

A Pilot Study Examining The Mental Health Of Diabetic And Hypertension Patients

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Abstract

The present study assessed the Mental Health of Diabetic and Hypertension Patients. For measure the mental health of the study Mental Health Inventory(MHI-38)prepared by Davies AR, Sherbourne CD, Peterson JR and Ware JE (1998) was used. Six categories of mental health namely Anxiety, Depression, Emotional Control, General Positive Affect, Emotional Ties and Life Satisfaction were comprised. The sample consisted of 20 Diabetic and 20 Hypertension Patients were selected for the study. The result reveals that insignificant difference of mental health was found between Diabetic and Hypertension Patients . In order to find out the differences of six sub scales of mental health between Diabetic and Hypertension Patients ; t-ratio was computed for each category separately. The result reveals that significant differences were found in Emotional Control ($t < .05$) General Positive Affect ($t < .05$) and Anxiety ($t < .05$) between Diabetic and Hypertension Patients . However, insignificant differences were found in depression, life satisfaction ($t = 0.56$) and Emotional Ties ($t = 0.9$) between Diabetic and Hypertension Patients .

Introduction:

Mental health as a state of emotional and psychological well-being in which an individual is able to use his or her cognitive and emotional capabilities, function in society and meet the ordinary demands of everyday life (Wikipedia, 2010). Health is a state of complete physical, mental and social well being and not merely the absence of disease or infirmity defines the Constitution of the World Health Organization. diabetes, is a group of **metabolic disorders** in which there are **high blood sugar** levels over a prolonged period.

Mental health problems including depression and anxiety have high prevalence worldwide (World Health Organization WHO,2016). Diabetes occurs when the body due to the absence of insulin production or the cells does not adequately use the insulin . The co-occurrence and the impact of psychological and psychosocial issues on physical illness, particularly diabetes and HTN, are challenging in diagnosis and management (Mrinmoy,et.al.2015). In addition , Hypertension (HTN or HT), also known as high blood pressure (HBP), is a **long-term medical condition** in which the **blood pressure** in the **arteries** is persistently elevated (Naish, et.al. 2014). There is a scarcity of research reports on mental health of diabetics and hypertension patients and require a very extensive effort. The effort made by the investigator, can prove very useful for reduce psychological problems and improve mental health.

Methods

Data was collected individually through questionnaires from the 20 diabetic and 20 Hypertension patients from Nanded (MS), The data was checked for accuracy and completeness and was coded and putup into the SPSS Descriptive statistics for all studied variables, percentage mean, standard deviation and t-ratio were considered statistically technique and the level of significant was set-up at 0.05 level. For measure the mental health of the sample , The Mental Health Inventory (MHI-38) prepared by Davies AR, Sherbourne CD, Peterson JR and Ware JE (1998) was used. All of the 38 MHI items, except two, are scored on a six-point scale (range 1-6). Items 9 and 28 are the exception, each scored on a five-point scale (range 1-5). The pre-coded values of each item are shown on the copy of the instrument on the preceding pages. Only six categories of mental health namely Anxiety, Depression, Emotional Control, General Positive Affect, Emotional Ties and Life Satisfaction were comprised. The personal data sheet was used to collect personal

information of the samples. Neither diabetic patients suffered from hypertension nor hypertension patients suffered from Diabetes in this study. The investigator followed the ethical consideration in the study.

Results and Discussion

The results and discussion have been presented in concise and comprehensive manner that is easy to comprehend starting with Personal Characteristics of Respondents . The results concerning this are presented in the form of tables. For the sake of convenience and methodical presentation of the results, following order has been adopted.

Table – 1
Personal Characteristics Of Diabetic And Hypertension Patients

Sr.No.	Personal characteristics	Patients	
		Diabetic	Hypertension
1)	Daily Physical Exercise	55.00 %	70.00%
2)	Use of Medicine	100.00%	100.00%
3)	Daily smoking/ Tobacco chewing	30.00%	20.00%
4)	Alcohol consumption (weekly)	10.00%	15.00%

Table-1 indicates the percentage of personal characteristics of Diabetic and Hypertension Patients. The result revealed that, 55.00 % Diabetic Patients engaged in daily physical exercise/sporting activity, whereas 70.00% Hypertension Patients engaged in daily physical exercise. 100.00% Diabetic and Hypertension Patients used regular medicine. 30.00% Diabetic Patients reported that they have Daily smoking/ Tobacco chewing , while 20.00% Hypertension Patients reported that they have Daily smoking/ Tobacco chewing. 10.00% Diabetic Patients reported that they consumed Alcohol (weekly) , while 15.00% Hypertension Patients reported that they have consumed Alcohol (weekly).

