

# A Phenomenological Study To Assess The Lived Experience Of Health Related Quality Of Life Of Diabetic Patient In Selected Hospitals Of Pune City.

Vivek Patidar

(M.Sc Nursing Student)

Mr. Deepak Sethi

(Assistant Professor)

Dr. Sharadha Ramesh

(Director)

Symbiosis College Of Nursing, Symbiosis International (Deemed University), Pune

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## Abstract

Diabetes is the top health emergencies from the 21st century. Every year more people live with diabetes that could be a result of sedentary life and health related complication. First world health organization's global report in (2016) about diabetes shows that the numbers of peoples with diabetes, almost from the year 1980 to 2014, has quadrupled. The number of peoples with diabetes has been increased from 108 million in 1980 to 422 million in 2014. The study aims to assess the Health related quality of life of diabetic patients.

Phenomenological research design was used with Purposive sampling technique to select the participants. Sample size was 10 as determined by data saturation technique using a semi-structured questionnaire technique was adapted to collected data using Colaizzi approach. The study finding revealed that in Baseline data 30% of the diabetic patients had age 25-35 years and 70% of them had age 35-45 years. 50% of them were females and 50% of them were male. 50% of them had higher secondary, 40% of them were illiterate and 10% of them had secondary education. 90% of them were married and 10% of them were unmarried and 30% of them had 5-10 years of working experience. 10% of them were non-vegetarians and 90% of them were vegetarians. All of them had family history of diabetes. 40% of their fathers having diabetes and 60 of their mothers had diabetes mellitus. And common themes were found like confusion, giddiness, restlessness and uncomfortable, effect of the medications as Anger, Anxiety, Frustration, Headache, Irritation, Nausea, Stress and Vomiting, 'Confusion about the dose', 'Difficult to manage', 'Difficult to remember dose', 'Easy to manage' and 'Forget amount and dose of medication'. Joint pain, Tenderness, Tiredness Uncomfortable and Weakness.

**Keywords:** Diabetes Mellitus, Phenomenological Study.

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## I. Introduction

Diabetes was considered a disease of the wealthy in ancient India, and was known as Madhumeha (sweet urine disease); it was observed that ants were attracted to the urine. The ancient Greeks coined the term "diabetes", meaning excessive urination with dehydration, but neither they nor the Romans appreciated that the urine contained sugar; "diabetes" was considered a kidney disease until the 18th century. The sweet taste of the urine was known to Avicenna (1000 AD) and to Thomas Willis in the 17th century. The sweet taste was known to be due to glucose by the start of the 19th century, and raised glucose in the blood was recognized soon afterwards. The modern era was heralded by the discovery of Oskar Murkowski that removal of the pancreas resulted in diabetes, followed by the discovery of insulin in 1921-22. The herbalists of the middle Ages already knew the beneficial effects of the herb Galega officinalis, which ultimately led to the discovery of metformin. Likewise, Claude Bernard with his 'pique diabétique' already suspected that the brain was somehow involved in the causation of diabetes, a topic that continues to attract research attention today. These examples show that many people have made the same observations and considered the same hypotheses at widely differing times, and that valuable findings are sometimes obscured by the fogs of time.<sup>1</sup>

Diabetes Mellitus ("diabetes" for short) is a serious disease that occurs when your body has difficulty properly regulating the amount of dissolved sugar (glucose) in your blood stream. It is unrelated to a similarly

named disorder "Diabetes Insipid us" which involves kidney-related fluid retention problems. In order to understand diabetes, it is necessary to first understand the role glucose plays with regard to the body, and what can happen when regulation of glucose fails and blood sugar levels become dangerously low or high. The tissues and cells that make up the human body are living things, and require food to stay alive. The food cells eat is a type of sugar called glucose. Fixed in place as they are, the body's cells are completely dependent on the blood stream in which they are bathed to bring glucose to them. Without access to adequate glucose, the body's cells have nothing to fuel themselves with and soon die<sup>2</sup>.

