

# Barriers to Exercise among Non-Exercising Type 2 Diabetes Mellitus Patients Visiting a Tertiary Care Hospital

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## Abstract

Exercise is a crucial strategy for diabetes management. However, the majority of patients with Type 2 diabetes seem reluctant to do physical activity. It increases the need of investigating the factors that are responsible for their non-exercising routine. This study aims to recognize the psychological and social barriers that prevent patients with diabetes mellitus to do exercise. A cross-sectional study was conducted with a total of 275 patients with type 2 diabetes attending family medicine outpatient clinics for the last six months. The questionnaire has been designed to collect data regarding psychological and social barriers to exercise. A comparison of social and psychological barriers with general characteristics was performed. The findings of the study reveal that all the general characteristics were significantly associated with psychological and social barriers. The patients reported that lack of interest, no willpower, a feeling of depression, unaffordability, and time barriers were the most frequent barriers among social and psychological barriers to exercise.

**Keywords:** diabetes, physical activity, exercises, barriers, physical, psychological, social, environmental

## 1. Introduction

### 1.1 Introduce the Problem

Diabetes mellitus has been accelerating at epidemic proportions around the world. It is associated with the emergence of other medical conditions as well as morbidity and mortality. It is estimated that in the year 2015, 415 million adults had diabetes which could reach the mark of 624 million (International Diabetes Federation, 2020). The number of diabetes patients has increased from 4.7% to 8.5% since 1980 among adults. This prevalence can be associated with the factors of obesity (Roglic, 2020). Usually, people in middle and low-income countries are more affected by diabetes in comparison with countries with higher income streams (Roglic, 2020). The International Diabetes Federation (IDF) in Pakistan has stated that approximately 10 million people have been living with diabetes of which 7 million people are diagnosed while 3 million could not be diagnosed (IDF, 2020). Some risk factors associated with diabetes include genetics, gestational diabetes metabolic, obesity, unhealthy diet, smoking, no or lack of physical activity, and being overweight (International Diabetes Federation, 2020).

### 1.2 Explore the Importance of the Problem

Among the stated risk factors, obesity and overweight, coupled with no or lack of physical activity is the most prevalent risk factors to trigger diabetes (GBD 2013 Risk Factors Collaborators, 2015). To obtain a healthy lifestyle, exercise is more important, especially for patients with Type 2 diabetes mellitus (T2DM) (Huang et al., 2016). It has a positive impact on the level of blood sugar, mitigates the risk of cardiovascular diseases, helps in weight loss, and increases the quality of life (Lin et al., 2015; Colberg et al., 2010). Moreover, exercise is associated with a plethora of other psychological and physical positive outcomes for the patients of T2DM. Doing regular exercise is helpful to mitigate the chances of developing T2DM or delay the process of its emergence (Schellenberg et al., 2013). A study that was conducted in District Dir Lower, Pakistan, revealed that lack of exercise was associated with diabetes (p-value 0.045) (Akhtar et al., 2016). Results of another study in Pakistan conducted on patients with chronic diseases (T2DM and cardiovascular disease) found that 60% of the patients were not physically active.

### 1.3 Describe Relevant Scholarship

Some barriers hamper physical activity among patients with T2DM. For instance, a study revealed that in Canada, 54% of people avoided exercise due to injury or illness. 36% were constrained by work commitment, and 32% people were hindered by weather conditions. While 29% of people found it as boring. Lack of time affected 18%, family commitment prevented 21%, and 18% of people reported tiredness (Khuwaja et al., 2010; Tulloch et al., 2013). The results of the study conducted in Ireland concluded that 23.4% of people reported physical discomfort to exercise 20.7% reported it as boring. While 20% of people reported insufficient time as a barrier to exercise. Moreover, tiredness prevented 15.9% of people to do physical activity. In addition to it, weather conditions were another obstacle for 11.7% of participants in study 11. Similarly, Dave, Soni, and Irani (2015) conducted a cross-sectional study in Gujrat state of India. The study unveiled reported that time constraints, disinterestedness towards physical activity, and lack of knowledge regarding the benefits of physical activity for the patients of T2DM as prevalent obstacles among male participants. However, inadequate time and social support were described as common barriers for females (Dave, Soni, & Irani, 2015). Additionally, Korkiakangas, Alahuhta, and Laitinen (2009) conducted a systematic review of 13 studies. The results showed that family and work commitment, time constraints, weather patterns, absence of willpower, mobility issues, and lack of company were the psychological and social barriers among adults with T2DM (Korkiakangas, Alahuhta, & Laitinen, 2009). A plethora of studies has been published that investigated the burn and prevalence of T2DM. However, there is scant literature available to investigate the barriers that constrain T2DM patients to exercise. Therefore, this study aims to investigate psychological and social barriers that prevent patients of T2DM to exercise. The results of the study will assist physicians to prescribe relevant interventions and strategies that could increase the inclination of physical activities among patients of T2DM. Consequently, they could better manage their lives with diabetes mellitus.

