# Frustration level in type 1 diabetic mellitus patients

Vijay lakshmi[1] Prof.Archana Chakravarty[2] and Dr. N.K.Agrawal[3]

[1] *Research Scholar, Department of Home science (Food and Nutrition), MMV, BHU, Varanasi*

*Email- vijayalakshmiksp417@gmail.com*

[2] *Professor and Head, Department of Home science (Food and Nutrition), MMV, BHU, Varanasi*

*Email- archana.nutrition@gmail.com*

[3]*Professor in Department of Endocrinology and metabolism, I.M.S., B.H.U, Varanasi*

## Abstract

*In adolescence period, management of type 1 diabetes is very challenging because this is the time when children dealing with physical changes, social pressure, mental change and other health issues. Many studies have been found that mental health issues like depression, anxiety and eating disorder are common in type 1 diabetic among teenagers and young adults which are linked with poorly controlled diabetes. The present study was carried out to assess the frustration level in type 1 diabetic patients. According to the results of the study, majority of male patients (53.7%) belonged to 10- 19 year of age group while female respondents (40.0%) were in both 10-19 and 20-29 years of age group. It was also observed that maximum number of respondents in both groups of males and females belonged to lower middle class of socioeconomic status. According to the results of the study maximum number of male respondents i.e. 31.7% and females i.e. 31.0% were grouped in average frustration level followed by very low frustration level i.e. 22.0% of male and 22.5% of female.*

**Key words:** Type 1 diabetes, Frustration level, males, females.

## 1. Introduction

Diabetes is a disease that involve the problem in production of insulin hormone. In healthy person, the pancreas releases insulin to help the body to store and use sugar and fat from food. In diabetes, the pancreas produces very little or no insulin or body does not respond appropriately to insulin [1]. Type 1 diabetes or insulin dependent diabetes, is a chronic disease in which the pancreas produce no insulin [2]. Now a days, the most common pediatric endocrine disease is type 1 diabetes mellitus (T1DM). India is being home to an estimated 97000 children with T1DM, in over

half of developing nations [3]. Among all cases of diabetes only 5-10% are accounts for T1DM. The number of type 1 diabetic patients are increasing and has short term as well as long term complication or outcomes worldwide [4]. One of the complication is psychological related problem or mental health of T1DM patients.

Diabetes has been described to be a risk factor for psychiatric disorder in adolescence, especially for internalizing behavior problem like depression [5]. In recent few years substantial increase in the rate of psychiatric disorder among adolescents has been observed [6].

In worldwide, there is increasing attentiveness in the impact of type 1 diabetes on their mental health and quality of life, along with some new focuses on the influence that this comorbidity might have an adherence to treatment and its efficacy. Many studies support that there is a relation between T1DM and occurrence of psychiatric problems [7].

The main aim of the present study was to assess the frustration level in type1 diabetic patients and how the frustration occurred in diabetic patients and its effects on their health.

## 2. Materials and Methods

### 2.1. Selection of respondents

The present study was conducted on 71 type 1 diabetic patients both males and females, who were attending the Sir Sundarlal Hospital in

Banaras Hindu University, Varanasi. Type 1 diabetic patients were purposively selected for this study. Below 10 years age and above 40 years of age group of patients were excluded from the study population. Data collection was done through structural questionnaire cum interview schedule.

## 2.2. Assessment of demographic profile of respondents

Assessment of demographic profile was done through questionnaire. The respondents have been asked about their age, educational status and place of residence, physical activity level, family income and socioeconomic status of their families. For assessment of socioeconomic condition of respondents B.G. Prasad socioeconomic scale (2017) was used.

## 2.3. Assessment of Frustration level

Assessment of frustration level of respondents in the study was done through "reactions to Frustration Scale (RFS-DS) by Dr. B.M. Dixit and D.N. Srivastava. Frustration is expressed in various modes- aggression, resignation, fixation and regression. The questionnaire includes 40 questions in four different modes of frustration. In this questionnaire 10 questions of each mode of frustration in which 5 are positive and 5 are negative have been used. Analysis of this questionnaire was done by standard formula for evaluating their frustration level such as very high frustration, high frustration, average frustration, low and very low frustration level.

