INFLUENCE OF LIFESTYLE ON HAPPINESS OF PERSONS WITH TYPE-2 DIABETES MELLITUS

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ABSTRACT: *The study aimed to examine the influence of lifestyle on happiness of persons with type-2 Diabetes Mellitus. The research was conducted on 150 type-2 Diabetes Mellitus patents in the age range of 18-85 years. Random sampling method was used in order to select the subject's for the present study. Survey method was adopted for the collection of data. Lifestyle scale (LSS-BK) and Happiness Scale (HS-RHM) was used to assess the lifestyle and level of happiness respectively. In order to analyse the data mean, SD, "t" test and ANOVA was used. The data analysis showed that there was a low level of adapting lifestyle and an average level of happiness among persons with diabetes mellitus. The present study enumerated the factors that have an influence on lifestyle and happiness among diabetic patients. Henceforth the research findings established a positive correlation between lifestyle and happiness among diabetic patients which will further aid future research endeavours in this area.*

KEYWORDS: lifestyle, happiness, type-2 diabetes, mellitus

INTRODUCTION

Modern day living is subjected to rapid changes in lifestyle under the influence of continuously evolving technologies. Such constant change in environment is influencing every part of our day today life. Though modern lifestyle has a number of advantages which includes easing people's life and saving hundreds of people's lives by the new development of medicine and vaccines, on the other hand modern life style patterns have negative effects on our physical and mental health. The changes in lifestyle nowadays is so evident that people try to mimic on the trending pattern of lifestyle such as, there has been a shift in eating habits where in the traditional food items have been replaced with the fast foods, social media addiction is on a rise and thus people have become more materialistic. Modern day living has been responsible for increase in incidence of the cardiovascular, cancers, diabetes, and respiratory diseases. Diabetes is a condition caused by the body's inability to regulate insulin levels, which can lead to tissue damage and organ failure. Diabetes has become the country's fastest growing disease burden. Diabetes is a major health problem in the world and is a fast growing chronic disease in India. It has been reported that the incidence of Type 2 diabetes mellitus is increasing in both developed and developing countries due to behavioural causes and changes in the life style. It has been expected that in India the number of patients with diabetes be doubled by the year 2025. Based on a newly published data, 7.7% of adults aged 25-64 (2 million) are affected by diabetes. The World Health Organization has expected that the number of patients with diabetes will increase to more than 6 million in the year 2030. There is increasing evidence that following a healthy lifestyle including appropriate diet, satisfactory physical activity level, and healthy weight can provide significant cardiovascular and metabolic benefit. Lifestyle is one's behaviour pattern that greatly affects one's health and happiness. In addition, happiness is seen as one of the major mental needs of human beings. The relationship between lifestyle and

happiness and their effects on human life have always been one of the important issues to which not much attention has been paid. Lifestyle and happiness can have significant effects on all aspects and levels on diabetes mellitus which is a long-term (chronic) condition. Yanbo Zhang et.al (2019) who has reviewed the existing literature has found that adoption of a healthy lifestyle substantially reduces the risk of getting type 2 diabetes and long-term adverse outcomes among diabetic individuals. [22]. AikateriniTrikkalinou, Athanasia K Papazafiropoulou, and Andreas Melidonis(2015) in research study found diabetes affects major components of lifestyle although differences in terms of ethnicity, environment, gender socioeconomic status, culture, profession dietary and lifestyle habits do exist [1].

METHODS

Sample
The sample consisted of 150 adults with type 2 Diabetes mellitus, that encompasses 75 men and 75 women, in the age range of 18-85 years. Random sampling method was used in order to select the subject's for the present study. The respondents were from Mysore district.

GENDER	EARLY	MIDDLE	OLD	TOTAL
MALE	25	25	25	75
FEMALE	25	25	25	75
TOTAL	50	50	50	150

Objectives of the study
The following are the objectives of the present research study.
1.   To study the lifestyle of persons with diabetes mellitus.
2.   To assess the level of happiness among persons with diabetes mellitus.
3.   To know the difference in lifestyle and happiness of early, middle and old age adults who have diabetes mellitus.
4.   To study the influence of lifestyle on happiness of diabetes mellitus patients.

Hypothesis of the study
Based on the literature reviewed, the following hypothesis is formulated for the current study.
H1: There is a significant difference in the lifestyle among men and women with diabetes mellitus.
H2: There is a significant difference in the level of happiness among men and women with diabetes mellitus.
H3: There is a significant difference in lifestyle and happiness of early, middle and old age adults who have diabetes mellitus.
H4: There is a significant relation between lifestyle and happiness of diabetic patients.

