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Research Article

**STUDY TO ISOLATE DIFFERENT PSYCHOSOCIAL  
ELEMENTS WHICH ARE LINKED WITH DIABETES  
MELLITUS OF TYPE-II PATIENTS ATTENDING JINNAH  
HOSPITAL**Dr Ahmed Ghassan<sup>1</sup>, Dr Muhammad Idrees<sup>2</sup>, Dr M Mosa Ayub<sup>3</sup><sup>1,3</sup> Jinnah Hospital, Lahore<sup>2</sup> Khyber Medical College, Peshawar**Article Received:** January 2020 **Accepted:** February 2020 **Published:** March 2020**Abstract:****Objective:** Research was held to isolate different psychosocial elements which are linked with Diabetes Mellitus of type-II.**Study Design:** Carried out case-control study.**Place and Duration of Study:** Research was carried out at Medical Units and Diabetic clinic of Jinnah Hospital Lahore. Study was carried out for 12 months from January to December, 2019.**Methodology:** Study was carried out on a population-based case-control with case to control ratio 1:1. In the study 100 subjects out of which are 50 cases and 50 controls having age more than 35 years were conscripted. After taking approval the selection was made from patients coming to Jinnah Hospital Lahore as per criteria laid down in Hospital. Data was collected after having interviews according to pretested questionnaire compiled it and analyzed through IBM SPSS version 20.**Results:** Amongst the selected patients 67% were men and 33% were women. Out of these cases which are selected for study purpose 70% are in the age group of 35 to 50 years, 96% were married and 36% were uneducated. The mean age patients were found 49.24, standard anomaly was noted 10.915. In bivariate scrutiny, Diabetes Mellitus type-2 was establish impressively connected with (Anxiety) OR: 5.348, 95% CI: 2.151-13.298, (Depression) OR: 5.063, 95% CI: 1.703-15.050, (High Fat Diet) OR: 2.471, 95% CI: 1.100-5.547, (Sedentary lifestyle) OR: 4.529, 95% CI: 1.952-10.508, and (Psychological Stress) was OR: 4.529, 95% CI: 1.952-10.508. Although, in multivariate scrutiny while all other risk aspects were controlling, (Anxiety) OR: 6.066, 95% CI: 1.918-19.191, (High fat diet) OR: 3.648, 95% CI: 1.265-10.522, (Overeating) OR: 3.196, 95% CI: 1.127-9.064 and psychological stress OR: 3.071, 95% CI: 1.151-8.188 were found significant.**Conclusion:** In our research we revealed that the type-II Diabetes Mellitus was suggestively linked with Overeating, High fat diet intake, Psychological and Anxiety.**Key words:** Type-II diabetes mellitus, anxiety, overeating, psychosocial, psychological stress, determinants and high fat diet.**Corresponding author:****Dr. Ahmed Ghassan,**

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## INTRODUCTION:

In this research aimed was to find out the psychological elements of Diabetes Mellitus type-2 at public sector hospital in Adult patients. Diabetes mellitus type-2 is an abdominal disorder that is categorized by the glucose of high blood in the context of insulin struggle and deficiency of relative insulin.[1] It was revealed in 2010 that there were about 284 million people with diabetes type-II which are making diabetes cases about 90%.[2] In the world Pakistan is at seventh highest number of diabetics.[3] The analysis of works showed that psychological pressure [4,5] is a inclining cause in expansion of type-II diabetes. Increasing age [6], fatness [7,8] inactiveness Lifestyle [9] and genetic bases [10,11] were considered in diabetes and found to play role. Some other studies exposed anxiety [12,13] and depression [14] were main sponsors. Smoldering [15-20] increases the risk and it has been recognized that used smoke [21] was also a reason.

Extreme overtime, perhaps due to over promise to work had been stated to be related with 4-fold greater risk of type-II diabetes [22]. It has revealed in study of Diabetes Mellitus that Upset Sleep [23] and Unfriendliness [24] were labeled as risk issues. It has been noticed that persons who had momentous hard life activities during the last five years had a 1.6-fold increased risk compared to those persons who had not momentous hard life activities [25]. It was noticed that prolonged Intoxication [26], lack of exercise [27], and small weight at the time of birth [28,29] and Before Time Birth [30]. It was examined that the change in life-style in moderating countries had increased the load of Diabetes mellitus-2. The increase in Diabetes Mellitus had produced chronic impediments leading to increased morbidity and mortality [31-36]. The Diabetes pandemic had impact to increase the burden on health system, health resources and health care providers. The anticipation stratagems, awareness movements about the encouragements of Diabetes Mellitus type-2 and modification in lifestyle could upgrade the health of public in the high-risk groups and in general in the country.

