen as over 50% of individuals with substance related disorder will often have a dual diagnosis, the most common being is major depressive disorder, anxiety disorder and dysthymia.<sup>3</sup> A study with family members of drug dependent people showed an increase in the risk of the emergence of mental disorder in 58.0% of spouses.<sup>2</sup> It is usually the irresponsible and violent behavior of the patient towards the family members that make them frustrated and helpless. It may result in anxiety and depression among them.<sup>4,6</sup> Alcoholics are the one with increased risk of stressful life events for their families. They not only hamper personal life by direct drug effects but also of their family by incapacitating their physical, emotional and social needs<sup>7-11</sup>. 'Substance use disorder' is a condition in which the use of one or more substances cannabis, opioids or alcohol leads to a clinically significant impairment or distress to oneself or others.<sup>9</sup> In Diagnostic and statistical manual DSM 5 substance use disorder replaced substance abuse and substance dependence.<sup>12-15</sup> In 2013 mental and substance use disorders resulted in 282.4k deaths. Among substance use disorder, the highest number of deaths were from alcohol, followed by 'opioid' and 'Cocaine use disorder'.<sup>16-18</sup> According to International Classification of Diseases ICD<sup>10,19</sup> dependence is only considered if 3 or more of the following symptoms have been present at some time during the previous year.; Strong desire to take substance, Difficulties in controlling substance taking behaviour in terms of its onset or level of use, Physiological withdrawal state, Evidence of tolerance, such that increased doses of psychoactive substance are required in order to achieve the effects originally produced by lower doses, Increased amount of time necessary to obtain or take the substance or to recover from its effects, Persisting with substance use despite clear evidence of overtly harmful consequences.

The extensive search in local perspective revealed limited work among caregivers of mentally ill person and that is even deficient in area of substance use disorder. So this study is not only expected to expand the local data but also the findings obtained would be helpful for mental health professionals to make appropriate interventions accordingly in order to improve functionality and quality of life of caregivers and ultimate recovery of the patient.

## SUBJECTS AND METHODS

## Participants

175 caregivers of substance users who visited psychiatry department of civil hospital Karachi during September 2015 to February 2016 were selected. Only those caregivers were enrolled who gave informed consent, were proficient in communicating Urdu language, were between 20-80 yrs of age, of either male or female gender, who were living with the patient diagnosed with substance dependence for a minimum of 3 years according to ICD-10 and attended psychiatric facility for treatment. Caregivers who had chronic medical or psychiatric illness in either themselves or their patients were excluded.

## Instruments

The Demographic data of the participants was collected by principal investigator on semi-structured Performa. In this study "Caregivers are the one in family member who have been looking after the substance users for at least 2 years duration in areas including medical and psychiatric consultations and responsible for giving medications." Depression will be assessed by using PHQ-9 scale (patient health questionnaire-9).<sup>20-22</sup> It is 9 item, Self-reported 4 point likert type questionnaire with cut off score of 10, while anxiety was measured by Generalized Anxiety Disorder (GAD-7). GAD-7 is a self-report 4 point likert type questionnaire, comprising of 7 items, 8 is the cutoff score above which anxiety is to be considered.<sup>23-24</sup>

## Procedure

After taking ethical approval from the Psychiatry department, participants were approached and their informed consent was taken. Data were entered and analyzed through SPSS v 16. Mean standard deviation was calculated for the quantitative variables like age, anxiety scores and depression scores. Frequency and percentage calculated from qualitative variables like gender, marital status, education and socioeconomic status. Effect modifiers like age, gender, marital status, education and socioeconomic status will be controlled through Stratification. Post stratification, Chi-square test will be applied.

## RESULTS

Among the studied caregivers, majority were females 123 (70.2%) with a mean age of  $42.1 \pm 7.3$  years. Most of the caregivers were married 43(24.57%), illiterate 63(36%), employed 105 (60%) and of middle to low socioeconomic status 165 (94.28%) see table 1.

In this study, the frequency of depression and anxiety was found to be 115 (65%) and 81 (46.2%) respectively. 83 out of 115 depressed participants were females while among participants with anxiety 43/81 (53.08%) were males. Patients had a mean duration of illness of  $8.50 \pm 5.13$  years. The caregivers were living with the patient for a mean of  $9.42 \pm 5.65$  years. Most of them were spouses 75 (42.86%) and siblings 69 (39.43%) of the patients. The factor that significantly contributed to anxiety in caregivers (i.e.  $p < 0.05$ ) was gender. While in case of depression it appeared to be not significant ( $p = 0.4520$ ) see table 2.

