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Demographic Risk Factors of Depression among healthcare Providers in Alhasaheesa Locality, Sudan 2016

Intisar Elshiekh Mohammed[1], Abdalla Abdelrahman [2,] Eman Elsayed Bauomey[3]
[1] *(Nursing department, faculty of applied medical sciences / Jouf University, Kingdom of Saudi Arabia)*
[2](*Psychiatrics department, Faculty of Medicine/ Khartoum University, Sudan)*
[3] *(Nursing department, faculty of applied medical sciences / Jouf University, Kingdom of Saudi Arabia)*
Corresponding Author: Intisar Elshiekh Mohammed

***Abstract**: Demographic factors are well known risk factors for depression among healthcare personnel. In this study, demographic factors are tested as risk factors of depression by HAD scale.*
This study aims to test demographic factors as risk factors of depression in the healthcare providers.
Risk factors of depression assessed by using HAD scale among 208 healthcare personnel in Governmental Health Facilities in Alhasaheesa locality in Al Gezira State, Sudan.
According to HAD scale, 51.0% of the participants were normal while the remaining (49%) had variable levels of depression ranging from mild to severe depression The demographic risk factor associated depression, found to be the academic levels,. However, age, gender, marital status had statistically insignificant association with depression.

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I. Introduction

Depression is a common mental disorder that is characterized by loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, low energy, and poor concentration[1,2]. It is an incapacitating disease that involves not only the patient but also the families and the workplace[2]. It considered as one of the most common diseases worldwide, with a huge socioeconomic burden for the individual and the community[1]. It ranks third among the diseases that have greatest burden worldwide according to the World Health Organization's list and expected to be the second leading cause of disability by 2020[2]. People in their different categories are vulnerable to such a disease. Healthcare workers in hospitals not exempted from the disease and they exposed to high levels of occupational stress resulting from heavy workloads, extended working hours and high levels of time pressure[3]. Hospital staff members, including physicians and nurses, are at a higher risk of suffering from depressive disorders than is the general population[1]. The medical personnel are unique in that their exposure to unique stressors that are associated with human sufferings and catastrophic events including death. Liu ZYet al in China reported that depression was common among doctors and nurses[3]. The medical personnel are commonly under stressing conditions of patients that can become a burden on them rendering them vulnerable to depression. Abdolhamid Tajvar et al in another study in Bandar Abbas, reported the presence of significant relationship between occupational stress and depression[2]. The WHO estimated that nearly 15% of the global population on average suffered from depression at least once in their lives. In addition, the WHO estimated that neuropsychiatric disorders account for a total of 28% of the global burden of disease, of which more than one-third are accounted for by depression[2].

II. Material And Methods

This was a descriptive study conducted in the governmental hospitals and health facilities in Alhasaheesa locality in Al Gazira State, Sudan.

Study Design: descriptive cross-sectional health facility-based study

Study Location: Alhasaheesa city lies in the west side of the Blue Nile river, about 121 kilometres southeast of the capital Khartoum and 46 kilometres to the north of Wad Medani the capital of Gazira State in Sudan. Alhasaheesa has 18 health centres in addition to one teaching hospital.
Study Duration: October 2016 to July 2017.
Sample size: 208 health care personnel.
Sample size calculation: The target population from which we randomly selected our sample was 428 . Sample size calculated according to the following formula:-
n = N/ 1+N (D2)74. (n: is the desirable sample size / N: is the population size / D: is the degree of accuracy desired (or the accepted margin of error and is usually set to 0.05)
Subjects & selection method: The study population included the practicing healthcare providers in the governmental health facilities in Alhasaheesa locality with their different levels including medical practitioners, nurses, pharmacists and technicians.

Inclusion criteria:
1. Practicing medical practitioner of both genders; doctors, nurses, pharmacists, medical assistants, midwifes and technicians.
2. At least six months period of employment in the governmental hospital and health centers in ALhasahesa city.

