A Cross-Sectional Study to Assess the Relationship Between Self-Care Compliance and Life Satisfaction Among Patients with Type 2 Diabetes Mellitus Attending a Tertiary Care Hospital in Ernakulam District, Kerala

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***Abstract*—Background; Diabetes is one of the most common metabolic disorders in the world, and its prevalence has an upward trend, leading it to be called the "silent epidemic". The increasing global prevalence of Type2 Diabetes Mellitus highlights the need for effective self-care practices to prevent complication and improve patients' outcomes Objectives: To assesss the relationship between self care compliance and life satisfaction among patients with Type2 Diabetes Mellitus.**

Methods: A cross-sectional correlational study was conducted among 150 participants with Type 2 Diabetes Mellitus.in a tertiary care hospital, Ernakulam district. A quantitative research approach was adopted, and participants were selected using a convenience sampling technique. Data were collected using the Questionnaire of Socio demographic Proforma, Summary of Diabetes Self Care Activities and Satisfaction with Life Scale Statistical significance was considered at $p < 0.05$.

Results: The findings were 95.3% of participants demonstrated excellent compliance with prescribed medication regimens, while 58.7% and 33.3% showed good compliance with dietary and exercise recommendations, respectively. However, very poor compliance was reported in blood glucose monitoring (56.7%) and foot care (46%). In terms of life satisfaction, 30% of participants were slightly satisfied, 26% satisfied, and 14.7% extremely satisfied, while 2.6% were extremely dissatisfied. Pearson's correlation analysis indicated a very weak positive relationship between self-care compliance and life satisfaction ($r = 0.124$), which was not statistically significant ($p = 0.131$).

Conclusion: There was a weak positive correlation between self-care compliance and life satisfaction among patients with Type 2 Diabetes Mellitus ($r=0.124$) and are not statistically significant ($p=0.131$).

***Index Terms*— (Self-care compliance, Life satisfaction, Patients with Type 2 Diabetes Mellitus)**

I. INTRODUCTION

Diabetes mellitus is a chronic metabolic disorder characterized by persistent hyperglycemia, and it has reached epidemic proportions globally. As of 2021, approximately 537 million adults aged 20–79 years, representing 10.5% of the global adult population, were living with diabetes, with projections rising to 783 million by 2045[1]. India bears a substantial share of this burden, ranking second globally with 77 million individuals affected in 2019 and an expected increase to over 134 million by 2045[2].

Effective management of Type 2 Diabetes Mellitus (T2DM) depends significantly on patient engagement in self-care behaviors, such as adherence to medication, regular blood glucose monitoring, healthy eating, physical activity, and foot care. The American Diabetes Association recognizes these behaviors as essential for achieving glycemic control and preventing complications[3]. Research consistently shows a strong association between adherence to self-care and improved metabolic outcomes, including reduced HbA1c levels and lower incidence of diabetes-related complications[4].

Life satisfaction, defined as an individual's overall evaluation of their quality of life, is an important component of well-being, especially in individuals managing chronic conditions like T2DM[5]. The daily demands and psychosocial stressors associated with diabetes often diminish life satisfaction. A study involving 583 patients in Punjab, India, found that

socioeconomic status, depression, and disease severity significantly affected life satisfaction, emphasizing the multifactorial influences on well-being in diabetes care[6] Understanding how self-care adherence influences life satisfaction in Kerala's context can inform culturally sensitive patient education programs, behavioral counseling strategies, and community-based initiatives aimed at comprehensive diabetes management.

II. OBJECTIVES

1. To determine the self-care compliance among patients with Type 2 Diabetes Mellitus.
2. To determine the life satisfaction among patients with Type 2 Diabetes Mellitus.
3. To determine the relationship between self-care compliance and life satisfaction among patients with Type 2 Diabetes Mellitus.
4. To find out the association of self-care compliance and life satisfaction among patients with Type 2 Diabetes Mellitus with selected socio-demographic variables.