**Table 1**  
Demographic details of care givers

DEMOGRAPHIC VARIABLES		COUNT (n)	PERCENT (%)
AGE (42.1±7.3yrs)	20-30	26	14.9%
	31-40	35	20.0%
	41-50	83	47.4%
	51-60	21	12.0%
	61-70	9	5.1%
GENDER	MALE	52	29.7%
	FEMALE	123	70.3%
MARITAL STATUS	MARRIED	121	69.1%
	SINGLE	43	24.6%
	WIDOW	11	6.3%
EDUCATION	ILLITERATE	63	36.0%
	PRIMARY	34	19.4%
	SECONDARY/MATRIC	36	20.6%
	INTERMEDIATE	20	11.4%
	GRADUATION	15	8.6%
OCCUPATION	POSTGRADUATION	7	4.0%
	EMPLOYED	105	60.0%
SCIOECONOMIC STATUS	UNEMPLOYED	70	40.0%
	POOR	80	45.7%
	MIDDLECLASS	85	48.6%
RELATIONSHIP WITH PATIENT	UPPERCLASS	10	5.7%
	PARENT	23	13.14%
	SIBLING	69	39.43%
	SPOUSE	75	42.86%
	CHILDREN	08	4.57%

**Table 2**  
Association of anxiety with demographic factors

VARIABLES	ANXIETY		Total(N)	p Value	
	YES Count	NO Count			
AGE	20-30	10	16	26	*0.002
	31-40	11	24	35	
	41-50	43	40	83	
	51-60	8	13	21	
	61-70	9	0	9	
	71-80	0	1	1	
GENDER	MALE	43	9	52	0.0005
	FEMALE	38	85	123	
MARITAL STATUS	MARRIED	75	46	121	0.0003
	SINGLE	6	37	43	
	WIDOW	0	11	11	
EDUCATION	ILLITERATE	4	59	63	*<0.001
	PRIMARY	14	20	34	
	SECONDARY/MATRIC	23	13	36	
	INTERMEDIATE	20	0	20	
	GRADUATION	14	1	15	
OCCUPATION	POSTGRADUATION	6	1	7	0.0004
	EMPLOYED	80	25	105	
SOCIO-ECONOMIC STATUS	UNEMPLOYED	1	69	70	*0.006
	POOR	28	52	80	
	MIDDLECLASS	45	40	85	
RELATIONSHIP WITH THE PATIENT	UPPERCLASS	8	2	10	*0.003
	PARENT	13	10	23	
	SIBLING	26	43	69	
	SPOUSE	42	33	75	
	CHILDREN	0	8	8	

*P- Value is considered significant if  $\leq 0.05$ , \*p values calculated through Fisher Exact test.*

**Table 3**  
Association of depression with demographic factors

VARIABLES		DEPRESSION			
		YES	NO	Total (N)	p Value
AGE	20-30	22	4	26	* < 0.001
	31-40	33	2	35	
	41-50	48	35	83	
	51-60	12	9	21	
	61-70	0	9	9	
	71-80	0	1	1	
GENDER	MALE	32	20	52	0.4520
	FEMALE	83	40	123	
MARITAL STATUS	MARRIED	61	60	121	* < 0.001
	SINGLE	43	0	43	
	WIDOW	11	0	11	
EDUCATION	ILLITERATE	63	0	63	* < 0.001
	PRIMARY	34	0	34	
	SECONDARY/MATRIC	18	18	36	
	INTERMEDIATE	0	20	20	
	GRADUATION	0	15	15	
	POSTGRADUATION	0	7	7	
OCCUPATION	EMPLOYED	45	60	105	0.0003
	UNEMPLOYED	70	0	70	
SCIO-ECONOMIC STATUS	POOR	75	5	80	* < 0.001
	MIDDLECLASS	40	45	85	
	UPPERCLASS	0	10	10	
RELATIONSHIP WITH THE PATIENT	PARENT	8	15	23	* < 0.001
	SIBLING	56	13	69	
	SPOUSE	43	32	75	
	CHILDREN	8	0	8	

P- Value is considered significant if  $\leq 0.05$ , \*p values calculated through Fisher Exact test.