## 2.4. Statistical analysis

The data obtained from the participants was maintained and tabulated and the results are presented as numbers and percentages chi square test and P value. Data analysis has been processed through SPSS version 16.0 by using suitable statistical tools and techniques. For evaluating of frustration level of participants firstly all scores were added (four modes of frustration) and then calculated in percentile value.

## 3. Results

Type 1 diabetic patients included for this study comprised of both male and female patients who were attending the OPD of endocrinology and metabolism department, Sir Sundarlal hospital in BHU. It can be perused from table 1 that maximum number of participants were in the age group of 10-19 years followed by 20-29 years of age group. Table 2 shows the distribution of the study subjects according to place of residents. It is indicated from the table that 54.9% of participants were from rural background and 45.1% were from urban background.

According to table 3, 39.4% of respondents having up to high school education level followed by 29.6 % having undergraduate qualification. In the context of gender, females were holding more undergraduate degree (40.0%) than male (22.0%) and maximum number of male patients (46.3%) had up to high school education.

Table 4 demonstrated the gender wise distribution of participants according to their different mode of frustration. It is indicated that majority of respondents were fall under the average frustration level in all four mode of frustration. In first mode of frustration, Aggression male patients (24.4%) and female (20.0%) having the very high frustration (VHF) followed by the average frustration (AF). In resignation 36.6% of male and 30.0% of female have average frustration followed by very high frustration (VHF). The same trends were also followed in rest of two modes of frustration, fixation and regression. In all modes of frustration on gender basis no significant value were found.

Overall frustration level including very high frustration, high frustration, average frustration, low frustration and very low frustration were shown in table 5. It is evident from the table that majority of the respondents were in average frustration level followed by very low frustration

and very high frustration level among both males and females diabetic patients.

## 4. Conclusion

The present study has been concluded that majority of patients in both groups of males and females i.e. 47.9% belonged to 10-19 years of age group followed by (38.0%) within the range of 20-29 age group. Maximum respondents (54.9%) were from rural background and (45.1%) were urban background. A large proportion of study subjects holding up to high school qualification, followed by undergraduate. Majority of patients having the average level of frustration because of some diabetes health issues like dietary restrictions related to diabetes and daily intake of insulin.

## 5. Acknowledgements

## References:

[i] http://www.webmed.com/diabetes/defaults.htm

[ ii] http://www.medicalnewstoday.com/info/diabetes

[iii] Kumar KM, Azad K, Zabeen B, Kalra S. Type 1 diabetes in children: Fighting for a place under the sun. Indian J Endocrinol Metab 2012;16 Suppl 1:S1-3

[iv] Prasanna Kumar KM. Incidence trends for childhood type 1 diabetes in India. Indian J Endocr Metab 2015;19:34-5.

[v] Khandelwal S, Sengar G.S, Sharma M, Choudhary S, and Nagraj N, Psychological illness in Type 1 diabetes: Prevalence, Pattern and risk factors, Journal of clinical and Diagnostic Research ,2016Sep,vol-10(9):SC05-SC08

[vi] Verhulst FC, Tiemeier H. Epidemiology of child psychopathology:major milestones. Eur Child Adolesc Psychiatry. 2015;24:607-17

[vii] Almeida M.c, Clandino D.A,Grigolon R.B,bilak B.F, and Clandino a.M, Psychiatric disorders in adolescents with type 1 diabetes: a case and control study, Brazilian Journal of Psychiatry 2018

[viii] Kristensen LJ, Birkebaek NH, Mose AH, Hohwu L, Thastum M.Symptoms of emotional, behavioral, and social difficulties in the Danish population of children and adolescents with type 1 diabetes –results of a national survey. PLoS One. 2014;9:e97543.

