Research Paper

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To See Depression Among Diabetic and Asthmatic Patients: A Comparative Study.

Medical Science

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ABSTRACT

Objective- The aim of the present study is to compare the levels of depression among diabetic and asthmatic patients. Asthma and diabetes are chronic conditions and were considered earlier as having a psychosomatic origin. In the past, prominent psychoanalysts such as Menninger (1935) and Dunbar (1936) claimed that diabetes was a part of psychosomatic disease caused by emotional stress. Psychiatric morbidity among asthmatics has also been extensively studied worldwide. The purpose of this investigation was to identify psychiatric morbidity among diabetic patients as compared to asthmatics and their Depression level. So, this study was planned to assess the presence of depression in diabetes and asthma. Methodology-The sample size is 60 in total, where 30 diabetic and 30 asthmatic patients from different medical hospitals of Raipur and Chandigarh has been taken for the study through purposive sampling. The tools used for assessing the variables are Beck depression inventory (BDI).

INTRODUCTION

The global prevalence of diabetes and asthma is 285 million and 300 million respectively and this number is predicted to double by the year 2025; with the greatest number of cases being expected in China and India (WHO, 1997).

Diabetes is now seen as a heterogeneous group of disorders whose only common factor is hyperglycemia, whereas Asthma on other hand is a more severe allergic reaction, which can be caused by a variety of foreign substance, including dust, dog or cat dander, pollens and fungi. Diabetics and Asthmatics were chosen for comparison because both are chronic conditions and having a psychosomatic origin, caused by emotional stress (Menninger, 1935 & Dunbar, 1936).

What is now recognized is that diabetes and asthma is a chronic conditions, like other chronic medical conditions, they constitute a source of stress to sufferers and, as such, affect their quality of life. An estimated 300 million people worldwide suffer from asthma, with 250,000 annual deaths attributed to the disease (WHO, 2007).

The impact of long-term complications can be severe, leading to major changes in the patient's ability to function in daily life. There is also the continuing threat of complications, which can be depressing. Social relationship may be severely affected, and adjustment to the disease is often accompanied by a variety of negative emotional responses such as anger, guilt, frustration and loneliness (mosaku et al 2006).

Aim- The aim of the study is too measure the level of depression among diabetic and asthmatic patients

Hypothesis –There will be significantly higher level of depression among diabetic patients than asthmatic patients

Methodology

Sample-

The sample size was 60 in total, where 30 diabetic and 30 asthmatic patients from different medical hospitals of Raipur and Chandigarh were taken for the study through purposive sampling.

Inclusion criteria

- Patients above 40 years of age
- Well diagnosed diabetic and asthmatic patients
- Patients who were cooperative and could comprehend the test instructions properly.
- Patients diagnosed for at least 1 year

Exclusion criteria

- Patients below 40 years of age
- Patients with Gestational diabetes
- Patients who were already diagnosed with depression and anxiety

Tools

1. Socio-demographic questionnaire - This questionnaire was prepared to elicit information on demographic and clinical variables such as age, sex, marital status, type of diabetes and duration.
2. State trait anxiety inventory STAI- 1 This instrument was developed by Spielberger et al (1970) It measures anxiety as a state, which is a transitory experience. It is a self-rating questionnaire that has been validated in Nigeria and has been used in research and clinical evaluation of patients.

3 WHOQOL-BREF - This instrument was developed by the WHO in 1996 at Geneva, with fifteen international field centers, that would be applicable cross-culturally. It has been developed to provide a short form quality of life assessment that looks at domain level profiles. It contains total of 26 questions.

4. Beck Depression Inventory (BDI-II) = This instrument was developed by Beck, 1996. It measures the levels of depression from minimal to severe.

Procedure-

Consent was obtained from each and every patient after the purpose of the study was explained to them before they were included in the study. Each respondent completed the socio-demographic questionnaire. Then State Trait Anxiety Inventory (STAI 1), Quality of life (WHOQOL- BREF) and Beck depression inventory (BDI- 2) were administered on them.

Data obtained were analyzed using the Statistical Package for the Social Sciences, (SPSS) version 11.