III. HYPOTHESIS

- HA_1: There is significant relationship between self-care compliance and life satisfaction among patients with Type 2 Diabetes Mellitus.
- HA_2: There is significant association between life satisfaction and selected socio-demographic variables of patients with Type 2 Diabetes Mellitus.
- HA_3: There is significant association between self-care compliance and selected socio-demographic variables of patients with Type 2 Diabetes Mellitus

IV. MATERIALS AND METHODS

Research Approach: Quantitative research approach

Research design Cross sectional correlational study design

Research variables:
Outcome Variables: Self-care compliance of patients with Type 2 Diabetes Mellitus and Life satisfaction of patients with Type 2 Diabetes Mellitus.

Socio Demographic Variables: Age, Gender, Educational Qualification, Employment Status, Monthly Income, Health Insurance Coverage, Place of residence, Type of Family, Marital Status, Family support in managing Diabetes Mellitus, Family history of Diabetes Mellitus, Duration of Diabetes Mellitus, Type of treatment for Diabetes Mellitus, Glycaemic Control, Presence of any complications related to Diabetes Mellitus, History of hospitalization due to Diabetes Mellitus or associated Complications, Level of Physical Activity, Body Mass Index (BMI), Smoking or Alcohol use and Guidance from healthcare providers on management of Diabetes Mellitus.

Setting of the study: The study was conducted in the Medicine and Endocrinology Out Patient Departments of M.O.S.C. Medical College Hospital, Kolenchery.
Population: Patients diagnosed with Type 2 Diabetes Mellitus residing in Ernakulam District, Kerala.

Sample and sampling technique
Sample: 150 Patients diagnosed with Type 2 Diabetes Mellitus attending the Medicine and Endocrinology Out Patient Departments of M.O.S.C. Medical College Hospital, Kolenchery.

Sampling technique: Convenience Sampling Technique

Sample size: The estimated sample size was 150.

Sample selection criteria:
Inclusion criteria: Participants were included in the study based on the following criteria:

- Patients who have been clinically diagnosed with Type 2 Diabetes Mellitus.
- Patients aged 40 years and above.
- Patients diagnosed with Type 2 Diabetes Mellitus for a minimum duration of 6 months.
- Patients who are able to read, write, and understand either Malayalam or English.

Exclusion criteria:
Participants were excluded from the study based on the following criteria.

- Patients who are dependent on others for their self-care activities.

- Pregnant women with pre-existing Type 2 Diabetes Mellitus.
- Patients with cognitive impairment or any diagnosed neurocognitive disorders that may hinder independent participation

Data collection tools: The tools used in this study were Tool 1- Part A: Socio-Demographic Proforma of patients with Type 2 Diabetes Mellitus

Tool 1 – Part B: Summary of Diabetes Self-Care Activities (SDSCA) Questionnaire
Tool 2: Satisfaction with Life Scale (SWLS)

Results:
2.19 Section 1: Analysis and interpretation of socio-demographic variables of patients with Type 2 Diabetes Mellitus.

Table 1: Frequency and percentage distribution of study subjects based on socio-demographic variables.
n=150

Sl No	Socio-Demographic Variables		Frequency (f)	Percentage (%)
1	Age	41-50 yrs	18	12
		51-60 yrs	51	34
		61-70 yrs	55	36.7
		>70 yrs	26	17.3
2	Gender	Male	85	56.7
		Female	65	43.3
3	Educational Qualification	Under Graduate	124	82.7
		Graduate	19	12.7
		Post graduate	7	4.6
4	Employment Status	Employed	63	42.0
		Unemployed	76	50.7
		Retired	11	7.3
5	Monthly Income	<Rs10,000/-	89	59.3
		Rs.10,000/- to Rs.30.000/-	44	29.3
		>Rs. 30,000/-	17	11.4
6	Health insurance Coverage	Yes	74	49.3
		No	76	50.7
7	Place of Residence	Urban	33	22.0
		Semi urban	3	2.0
		Rural	114	76.0
8	Type of Family	Nuclear family	120	80.0
		Joint family	30	20.0
9	Marital Status	Single	7	4.7
		Married	119	79.3
		Widowed	24	16.0
10	Family Support in managing DM	Yes	137	91.3
		No	13	8.7
11	Family history of DM	Yes	71	47.3
		No	79	52.7
12	Duration of DM	6months- 1year	10	6.7
		1-5 years	49	32.7
		5-10 years	45	30.0
		More than 10 years	46	30.6
13	Type of treatment for DM	Not on medication	1	0.7
		Oral hypoglycemic agents	100	66.7
		Insulin injection	11	7.3
		Oral hypoglycemic agents and Insulin injection	38	25.3