## 2. Literature Review

Ball, Crawford, and Owen (2000) found that people avoided exercise as they found it not comfortable and caused sweating and discomfort to the body. People who were overweight assumed that being fat was also a barrier to exercise. However, Deforche, De Bourdeaudhuij, and Tanghe, (2006) concluded that adults that had normal weight were more inclined to exercise in comparison with people with overweight. Carels et al. (2005) revealed that weight loss and more exercise were aligned with lesser barriers to exercise. Kowal and Fortier (2007) concluded in their studies that physically active adults did not face more barriers while doing exercise as compared to adults that had physically inactive lives. In contrast, Vandelanotte et al. (2008) investigated that people who were overweight felt the motivation to adopt a physically active life. Therefore, Vandelanotte et al. (2008) concluded that being overweight and obese could be used as motivating factors to exercise more. Moreover, Smith (2007) examined whether physical activity individually or combined, coupled with weight loss has the potential to mitigate the signs of depression. Knutson et al. (2007), Taheri et al. (2004) and Gangwisch et al. (2005) observed that doing exercise routinely added up the quality and duration of sleep resulting in helping weight loss and control. Similarly, several studies have examined that the most commonly observed psychological hindrances to exercise were lack of will power, and support as well as misconception (Meetoo & Meetoo, 2005; Lawton et al., 2005; Greenhalgh, Helman, & Chowdhury, 1998). Also, Greenhalgh, Helman, and Chowdhury (1998) concluded that exercise was not in culture and the participants had a lack of knowledge about its benefits on health and in the management of lifestyle disease. In addition, the results of the study by Wilson (2010) found that exercise was assumed as a factor to deteriorate health conditions. The results of the study by Jepson (2010) described that women reported a lack of secure surroundings to do physical activity outdoors which resulted in triggering anxiety and lack of confidence. In the way of incorporating physical activity, lack of awareness was another impediment as reported by Jepson (2010) and Fagerli, Lien, Wandel (2005). Jepson (2010) also summarized that since culturally appropriate exercise options were not available, participants showed no inclination or motivation towards a physically active life. More specifically, Islam et al. (2012) summarized the feedback of the participants who recommend culturally appropriate exercises such as bhangra dance and walking with a group of friends. In other words, lack of awareness among patients with diabetes was one of the commonly found barriers to exercise. However, studies have concluded that linguistic barriers also played an important role in discouraging exercise among diabetic patients as direction from physicians was of limited nature and translation was coupled with ambiguous and vague interpretations (Rhodes, Nocon, & Wright, 2003). Meanwhile, mass media sources such as newspapers, and television were reported as effective means of disseminating knowledge for women (Rhodes, Nocon, & Wright, 2003). Another significant barrier was misinformation or conception regarding exercise as it was considered to put negative impacts on health. Whereas, education programs that were not culturally sensitive, had a positive impact on diabetes management among the African- American and Hispanic patients (Liu et al., 2012). However, Resnicow et al., (1999) summarized that education programs that were only meant to provide

basic knowledge about disease were inadequate; thus, there was a need of disseminating deeper knowledge and understanding. Still, there is a lower inclination among people to associate with healthcare providers, aiming to manage diabetes owing to fatalism. Subsequently, more health programs are needed that advocate healthy lifestyle adaptations and eliminate the cultural misconceptions regarding diseases along with more accurate and clear advice.

### **3. Materials and Methods**

#### *3.1 Study Design and Setting*

This research paper adopted a cross-sectional study design based on its inclusion criteria. The study was carried out in the specific department (Family Medicine outpatient clinics) of Aga Khan University Hospital (AKUH), Karachi from October 2018 to April 2019.