Human beings eat food, not glucose. Human foods get converted into glucose as a part of the normal digestion process. Once converted, glucose enters the blood stream, causing the level of dissolved glucose inside the blood to rise. The blood stream then carries the dissolved glucose to the various tissues and cells of the body. Though glucose may be available in the blood, nearby cells are not able to access that glucose without the aid of a chemical hormone called insulin. Insulin acts as a key to open the cells, allowing them to receive and utilize available glucose. Cells absorb glucose from the blood in the presence of insulin, and blood sugar levels drop as sugar leaves the blood and enters the cells. Insulin can be thought of as a bridge for glucose between the blood stream and cells. It is important to understand when levels of insulin increase, levels of sugar in the blood decrease (because the sugar goes into the cells to be used for energy). The body is designed to regulate and buffer the amount of glucose dissolved in the blood to maintain a steady supply to meet cell needs. The pancreas, one of your body's many organs, produces stores and releases insulin into the blood stream to bring glucose levels back down. The concentration of glucose available in the blood stream at any given moment is dependent on the amount and type of foods that people eat. Refined carbohydrates, candy and sweets are easy to break down into glucose. Correspondingly, blood glucose levels rise rapidly after such foods have been eaten. In contrast, blood sugars rises gradually and slowly after eating more complex, unrefined carbohydrates (oatmeal, apples, baked potatoes, etc.) which require more digestive steps take place before glucose can be yielded. Faced with rapidly rising blood glucose concentrations, the body must react quickly by releasing large amounts of insulin all at once or risk a dangerous condition called Hyperglycemia (high blood sugar) which will be described below. The influx of insulin enables cells to utilize glucose, and glucose concentrations drop. While glucose levels can rise and fall rapidly, insulin levels change much more slowly. This more gradual process will leave you feeling "full" or content for a longer period of time. For these reasons, it is best for overall health to limit the amount and frequency of sweets and refined sugars in your diet. Instead eat more complex sugars such as raw fruit, whole wheat bread and pasta, and beans. The difference between simple and complex sugars (carbohydrates) is exemplified by the difference between white (simple) and whole wheat (more complex) bread. Insulin is the critical key to the cell's ability to use glucose. Problems with insulin production or with how insulin is recognized by the cells can easily cause the body's carefully balanced glucose metabolism system to get out of control. When either of these problems occurs, Diabetes develops, blood sugar levels surge and crash and the body risks becoming damaged<sup>3</sup>.

Diabetes is common, affecting 23.6 million Americans according to a 2007 survey by the American Diabetes Association (CDC, 2008). Unfortunately that number is on the rise as roughly 1.6 million more Americans are diagnosed with diabetes every year (CDC, 2008). Diabetes comes in two major forms and a third less common form<sup>4</sup>.

**Type-1 Diabetes.** The first major form of diabetes, known simply as Type 1 diabetes is an autoimmune disease wherein the body's own immune system attacks and destroys the cells within the pancreas that produce insulin, rendering the affected person unable to produce insulin naturally..

- **Type 2 Diabetes.** Type 2 diabetes is different than Type 1 diabetes in that it begins with a gradual decrease in the body's ability to respond to insulin (a condition known as "Insulin Resistance"), rather than an abrupt stoppage of actual insulin production. Insulin resistance occurs when the body is repeatedly subjected to high levels of insulin in the blood stream. After a while the cells do not respond as vigorously to insulin as they once would. At this point it takes a higher level of insulin to get the same amount of glucose into the cells. This can be thought of a little like "the boy who cried wolf."
- **Hyperglycemia** occurs when your blood glucose levels become too high, indicating the body's inability to use the sugar that is present in the bloodstream. This occurs either because insulin is not available (Type 1 diabetes) or because the cells are resistant to the present insulin (Type 2 diabetes). Hyperglycemia is a sign that the body's tissues are, to one degree or another, starving for glucose. In extreme and untreated cases, hyperglycemia can be very serious, leading to ketoacidosis, coma and even death.

**Research Statement:** A Phenomenological Study To Assess The Lived Experience Of Health Related Quality Of Life Of Diabetic Patient In Selected Hospitals Of Pune City.

**Aims:** 1. To assess the Health related quality of life of diabetic patients.

## II. Methodology:

- **Research approach:** Qualitative approach
- **Research design:** Phenomenological research design
- **Sampling technique-**Purposive sampling
- **Sample size-**10(as determined by data saturation technique)
- **Sampling criteria:**

- **Inclusion criteria :**

Diabetic patients:

1. Who had developed diabetic mellitus (more than 2 years).
2. Patient those who are available in that time

- **Exclusion criteria:**

Patients those who are not willing for Personal interaction

**Data Collection Procedure: The data collection was done in 2 phases;**

- **Section I:** Includes Baseline Data Which Includes Age, Gender, Education Status, Marital Status, And Type Of Living Etc.
- **SECTION B-:** Includes Questions for In-Depth Interview.

