

# HOW ANXIETY AND DIABETES AFFECT HEALTHY LIVES AND PREGNANCY

**Kapilbala panchal**

Ph.D scholar (psychology)

Govt.Shri Atal Bihari Vajpayee Arts and Commerce Collage

Devi ahilya vishvavidyalaya Indore (M.P.)

Email - kapilamalviya07@gmail.com

**Abstract:** *Diabetes and anxiety related complications impose heavy health burdens worldwide and there have been not effective measures to fully control with the disease. The main cause of the diabetes epidemic is the interaction between genetic and environmental risk. A wide variety of lifestyle factors are also play great role to the development of diabetes Such as sedentory lifestyle physical inactivity, smoking and alcohol use, many studies have also shown that a low fibre diet with a high glycemic index is positively associated with a higher risk of diabetes mellitus.*

**Key Words:** *Anxiety Vs Diabetes , Gastational Diabetes and Health.*

## 1. INTRODUCTION:

**Health is not mainly an issue of doctors, social services and hospitals, it is an issue of social justice”.** Health is a common theme in most cultures. In fact all community have their concept of health as a part of their culture. Among definitions still used .probably the oldest is the “absence of disease.”In some cultures health are harmony are considered equivalent. Harmony being defined as –“**being at peace with the self, the community god and cosmos.**”[1] The ancient Indians and Greeks shared this concept and attribution disease to disturbances is bodily equilibrium of what they called “humours”. Many years ago no one thought about diabetes it was a rare disease in rare people. After some time diabetes was found in a special class people, who were rich and women of those families spent their time in very comfortable situation.

The explosive growth of diabetes from across the country from the 1980s to till now is essentially multifactorial which is very real and large. The real reasons would be inclusive of

- ✓ cable television
- ✓ economic liberalization
- ✓ more processed and fast food
- ✓ increased academic competitiveness (thereby reducing physical activity)
- ✓ mobile phone and computers
- ✓ Increased life expectancy-67 years for males now as supposed to 56 in 1980s and 64 for females at present.

The solutions are not simple and essentially would involve proper counseling of the mothers and families of those children who are born low birth weight or preterm as to how overenthusiastic attempts to make the growth curve more steep in these children is probably like to increase childhood obesity and lead to adverse consequences in adulthood. The ultimate solution of optimum feeding of mothers in pregnancy can be debated but what is optimum and when? Research is on but the answer is unclear and concepts are still evolving certainly economic equity is a solution in improving birth weights but is much more easily said than done.[2] Vitamin D which is termed the “Sunshine vitamin” has its deficiency being associated with insulin resistance (body’s own lack of ability to respond to insulin). There is more evidence nowadays that though not entirely always with controversy that since vitamin D deficiency has been shown by several groups to be fairly common owing to our propensity to be avoid the seen for occupational and cosmetic reasons that this is itself may pose an added risk factor for the increasing prevalence of diabetes.[2]

### 1.1. ANXIETY:

Anxiety is the kind of psychoneurosis. Anxiety disorders are more common in the general population than are any other disorders. Anxiety may play a role in many disorders. The most important symptoms include both vague fears and apprehension are accompanied in many cases by increased activity of sympathetic nervous system which is manifested by physical signs such as sweating, rapid heartbeat, rapid respiration tremor, gastrointestinal distress, insomnia, dizziness, muscle twitches, fearfulness, hyperventilation, dry mouth etc<sup>4</sup>. The individual suffering from anxiety neurosis has difficult difficulty in making his own decision. He feels helpless and dependence, but does not

like his dependence on other. He feels insecure; the feeling of insecurity gives rise to a sense of unimportance and a disbelief in one's abilities. He regards his success either as accidental or due to other people's kindness. Other symptoms of the sensitivity to the attitude of others. Suspicious of others motives the tendency to interpret others, chance remarks as criticism, irritability, inability to concentrate and swings of moods from excitement to depression. The anxiety neurotic patient constantly seeks medical attention, does not feel happy to learn that he has no organic illness. [3]