14	Glycemic Control (based on HbA1c value)	Poor glycemic control (HbA1c>8)	33	22.0
		Moderate glycemic control (HbA1c6.6-8)	76	50.7
		Good glycemic control (HbA1c≤6.5)	31	20.6
		Hba1c value unavailable	10	6.7
15	Presence of complications related to DM	Yes	23	15.3
		No	127	84.7
16	History of hospitalization due to DM and its Complications within 1 year	Yes	35	23.3
		No	115	76.7
17	Level of Physical Activity	Not active at all	16	10.7
		Moderately active	90	60.0
		Very active	44	29.3
18	BMI	Underweight (<18.5)	2	1.3
		Normal weight (18.5-24.9)	83	55.4
		Over weight (25-29.9)	54	36.0
		Obese (≥30)	11	7.3
19	Smoking or Alcohol use	Yes	31	20.7
		No	119	79.3
20	Guidance from the health care provider in management of DM	Yes	140	93.3
		No	10	6.7

As presented in Table 1, the largest proportion of study participants (36.7%) belonged to the 61–70 years age group. The majority were males (56.7%) and a considerable proportion (82.7%) of subjects were under graduates. Approximately half of the participants (50.7%) were unemployed. Over half (59.3%) reported a monthly household income below Rs. 10,000/-, and 50.7% did not possess any form of health insurance. A significant majority (76%) resided in rural areas. Additionally, 80% of the participants were from nuclear families, and 79.3% were married. Most respondents (91.3%) reported receiving family support in the management of diabetes mellitus, while 52.7% had a positive family history of the disease.With regard to clinical parameters, 32.7% of participants had been diagnosed with diabetes mellitus for a duration of 1–5 years. Oral hypoglycemic agents were the most commonly used treatment modality, reported by 66.7% of participants. However, only 20.7% achieved good glycemic control. Diabetes-related complications were reported by 15.3% of respondents, and 23.3% experienced hospital admissions in the previous year related to diabetes or its complications. In terms of physical activity, 60% reported engaging in moderate activity levels, while 55.4% maintained a body mass index (BMI) within the normal range. Moreover, 79.3% of the participants abstained from smoking and alcohol consumption. Notably, 93.3% reported receiving guidance from healthcare providers regarding diabetes management.

Objective 1: To determine the self-care compliance among patients with Type 2 Diabetes Mellitus.

2.19 Section 2 A: Distribution of study subjects according to their level of self-care compliance.

n=150

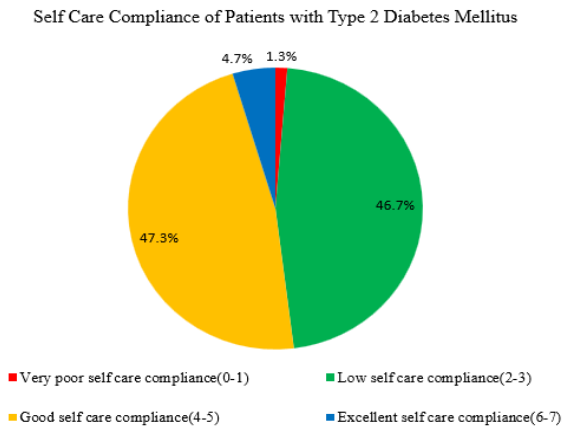

Figure 1: Pie diagram showing self-care compliance among patients with Type 2 Diabetes Mellitus.

he pie chart illustrates the distribution of self-care compliance levels among the study participants.About 47.3% of participants had good self-care compliance, while 46.7% had low compliance. Only 4.7% of them showed excellent self-care compliance, and just 1.3% had very poor compliance.These findings suggest that while nearly half of the participants are managing their self-care reasonably well, there remains a substantial proportion with suboptimal compliance, highlighting the need for targeted interventions to improve self-care behaviors.