#### *3.2 Study Sample and Sampling Technique*

In this study, the participants were selected randomly from the outpatient clinics, and WHO software was used to calculate the sampling comprising of barriers to exercise among T2DM. The study enrolled 249 (11.7%) participants obtaining 95% accurate statistical parameters with a 4% deviation. Of the participants which were not considered in the study, about 10% were due to inappropriate responses. The compilation of all the data in the study includes 275 participants respectively.

#### *3.3 Inclusion Criteria*

The study recruited all patients with Type 2 diabetes aged 18 years and under 65 years. Patients who had been diagnosed with Type 2 diabetes for the last six months and exercised less than 150 minutes weekly or less than 30 minutes per day were included.

#### *3.4 Exclusion Criteria*

Those who failed to provide consent were critically ill and had co-morbid medical conditions were not recruited in the study.

#### *3.5 Ethical Consideration*

The Ethical Review Committee of the Aga Khan University Hospital, Karachi provided the ethical approval to conduct the study in its premises of family medicine outpatient clinics. Participants who provided written consent were included in the study. The confidentiality of the participants was ensured by taking standard measures.

#### *3.6 Data Collection*

The patients were arranged in the waiting area was asked about their level of exercise. Those who were characterized as non-exercising were included in the study. Subsequently, the study conducted a pilot test in which a coded questionnaire was given to the patients to submit their responses in 15–20 minutes. The study participants were assisted by the principal investigator to fill in the responses of those who were not educated or cannot write their responses.

#### *3.7 Study Tool*

The study employed a questionnaire as a study tool which consisted of 2 parts. The first part of the questionnaire gathered information about demographics such as gender, age, BMI (estimated weight and height were gathered from their medical records), marital status, level of education, employment, education, duration of diagnosis of diabetes, medication, and co-morbid illness. The second part of the questionnaire characterized psychological and social barriers. The psychological barriers included no willpower, lack of interest, fear of low blood sugar, and feeling of depression. In addition to it, no spare time, lack of transport, lack of family support, unaffordability of facilities like parks/gym, family commitment (taking care of child/family), hectic job routine and lack of company were taken into consideration as social barriers to exercise. Except for those who could not write or be uneducated, the patients filled out their responses on their own to eliminate the interviewer's bias. Gender, age, education, employment, income, time of diabetes diagnosis, and co-morbid illness were characterized as modifiers and their impact was evaluated post-stratification. (Appendix 1) The Cronbach value of each item was more than 0.7 which confirms that the questionnaire was fit to be used for data collection.

#### *3.8 Data Analysis*

Statistical Package for the Social Sciences (SPSS) version 19.0 was used to analyze the data. Through descriptive statistics, baseline data was interpreted. Mean and standard deviation was used to measure quantitative variables i.e., weight, height, and time of diabetes diagnosis. Whereas, frequencies and percentages were used to measure the qualitative variables such as gender, age, marital status, education, co-morbid illness, and medications is used.

It also included social and psychological barriers to exercise i.e., lack of willpower, time constraints, no interest in exercise, lack of transportation, unavailability of parks/gyms, family commitments, hectic jobs, and lack of knowledge about the importance and type of exercise. Percentages and frequencies were obtained related to barriers to exercise among T2DM patients. The Chi-square test was used to examine the association between social and demographic variables along with barriers. To observe the effect of the Chi-square test, stratification was done on the related modifiers such as gender, age, education, marital status, income and employment, co-morbid illness, and time since diagnosis of diabetes. Two-tailed analysis was conducted with a significant value of 0.05.

#### 4. Results

A total of 275 were included in the study. The demographics of the patients are shown in Table 1. There were 146 (53.1%) males and 129 (46.9%) females. The participants' mean age was  $46.58 \pm 10.96$  years. Patients with more than 50 years were 128 (46.5%). The average height of patients was  $163.82 \pm 8.19$  cm. whereas, the mean weight of patients came out to be  $76.38 \pm 13.74$  kg. According to BMI distribution, 94 (34.2%) patients were obese, 7 (2.5%) were underweight and 113 (41.1%) were overweight. 259 patients (or 94.2%) were married. 209 (76%) patients had attended secondary or higher education. In contrast, 169 (61.45) patients were doing the job or running their businesses. Given medication status, 241 (87.6%) were using drugs. 19 (6.9%) patients were using insulin. While 9 (3.3%) were using both medications and insulin. However, 6 (2.2%) patients were not using any medication. 32 (11.6%) reported dyslipidemia and 105 (38.2%) reported hypertension (Table 2).