The clinical picture as composed, as Freud outlined of the following elements-

- General irritability
- Anxious expectation (Freud gave an example of a Women who fears that her husband has pneumonia every time she hears him cough) which also may take the form of scrupulosity pedantry or doubting mania.
- Anxiety that is constantly lurking in the background.
- Rudimentary anxiety attacks.
- Waking up at night in a Fright (pavor nocturnus)
- Vertigo
- Phobias, (specific fears) of snakes, darkness, vermin, and so forth but also agoraphobia ;
- Digestive troubles
- Paresthesias and
- Chronic states. Such as a constant feeling of lassitude. [4]

#### 1.1.1. Management of anxiety:

- Physician – patient relationship
- Supportive psychotherapy
- Behavioral medicine in medically ill patients
- Psychotropic medications

## 1.2. ANXIETY AND DIABETES:

Clinical depression, anxiety disorders, depressive affect and diabetes-specific distress are common conditions in patients with diabetes, and all have been linked with a variety of bio- behavioural variables: poor disease management, higher healthcare costs, more days of missed work and mortality. Previous reports have suggested that most patients with high depressive affect are not necessarily clinically depressed, but rather, are suffering from high levels of diabetes-related distress. The prevalence of anxiety disorders and their linkages with diabetes indicators remain unclear, but several studies have shown negative associations with HbA1c. Studies of the prevalence of co-occurring anxiety and affective disorders have also yielded mixed results.[5]

**GESTATIONAL DIABETES MELLITUS (GDM)** is defined as any degree of glucose intolerance with onset or first recognition during pregnancy. Estimates range from 5-10% of pregnant women.

#### 1.2.1. Genetic factors:

Although monogenic forms of diabetes have been identified (eg. Mody have type 1 through 5), most cases are polygenic T2DM results from a combination of genetic defects or form of the simultaneous presence of multiple susceptibility genes in the presence of predisposing environmental factors.

#### 1.2.2. Environmental factors:

-Obesity- excess body fat-particularly abdominal or visceral adiposity- is thought to contribute to insulin insensitivity that is characteristic of T2DM it has been shown that people who carry excess weight around their abdomen (obesity) are at higher risk of T2DM.

-Poor fetal nutrition – some recent studies have shown that poor fetal nutrition may cause a decrease in beta cell formation, provoking diabetes in later life poor fetal nutrition is marked by low birth weight followed by rapid growth – with sufficient nutrition – within the first 12 months of life.

Sedentary lifestyle – The 'thrifty gene' theory hypothesizes that humans are genetically programmed to survive periods of famine. However, in times of abundance particularly in the context of sedentary lifestyles and high-energy diets, these genes contribute to the excessive accumulation of fatty tissues leading to insulin insensitivity and diabetes.

#### 1.2.3. Gestational diabetes mellitus (GDM):

Gestational diabetes mellitus is defined as any degree of glucose intolerance with onset of first recognition during pregnancy. It is present in about 6-10% of all pregnancies.

Insulin resistance usually begins by about second trimester in pregnancy and increases to term.

Women also have diabetes before pregnancy are said to have pregnancy complicated by diabetes.

### What are risk factors for developing GDM?

- Age > 25 years when pregnant.
- Have a family history of diabetes.
- Give birth to a baby that weight > 4 kg or had a birth defect.
- Have sugar (glucose) in your urine when you see your doctor for a regular prenatal visit.
- Have high blood pressure
- Have too much amniotic fluid.
- Have had an unexplained miscarriage or stillbirth.
- Were overweight before pregnancy.

### The symptoms of GDM

Usually there are no symptoms or the symptoms are mild and not life threatening to the pregnant woman. Often the blood sugar level return to normal after delivery.

### Management of GDM

Treatment is aimed at keeping blood sugar in the normal range. Treatment goals in gestational diabetes are as follows.

Fasting plasma glucose  $\leq$  95 mg/dl

1-h plasma glucose after eating  $\leq$  140  $\frac{mg}{dl}$

2-h plasma glucose after eating  $\leq$  120  $\frac{mg}{dl}$

Special meal plans, moderate exercise, regular (e.g. daily) blood sugar testing and insulin injections will do this.

### 1.3. Clinical features of diabetes:

Diabetes is generally an asymptomatic disorder and hence often missed by physicians and patients. It is mostly diagnosed by chance during routine investigations, hospitalization, illness etc.