2.19 Section 2 B: Distribution of study subjects according to their level of self-care compliance across various domains.

n=150

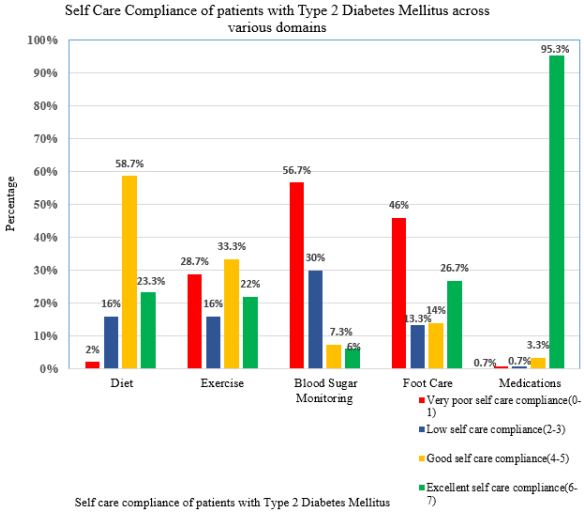

Figure 2: Bar diagram showing self-care compliance among patients with Type 2 Diabetes Mellitus across various domains.

The bar diagram illustrates the levels of self-care compliance among study participants across 5 key domains: diet, exercise, blood glucose monitoring, foot care, and medication adherence.

The majority of respondents (58.7%) demonstrated good self-care compliance with dietary recommendations. This was followed by 23.3% who showed excellent compliance. On the other hand, 16% of participants reported low compliance with diet, while only a small proportion (2%) fell into the very poor compliance category.

The largest proportion of participants (33.3%) reported good compliance with exercise recommendations. This was closely followed by 28.7% who had very poor compliance, indicating a significant number with minimal adherence to physical activity. Additionally, 16% of respondents showed low compliance, while only 22% demonstrated excellent self-care in the area of exercise.

The majority of participants (56.7%) reported very poor compliance with blood glucose monitoring. An additional 30% showed low compliance, further highlighting limited adherence in this area. Only 7.3% of individuals demonstrated good compliance, while a small proportion (6%) achieved excellent compliance with blood glucose monitoring.

A considerable proportion of participants (46%) reported very poor compliance with foot care, indicating a lack of regular foot care practices essential for diabetes management. Low compliance was observed in 13.3% of respondents, while 14% demonstrated good compliance. Notably, 26.7% reported excellent compliance, which is relatively higher compared to other self-care areas.

Majority of participants (95.3%) reported excellent compliance with their prescribed medication regimen. Additionally, 3.3% demonstrated good compliance, while only a very small percentage reported low (0.7%) or very poor (0.7%) adherence to their medications.

The study findings highlight strong compliance in the domains of medication and diet, moderate adherence in exercise and foot care, and notably low compliance in blood glucose monitoring.

Table 2: Mean and standard deviation of self-care compliance scores among patients with Type 2 Diabetes Mellitus.

n=150

Sl. No	Self-Care Compliance - Category	Score Range	Mean Score and Standard Deviation
1	Overall Self-care compliance	0-7	3.56±1.01
2	Diet	0-7	4.54±1.30
3	Exercise	0-7	3.14±2.24
4	Blood Sugar Monitoring	0-7	1.63±1.73
5	Foot Care	0-7	2.82±2.87
6	Medication Adherence	0-7	6.82±0.83

Table 2 displays the mean and standard deviation of self-care compliance scores among patients with Type

2 Diabetes Mellitus, with each domain assessed on a scale ranging from 0 to 7. The highest mean score was observed in medication adherence (M = 6.82, SD = 0.83), indicating better compliance in this domain. In contrast, the lowest mean score was reported for blood sugar monitoring (M = 1.63, SD = 1.73), suggesting poor adherence. Overall self-care compliance had a moderate mean score of 3.56 (SD = 1.01).

Objective 2: To determine the life satisfaction among patients with Type 2 Diabetes Mellitus.