Exclusion criteria:
1. Not practicing medical personnel, administration is a main job.
2. New employees.
3. Trainees

Procedure methodology

After written informed consent obtained, a well-designed questionnaire used to collect the data. The required data included the sociodemographic data (Age, gender, marital status, level of education, occupation, duration of daily hours at work, years/ months of employment, job satisfaction, chronic illness, family history of mental illness and medications). Also standardized Hospital Anxiety and Depression scale (HAD scale) was used.
. The data tested for association with depression Hospital Anxiety and Depression Scale (HAD Scale).

Statistical analysis:

Data was analyzed by using Statistical Package for Social Science (SPSS) for windows version (22) after pre- coded and pre-tested and presented as tables and figures, descriptive statistics was used and data was created in frequencies, percentages, . In addition to statistical comparing of two sets of normally distributing data was performed by chi square test. P-value of less than 0.05 considered to indicate a statistical significance.

III. Results

Table no 1 Association of Socio-demographic Characteristics and Depression according to HADS Scale.

Gender		HADS Scale (Depression)				P-value
		Normal n=106	Mild n=50	Moderate n=51	Sever n=1	
Male n=85	No	37	24	24	0	0.25
	%	43.5%	28.2%	28.2%	0.0%	
Female n=123	No	69	26	27	1	
	%	56.1%	21.1%	22.0%	0.8%	
Age						
(20-29) Yrs n=139	No	79	30	29	1	0.387
	%	56.8%	21.6%	20.9%	0.7%	
(30-39) Yrs	No	17	9	11	0	

n=37	%	45.9%	24.3%	29.7%	0.0%	
(40-49) Yrs n=23	No	7	7	9	0	
	%	30.4%	30.4%	39.1%	0.0%	
(50-59) Yrs n=9	No	3	4	2	0	
	%	33.3%	44.4%	22.2%	0.0%	
Academic Certificates:						
Secondary school n=21	No	5	12	4	0	0.024
	%	23.8%	57.1%	19.0%	0.0%	
Intermediate Diploma n=27	No	18	2	7	0	
	%	66.7%	7.4%	25.9%	0.0%	
B.Sc. n=120	No	55	30	34	1	
	%	45.8%	25.0%	28.3%	0.8%	
Higher Diploma n=28	No	18	5	5	0	
	%	64.3%	17.9%	17.9%	0.0%	
Master n=3	No	2	0	1	0	
	%	66.7%	0.0%	33.3%	0.0%	
Ph.D. n=9	No	8	1	0	0	
	%	88.9%	11.1%	0.0%	0.0%	
Marital Status						
Married n=77	No	33	22	22	0	0.291
	%	42.9%	28.6%	28.6%	0.0%	
Single n=125	No	71	26	27	1	
	%	56.8%	20.8%	21.6%	0.8%	
Widowed n=4	No	0	2	2	0	
	%	0.0%	50.0%	50.0%	0.0%	
Divorce n=2	No	2	0	0	0	
	%	100.0%	0.0%	0.0%	0.0%	

Statistically significant p-value is 0.05 or less; therefore the statistical difference is significant.

From the above table, statistically there was insignificant association between demographic Characteristics (Gender, Age and Marital Status) and HADS Scale (Depression) (P-value > 0.05), and we found a highly significant association between depression and Academic Certificates.

Table no 2 Association of type of Job and Depression according to HADS Scale.

Type of job			HAD's Scale (Depression)				**Total**
			Normal (N = 106)	Mild (N = 50)	Moderate (N = 51)	Sever (N = 1)	
	Physician	No	7	3	2	0	12
		%	58.30	25.00	16.70	0.00	100.00
	Medical doctor	No	18	12	14	1	45
		%	40.00	26.70	31.10	2.20	100.00
	Pharmacist	No	2	0	0	0	2
		%	100.00	0.00	0.00	0.00	100.00
	Nurse	No	46	14	9	0	69
		%	66.70	20.30	13.00	0.00	100.00
	Medical	No	2	0	2	0	4

