ORIGINAL ARTICLE

DEPRESSION AND QUALITY OF LIFE AMONG DIABETIC PATIENTS

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Submitted: June 06, 2017
Accepted: November 01, 2017

ABSTRACT

OBJECTIVE
To explore the relationship between depression and quality of life. The second objective is to check the difference on quality of life among diabetic patients having different levels of depression.

STUDY DESIGN
Cross section study design

PLACE AND DURATION OF THE STUDY
The study was conducted in the ward of General Medicine department of Pakistan Institute of Medical Sciences Islamabad (PIMS) from August, 2014 to March, 2015.

SUBJECTS AND METHODS
Sample comprised of 104 diabetic patients (Males = 54, Females = 50), taken from the ward of General Medicine Department, Pakistan Institute of Medical Sciences Islamabad. Those who were only having diabetes were selected for the study. Those having any other disease were excluded from the study. Depression was assessed with the Beck Depression Inventory (BDI), Urdu Version and Quality of Life was assessed with the help of the WHO Quality of life Questionnaire translated by Khalid and Kausar (2006).

RESULTS
Results revealed that there is a negative relationship of depression with the physical functioning, psychological functioning, social relationships and environments. Furthermore, the results of ANOVA analysis revealed that the social relationships and environmental stability are significantly very low among patients with moderate level of depression as compared with those patients who are having mild depression or having normal ups and downs.

CONCLUSION
There is high prevalence of co morbidity of psychological problems among diabetic patients. The findings will have its implication for the doctors to provide the psychological consultancy to patients and help them to control depression and improve the quality of life of patients.

KEY WORDS
Depression, Quality of life, Diabetes, Psychological functioning

INTRODUCTION

There are many leading causes of death and chronic diseases. According to one report, diabetes is one of the leading causes of death[1]. Diabetes is a chronic disease which is associated with many miserable problems i.e., heart diseases and stroke, gastrointestinal tract problems, hospitalizations, kidney failure (renal failure) and gangrene (amputation)[2-4]. Diabetes is getting common day by day; the prevalence rate is very high among several developing countries[5]. The worldwide prevalence of diabetes among adults (age ranging from 20 to 79 years old) is estimated to be 7.7 percent and 439 million adults by 2030. There will be a 69% increase in numbers of adults with diabetes in developing countries and a 20% increase in developed countries, between 2010 to 2030[6].

Pakistan is economically not well established and within the limited resources everything need to be managed. Diabetes is affecting both the high and low income people. According to a survey in Pakistan, prevalence of newly diagnosed diabetes was 5.1% in men and 6.8% in women in urban areas and 5.0% in men and 4.8% in women in rural areas. Impaired glucose tolerance in the urban versus the rural areas was 6.3% in men and 14.2% in women against 6.9% in men and 10.9% in women, respectively[7].

Researches in the western societies have explained and concluded that the diabetic patients commonly experience symptoms like irritability, fatigue, low level energy and depression[8]. There are many factors which are linked with the poor quality of life among diabetic patients and psychological disorders such as depression and anxiety etc.[9]

Quality of life is an important aspect in diabetes because poor quality of life leads to diminish self-care, which in turn affects the glycemic control and hence increases the complications. It is very much clear from the literature that the quality of life issues are linked with disease and predict about the future status of the disease and its progression, so it is important to maintain the good quality of life of diabetic patients[10]. Local literature is scarce on the quality of life of such patients. Current study was designed to fill the gap.

SUBJECTS AND METHODS

Participants

Sample comprised of 104 diabetic patients (Males = 54, Females = 50), taken from the ward of General Medicine department, Pakistan Institute of Medical Sciences Islamabad. Those who are only having diabetes and were diagnosed by a doctor were included in the study. Those having any other diseases were excluded from the study.

Instruments

Depression was assessed with Beck Depression Inventory, Urdu Version[11]. BDI was originally developed by Beck and Steer in 1993; it was adapted in Urdu by Khan in 1996. The Beck Depression Inventory (BDI) is comprised of 21-item and is presented with the multiple choice format. Each of the items tries to assess a specific symptom. It measures the presence of depression and also provides details about the level of depression among adolescents and adults consistent with the DSM-IV.

In the present study for the assessment of quality of life "World Health Organization Quality of Life Questionnaire" was used, which was developed by Power (2003) and translated into Urdu by Khalid and Kausar (2006). It consists of 26 items and comprised of four subscales including physical functioning, psychological functioning, social relationships and environment.

Procedure

With the proper permission of the authorities the diabetic patients from the General Medicine Department were approached. They were briefed about the research topic and aim of the study. They were also ensured about the confidentiality and privacy of the information. With their consent the data was collected.

RESULTS

The mean age of diabetic patients was 26.74 years (54 males and 50 females) which ranges from 11 – 53 years. 28 were married and 76 were unmarried. 75 of them belong to nuclear family and 29 from joint family system. Duration of their illness is from 3 months to 36 months.