The classical features commonly seen are

- Poly urea (Frequent urination),
- Poly dyspsia (Unusual thirst),
- Poly phagia (Extreme hunger),
- Weight loss may be severe in patients with T1DM than T2DM,
- Frequent infections;
- Vaginal infections is common in women,
- Delayed healing of wound
- Blurred vision
- Other nonspecific symptoms commonly reported are:
- Appearance or exacerbation of cramp in the calves or feet
- Signs of sensory neuropathy commonly involving lower limbs like tingling numbness in the lower limbs
- Some patients complain of a loss of appetite but others develop a craving particularly for sweet foods
- Constipation [6]

## 2. MATERIALS:

For the present research study purposive sampling technique was used for finding the anxiety level of diabetic patients and healthy persons.. For which researcher had to undergo medical profile of the various subjects for identifying diabetic patients age group 30 to 60 years male and female both included in it. The total numbers of selected subjects was 204.

Healthy persons were selected randomly from the various collages, gyms and surrounding area in Ujjain. The age group of healthy male females was also same as 30 to 60 years to fulfilling the research questioner for need of the study of the healthy population about anxiety . They were 200 in total numbers.

- **CLINICAL BIO DATA SHEET -**

A special proforma has been prepared to collect the following details .

Clinical profile of the patient.

- *Comprehensive Anxiety Test [7]*

## 3. DISCUSSION:

Once they are aware to their disease people need special type of information. There are always advantages and disadvantages for all therapeutic options. It is important to realize that ultimately people have the right and responsibility to make the final decision although we expect people with diabetes and obesity to make multiple life style modifications. We rarely provide information about strategies for behavioral changes. Providing this information

is most effective if it is incorporated in to each content area so that people can apply the information in context. It is important that we let them know that their outcomes largely depend on their own efforts.

### 3.1. ANALYSIS:

#### 3.1.1. STEPS WITH A HEALTHIER LIFE-

- ✓ Walk as much as time permits.
- ✓ Always walk briskly swinging arms.
  - More house work more active by putting more efforts in to what you do
- ✓ Use the first part of lunch time at work to exercise with colleagues, get a radio or music instrument.
- ✓ If come late from work go for evening walk it takes effort at first but you will soon grow to love them.
- ✓ Playing safe with wear light loose clothes that allow sweat to evaporate.
- ✓ Drink plenty of water before and during exercise.
- ✓ Warm up and cool down before and after exercise.
- ✓ Do not exercise when- feeling unwell or are just recovering from an illness.
  - Less than two hours after a meal.
  - Feel any pain , breathlessness or giddiness.
- ✓ Coping with life challenges – Be realistic about yourself and what you can achieve , Don't to do the impossible.
- ✓ Plan your time well , make list of things you need to do , draw up a time table for completing them and stick to it.
- ✓ Make decision wisely , get enough information look at the good and bad points and speak to those affected by decision.
- ✓ Spread out the changes in life . Adjust to one before moving one to another ,(eg- getting married, moving house and switching jobs) all at the same time.
- ✓ Make time for yourself . take a break when necessary . Do something that you enjoy (like a hobby or sport) to help you unwind.

#### 4. FINDINGS: After analysis of data findings were that -Difference found in anxiety level of diabetic males and females.

**-Yatan et al. 2011** - In study aimed at assessment of anxiety among those with type-2 diabetes in Indian outpatient settings, there was anxiety scores were found to be related to HbA1C levels (correlation - coefficient, 0.41;  $p = 0.03$ ) and post prandial blood glucose levels (correlation - coefficient 0.51;  $p = 0.02$ ). It was a cross sectional study design, sample size was 77 both genders included in it, its conducted in the endocrinology outpatient department of an urban tertiary care center. In between group difference were calculated for male and female study subjects using independent sample t-test, ANOVA was carried out for the in between group comparisons. The level of significance for all the statistical tests was kept at  $P < 0.05$ . The mean age of the study subjects was 54.66 (SD  $\pm 11.22$ ) years. The study sample comprised of 51% females ( $n = 39$ ) and 49% males ( $n = 38$ ). The mean duration of type-2 diabetes among the subjects was 10.25 (SD $\pm 9.75$ ) years and the mean duration for treatment was 9.7 (SD  $\pm 8.94$ ) years.[8]