	Assistant	%	50.00	0.00	50.00	0.00%	100.00
	Midwife	No	3	9	4	0	16
		%	18.80	56.30	25.00	0.00	100.00
	Other	No	28	12	20	0	60
		%	45.80	20.30	33.90	0.00	100.00

IV. Discussion

In this study the demographic risk factors of depression were assessed by HAD scale among healthcare staff in Governmental Health Facilities in Alhasahesa locality in Al Gezira State, Sudan. To the best of my knowledge and as far as the published medical literature can provide, this is the first study addressing such a community sector in Sudan. It found that 49% of the participants had variable levels of depression ranging from mild to severe. In the study the age did not constitute a significant factor for depression in HAD scale (p=0.92, 0.387 respectively). Mirowsky J and Ross CE, in an earlier study found that depression reaches its lowest level in the middle aged, at about age 45 and depression reaches its highest level in adults 80 years old or older, because physical dysfunction and low personal control add to personal and status losses[4,5]. The age of the participants ranged from 20-59 years constituting the official employment age in Sudan and none of them reached the old age. This may be due to the state of waning out of the physical and mental capabilities of the old people and their dependence on others. In this study, no one of the participant was at this age.

Gender had insignificant association with depression on HAD scale (p=0.239, 0.25 respectively). It is conceived in the mental health literature all over the world, depression is two to three times more common in women than men[6,7]. The prevalence of depression and anxiety is higher in women than men because women are more exposed to stressful events and risk factors for depression during their life and may also react differently to those factors; two facts that contribute to explain women's greater rates of depression[8,9,10]. Theorell et al in a meta-analysis review reported that there is no gender difference in excess risk associated with adverse work conditions but studies have shown that women actually have higher levels of job strain than men[11].

According to HAD scale, marital status what so ever to be, had insignificant association with depression (p= 0.291respectively). Different reports documented that never-married women exhibited significantly higher levels of depression compared to women who were married or living together with an intimate partner and marriage was associated with reduced risk of most mental disorders in both men and women[13,14]. It is commonly popularly and scientifically known that, the stable marital status is a shield against depression because it provides the necessary social support to the person. It has been reported in many studies that social support is an extremely essential component of the protection against depression and anxiety[15,16]. The people in Sudanese community usually live in extended families and it is very rare for the individuals to live a lonely life. The single, the divorced and widowed people will be integrated in their families and commonly the social support is offered to any member even if the person does not belong to the family. In this study about 96% of participants lived with their families or with other groups. Such a way of life constitutes protection against depression and anxiety.

According to HAD scale, the academic status had significant association with depression (p=0.614) but it was significant with HAD scale of depression (p=0.024).This positive association in HAD scale may be due to the unique status that the educated person can attain regarding the reasonably satisfactory income and the prestige that glows around him/her. Moreover, the educated person usually has a high ability to cope with life challenges compared to those who are non-educated. Moreover, the educated people have wide scope of thinking regarding the life challenges that may face him/her. Solomon et al in Ethiopia reported that low educational status found to be a barrier for medical services use[18]. Bjelland et al et al also reported that low educational levels were significantly associated with both anxiety and depression[19]. Numerous studies document that higher education is associated with a reduced likelihood of depression. The protective effects of higher education, however, are well known but vary across population subgroups according to a report by Shawn[20]. In. The personnel in medical field differ in their levels of education and hence the jobs they are qualified for . As an example, the medical practitioners are the ones who have attended the more higher education and therefore

occupy the jobs of higher income. The situation for other health cadres can be seen in this view. In this study, nurses were the majority (33.2%) followed by the medical practitioners constituting 21.6%.. In case of the job, the association with depression was found to be significant (p=0.048).

V. Conclusion

The demographic risk factors that found to be associated depression included the academic levels. This factor can be rectified by provision of better work condition to abolish or reduce their negative impact as risk factors for depression. Further studies needed to elucidate the full dimension of this issue to propose effective tools to manage them for the sake of this important health sector and their clients.

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