Table 1. Descriptive characteristics of the patients (n = 275)

Description	mean $\pm$ SD	
Age (years)	46.58 $\pm$ 10.96	
Height (cm)	163.82 $\pm$ 8.19	
Weight (kg)	76.38 $\pm$ 13.74	
Duration of diabetes, years	6.15 $\pm$ 4.35	
Description	n	%
<b>Age, years</b>		
18-29	9	3.3
30-40	53	19.3
41-50	85	30.9
>50	128	46.5
<b>Gender</b>		
Male	146	53.1
Female	129	46.9
<b>BMI</b>		
Underweight	7	2.5
Normal	61	22.2
Overweight	113	41.1
Obese	94	34.2
<b>Marital Status</b>		
Married	259	94.2
Unmarried	13	4.7
Widow	3	1.1
<b>Educational Status</b>		
Not Educated	32	11.6
Primary	34	12.4
Secondary	84	30.5

Intermediate	41	14.9
Higher	84	30.5
<b>Employment Status</b>		
Stay at home	106	38.5
Full-Time Job	58	21.1
Part-Time Job	17	6.2
Own Business	94	34.2
<b>Monthly Income (PKR)</b>		
<20,000	20	7.3
20,000-50,000	77	28
>50,000	178	64.7

Table 2. Clinical characteristics of the patients (n=275)

Description	n	%
<b>Medication</b>		
Drugs Only	241	87.6
Insulin Only	19	6.9
Both	9	3.3
No Medication	6	2.2
<b>HTN (hypertension)</b>		
Yes	105	38.2
No	170	61.8
<b>Dyslipidemia</b>		
Yes	32	11.6
No	243	88.4

A comparative analysis was conducted to observe the impact of psychological and social factors with general characteristics. Table 3 shows that age was significantly associated with talking care of a child/family (p-value 0.013), time constraints (p-value <0.001), and no willpower (p-value 0.020). Gender was found as significantly associated with hectic job routine (p-value <0.001), lack of facilities (p-value 0.010), and scared of low blood sugar (p-value 0.040) (Table 3). Further, a significant association of BMI was calculated with hectic job routine (p-value <0.001), dearth of the facility (p-value 0.018), time constraints (p-value <0.001), and no interest in exercise (p-value 0.017). While, educational status was significantly associated with unaffordability of parks/gym (p-value <0.001), lack of company (p-value 0.024), tough job routine (p-value <0.001), time constraints (p-value <0.001), scared of low blood sugar (p-value 0.035), and no will power (p-value <0.001). Moreover, marital status was significantly associated with feeling depressed (p-value 0.046), lack of company (p-value 0.042), taking care of a child/family (p-value 0.002), no willpower (p-value 0.048), and being scared of low blood sugar (p-value <0.001). Employment status was significantly correlated with unaffordability of parks/gym (p-value 0.035), hectic job routine (p-value <0.001), lack of company (p-value 0.026), lack of family support (p-value 0.010), taking care of child/family (p-value 0.012), time constraints (p-value <0.001), no will power (p-value 0.039) and scared of low blood sugar (p-value 0.039). Table 3 indicates that income was correlated with the unaffordability of parks/gyms (p-value <0.001), family commitments (p-value <0.001), and feeling depressed (p-value 0.002). In Table 3, a significant association of medications was observed with family commitments (p-value 0.002), fear of low blood sugar (p-value <0.001), and lack of interest in exercise (p-value 0.041). Also, hypertension was observed significantly correlated with a lack of company (p-value 0.007) (Table 3)

Table 3. Comparison of Psychological and Social Barriers to general characteristics of T2DM Patients

	Psychological Barriers							Social Barriers			
	No will power	Lack of interest	Fear of Low blood sugar	Feeling depression	No Spare time	Lack of transport	Lack of Family Support	Unaffordability	Family Commitments	Hectic Job Routine	Lack of Company
<b>Age, years</b>											
18-29											
30-40											
41-50	0.020	0.660	0.721	0.070	0.001	0.110	0.244	0.057	0.013	0.118	0.999
>50											
<b>Gender</b>											
Male	0.989	0.338	0.040	0.937	0.214	0.331	0.951	0.010	0.343	0.001	0.144
Female											
<b>BMI</b>											
Underweight											
Normal	0.014	0.017	0.551	0.754	0.001	0.759	0.001	0.018	0.105	0.001	0.657
Overweight											
Obese											
<b>Marital Status</b>											
Married											
Unmarried	0.048	0.175	0.001	0.046	0.157	0.340	0.103	0.622	0.002	0.581	0.042
Widow											
<b>Educational Status</b>											
Not Educated											
Primary	0.002	0.001	0.035	0.171	0.001	0.046	0.033	0.770	0.319	0.001	0.024
Secondary											
Intermediate											
Higher											