## DISCUSSION

Substance use disorders have devastating physical, mental, and socio-economic consequences not only for patients but also for their caregivers. It is a critical public health concern for which the global burden far exceeds the difficulties experienced by many of the 250 million drug users<sup>25</sup>, or the two billion alcohol drinkers worldwide<sup>26</sup>. Their illness substantially affects the quality of life of their caregivers, including financial security, mental health, social networks, and productivity. The cost approaches 2 percent of the gross domestic product of some index countries<sup>27</sup>. In relation to the sociodemographic variables, amongst the caregivers there was a greater predominance of females compared with the males. This finding is justified because the role of caregiver is often delegated to women, specifically the spouse and/or family member. A study with caregivers of psychiatric patients evidenced 80.0% of women caregivers in its sample.<sup>28</sup> Another study, which investigated the impact of alcohol abuse in the family, found a majority of females caregivers, and among these wives,<sup>29</sup> these characteristics were also found in caregivers of people with chronic diseases<sup>30-34</sup>. Evidently in our study also, 70.2% of the caregivers presented to us were women,

these results reaffirm the findings of the literature and reflect the tradition of caring, relegating the responsibility for the care of the sick family member to the woman<sup>29,35</sup>. According to a prior study, In Pakistan, 40% caregivers are at risk of developing depression and anxiety<sup>4</sup> while our study reported 65% of caregivers having depression on PHQ-9 Scale and almost 46.2% of caregivers having anxiety on GAD-7 Scale. The women were found to be 72% depressed and 46.9% anxious amongst the studied caregivers. This finding is however partially supports the established fact that depression and anxiety are more common in women due to certain genetic and hormonal predisposition<sup>36</sup>. It might be due to unequal gender distribution of the sample, this finding is overestimated and unremarkable to be generalized. Unfortunately, In Pakistan not enough research has been conducted on this subject, it can be due to denial or guilt among Pakistani caregivers when unable to cope in handling the care for the patients with substance use.

In our study 42.86% and 39.43% caregivers were spouses and siblings respectively. This is unlike to Imran et al's study where parents were reported as majority caregivers in Pakistani society<sup>37-38</sup>. In our study, most of the caregivers were married and almost 69.1% of the caregivers were reportedly living with a partner and out of which 42.8% were diagnosed with anxiety disorder and 43.8% had depression. It can be assumed, for a caregiver living with a spouse with substance use disorder might the common inducer of anxiety and depression in a Pakistani society. The 36% of caregivers were illiterate and only 20.57% acquired secondary education, lack of education is one of the identified factors behind poor coping beside unemployment. Discontinuation of work because of extra responsibilities, treatment and transportation to hospitalization away from home are major factors incurred by caregivers of substance abusers behind financial burden<sup>35</sup>. Thus it's very important to assess the well-being of caregivers in order to prevent the burden of mental health issues and their consequences on long term.

This study has addressed a very important yet easily ignored issue in our society that has strong clinical implications because caregiver and patient's wellbeing are directly correlated. The results of this study can be forwarded to propose interventions for caregivers and plan further research in this domain. Among few important limitations of this study are the small sample size to generalize its findings, the disproportionate gender distribution of the subjects that might create bias in estimation of results and the association of patient related factors like age, gender, duration of illness were not studied.

## CONCLUSION

This study reveals a remarkable rate of depression and anxiety among caregivers living with substance use disorder patients. Strategies like educational seminars and psychotherapy for the caregivers are also necessary to relieve their burden, as the overall health of the caregiver can directly affect the well-being and environment of the patient.

## LIMITATION AND SUGGESTIONS

For assessment of personality pathology, present study used a self-report measure. Further evidence can be gained by adding informant

rated measures. It has been suggested that collateral information should be included when making diagnoses for personality disorders ADP IV is based upon categorical approach which ignores the presence of symptoms that do not fully meet the criteria for a particular disorder. Future studies could take into account the empirical system of taxonomies for assessment of personality pathology.

### FUTURE SUGGESTIONS

On the basis of findings of the current research, large epidemiological studies can be carried out to determine the prevalence, psychosocial determinants and risk and protective factors of depressive symptoms in adolescents from diverse socio-demographic variables.

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