## III. Results:

**Table.1**

**Section I: Baseline data:**

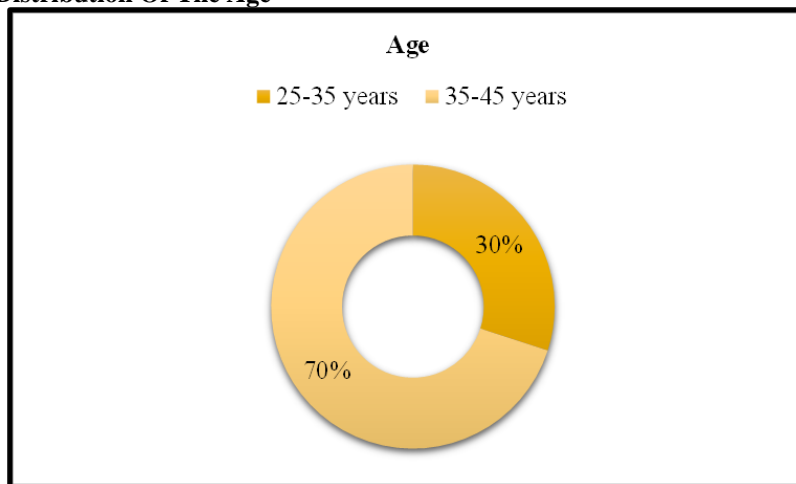
**Table 1: Description of samples (Diabetes Patients) based on their personal characteristics in terms of frequency and percentages**

Demographic variable	Freq	%
<b>Age</b>		
25-35 years	3	30%
35-45 years	7	70%
<b>Gender</b>		
Female	5	50%
Male	5	50%
<b>Educational status</b>		
H.S	5	50%
Illiterate	4	40%
Secondary	1	10%
<b>Marital status</b>		
Married	9	90%
Unmarried	1	10%
<b>Type of living</b>		
Joint	9	90%
Nuclear	1	10%
<b>Religion</b>		
Hindu	10	100%
<b>Monthly income of the family</b>		
>Rs. 10000	8	80%
Rs. 10001-30000	2	20%
<b>Total year of Years of working experience</b>		
<5 years	7	70%
5-10 years	3	30%
<b>Food habits</b>		
Non-veg	1	10%
Vegetarian	9	90%
<b>Do you have family history of medical condition like</b>		
Diabetes	10	100%
<b>Which of the family member have the Diabetic mellitus</b>		
Father	4	40%
Mother	6	60%

**N=10**

- 30% of the diabetic patients had age 25-35 years and 70% of them had age 35-45 years.
- 50% of them were females and 50% of them were male.
- 50% of them had higher secondary, 40% of them were illiterate and 10% of them had secondary education.
- 90% of them were married and 10% of them were unmarried.
- 90% of them had joint family and 10% of them had nuclear family.
- All of them were Hindu.
- 80% of them had monthly family income more than Rs. 10000 and 20% of them had monthly family income Rs.10001-30000.
- 70% of them had less than 5 years of working experience and 30% of them had 5-10 years of working experience.
- 10% of them were non-vegetarians and 90% of them were vegetarians.
- All of them had family history of diabetes.
- 40% of their fathers having diabetes and 60 of their mothers had diabetes mellitus.