2.19 Section 3: Distribution of study subjects according to their level of life satisfaction.

n=150

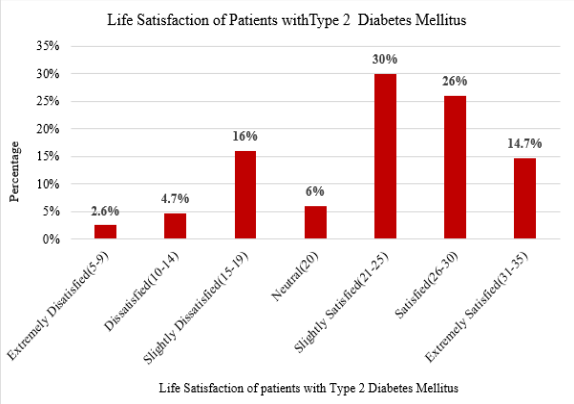

Figure 3: Percentage distribution of Life satisfaction among patients with Type 2 Diabetes Mellitus.

The results indicate that a significant proportion of respondents reported positive satisfaction with life, with 30% stating they were slightly satisfied, 26% satisfied, and 14.7% extremely satisfied. In contrast, levels of dissatisfaction with life were also reported, with 16% indicating they were slightly dissatisfied, 4.7% dissatisfied, and 2.6% extremely dissatisfied. Additionally, 6% of the respondents expressed a neutral stance regarding their overall satisfaction with life.

Table 3: Mean and standard deviation of life satisfaction scores among patients with Type 2 Diabetes Mellitus.

n=150

Sl. No	Category	Score range	Mean Score and Standard Deviation
1	Life Satisfaction	5-35	23.75±6.01

Table 3 presents the mean and standard deviation of life satisfaction scores among patients with Type 2 Diabetes Mellitus with scores ranging from 5 to 35. The mean score was 23.75 with a standard deviation of 6.01, indicating a moderate level of life satisfaction among the participants.

Objective 3: To determine the relationship between self-care compliance and life satisfaction among patients with Type 2 Diabetes Mellitus.

2.19 Section 4: Relationship between self-care compliance and life satisfaction among patients with Type 2 Diabetes Mellitus.

Table 4: Relationship between self-care compliance and life satisfaction among patients with Type 2 Diabetes Mellitus.

n=150

Sl. No	Variables	Person Correlation Coefficient (r)	p value
1	Self-care compliance of patients with Type 2 Diabetes Mellitus	0.124	0.131
2	Life satisfaction of patients with Type 2 Diabetes Mellitus		

Level of significance $p<0.05$

Pearson's correlation analysis was performed to examine the relationship between self-care compliance and life satisfaction among patients with Type 2 Diabetes Mellitus at $p<0.05$ level of significance. The analysis revealed a very weak positive correlation, which was not statistically significant ($r = 0.124$, $p = 0.131$).

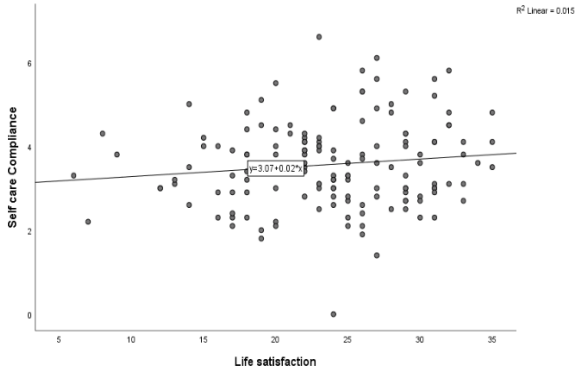

Figure 4: Scatter diagram showing relationship between self-care compliance and life satisfaction among patients with Type 2 Diabetes Mellitus.

Objective 4: To find out the association of self-care compliance and life satisfaction among patients with Type 2 Diabetes Mellitus with selected socio-demographic variables.

2.19 Section 5: Association of self-care compliance of patients with Type 2 Diabetes Mellitus with selected socio-demographic variables.