Procedure
The study was conducted on 150 diabetes mellitus patients. The sample for the study was chosen using random sampling technique. Each subject chosen for the study was briefly described about the aim and objectives of the study thereby establishing a rapport. Initially the lifestyle questionnaire was given to the subject, further was instructed to carefully read all the questions and answer them with the response which ever they feel appropriate among the five

options provided in the scale. A ten minutes break was given to avoid mental fatigue. After the break the second questionnaire that is the happiness scale was given to the subject and was instructed to carefully read all the 62 questions and answer them with the response which ever they feel appropriate among the five options provided in the scale. At most care was taken while administering, scoring and interpreting the information obtained. All the responses provided by the subject in the lifestyle and happiness questionnaires were scored using the standardized screening procedure with the help of the answer key and the norms. The data obtained is further will be subjected to analyses.

Tools used in the Study

The tools selected for the study was chosen on the basis of the objectivity, validity and reliability of the tools. In the present study the researcher has used following research tools:
1.   Lifestyle scale developed by S.K Bawa
2.   Happiness scale developed by Dr. Himanshi Rastogi and Dr. Janki Moorjani

Lifestyle Scale (LSS-BK)

This lifestyle scale was developed by S.K Bawa that has been standardized in three versions that is English, Hindi and Panjabi. This scale can used to know the lifestyle of individuals with the age range of 16 years and onwards. The scale encompasses following six dimensions.
1.   Health conscious lifestyle: The lifestyle in which the individual always remains conscious for keeping himself physically fit and fine.
2.   Academic oriented lifestyle: It refers to the lifestyle of an individual who always remains involved in his or her academic field.
3.   Career oriented lifestyle: An individual's lifestyle is said to be career oriented when he or she is always curious to gain more and more knowledge in their career.
4.   Family oriented lifestyle: A person is always in close touch with his family and shares each and every moment of his or her daily activities with family.
5.   Socially oriented lifestyle: An individual who always participates in social activities and is always keen to do good for the society.
6.   Trend seeking lifestyle: An individual who is keen to adopt new fashion and is always willing to update himself with new trends.
Validity: As per the suggestions and the opinion given by nine experts the 117 items were reduced to 60 valid items which were spread among the above six dimensions of lifestyle. The scale thus contains 60 valid items with 43 positive and 17 negative statements.
Reliability: The reliability coefficient of 0.96 was obtained in the test retest method of reliability.
Scoring Procedure: This lifestyle scale has 60 items among them there are 43 positive items and 17 negative items. The positive items are scored as4,3,2,1,0 and negative items are scored as0,1,2,3,4 for the responses Strongly Agree, Agree, Indifferent, Disagree and Strongly Disagree.

Happiness Scale

Happiness scale used in the study was developed by Dr. Himanshi Rastogi and Dr. Janki Moorjani, this scale contains 62 valid items spread among five different dimensions. The scale encompasses following five dimensions.

1.   Career well-being

2.   Subjective well-being
3.   Social well-being
4.   Spiritual well-being
5.   Emotional well-being

Scoring procedure: This happiness scale has 62 items among which are spread among five different dimensions that is 14 items in Career well-being, 14 items in subjective well-being, 11 items in Social well-being 11 and 12 items in emotional well-being respectively The positive items are scored as 5,4,3,2 and 1 for the responses Strongly Agree, Agree, Undecided, Disagree and Strongly Disagree accordingly. The scores are analyzed using the standardized norms to assess the level of happiness as Extremely High, High, Above Average, Average, Below Average, Low and Extremely Low accordingly.

Statistical techniques used in analyzing the data
Based on the objectives and hypothesis of the study, the following statistical techniques will be applied to analyze the data. The researcher will be using the descriptive statistical techniques such as Mean and SD (Standard Deviation) and the inferential statistical techniques such as Pearson Product moment correlation, t-test and ANOVA (Analysis of Variance).

RESULTS AND DISCUSSION

In this section, the researcher has tried to assess the lifestyle and level of happiness among persons with diabetes mellitus using the happiness scale (developed by Dr. HimanshiRastogi and Dr. JankiMoorjani) and lifestyle Scale developed by S.K. Bawa.
The data obtained was analyzed as below:

Table No.1: Level of happiness among persons with diabetes mellitus.

Group	Men	Women	Total
Mean	218.08	211.01	214.55
Standard Deviation	27.83	29.48	28.79
SEM	3.21	3.40	2.35
N	75	75	150
t-value	1.509		
p-value	0.133		

The above table reveals the level of happiness among persons with diabetes mellitus. The mean scores of level of happiness among men and women who had type2 diabetes is 218.08 and 211.01 respectively, though the scores indicate a slightly lower scores among women, the level of happiness among both the group indicated an average level of happiness. Henceforth there was no significant difference in the level of happiness among men and women who had type2 diabetes. However the happiness among the total sample revealed a mean score of 214.55 which indicated an average level of happiness.