	Psychological Barriers						Social Barriers				
	No will power	Lack of interest	Fear of Low blood sugar	Feeling depression	No Spare time	Lack of transport	Lack of Family Support	Unaffordability	Family Commitments	Hectic Job Routine	Lack of Company
<b>Employment Status</b>											
Stay at home											
Full-Time Job	0.039	0.001	0.039	0.303	0.001	0.023	0.010	0.049	0.012	0.001	0.026
Part-Time Job											
Own Business											
<b>Monthly Income (PKR)</b>											
20,000	0.389	0.885	0.144	0.002	0.292	0.131	0.125	0.001	0.001	0.255	0.119
20,000-50,000											
<b>Medications</b>											
Drugs Only											
Insulin Only	0.437	0.041	0.001	0.931	0.096	0.001	0.088	0.398	0.002	0.306	0.896
Both											
No Medication											
<b>Hypertension</b>											
Yes	0.982	0.779	0.819	0.493	0.591	0.648	0.795	0.103	0.277	0.133	0.007
No											
<b>Dyslipidemia</b>											
Yes	0.078	0.677	0.026	0.001	0.596	0.718	0.564	0.217	0.004	0.621	0.814
No											

#### 4. Discussion

This study examines the psychological and social barriers that prevent patients with T2DM to do physical activity. All the participants of the study were non-exercising and had been living with type 2 diabetes for the last six months. The study investigated four psychological and seven social barriers. The findings of the study show that lack of interest in exercising was the most-stated psychological barrier. It was followed by no willpower and feeling depressed as the most frequently reported psychological barriers. Therefore, there is a need to emphasize psychological counseling programs for patients with diabetes for better disease management and to mitigate the risk of co-morbid illness. In this instance, behavioral changes are crucial to avert feelings of depression and fear and to increase the tendency to exercise among the patients. Patients can be encouraged to initiate some form of physical activity despite feeling depressed or lack of interest in exercise as exercise will help them counter such behavioral changes (Fox, 1999; Thomas, Alder, & Leese, 2004). Thomas, Alder, and Leese (2004) concluded in their study that most diabetic patients opted for gardening and walking to remain physically active. However, the extent of these activities caused breathing and a rise in their heart rate. Thomas, Alder, and Leese (2004) recommended that a lifestyle change was useful to prevent this psychological barrier. Therefore, a change of lifestyle can be effective to overcome the above-stated psychological barriers. Besides the psychological barriers investigated in this study, several other studies have examined the lack of confidence to perform physical activity was reported as a major barrier to exercise (Nelson, Reiber, & Boyko, 2002; Hays & Clark, 1999). Moreover, Jepson et al. (2012) asserted that most of the patients avoided exercise because they did not have options for physical activities that were culturally appropriate for them. Thus, cultural and social factors are needed to reshape aiming to increase the trend of physical activity. The study examined the unaffordability of parks/gyms as a social barrier that is linked to poor diabetes management. Moreover, through counseling the patients, more options can be derived to increase the tendency of physical activities among diabetic patients along with medication. Amongst the social barriers, time constraints were the most commonly found obstacle that hampered the intent of exercise for the patients. Subsequently, family commitments, lack of company, and job responsibilities also played role in inhibiting the tendency of engaging in physical activities. Similarly, Korikiakangas et al. (2009), Bryant et al. (2010) and Qiu et al. (2012) have concluded in their studies that time constraints, laziness, and faintness were the reasons that patients with Type 2 diabetes reported as barriers to exercise. They also investigated that individualist choices and temperament needed to be identified to chalk out interventions (Korikiakangas et al., 2009; Bryant et al., 2010; Qiu et al., 2012). Fort et al. (2013) suggested working on readiness to alter the attitudes and reinforce the patients to do physical activities. The results of this study reveal that people did not have the company to exercise. These findings are similar to the results of Sanghamitra et al. (2019) and Van Dam et al. (2005). Therefore, Sanghamitra et al. (2019) Van Dam et al. (2005) suggested that sensitizing social support in societies and taking support of family and friends could help promote the culture of physical activities in form of emotional reinforcement. Sanghamitra et al. (2019) Van Dam et al. (2005) have reported their effectiveness in controlling diabetes. This study investigates overlooked problems in T2DM patients. Most of the published literature concluded the frequency and the responsible factors that or impact of exercise on T2DM. Whereas, this study highlights a neglected area of research and identifies what factors hamper patients with diabetes to avoid physical activity. The findings of the study will be useful for family physicians, patients, and the department of health for diabetes management and to promote healthy living of patients while reinforcing the culture of exercise.