Figure -1 Illustrates The Personal Characteristics Of Diabetic And Hypertension Patients

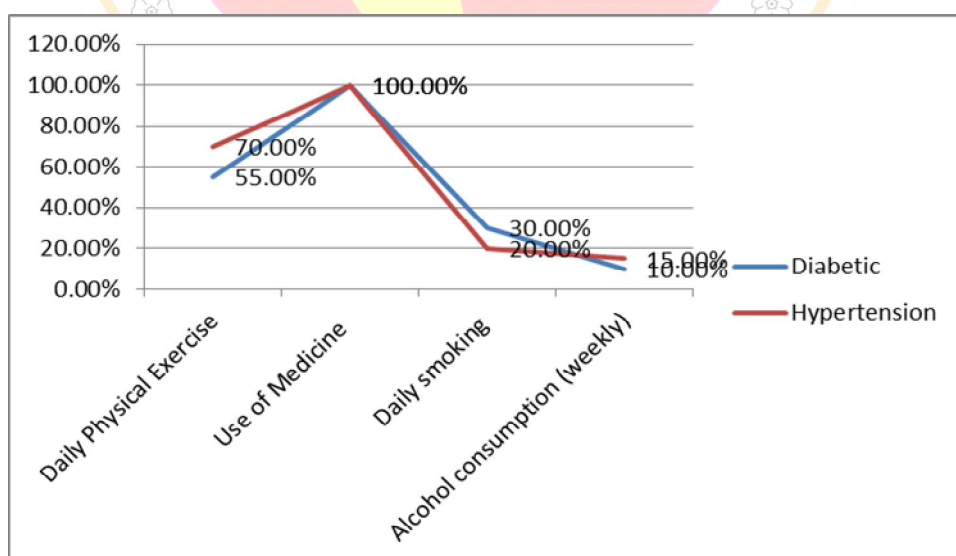


Table-2

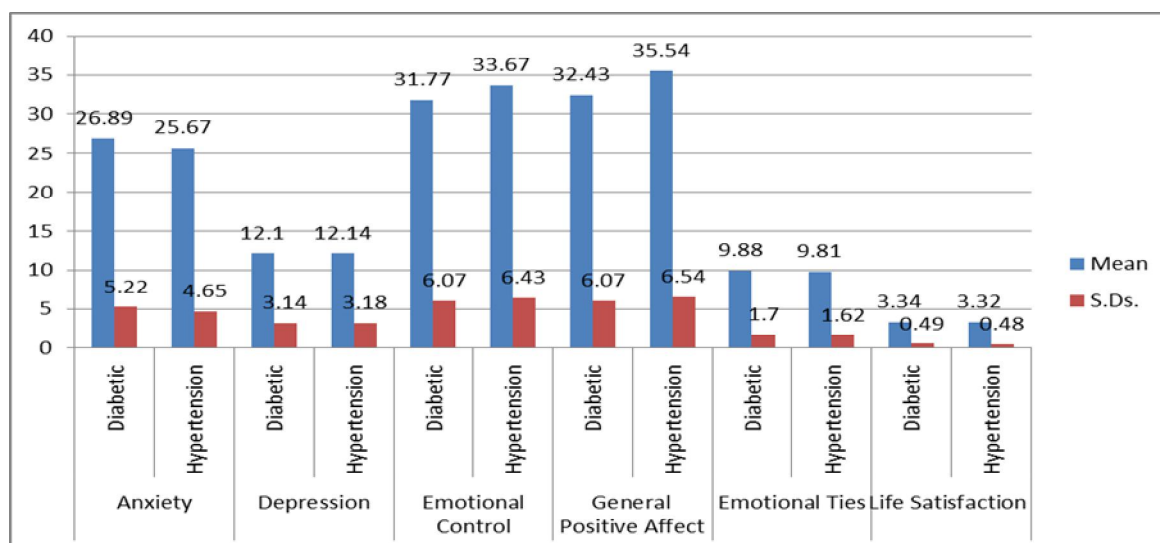
Mean Scores, Standard Deviation And T-Ratio Of The Six Subscales Of Mental Health Between Diabetic And Hypertension Patients.

Six subscales	Patients	Number	Means	S.ds.	T-ratios
Anxiety	Diabetic	20	26.89	5.22	2.94*
	Hypertension	20	25.67	4.65	
Depression	Diabetic	20	12.10	3.14	1.88 NS
	Hypertension	20	12.14	3.18	
Emotional Control	Diabetic	20	31.77	6.07	2.67*
	Hypertension	20	33.67	6.43	
General Positive Affect	Diabetic	20	32.43	6.07	2.89*
	Hypertension	20	35.54	6.54	
Emotional Ties	Diabetic	20	9.88	1.70	1.34 NS
	Hypertension	20	9.81	1.62	
Life Satisfaction	Diabetic	20	3.34	0.49	1.34NS
	Hypertension	20	3.32	0.48	
Mental health	Diabetic	20	19.38	4.12	1.56NS
	Hypertension	20	20.01	4.17	

* Significant at .05 level.