RESULTS

TABLE.1

SAMPLE DISTRIBUTION ON THE BASIS OF AGE

Diabetes N-30		Asthma N-30		Total
Mean	S.D	Mean	S.D	
55.77	10.80	52.87	9.15	1.12

Mean age of diabetic patient group is 55.77 years and that of asthma patient group is 52.87 years

Table: 1a

SOCIO DEMOGRAPHIC DETAIL

Variable		N–30	N - 30		Chi-square	
		N-30	%	N-30	%	
Sex	Male	18	30.00%	10	16.70%	4.28*
	Female	12	20.00%	20	33.30%	
Religion	Hindu	24	40.00%	23	38.30%	
	Muslim	3	5.00%	5	8.30%	0.85
	Christian	1	1.70%	1	1.70%	
	Others	2	3.30%	1	1.70%	
Marital Status	Unmarried	1	1.70%	3	5.00%	
	Married	27	45.00%	20	33.30%	5.33
	Divorced	0	0%	2	3.30%	
	Widowed	2	3.30%	5	8.30%	
	Separated					
Education	Illiterate	2	3.30%	3	5.00%	
	Primary	7	11.70%	0	0.00%	
	Secondary	9	15.00%	11	18.30%	9.39*
	Graduate	8	13.30%	7	11.70%	
	Post Graduate	4	6.70%	9	15.00%	
Occupation	Farmer/ H.W	14	23.30%	11	18.30%	
	Business	6	10.00%	7	11.70%	
	Executive	6	10.00%	7	11.70%	0.625
	Nil/Retired	4	670.00%	5	8.30%	
Family Type	Nuclear	14	23.30%	20	33.30%	2.44
	Joint	16	26.70%	10	16.70%	
Monthly Income	<2500	2	3.30%	4	6.70%	
	2500-5000	1	1.70%	1	1.70%	
	5000-10000	2	3.30%	5	8.30%	
	10000-15000	11	18.30%	10	16.70%	4.014
	15000-20000	9	15.00%	4	6.70%	
	>20000	5	8.30%	6	10.00%	

*p<0.05 and **p<0.01

In the diabetic patient group majority were male (30.0%) and in asthma patient group majority were female (33.3%). Maximum numbers of patients were Hindu by religion in both the groups 40% and 38.3% respectively. By education, in diabetic group 13.3% were graduates and in asthma patient group 18.3% were educated up to 12th std. Majority of diabetic group of patients were from joint family set up (26.7%) and in asthma group, maximum number of patients were from nuclear family (33.3%).

TABLE: 2 SHOWING VARIOUS LEVELS OF BDI

	VARIABLE	Diabetes		Asthma		Chi square (X2)
		N -30		N - 30		
		N	%	N	%	
BDI	Minimal	7	11.7%	25	41.7%	21.756
	Mild	12	20.0%	3	5.0%	
	Moderate	11	18.3%	2	3.3%	

Depression was found to be more in diabetic group of patients.

DISCUSSION-

In the present study the comparison has been done between diabetes and asthma to see the levels of depression. The average age of the sample group of diabetes was 55.76 years where it has also been estimation that the largest age group currently affected by diabetes is between 40-59 years of age (WHO 2007) and for sample group of asthma was 52.86 years. A majority of study participants of diabetes (45%) were found to be positive for anxiety and 40% of asthma patients were also positive for anxiety. As far as depression is concerned it was more prevalent among diabetic patients (20.0%) as compared with asthmatic patients (5.0%)." Research has shown that diabetes is associated with increased risk of psychological symptoms especially depression (Pibernik-Okanuvic et al, 2005). They reported 33% prevalence rate of depression in their study". As in our study depression is found to be high in diabetic patients, it is in accordance with other researches of Mosaku et al (2008) and Anatoroglu et al (2010). "Akinlade et al.(1996) also reported 25% prevalence rate for depression and 4.8% ,while Coker et al (2000) reported 31% of their cohort had psychiatric symptoms, 4% had depression".

On the basis of above findings it can be concluded that these patients are just taking pharmacological treatment without any awareness regarding their psychiatric co morbidity so; our study can be useful for the implementation and betterment of these groups.

Limitations -

- The sample size taken is small.
- Unequal ratio of males and females
- Area of sample collection was limited

Future directions -

- Large number of sample can be taken
- Equal number of male and female ratio can be taken for better comparative value
- Area of sample collection can be broadened

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