## METHODOLOGY:

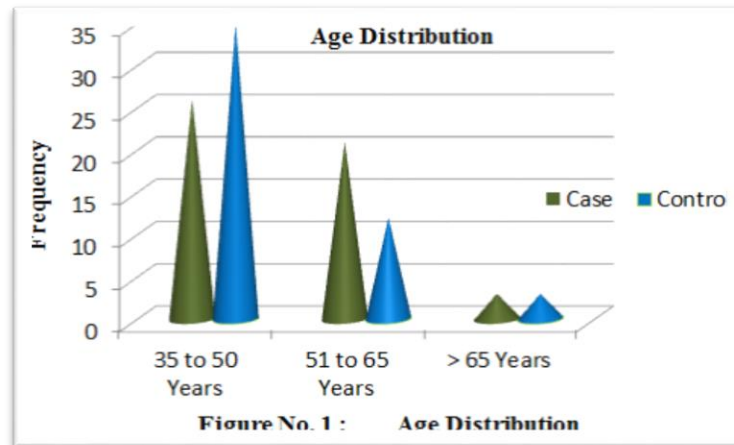
This research was based on case-control to identify different psychological elements with Diabetes Mellitus type-2 in different patients while visiting Jinnah Hospital Lahore. While studying the selected population was divided into two different groups.

The study was comprised both men and women, which was having age above 34 years. The population which was selected for study was divided into two groups. Out of which one group was contained of identified of type-II Diabetes Mellitus in Medical Units and Diabetic Clinic of Jinnah Hospital as per laid down procedures for blood sugar levels. Those patients were also involved which were on oral dealing for Diabetes Mellitus. Those patients were omitted from the study which was having difficulties of Diabetes Mellitus or using insulin or refused. The second group contained 50 individuals who were well controls and their sugar levels were normal. The suitable sampling method was used to enlist study rule as well as cases. Approval was also taken from all the nominated subjects. Evidence regarding the study subjects was kept in personal. While collecting the data all ethical and social consideration were in mind while interviews were conducted as per closed ended questionnaire. In interviews the questionnaires were comprised socio-demographic gender, marital status, qualification, name, age, occupation, contact information, address and family income.

The needy fickle was Diabetes Mellitus type-II and self-governing fickle were anxiety, junk food intake, overweight, high fat diet, intoxication, despair, upset sleep, less exercise, before time birth, less at the time of birth, inactive lifestyle, extra eating, type A temperament, emotional tension, fatness, active and passive smoking. Scrutiny and entry of data was complete by analytical software IBM SPSS version 20. After narrate the anthropology features using percentages and frequency tables. To find the arithmetical consequential link of the fickle, the vicar ship examination and chi square test was used. The disquiet was measured and binary logistic atavism was used to compute odds ratio and 95 % self-reliance interims to display arithmetical important link between independent and dependent fickle.

## RESULTS:

The study was included total 100 subjects out which 67% were men and 33% were women. Amid cases men were 64%. The majority cases were having age 35 to 50 years (70%) and uneducated (36%). The control group maximum subjects concern to men 70%, in between the age of 35 to 50 years 52% and uneducated were 24%. Therefore, both control and case groups congruent for gender and age. During study mean age of subjects was found 49.20 ordinary deflection 10.815 and variation 118.214. See figure-1.



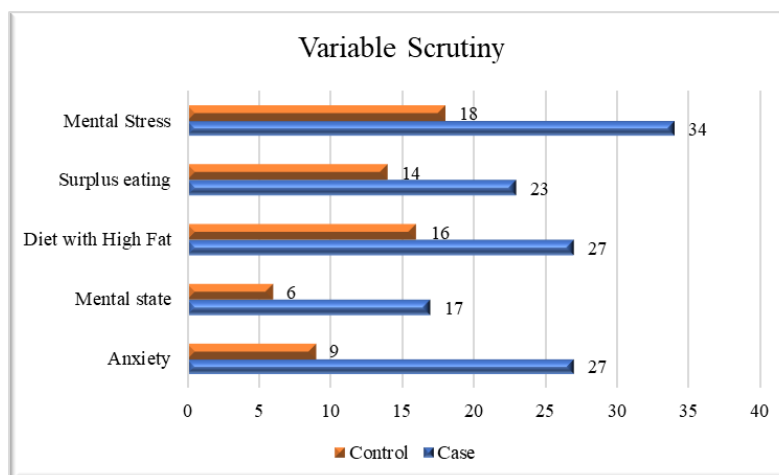
During the institution scrutiny it was revealed that Diabetes Mellitus type-II was pointedly linked with Anxiety [OR: 5.248, 94.9% CI: 2.141 - 13.288] Mental state [OR: 5.065, 94.95% CI: 1.693 - 15.060], diet with High fat, [OR: 2.481, 94.9% CI: 1.103 - 5.546] Inactive Life style [OR: 4.530, 94.9% CI: 1.953 -10.509] and Mental Stress [OR: 4.530, 94.9% CI: 1.953 - 10.507]. While, Intoxication, upset sleep, junk food, less exercise, heavyweight and Fatness, before time birth and less weight at the time of birth, active and inactive Smoking and Type-A character were not establish important statistically. Details are shown at below in Table 1.