##### 4.1 Study Limitation

However, one of the limitations of the study included that this is a cross-sectional study that does not find a temporal association between the variables. Moreover, this study only investigates a specified sample population that comprises a high economic class. Therefore, the results of this study cannot be generalized to a larger population. Also, the findings of this study can be subjected to reporting bias. Therefore, future studies could unfold their area of research while examining these barriers in other sets of the population with environmental barriers. Furthermore, studies can be conducted to investigate the social and psychological barrier disparities based on gender and age and the leading effect of T2DM in different populations as this study was conducted in selected high economic classes. The limitation of the study includes more research required to find out how social and different environmental effects are responsible for many factors associated with the control of T2DM in different gender, ages, and occupations.

#### 5. Conclusion

This study figures out that psychological and social barriers are responsible for the lack of physical activity among patients with type 2 diabetes. It further elaborates on the need of reinforcing behavioral interventions and family



or community support programs that will assist in overcoming these barriers. Physical activity is one of the cheapest and readily available strategies for diabetes management that has extended benefits on the overall physical and mental health of individuals. The findings of the study reveal that psychological and social barriers are crucial and commonest obstacles of lower the tendency to exercise. Therefore, this study highlights the role of family physicians as motivators in form of giving medical advice regarding exercise to patients.

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### Competing Interests Statement

The authors declare that there are no competing or potential conflicts of interest.

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**Appendix 1**

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**Location:****Date:**

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**Q. code no.:**

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**(Part –I)**

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**(a) Demographic Detail**

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**1 (a) What is your age?**

(a) 18-29 years

(b) 30-40 years

(c) 41- 50 years

(d) 50 years and above

**1 (b) Height: (cm) \_\_\_\_\_****2. Your Body mass index?**

(a) UnderWeight

(b) Overweight

(c) Normal

(d) Obese

**3. What is your gender?**

(a) Male

(b) Female

**4. What is your marital status?**

(a) Married

(b)Widow

(c) Unmarried

**5. What is your Educational level?**

(a) Not educated

(b) Primary

(c) Secondary

(d) Higher

(e) Intermediate

**6. What is your Employment status?**

(a) Stay at home

(b) Part-time job

(c) Full-time job

(d) Own business

**7. What is your monthly income (if employed)?**

(a) &lt; 20,000

(b) &gt; 50,000

(c) 20,000-50,000

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**(B) Clinical characteristics of the patients**

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**8. When the diabetes was diagnosed?**

Duration: \_\_\_\_\_ (years) \_\_\_\_\_ (months)

**9. Which medication was used for diabetes diagnosis?**

- (a) Drugs Only  
(c) Both (a) & (b)
- (b) Insulin Only  
(d) No, medication

10. Do you have hypertension?

- (a) Yes  
(b) No

11. Do you have Dyslipidemia?

- (a) Yes  
(b) No

**(Part – II)**

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**(C) General Characteristics of T2DM Patients**

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**(i) Psychological Barriers**

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12. Do you have willpower?

- (a) Yes  
(b) No

13. Do you have the habit of exercising?

- (a) Yes  
(b) No

14. Do you have fear of getting “Low blood sugar”?

- (a) Yes  
(b) No

15. Do you feel depressed?

- (a) Yes  
(b) No

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**(ii) Social Barriers**

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16. Do you have free/spare time for yourself?

- (a) Yes  
(b) No

17. Do you have a transport facility?

- (a) Yes  
(b) No

18. Do your family support you?

- (a) Yes  
(b) No

19. Do you have recreational activities (availability of Parks and Gym)?

- (a) Yes  
(b) No

20. Are you able to fulfill your family commitments (giving time to family and children)?

- (a) Yes  
(b) No

**21.** Do you hectic Employment/ Job routine?

(a) Yes

(b) No

**22.** Do you need your friends frequently?

(a) Yes

(b) No

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