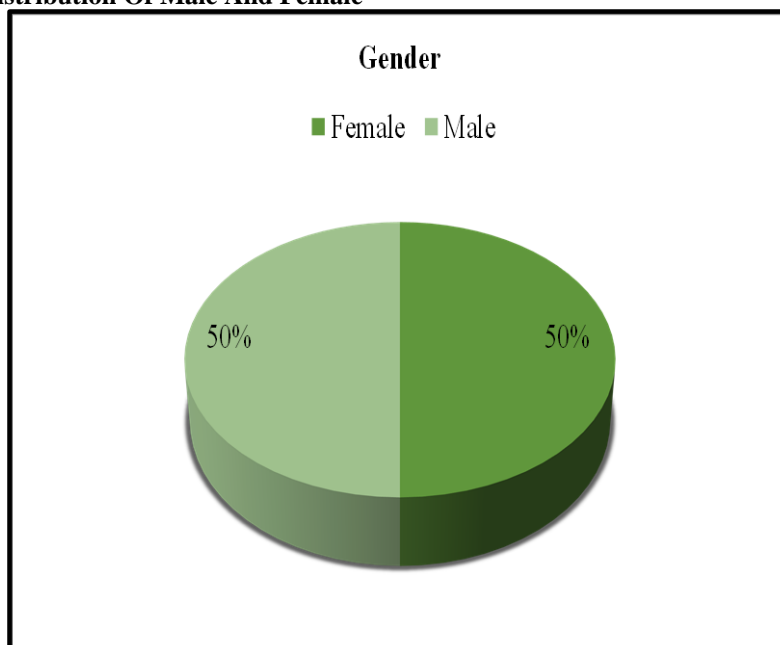
**Pie Diagram Of Distribution Of The Age**



**Figure: 1**

Pie diagram indicates distribution of the age which shows that 30% of the diabetic patients had age 25-35 years and 70% of them had age 35-45 years.

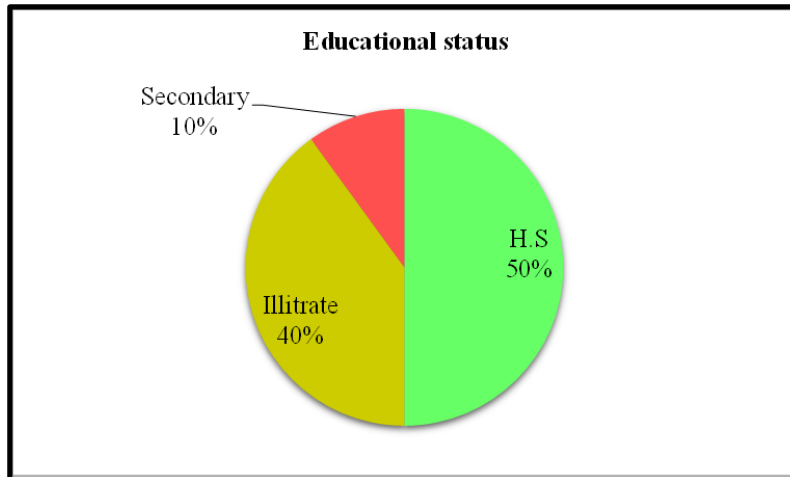
**Pie Diagramon Distribution Of Male And Female**



**Figure: 2**

Figure Indicates That 50% of Them Were Females And 50% of Them Were Male

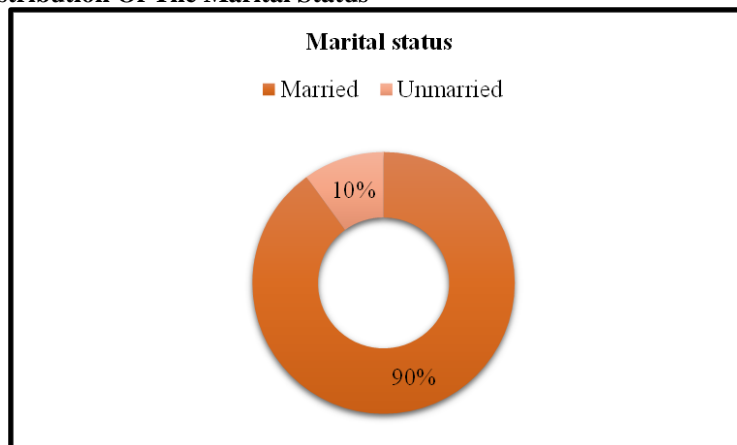
**Pie Diagram On Distribution Of Education Status**



**Figure: 3**

Pie Diagram Shows That 50% of Them Had Higher Secondary, 40% of Them Were Illiterate And 10% of Them Had Secondary Education