**Table No 01: Bivariate Scrutiny**

Psycho-social Factor	Diabetes Mellitus Type-2		Bivariate Analysis			Chi- Square Value
	Case n=50	Control n=50	Crude Odds Ratio	95 % CI		
				Lower	Upper	
Alcoholism	3	2	1.532	0.245	9.587	0.211
Anxiety	27	9	5.348	2.151	13.298	14.063
Depression	18	15	5.063	1.703	15.050	9.543
Disrupted Sleep	16	10	1.882	0.756	4.690	1.871
High Fat Diet	28	17	2.471	1.100	5.547	4.889
Junk Food Intake	15	19	0.699	0.304	1.607	0.713
Lack of Exercise	40	33	2.061	0.832	5.104	2.486
Overweight and Obesity	20	14	1.714	0.742	3.961	1.604
Premature Birth and Low Birth Weight	3	1	0.495	0.406	1.604	1.010
Overeating	22	13	2.236	0.962	5.197	3.560
Sedentary Lifestyle	35	17	4.529	1.952	10.508	12.981
Active Smoking	10	12	0.792	0.306	2.046	0.233
Passive Smoking	14	21	0.537	0.233	1.237	2.154
Psychological Stress	35	17	4.529	1.952	10.508	12.981
Type-A personality	24	22	1.175	0.535	2.581	0.161

To control the possible confusing result the variable logistical relapse model was used. Therefore, it was noticed that there were some alterations in between the adjusted odds-ratio and crude odds-ratio. It was noticed that after governing for all the causes studied the toughest statistically momentous cooperation was showed by Anxiety [OR: 6.070, 94.9% CI: 2.003 - 19.201], diet with High fat [OR: 3.650, 94.9% CI: 1.305 - 10.544], Surplus eating [OR: 3.201, 94.9% CI: 1.141 - 9.104] and Mental Stress [OR: 3.101, 94.9% CI: 1.201 - 8.201]. Details are shown at below in Table 2.

PSYCHOSOCIAL ELEMENTS	DIABETES MELLITUS TYPE-II		VARIABLE SCRUTINY			CHI- SQUARE VALUE
	Case n=50	Control n=50	Crude Odds Ratio	94.9 % CI		
				Lower	Upper	
Anxiety	27	9	6.070	2.003	19.201	14.064
Mental state	17	6	3.050	0.870	10.665	10.002
Diet with High Fat	27	16	3.650	1.305	10.544	4.901
Surplus eating	23	14	3.201	1.141	9.104	3.602
Mental Stress	34	18	3.101	1.201	8.201	13.002



## DISCUSSION:

During study regarding type-II Diabetes Mellitus it was revealed that psychological elements may vary from one population to other population. Causes which founded ominously linked in the study were diet with high fats, excessive eating, mental stress and anxiety. In 2007 Engum had experienced anxiety as a risk cause for the growth of diabetes, data was collected from a great Norwegian potential population-based study [n=37, 29]. It was noticed that both misery and standard anxiety were related with an enlarged risk for the growth of type-II diabetes at the 10 years follow up [OR: 1.6, 94.9% CI: 1.4 – 1.9][13]. In the study anxiety was establish an important disposing determinative. In 2008 Mezuk et al were capable to contain a total of 14 studies in which it was explored misery as a risk element for diabetes, signifying [6,8,16] occasion cases.[12] In meta analytic review, risk for occasion diabetes was 65% higher in miserable members than to non-miserable members [OR: 1.65, 94.9% CI: 1.36 – 1.87]. However, outcomes for miserly, which were obtained in our study were not in accordance with earlier studies. Different likely studies have verified the hypothesis that common sensitive tension related to an increased risk for the growth of type II diabetes [Rod et al., 2008] [OR; 2.5; 94.9% CI; 1.3 - 4.7][5]. Our study was done on the Japanese community-based and revealed that the relation amongst observed mental pressure and the onset of diabetes were examined [Kato et al., 2008] [OR;

1.37, 94.9% CI; 1.14-1.67] between male and [OR; 1.23, 94.5% CI; 0.99-1.152] among female. While studying it was revealed that psychological pressure was statistically significant. Director of the centers for Nano medicine, Jamey D Marth, Ph.D has discovered a passageway that associate diets to a structure for molecular events responsible for the onset and severity of diabetes [37]. Existing researches presented that other causes related with growth of the infection were fatness, inactive lifestyle, upset sleep, active smoking, passive smoking, no regular exercise, type-A personality, rubbish food, before time birth and low weight at the time of birth [17-37]. Therefore, the alertness should be formed about the danger elements of deadly disease and change in lifestyle should comprise the improved behavior in public about stoppage of risk elements of Diabetes Mellitus.

## CONCLUSION:

According to resultant statistics of the current study it was revealed that the following elements linked with Diabetes Mellitus Type-2, diet with high fats, Overeating, mental stress and Anxiety.

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