Marital satisfaction among diabetic partners: a cross-sectional study

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Abstract

This study aimed to determine marital satisfaction among diabetic partners and associated factors. A cross-sectional study was conducted for six months among couples with diabetic partners in Saudi Arabia. An electronic predesigned couple satisfaction questionnaire was used to collect data. The questionnaire aimed to measure marital satisfaction among couples with a wife/husband diagnosed with diabetes mellitus. A total of 140 participants were included in the final analysis. Most couples did not complain of diabetic complications (84%) or diseases other than diabetes (78%). The mean satisfaction score concerning all aspects of marital life was 4.0 ± 0.9 out of 5, as most of the studied couples (65%) reported high satisfaction scores (≥ 4) regarding all aspects. Most couples were highly satisfied with their romantic relationships (68%), sharing family issues (59%), and general marital life aspects (70%). It could be concluded that diabetes in one partner does not affect marital satisfaction.

Highlights

What is known about this topic?

- Diabetic patients with uncontrolled blood glucose levels and elevated glycated hemoglobin (HbA1c $>7\%$) could be at an increased risk of developing several health issues, such as elevated blood pressure, blood coagulation, retinopathy, and nephropathy.
- A poor marital adjustment among diabetic patients could adversely affect physical and mental health, quality of life, and the economic status of these couples.
- Despite the likelihood of diabetic complications, patients (either insulin-dependent or non-insulin-dependent) could still lead a normal and healthy life as long as their blood glucose level is well-controlled and usually within the normal range.

What this paper adds?

- Diabetes in one partner does not affect marital satisfaction.
- Factors affecting marital satisfaction among diabetic partners and normal couples do not vary.
- Family income and living status (living either alone or with their relatives) are not significant factors affecting marital satisfaction among studied couples.
- Modern marriage procedures, based on romantic relationships, are positively associated with marital satisfaction.

Background

Diabetes Mellitus (DM) is a common chronic disease that can be described as a group of metabolic disorders characterized by high blood glucose levels, impaired lipids metabolism, and accelerated protein catabolism (Negera et al., 2020; Athyros et al., 2018; Zanetti et al., 2020). Continuous uncontrolled diabetes with frequently elevated glycated hemoglobin (HbA1c $>7\%$) could increase the risk of developing

several health issues, such as elevated blood pressure, blood coagulation, retinopathy, and nephropathy (Alkattan et al., 2019; Kim et al., 2014). These macro- and microangiopathies might increase the medical care costs, reduce the quality of life, and increase mortality rates among people with complicated diabetes (Zhou et al., 2005)

Over the past three decades, the global prevalence of diabetes has constantly increased (Zimmet et al., 2014). The devastating consequences of diabetes mellitus are set to continue due to the predicted increase in diabetic patients from 463 million in 2019 to almost 700 million in 2045 due to population expansion, urbanization, and lifestyle modifications (Saeedi et al., 2019). Besides, clinicians have reported that diabetes is one of the most 10 common reasons people visit primary healthcare centers globally (Finley et al., 2018).

Despite the likelihood of diabetic complications, patients (either insulin-dependent or non-insulin-dependent) can still lead a normal and healthy life as long as their blood glucose level is well-controlled and usually within the normal ranges (Paterson et al., 1998). Therefore, keeping the glycated hemoglobin within the appropriate ranges (HbA1c <7%) will reduce the incidence of possible diabetic complications and increase the quality of life (Alkattan et al., 2019; Mosaku et al., 2008).

Family context strongly influences disease management among patients with chronic disorders, including diabetes (Hartmann et al., 2010). Management decisions of chronic diseases among families are usually made dependent on their concerns for well-being and the reciprocal responsibilities required by varied family roles (Paterson et al., 1994).

Marital satisfaction is when couples have a sense of happiness and are satisfied with each other most of the time (Tavakol et al., 2017). Good connections among couples can be determined by mutual love, understanding, and the amount of caring for each other (Dadgari et al., 2015). A poor marital adjustment among diabetic patients can adversely affect both physical and mental health, quality of life, and the economic status of these couples (Trief et al., 2002). Therefore, this study aimed to determine marital satisfaction among diabetic partners and associated factors.