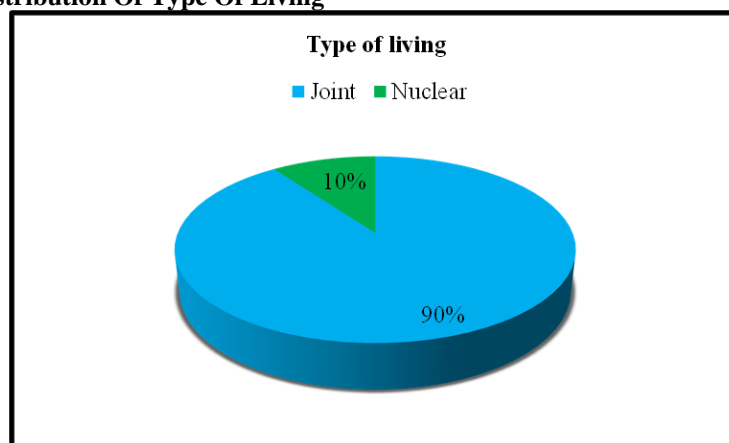
**Pie Diagram On Distribution Of The Marital Status**



**Figure:4**

Pie Diagram Show That 90% of Them Were Married And 10% of Them Were Unmarried

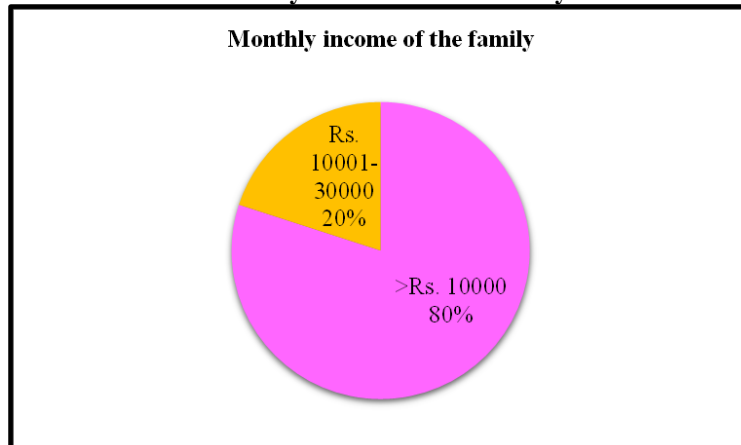
**Pie Diagram On Distribution Of Type Of Living**



**Figure: 5**

Pie Diagram Shows That 90% Of Them Had Joint Family And 10% Of Them Had Nuclear Family.

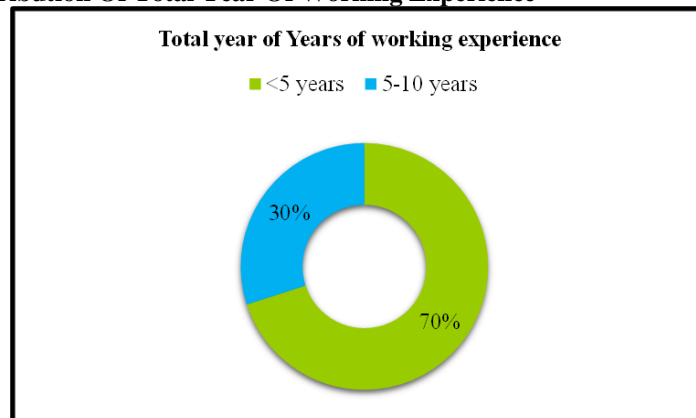
**Pie Diagram On Distribution Of The Monthly Income Of The Family**



**Figure: 6**

Pie Diagram Says That 80% of Them Had Monthly Family Income More Than Rs. 10000 And 20% Of Them Had Monthly Family Income Rs.10001-30000