Table 5: Association of self-care compliance of patients with Type 2 Diabetes Mellitus with selected socio-demographic variables.

n=150

Sl No	Socio-Demographic Variables		Self-Care Compliance		Chi square/ Fisher's exact test	p value
			Very Poor/ Low	Excellent/ Good		
1	Age	41-50 yrs	9	9	$\chi^2 = 0.672$	0.880
		51-60 yrs	26	25		
		61-70 yrs	24	31		
		>70 yrs	13	13		
2	Gender	Male	45	40	$\chi^2 = 1.919$	0.166
		Female	27	38		
3	Educational Qualification	Under Graduate	60	64	Fisher's exact test	0.298
		Graduate	7	12		
		Post graduate	5	2		
4	Employment Status	Employed	28	35	$\chi^2 = 0.630$	0.730
		Unemployed	38	38		
		Retired	6	5		
5	Monthly Income	<Rs10,000/-	45	44	$\chi^2 = 0.649$	0.723
		Rs.10,000/- to Rs.30.000/-	19	25		
		>Rs. 30,000/-	8	9		
6	Health Insurance Coverage	Yes	35	39	Fisher's exact test	0.805
		No	37	39		
7	Place of Residence	Urban	16	17	Fisher's exact test	1.000
		Semi urban	1	2		
		Rural	55	59		
8	Type of Family	Nuclear family	58	62	$\chi^2 = 0.027$	0.870
		Joint family	14	16		
9	Marital Status	Single	2	5	Fisher's exact test	0.559
		Married	57	62		
		Widowed	13	11		
10	Family Support in managing DM	Yes	69	68	$\chi^2 = 3.542$	0.060
		No	3	10		
11	Family history of DM	Yes	39	32	Fisher's exact test	0.141
		No	33	46		
12	Duration of DM	6 months – 1 year	6	4	$\chi^2 = 0.715$	0.870
		1-5 years	23	26		
		5-10 years	22	23		
		> 10 years	21	25		
13	Type of treatment for DM	Not on medication	0	1	Fisher's exact test	0.371
		Oral hypoglycemic agents	49	51		
		Insulin injection	3	8		
		Oral hypoglycemic agents and Insulin injection	20	18		
14		Poor glycemic control (HbA1c>8)	18	15	$\chi^2 = 5.290$	0.152

	Glycemic Control (based on HbA1c value)	Moderate glycemic control (HbA1c 6.6-8)	34	42		
		Goodglycemic control (HbA1c ≤6.5)	18	13		
		HbA1c value unavailable	2	8		
15	Presence of complications related to DM	Yes	6	17	$\chi^2 = 5.226$	0.022*
		No	66	61		
16	History of hospitalization due to DM and its Complications within 1 year	Yes	8	27	$\chi^2 = 11.562$	0.001*
		No	64	51		
17	Level of Physical Activity	Not active at all	11	5	$\chi^2 = 3.616$	0.164
		Moderately active	39	51		
		Very active	22	22		
18	BMI	Underweight (<18.5)	0	2	Fisher's exact test	0.546
		Normal weight (18.5-24.9)	43	40		
		Over weight (25-29.9)	24	30		
		Obese (≥30)	5	6		
19	Smoking or Alcohol use	Yes	18	13	$\chi^2 = 1.586$	0.208
		No	54	65		
20	Guidance from the health care provider in management of DM	Yes	69	71	$\chi^2 = 0.725$	0.394
		No	3	7		

*Significant, Level of significance p<0.05

Table 5 shows a significant association between self-care compliance among patients with Type 2 Diabetes Mellitus and socio-demographic variables such as the presence of diabetes related complications and history of hospitalization due to diabetes and its complications within the past year, at a significance level of $p < 0.05$. 2.19 Section 6: Association of life satisfaction of patients with Type 2 Diabetes Mellitus with selected socio-demographic variables.

Table 6: Association of life satisfaction of patients with Type 2 Diabetes Mellitus with selected socio-demographic variables.

n=150

Sl No	Socio-Demographic Variables		Life Satisfaction			Chi square/ Fisher's Exact test	p value
			Dissatisfied	Neutral	Satisfied		
1	Age	41-50 yrs	5	3	10	Fisher's exact test	0.145
		51-60 yrs	14	2	35		
		61-70 yrs	8	4	43		
		>70 yrs	8	0	18		
2	Gender	Male	20	7	58	χ^2= 1.801	0.406
		Female	15	2	48		
3	Educational Qualification	Under Graduate	29	7	88	Fisher's exact test	0.926
		Graduate	4	2	13		
		Post graduate	2	0	5		
4		Employed	15	5	43		0.473