Methods And Materials

Study design, sample size, and study participants

A cross-sectional study was conducted six months from July to December 2021 among couples with diabetic partners in Saudi Arabia. The sample size was calculated using the Cochran formula ($n = Z^2 Pq / d^2$), where n = minimum sample size required (246), Z = Standard normal variable (1.96 at 95% confidence interval), P is the estimated proportion of problem in population (20%), q = precision, (0.05 at 95% confidence interval). Accordingly, we estimated a minimum sample size of 246. However, due to some sensitive questions concerning marital life, it was impractical to study 246 couples; the precision was reduced to 0.07% at a 95% confidence interval. Accordingly, the calculated sample size was reduced

to 125 couples. However, our sample included 140 couples who accepted and responded to the electronic questionnaire.

Data collection

An electronic predesigned couple satisfaction questionnaire through Short Message Service (SMS) was used to collect data. The questionnaire aimed to measure marital satisfaction among couples with a wife/husband diagnosed with diabetes mellitus. It consisted of two sections, the first section was related to socio-demographic data, and the second section contained a 5-points relationship satisfaction scale consisting of 22 questions. The scoring for this scale ranges from 0 (0%) to 5 (100%) points; $\geq 80\%$ (highly satisfied), 60 to $<80\%$ (moderately satisfied), 40 to $<60\%$ (fairly satisfied), 20 to $<40\%$ (moderately unsatisfied), and $<20\%$ (highly unsatisfied).

The questionnaire was reviewed for validity and reliability by experts working at the Assistant Deputyship for Primary Healthcare, Saudi Ministry of Health, Riyadh.

Statistical analysis

The total marital satisfaction score and individual satisfaction score for each item of family issues among studied couples were estimated. Satisfaction scoring was related to the different background variables using appropriate tests to study underlying risk factors for marital dissatisfaction. SPSS version 19 was used for data analysis. A p-value of < 0.05 was considered significant.

Ethical consideration

Approval for conducting the study was obtained from the Central Institutional Research Board (IRB) Committee, Saudi Ministry of Health, Riyadh, with log number: 21-59 M. The electronic questionnaire included a statement indicating that answering and submitting the questionnaire will be considered as a consent to participate in this study. All information obtained by the questionnaire did not include any personal data, and the researchers cannot identify the included people.

Results

One hundred eighty-six (186) couples with diabetic partners responded to the questionnaire. However, the researchers excluded 46 couples [none of the partners had diabetes ($N=39$), both of the partners had diabetes ($N=7$)]. Consequently, a total of 140 participants were included in the final analysis. Most couples did not complain of diabetic complications (84%) or diseases other than diabetes (78%).

The participant's mean age was 32.4 ± 8.9 years, and the majority were females (59%). More than 60% of studied couples had bachelor's degrees, and about one-third (35%) had no children. More than 80% lived away from their families. About 64% of couples were married for less than one year, and 71% had a traditional marriage (not based on a romantic relationship) (see table.1).

The mean satisfaction score concerning all aspects of marital life was 4.0 ± 0.9 out of 5, as most of the studied couples (65%) reported high satisfaction scores (≥ 4) regarding all aspects. More than 68%, 59%, and 70% of the included couples were highly satisfied concerning their romantic relationships, sharing family issues, and general marital life aspects, respectively (see table.2).

Table.3 presents the marital satisfaction among studied couples concerning their background variables. Family income, living status (either living alone or with their relatives), diabetic complications, and chronic diseases were not significant variables affecting the marital satisfaction of the studied couples ($p\text{-value} > 0.05$). In contrast, having no children, marriage duration less than 3 years, and modern marriage procedures were significant factors that increased marital satisfaction ($p\text{-value} < 0.05$).