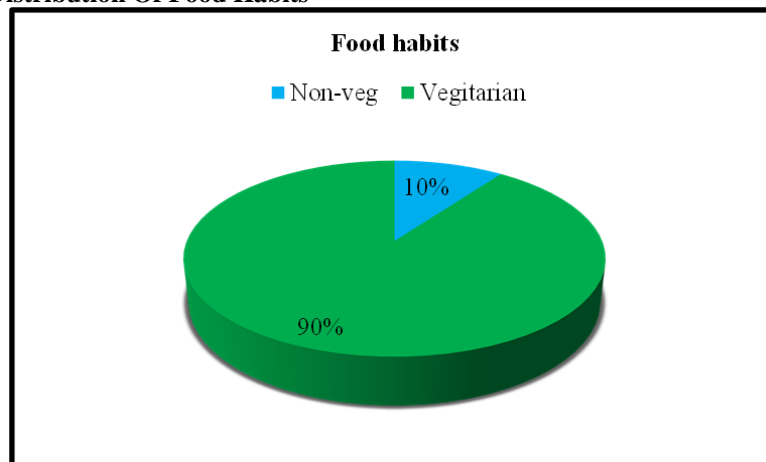
**Pie Diagram On Distribution Of Total Year Of Working Experience**



**Figure:7**

Pie Diagram Shows That 70% Of Them Had Less Than 5 Years Of Working Experience And 30% Of Them Had 5-10 Years Of Working Experience.

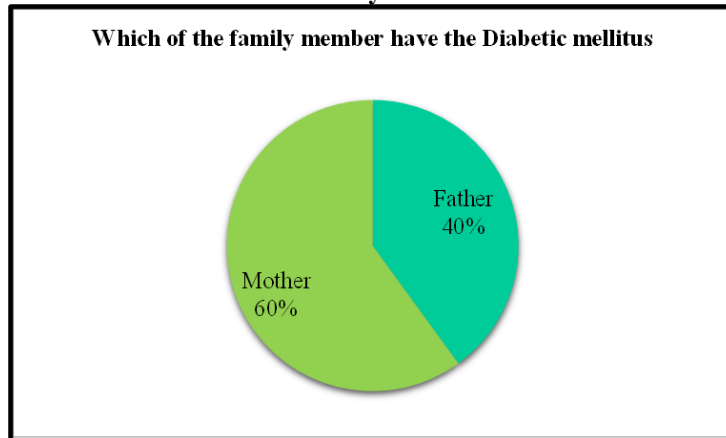
**Pie Diagram On Distribution Of Food Habits**



**Figure:8**

Pie Diagram Shows That 10% Of Them Were Non-Vegetarians And 90% Of Them Were Vegetarians.

**Pie Diagram On Distribution Ofwhich Of The Family Member Have The Diabetic Mellitus**



**Figure:9**

Pie Diagram Shows That 40% of Their Fathers Having Diabetes and 60 of Their Mothers Had Diabetes Mellitus

**Section II**

**Analysis of data related to Health-Related quality of life of diabetic patients**

**Table 3: Health Related quality of life of diabetic patients**

**N=10**

**Table:2**

<u>First Theme: Understanding about diabetes mellitus</u>	<u>Second Theme: Manage daily dosage of medications</u>
<p><b>Effect of Diabetes Mellitus</b></p> <ul style="list-style-type: none"> <li>• Confusion</li> <li>• Giddiness</li> <li>• Restless</li> <li>• Uncomforted</li> </ul> <p><b>Reason of Diabetes Mellitus</b></p> <ul style="list-style-type: none"> <li>• BSL rise issue</li> <li>• Imbalance of insulin hormones</li> </ul>	<p><b>Effect of medications</b></p> <ul style="list-style-type: none"> <li>• Anger</li> <li>• Anxiety</li> <li>• Frustration</li> <li>• Headache</li> <li>• Irritation</li> <li>• Nausea</li> <li>• Stress</li> <li>• Vomiting</li> </ul> <p><b>Management of dose</b></p> <ul style="list-style-type: none"> <li>• Confused</li> <li>• Difficult to manage</li> <li>• Difficult to remember dose</li> <li>• Easy to manage</li> <li>• Forget amount and dose of medication</li> </ul>
<p><u>Third Theme: Manage daily exercise</u></p> <p><b>Adverse effects</b></p> <ul style="list-style-type: none"> <li>• Joint pain</li> <li>• Joint pain</li> <li>• Tenderness</li> <li>• Tiredness</li> <li>• Uncomfortable</li> <li>• Weakness</li> </ul> <p><b>Positive effect</b></p> <ul style="list-style-type: none"> <li>• Ability to work long time                             <ul style="list-style-type: none"> <li>• Cure</li> </ul> </li> <li>• Generate new energy                             <ul style="list-style-type: none"> <li>• Healthy</li> </ul> </li> <li>• Perfect body shape</li> </ul>	<p><u>Fourth Theme: Dietary pattern</u></p> <p><b>Feeling</b></p> <ul style="list-style-type: none"> <li>• Anger</li> <li>• Feeling very unlucky</li> <li>• Irritation</li> <li>• Keep healthy</li> <li>• Not feeling good</li> </ul> <p><b>Health related</b></p> <ul style="list-style-type: none"> <li>• Cure</li> <li>• Keep healthy</li> <li>• Proper homemade food</li> </ul> <p><b>Manage to follow</b></p> <ul style="list-style-type: none"> <li>• Avoid parties</li> <li>• Create problems like nausea and vomiting sometimes</li> <li>• Difficult to follow</li> <li>• Not feeling good</li> <li>• Very hectic to follow</li> </ul>
<p><u>Fifth Theme: Manage Hypoglycemia at home</u></p> <p><b>Diet related</b></p> <ul style="list-style-type: none"> <li>• Proper healthy diet</li> </ul>	<p><u>Sixth Theme: Manage Hypoglycemia at home</u></p> <p><b>Encourage oneself</b></p> <ul style="list-style-type: none"> <li>• Being a good human</li> </ul>