	Employment Status	Unemployed	16	3	57	Fisher's exact test	
		Retired	4	1	6		
5	Monthly Income	<Rs10,000/-	24	5	60	Fisher's exact test	0.392
		Rs.10,000/- to Rs.30.000/-	10	3	31		
		>Rs. 30,000/-	1	1	15		
6	Health insurance Coverage	Yes	23	3	48	Fisher's exact test	0.029*
		No	12	6	58		
7	Place of Residence	Urban	4	2	27	Fisher's exact test	0.088
		Semi urban	1	1	1		
		Rural	30	6	78		
8	Type of Family	Nuclear family	22	8	90	$\chi^2 = 8.467$	0.014*
		Joint family	13	1	16		
9	Marital Status	Single	2	0	5	Fisher's exact test	0.192
		Married	23	8	88		
		Widowed	10	1	13		
10	Family Support in managing DM	Yes	32	9	96	Fisher's exact test	1.000
		No	3	0	10		
11	Family history of DM	Yes	19	4	48	Fisher's exact test	0.780
		No	16	5	58		
12	Duration of DM	6 months – 1 year	0	3	7	Fisher's exact test	0.098
		1-5 years	11	3	35		
		5-10 years	11	2	32		
		> 10 years	13	1	32		
13	Type of treatment for DM	Not on medication	0	0	1	Fisher's exact test	0.632
		Oral hypoglycemic agents	20	8	72		
		Insulin injection	3	0	8		
		Oral hypoglycemic agents and Insulin injection	12	1	25		
14	Glycemic Control (based on HbA1c value)	Poor glycemic control (HbA1c>8)	14	1	18	Fisher's exact test	0.043*
		Moderate glycemic control (HbA1c 6.6-8)	16	7	53		
		Goodglycemic control (HbA1c ≤6.5)	5	1	25		
		HbA1c value unavailable	0	0	10		
15	Presence of complications related to DM	Yes	4	2	17	$\chi^2 = 0.781$	0.677
		No	31	7	89		
16	History of hospitalization due to DM and its Complications within 1 year	Yes	8	2	25	$\chi^2 = 0.014$	0.993
		No	27	7	81		
17	Level of Physical Activity	Not active at all	2	0	14	Fisher's exact test	0.342
		Moderately active	20	8	62		
		Very active	13	1	30		

18	BMI	Underweight (<18.5)	0	1	1	Fisher's exact test	0.260
		Normal weight (18.5-24.9)	21	6	56		
		Over weight (25-29.9)	12	1	41		
		Obese (≥30)	2	1	8		
19	Smoking or Alcohol use	Yes	10	1	20	$\chi^2 = 2.044$	0.360
		No	25	8	86		
20	Guidance from the health care provider in management of DM	Yes	35	8	97	Fisher's exact test	0.103
		No	0	1	9		

*Significant, Level of significance p<0.05

Table 6 shows a significant association between life satisfaction among patients with Type 2 Diabetes Mellitus and socio-demographic variables such as health insurance coverage type of family and glycemic control, at a significance level of $p < 0.05$.

Major Findings:

The major findings of the study were presented under the following sections.

The majority of participants were aged between 61 and 70 years (36.7%) and were predominantly males (56.7%). A significant proportion had attained undergraduate education (82.7%) and were unemployed (50.7%). Most of them reported a monthly income below Rs. 10,000 (59.3%) and lacked health insurance coverage (50.7%). A large share of respondents resided in rural areas (76%) and lived in nuclear families (80%). Marital status data showed that 79.3% were married, and a notable 91.3% received family support in managing their diabetes. Additionally, over half (52.7%) of the subjects had a positive family history of diabetes mellitus. Clinically, 32.7% had been diagnosed with diabetes for 1–5 years, and 66.7% were on oral hypoglycemic agents. However, only 20.7% had achieved good glycemic control. Diabetes-related complications were reported by 15.3% of participants, while 23.3% had been hospitalized in the past year due to diabetes or its complications. Regarding lifestyle, 60% engaged in moderate physical activity, and 55.3% had a normal Body Mass Index (BMI). The majority abstained from smoking and alcohol consumption (79.3%) and had received healthcare guidance related to diabetes management (93.3%).