The descriptive statistics indicates that the data is normally distributed and the Cronbach's Alpha values indicated that the instruments are psychometrically sound. Values of the kurtosis and skewness fall in the acceptable ranges which is +2 to -2[12].

The results revealed that there is statistically significant negative relationship of depression with the physical functioning; psychological functioning, social relationships and environment (see Table 2). There is a very strong significant negative relationship of

Table 1
Descriptive statistics for Beck Depression Inventory and WHO Quality of life (N = 104).

Variables	α	M	SD	Score Range		Skewness	Kurtosis
				Mini	*Max*		
BDI	.71	11.52	5.97	3	25	.76	-.29
Physical functioning	.78	77.27	27.62	28	120	.10	-.83
Psychological functioning	.88	63.38	22.02	20	100	-.87	-.13
Social relationships	.90	38.96	13.96	24	60	.56	-1.49
Environment	.83	114.23	28.60	68	160	.20	-1.25
Perception of quality of life	.88	14.31	5.68	8	24	.41	-.93

Table 2
Relationship between depression and quality of life among diabetic patients (N = 104).

	Physical functioning	Psychological functioning	Social Relationships	Environment
BDI	-.18*	-.19*	-.52**	-.70**

environment (-.70**) and social relationship (-.52**) with depression whereas there is a significant negative but weak relationship of physical functioning (-.18*) and psychological functioning (-.19*) with depression.

Results of the univariate analysis of variance was computed to find out the mean differences on quality of life of diabetic patients who are having normal ups and downs in their mood or having different levels of depression. Mean values show that significant group differences occurred on social relationships ($F = 12.08$, $p<.001$) between individuals having normal ups and downs, mild level of depression and moderate level of depression. A post-hoc was computed to find out the with-in group differences and the findings revealed that the level of social relationships are significantly lower in those diabetic patients who are having moderate level of depression as compared with those who are have normal ups and downs in their mood and mildly depressed diabetics. Furthermore the results revealed that the environment ($F = 28.91$, $p<.001$) is significantly high in diabetics those who are having normal ups and downs in their moods as compared with those who are having mild or moderate level of depression. The post-hoc was computed and the results revealed that the environment stability (like home environment, work satisfaction freedom, physical safety and security etc.) is high in diabetics having normal ups and downs as compared with those who have mild or moderate level of depression.

DISCUSSION

Results of the present study revealed that the diabetic patients suffer from mild to moderate level of depression. It is very common among chronically ill patients to suffer from the psychological problems along with the physiological one. Depression is among one of them [13]. Health professionals working with diabetes patients often fail to identify and diagnose psychological problems and disorders. Approximately two out of three patients with serious psychological problems remain undiagnosed[14, 15].

The results indicated that there was statistically significant negative relationship of depression with physical functioning, psychological functioning, social relationships and environment. Research has indicated that diabetic patients had poorer quality of life[16]. The diabetic status and depression had adverse effects on the quality of life of patients[17]. In present study the results revealed that the diabetic patients with moderate depression had significantly low social relationships and environmental health (home environment, work satisfaction freedom, physical safety and security etc.). As the depression increases the social relations get affected among diabetic patients[18].

Depression and the presence of other medical conditions, which are often linked with the complications of the diabetes, should be controlled with timely diagnosis of physiological and psychological conditions. Intervention plans should also include the psychological

Table 3
Level wise comparison of depression on quality of life among diabetic patients (N=104)

	Normal Ups & Downs (N = 52)		Mild mood disturbances (N = 38)		Moderate depression (N = 14)								95% CI	
	M	SD	M	SD	M	SD	F	p	η^2	i-j	Mean (i-j)	SE	LL	UL
Physical functioning	79.54	29.62	79.05	26.83	64.00	18.23	1.90	.15						
Psychological functioning	64.85	22.11	65.58	21.92	52.00	19.85	2.23	.11						
										N>Mo	4.65*	.95	2.76	6.54
										Mi>Mo	3.29*	.99	1.32	5.25
										Mo<N	-4.65*	.95	-6.54	-2.76
										Mo<Mi	-3.29*	.99	-5.25	-1.32
Environment	129.31	28.23	106.21	18.71	80.00	.00	28.91	.00	.36	N>Mi	5.77*	1.23	3.34	8.21
										N>Mo	-12.33*	1.73	8.89	15.77
										Mi<N	-5.77*	1.23	-8.21	-3.34
										Mi>Mo	6.55*	1.80	2.98	10.12
										Mo<N	-12.33*	1.73	-15.77	-8.89
										Mo<Mi	-6.55*	1.80	-10.12	-2.98

consultancy, so that the quality of life of patients can be improved. As many diabetic patient's never under go for psychological assessment and then treatment.

CONCLUSION

Chronic illnesses always accompany hardships which include the disease burden and the psychological burden as well. Diabetes is not completely curable but is a manageable disease. The prevalence of diabetes in Pakistan is increasing day by day and so are the psychological issues related to it specifically depression. Depression affects the physical functioning, psychological functioning, social relationships and environment in short the quality of life of the patients. So it is important to assess and treat the depression along with the diabetes to improve the quality of life of the patient.

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