<ul style="list-style-type: none"> <li>• Proper soft diet</li> <li>• Take some amount of sugar</li> <li><b>Personal care</b></li> <li>• Daily dose of insulin injection             <ul style="list-style-type: none"> <li>• Proper medication</li> <li>• Proper rest</li> </ul> </li> <li><b>Personal hygiene</b></li> <li>• Hand washing before and after food             <ul style="list-style-type: none"> <li>• Maintain personal hygiene</li> <li>• Wash legs at bed time</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Better for oneself             <ul style="list-style-type: none"> <li>• Cure</li> </ul> </li> <li>• Maintain proper repo</li> <li><b>Exercise</b></li> <li>• Morning walk</li> <li>• Yoga and deep breathing</li> <li><b>Spirituality</b></li> <li>• Believe in god</li> <li>• Pray to god</li> <li>• Spiritual songs</li> <li><b>Intake related</b></li> <li>• Avoid bad habits like smoking, tobacco</li> <li>• Morning breakfast</li> </ul>
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- The diabetes patients when responding about the understanding of diabetes mellitus mainly mentioned the effect of DM and Reason of DM. While mentioning the effect of DM, they spoke about confusion, giddiness, restlessness and uncomfortable. Whereas speaking about reasons of DM, they mentioned the reasons as blood sugar level rise issue and imbalance of insulin hormones.
- While responding on management of the daily dose of medication, they responded around two subthemes 'Effect of medications' and 'Management of dose'. They mentioned the effect of the medications as Anger, Anxiety, Frustration, Headache, Irritation, Nausea, Stress and Vomiting. About management of daily dose they spoke around 'Confusion about the dose', 'Difficult to manage', 'Difficult to remember dose', 'easy to manage' and 'Forget amount and dose of medication'
- They also spoke around management of Hypoglycemia at home with the subthemes 'Diet related', 'Personal care' and 'Personal hygiene'. They mentioned 'Proper healthy diet', 'Proper soft diet' and few of them take some amount of sugar to manage Hypoglycemia. They mentioned daily dose of insulin injection, proper medication and proper rest for personal care. They also mentioned 'Hand washing before and after food', 'Maintain personal hygiene' and 'Wash legs at bed time' for personal hygiene.
- The responses on life style modifications required for managing diabetes were spread over three subthemes viz., Encourage oneself, Exercise, Spirituality and Intake related. They encourage themselves to be a good human, better to themselves, they will cure and maintain good repo with others. They do morning walk, yoga and deep breathing exercises. They believe in god, pray to god and sing spiritual songs. They avoid bad habits like smoking, chewing tobacco. They take morning breakfast.

#### IV. Conclusion:

Ideals with the introduction. Analysis and interpretation of the data collected for baseline data of diabetic patients and Analysis and interpretation of the data collected for interviewing of diabetic patients by semi-structured questionnaire.

**Conflict of interest:** There is no conflict of interest in the present study.

**Source of funding:** Self

**Ethical clearance:** The present has cleared the Institutional Ethical Committee and informed & written consent was taken from the participation.

#### References:

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