Table No.2: Lifestyle of persons with diabetes mellitus.

Group	Men	Women	Total
Mean	120.75	115.31	118.03
Standard Deviation	19.124	16.64	18.07
SEM	2.20	1.92	1.47
N	75	75	150
t-value	1.85		
p-value	0.065		

The above table reveals the lifestyle of persons with diabetes mellitus. The mean scores of Lifestyle of persons with diabetes mellitus, men and women is 120.75 and 115.31 respectively. Though the scores indicate slightly lower scores among women, the lifestyle among both men and women indicate **low level of adapting lifestyle**. Henceforth there was no significant difference in the lifestyle of men and women who had diabetes. However the lifestyle among the total sample of the study that had type2 diabetes revealed a mean score of 118.03, this also indicated a low level of adapting lifestyle.

Table No.3: Happiness among early, middle and old age adults having diabetes mellitus.

Group	Early	Middle	Old
Mean	211.44	210.94	221.26
SD	23.43	30.52	31.16
SEM	3.31	4.31	4.40
N	50	50	50
f-value	2.071		
p-value	0.64		

The above table reveals the level of happiness among the early, middle and old age adults having diabetes mellitus. The mean scores of level of happiness revealed that early aged (M-211.44), middle aged (M-210.94) and the old aged (M-221.6) the scores indicated a greater score among old aged adults. Thus these scores indicated that the old aged adults had an above average level of happiness, where as the early and middle aged adults had an average level of happiness.

Table No.3: Lifestyle among early, middle and old age adults having diabetes mellitus.

Group	Early	Middle	Old
Mean	118.64	119.70	115.74
SD	16.78	19.34	18.13
SEM	2.37	2.73	2.56
N	50	50	50
f-value	0.640		
p-value	0.529		

The above table reveals the level of lifestyle among the early, middle and old age adults having diabetes mellitus. The mean scores of level of happiness revealed that early aged (M-118.64), middle aged (M-119.70) and the old aged (M-115.74) the scores indicated a greater score among old aged adults. Though the scores indicate slightly lower scores among old aged adults, the lifestyle among all the three groups indicates a **low level of adapting lifestyle**. Henceforth there was no significant difference in the lifestyle of early, middle and old age adults having diabetes mellitus.

DISCUSSION

This study aimed at examining the influence of lifestyle on happiness of persons with type-2 Diabetes Mellitus, the results showed that there is a significant relation between the lifestyle and happiness among persons with type-2 Diabetes Mellitus. The outcomes of the study corroborated with previous studies done by Ushakiran Agrawal (2015) who found that there was a significant differences among different dimensions of life satisfaction and happiness among male patients of diabetes of insulin Vs non insulin category. [19]. In a similar study by Shun-Ying Liu et.al (2020) it has been found that there was a significant difference in happiness and diabetes distress among type2 Diabetes Mellitus patients. The author further stated that "the suffering and happiness of type2 Diabetes Mellitus patients were related to different therapies, age, complications, glycaemic control, lifestyle, school education, and so on. [21]

In another study, Kalhori RP, Ziapour A, Kianipour N, Foroughinia A (2016), rightly observed that there is a significant positive relationship between the lifestyle and happiness [9].
Henceforth, our findings that there are significant differences among different dimensions of lifestyle and happiness among the patients of type2 Diabetes mellitus, looking at the scores obtained in both scales, is a complimentary to the previous studies.

CONCLUSION

1.   The research study revealed an average level of happiness among persons with diabetes mellitus,
2.   The scores indicated that, men and women having diabetes mellitus had an average level of happiness. Thus there was no significant difference in the level of happiness among men and women having diabetes mellitus.
3.   The research study revealed a low level of adapting lifestyle among persons with diabetes mellitus.
4.   The scores indicated that, men and women having diabetes mellitus had a low level of adapting lifestyle. Thus there was no significant difference in the lifestyle of men and women having diabetes mellitus.
5.   The study revealed that happiness among the early and middle age adult having diabetes mellitus had an average level of happiness, whereas the old age adults with diabetes had an above average level of happiness.
6.   The study revealed that lifestyle of the early, middle and old age adults having diabetes mellitus had a low level of adapting lifestyle, and this further indicated that there was no significant difference in the lifestyle of early, middle and old age adults having diabetes mellitus.

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