When examining specific domains, compliance was strongest in medication adherence, with 95.3% reporting excellent compliance, followed by diet, where 82% demonstrated good or excellent adherence. Exercise compliance was more varied, with about one-third showing good adherence, but a substantial 45% reported low or very poor compliance. Blood glucose monitoring had the lowest adherence, with 86.7% of participants falling into low or very poor compliance categories. Foot care adherence was moderate, with 41% showing good or excellent compliance, while the remainder had low or very poor adherence.

The results indicated that a significant proportion of respondents reported positive satisfaction with life, with 30% stating they were slightly satisfied, 26% satisfied, and 14.7% extremely satisfied. In contrast, levels of dissatisfaction with life were also reported, with 16% indicating they were slightly dissatisfied, 4.7% dissatisfied and 2.6% extremely dissatisfied. Additionally, 6% of the respondents expressed a neutral stance regarding their overall satisfaction with life.

The analysis revealed a very weak positive correlation, which was not statistically significant ($r = 0.124$, $p = 0.131$) at $p<0.05$ level of significance. The results showed a significant association between self-care compliance among patients with Type 2 Diabetes Mellitus and socio-demographic variables such as the presence of diabetes-related complications and history of hospitalization due to diabetes and its complications within the past year, at a significance level of $p < 0.05$.The results showed a significant association between life satisfaction among patients with Type 2 Diabetes Mellitus and socio-demographic variables such as health insurance coverage, type of family and glycemic control, at $p < 0.05$ level of significance.

V. DISCUSSION

The present study aimed to assess the self-care compliance and life satisfaction among patients with Type 2 Diabetes Mellitus and to explore the relationship between these two variables. Approximately 47.3% of participants demonstrated good overall self-care compliance, while a comparable proportion (46.7%) exhibited low levels of adherence. Only a small percentage of individuals showed excellent (4.7%) or very poor (1.3%) compliance. Although many participants demonstrated reasonable overall compliance, specific self-care behaviours, particularly blood glucose monitoring and foot care, remained inadequate. Foot care also exhibited low adherence (mean = 2.82), indicating a potential neglect of preventive care in this high-risk population.

With regard to life satisfaction, 30% of participants reported being slightly satisfied, 26% indicated they were satisfied, and 14.7% expressed that they were extremely satisfied. Conversely, levels of dissatisfaction were also noted, with 16% stating they were slightly dissatisfied, 4.7% dissatisfied, and 2.6% extremely dissatisfied. Additionally, 6% of respondents reported a neutral perception of their overall life satisfaction. This study found a strong positive correlation between total self-care management and life satisfaction, with a correlation coefficient of $r = 0.72$ ($p < 0.01$)[7]. These contradictory findings suggest that the relationship between self-care and life satisfaction in diabetes patients may be influenced by various contextual, psychosocial, or demographic factors. Self-care compliance showed a significant association with socio demographic variables such as the presence of diabetes-related complications and recent history of hospitalization due to diabetes and its complications ($p < 0.05$). Life satisfaction demonstrated significant association with socio demographic variables like health insurance coverage, type of family and glycaemic control ($p < 0.05$).

VI. CONCLUSION

The present study assessed the relationship between self-care compliance and life satisfaction among patients with Type 2 Diabetes Mellitus attending a tertiary care hospital in Ernakulam district, Kerala. Domain-specific analysis showed excellent adherence in medication (95.3%) and good compliance in diet (58.7%) and exercise (33.3%). However, very poor compliance was observed in blood glucose monitoring (56.7%) and foot care (46%), highlighting the need for focused interventions in these areas.In terms of life satisfaction, the largest proportion of participants (30%) reported being slightly satisfied, followed by 26% who were satisfied and 14.7% who were extremely satisfied. The results indicated a very weak positive correlation, which was not statistically significant ($r = 0.124$, $p = 0.131$). However, a significant association was found between self-care compliance and socio-demographic variables such as the presence of diabetes-related complications and history of hospitalization due to diabetes and its complications within the past year ($p < 0.05$). Similarly, life satisfaction showed a significant association with factors such as health insurance coverage, type of family, and glycaemic control ($p < 0.05$).

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CONFLICT OF INTEREST

The author declares no conflict of interest in the study.

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