[ix] Kovacs M, Obrosky D, Goldston D, Drash A. Major Depressive Disorder in Youths With IDDM: A controlled prospective study of course and outcome. Diabetes Care. 1997; 20 (1):45-51.

[x] Northam E, Matthews L, Anderson P, Cameron F, Werther G. Psychiatric morbidity [6] and health outcome in Type 1 diabetes - perspectives from a prospective longitudinal study. Diabetic Medicine. 2005;22 (2):152-57.

[xi] Novato TS, Grossi SAA. Fatores associados a` qualidade de vida de jovens com diabetes mellitus do tipo 1. Rev Esc Enferm USP. 2011;45:770-6.

[xii] Sivertsen B, Petrie KJ, Wilhelmsen-Langeland A, Hysing M. Mental health in adolescents with type 1 diabetes: results from a large population-based study. BMC Endocr Disord. 2014; 14:83.

[xiii] Cameron FJ. The impact of diabetes on brain function in childhood and adolescence. Pediatr Clin North Am. 2015;62:911-27.

[xiv] Wa¨ndell P, Ljunggren G, Wahlstro¨m L, Carlsson AC. Diabetes and psychiatric illness in the total population of Stockholm. J Psychosom Res. 2014;77: 169-73.

[xv] http://www.endocrineweb.com/mentalhealth

[xvi] Jadhav J B & Waghmare S L (2018). Frustration among Employed and Unemployed Girls Students. International Journal of Indian Psychology, Vol. 6, (1), DIP: 18.01.037/20180601, DOI: 10.25215/0601.037

**Table legend-**

Table 1: Gender wise distribution of respondents on the basis of their age group

Table 2: Distribution of respondents on the basis of their residents in relation to their gender

Table 3: Gender wise distribution of participants according to their educational status

Table 4: Gender wise distribution of study subjects according to the level of different and mode of frustration

Table 5: Distribution of respondents on the basis of total frustration level in relation to their gender

**Table 1: Gender wise distribution of respondents on the basis of their age group**

| Age (in years) | Gender | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| | Male | | Female | | Total | |
| | No. | % | No. | % | No. | % |
| 10-19 | 22 | 53.7 | 12 | 40 | 34 | 47.9 |
| 20-29 | 15 | 36.5 | 12 | 40 | 27 | 38 |
| >29 | 4 | 9.8 | 6 | 20 | 10 | 14.1 |
| **Total** | 41 | 100.0 | 30 | 100.0 | 71 | 100.0 |

**Table 2: Distribution of respondents on the basis of their residents in relation to their gender**

| Place of residents | Gender | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| | Male | | Female | | Total | |
| | No. | % | No. | % | No. | % |

| Rural | 23 | 56.1 | 16 | 53.3 | 39 | 54.9 |
|-------|----|------|----|------|----|------|
| Urban | 18 | 43.9 | 14 | 46.7 | 32 | 45.1 |
| Total | 41 | 100.0 | 30 | 100.0 | 71 | 100.0 |

**Table 3: Gender wise distribution of participants according to their educational status**

| Educational Status | Gender | | | | | |
|--------------------|--------|--------|--------|--------|--------|--------|
| | Male | | Female | | Total | |
| | No. | % | No. | % | No. | % |
| Primary (1 to 5) | 3 | 7.3 | 1 | 3.3 | 4 | 5.6 |
| Up to High School(6-10) | 19 | 46.3 | 9 | 33.0 | 28 | 39.4 |
| Intermediate | 8 | 19.5 | 6 | 20.0 | 14 | 19.8 |
| Undergraduate | 9 | 22.0 | 12 | 40.0 | 21 | 29.6 |
| Postgraduate | 2 | 4.9 | 2 | 6.7 | 4 | 5.6 |