**Khawaja et al (2010)** done a cross sectional multi centre study in Karanchi Pakistan. 889 adults with type 2 diabetes were included in the Anxiety and depression were measured by using the Hospital Anxiety and Depression Scale (HADS), multivariable analysis using multiple logistic regression was carried out to evaluate the combined effects of various factors associated with anxiety. Overall, 57.9 study participatns had anxiety factors found to be independently associated with anxiety were physical inactivity, having hypertension and ischemic heart disease. Metabolic components found to be independently associated with anxiety were systolic blood pressure, fasting blood glucose and fasting blood triglyceroides. Data of research was analyzed by SPSS-proportions were calculated for all variables of interest. Univariate analysis was done to assess the relationship between anxiety depression and their associated factors by using chi-square test and crude odds ratios (or) with 95%confidence interval (CI).[9]

#### 4.1. RECOMMONDATIONS:

H-0 There would be found no significant difference between age group of 30-45 and 46-60 years of diabetic and healthy persons on their anxiety level **Table- (a) shows anxiety mean SD and t ratio of age groups 30-45 and 46-60 years.**

Variable ( Anxiety)	Age group	N	Mean	SD	t	Significance
Diabetic and healthy	30-45	201	50.46	23.12	.07	NS
Diabetic and healthy	46-60	203	50.64	22.31		

Obtained t ratio was 0.07 which was not significant (at  $P < 0.01$ )

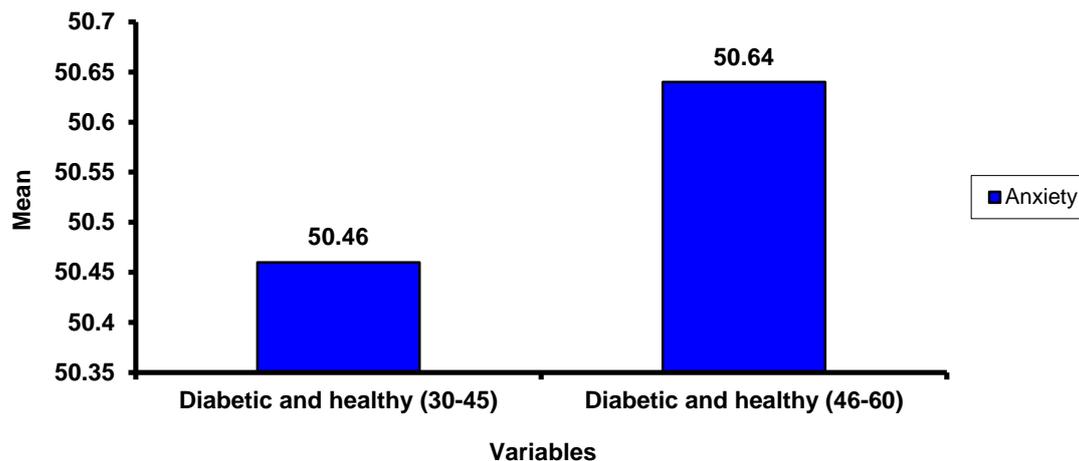


Table (b) ANOVA table of anxiety

Source	Sum of squares	df	Mean square	F ratio	significance
Diabetic and healthy	24650.93	1	24650.93	54.40	S*
Age group 30-45	91.253	1	91.253	0.201	NS
Diabetic and healthy- Age group 46-60	1668.205	402	1668.205	3.682	S*
Total	1239981.00	404			

Results received after analysis shows that calculated F ratio was 54.40 which was significant at p value 0.01 level. Both age groups were differ on the anxiety level. It may therefore be said that the null hypothesis that *there would be found no significant difference between diabetic and healthy persons age group 30-45 and 46-60 is rejected. As similar we find in the study of Yatan pal 2011.*

## 5. CONCLUSION:

Above researches shows that how chronic illness affect our lives and lack of knowledge of disease is put impact in lives. Traditional knowledge based education is essential. But not sufficient for sustained behavioral change. People with illness cannot do things that they do not know how to do.

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