Table 2 depicted Mean Scores, Standard Deviation and t-ratio of the mental health along with its six subscales between Diabetic and Hypertension Patients. With regards to Anxiety in diabetic and hypertension patients they have obtained mean values were 26.89 and 25.67 respectively, whereas they obtained standard deviation 5.22 and 4.65 respectively. In addition, With regards to Depression in diabetic and hypertension patients they have obtained mean values were 12.10 and 12.14 respectively, whereas they obtained standard deviation 3.14 and 3.18 respectively. Furthermore, With regards to Emotional Control in diabetic and hypertension patients they have obtained mean values were 31.77 and 33.67 respectively, whereas they obtained standard deviation 6.07 and 6.43 respectively. Whereas, in respect to General Positive Affect in diabetic and hypertension patients they have obtained mean values were 32.43 and 35.54 respectively, whereas they obtained standard deviation 6.07 and 6.54 respectively. However, mean values of Emotional Ties in diabetic and hypertension patients they have obtained 9.88 and 9.81 respectively, whereas they obtained standard deviation 1.70 and 1.62 respectively. The mean scores of Life Satisfaction in diabetic and hypertension patients, they have obtained 3.34 and 3.32 respectively, whereas they obtained standard deviation 0.49 and 0.48 respectively. Finally, mean values of mental health (Combine Sample) in diabetic and hypertension patients they have obtained 19.38 and 20.01 respectively, whereas they obtained standard deviation 4.12 and 4.17 respectively.

Figure 2 Illustrates The Mean Scores, Standard Deviation Of The Six Subscales Of Mental Health Between Diabetic And Hypertension Patients



Discussion

The findings of the study show that no significant difference of mental health between Diabetic and Hypertension Patients was found in combine . In order to find out the differences of six sub scales of mental health between Diabetic and Hypertension Patients; t-ratio was computed for each category separately. The result reveals that significant differences were found in Anxiety ($t=, <.05$) , Emotional Control ($t=, <.05$) General Positive Affect ($t=, <.05$) between Diabetic and Hypertension Patients . However, insignificant differences were found in depression, Emotional Ties and life satisfaction between Diabetic and Hypertension Patients . Diabetes may be more contribute to depression because of an interaction between high blood sugar levels and a neurotransmitter associated with depression (Dreber et.al.E 2015). The high amount of anxiety of Diabetic Patients this may be due to the diabetic patients less engage in daily physical exercise and more smoking as compare to hypertension patients. Whether an individual is diabetic and hypertension or not, physical exercise is an important component of a healthy lifestyle. There are many benefits of regular exercise: decreased body fat, increased lean body mass, a better functioning cardiovascular system, and an improved mental health, psychological well-being and decrease anxiety, stress and depression . These exercise-related benefits are especially important for people with diabetes and hypertension , who are at greater risk for coronary artery disease, arteriosclerosis, cerebral vascular diseases, renal diseases, ocular diseases, and other health problems. Anxiety disorders have highly prevalent conditions in diabetes and have a significant impact on health outcomes (Lloyd , Dyer , Barnett , 2000) . The American Psychiatric Association (2013) Diagnostic and Statistical Manual of Mental Disorders (DSM-5) describes diabetes as a correlation of mood disorder and join several symptoms that cause severe dysfunctionality of an individual . People with diabetes have considerable disadvantages in their emotions, cognition, and behaviors decreased by depression symptoms (Dreber et.al.E 2015). Chaudhry et al. (2011) showed that overall 84% of subjects with diabetes had comorbid depression. Shin et al. (2016) screened that 51.6% patients with diabetes had mental/emotional disorder or alcohol/drug abuse, 37.4% participants with diabetes and serious psychological distress sought help from general practitioner/primary care physician, while 31.1% did from mental health providers.in addition the hypertension is a principal precursor to cardiovascular diseases and a main cause of death globally. Hypertensive patients experience many profound emotions which increase their risk for the development of mental health disorders particularly anxiety and depression (Vetere, et.al. 2007). The findings also reveals that hypertension patients have more Emotional Control and General Positive Affect as compared to diabetic patients. Diabetic or hypertensive patients have a high risk to develop mental disorders such as depression and/or anxiety (Mrinmoy,et.al.2015)

Limitations

Results of this study are limited by a relatively small preliminary survey of self-reported mental health rather than a study of actual behavior, which would be very difficult to achieve. As such, participants may have answered questions in a socially desirable manner to avoid the stigma associated with admitting personal inadequacies. A limitation of this study is that it reflects the findings of some Diabetic and hypertension Patients; the data was collected in selected Diabetic and Hypertension Patients hence, the results may not be generalized to other Diabetic and Hypertension Patients. The mental health was self-reported by Patients that may have resulted in some reporting bias. To keep the student data-collection time within reasonable limits, information on mental health self-reported and no special psychometric instruments were used to measure it. Future research is warranted on estimating the level of mental health by psychometric instruments.

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E-sources

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