**Table 4: Gender wise distribution of study subjects according to the level of different and mode of frustration**

| Modes of Frustration | Level of Frustration | Gender | | | | | |
|----------------------|----------------------|--------|--------|--------|--------|--------|--------|
| | | Male | | Female | | Total | |
| | | No. | % | No. | % | No. | % |
| AGG | VHF | 10 | 24.4 | 6 | 20.0 | 16 | 22.5 |
| | HF | 5 | 12.2 | 4 | 13.4 | 9 | 12.7 |
| | AF | 11 | 26.8 | 10 | 33.3 | 21 | 29.6 |
| | LF | 6 | 14.6 | 3 | 10.0 | 9 | 12.7 |

**International Journal of Research**

Available at https://edupediapublications.org/journals

e-ISSN: 2348-6848
p-ISSN: 2348-795X
Volume 05 Issue 17
July 2018

|  | VLF | 9 | 22.0 | 7 | 23.3 | 16 | 22.5 |
|---|---|---|---|---|---|---|---|
|  | Total | 41 | 100.0 | 30 | 100.0 | 71 | 100.0 |
|  | $X^2= 0.72$, df = 4, P >0.05 | | | | | | |
| RES | VHF | 10 | 24.4 | 6 | 20.0 | 16 | 22.5 |
|  | HF | 2 | 4.9 | 3 | 10.0 | 5 | 7.0 |
|  | AF | 15 | 36.6 | 9 | 30.0 | 24 | 33.8 |
|  | LF | 6 | 14.6 | 7 | 23.3 | 13 | 18.3 |
|  | VLF | 8 | 19.5 | 5 | 16.7 | 13 | 18.3 |
|  | $X^2= 1.81$, df= 4, P > 0.05 | | | | | | |

| Modes of Frustration | Level of Frustration | Gender | | | | | |
|---|---|---|---|---|---|---|---|
|  |  | Male | | Female | | Total | |
|  |  | No. | % | No. | % | No. | % |
| FIX | VHF | 10 | 24.4 | 6 | 20.0 | 16 | 22.5 |
|  | HF | 2 | 4.9 | 3 | 10.0 | 5 | 7.0 |
|  | AF | 13 | 31.7 | 9 | 30.0 | 22 | 31.0 |
|  | LF | 8 | 19.5 | 5 | 16.7 | 13 | 18.3 |
|  | VLF | 8 | 19.5 | 7 | 23.3 | 15 | 21.2 |
|  | Total | 41 | 100.0 | 30 | 100.0 | 71 | 100.0 |
|  | $\chi^2= 1.01$, df = 4, P >0.05 | | | | | | |
| REG | VHF | 8 | 19.5 | 4 | 13.3 | 12 | 16.9 |
|  | HF | 8 | 19.5 | 6 | 20.0 | 14 | 19.7 |
|  | AF | 11 | 26.8 | 8 | 26.7 | 19 | 26.8 |
|  | LF | 4 | 9.8 | 5 | 16.7 | 9 | 12.7 |
|  | VLF | 10 | 24.4 | 7 | 23.3 | 17 | 23.9 |
|  | $\chi^2= 1.06$, df= 4, P > 0.05 | | | | | | |

**Table 5: Distribution of respondents on the basis of total frustration level in relation to their gender**

| Overall Frustration level | Gender | | | | | |
|---|---|---|---|---|---|---|
| | Male | | Female | | Total | |
| | No. | % | No. | % | No. | % |
| VHF | 8 | 19.5 | 6 | 20.0 | 14 | 19.7 |
| HF | 4 | 9.8 | 3 | 10.0 | 7 | 9.9 |
| AF | 13 | 31.7 | 9 | 30.0 | 22 | 31.0 |
| LF | 6 | 14.6 | 5 | 16.7 | 11 | 15.5 |
| VLF | 10 | 24.4 | 7 | 23.3 | 17 | 23.9 |
| Total | 41 | 100.0 | 30 | 100.0 | 71 | 100.0 |
| $\chi^2 = 0.08$, df = 4, P >0.05 | | | | | | |