Discussion

The present study was conducted to determine marital satisfaction among couples of diabetic partners and investigate factors associated with dissatisfaction in different aspects of marital life. The study showed that most of the included couples had high total satisfaction scores (mean score = 4.0 ± 0.9 out of 5) regarding all factors, including romantic relationships, sharing family issues, and general marital life aspects. Lower satisfaction scores (<4) were recorded by 60% and 64% of studied couples, regarding the lack of time the couples spend together and the expression of the couples' feelings/fears, respectively.

Furthermore, this research recorded that family income and living status were not significant factors affecting marital satisfaction among studied couples. This result was inconsistent with Saeedfard et al. (2015) and Ayub & Iqbal (2012) who found that family income was an important factor in increasing marital satisfaction, and couples should manage living expenses according to their income to avoid marital dissatisfaction.

Nevertheless, the current study showed a significant association between modern marriage procedures based on romantic relations and increased marital satisfaction. This result was compatible with Farahmand & Ahmadnia (2014) who stated that family interferences, conflicts associated with traditional marriage procedures, could create marital dissatisfaction.

Previous studies (Guney et al., 2010; Besier & Goldbeck, 2007) revealed a significant positive association between marital satisfaction and mental health among couples with chronic diseases, including chronic pulmonary disorders and coronary heart diseases. Stephens et al. (2013) found that diabetes was a shared problem among 67% of couples with diabetic partners, and they perceived it as their responsibility to deal with it.

On the other hand, a study assessing the romantic relationship and well-being among couples with diabetic partners reported that diabetes was a shared problem and a shared responsibility among only 15% and 10% of the studied couples, respectively. This could be attributed to other family issues that could affect confidence among couples (Helgeson, 2017). Helgeson's findings were inconsistent with the

current study, as 72% of the studied couples shared taking important decisions regarding diabetic issues. In addition, more than 75% of couples stated that they form a complete team together, and they feel more comfortable and more confident when they deal with diabetic issues with their partners.

The current study reported that marital satisfaction was not affected by chronic illnesses and diabetic complications. However, Trief et al. (2001) and Korporeal et al. (2008). found that health issues were inversely associated with marital satisfaction among couples. The variations of the outcomes might be related to the few numbers of people with diabetic complications and other chronic diseases, or could be due to the differences of traditions (Wang, 1994), social ethics (Khalatbari et al., 2013), ethnic group (Celenk & van, 2013) and religion (Marks, 2005) of the studied groups among previous studies and the current study.

Previous studies recorded an inverse association between the number of children and marital satisfaction; the current study reported the same (Maghsoodi et al., 2006; Attari et al., 2006; Mirfadi et al., 2010; Askarian et al., 2015). Abbasi et al. (2010) explained that incomplete harmony about essential family issues in early marriage could decrease marital satisfaction. This finding was incompatible with the current study findings as marital dissatisfaction score was highest among couples with a marriage duration of more than 3 years. This result may be explained by the association of other variables affecting marital satisfaction.

Limitations

The current study was subjected to the bias of cross-section design, including recall bias and self-reported data collection. In addition, with some sensitive questions about family life, it was impractical to study a large sample size.

Conclusion And Recommendations

It could be concluded that diabetes in one partner does not affect marital satisfaction. In addition, the study revealed that factors affecting marital satisfaction among diabetic partners and normal couples do not vary. Further studies with a large sample size are recommended to investigate different family issues that support marital satisfaction.

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Tables

Table.1 Background variables among studied couples.

Variable	Mean / N (%)
Age (participants)	32.4 ± 8.9
Female gender (participants)	83 (59%)
Level of education (participants)	Bachelors N=90 (64%) Secondary school N= 35 (25%) Higher education N=12 (9%) Less than secondary school N=3 (2%)
Level of education (partners)	Bachelors N=86 (61%) Secondary school N= 42 (30%) Higher education N=11 (8%) Less than secondary school N=1 (1%)
Number of children (couples)	No children N=49 (35%) One child N=30 (21%) Two children N=23 (16%) Three children N=15 (11%) More than three children N=23 (16%)
Income (couples)	More than 2100\$ N= 72 (51%) Between 1300-2100\$ N= 46 (33%) Between 800-1300\$ N= 17 (12%) Less than 800\$ N= 5 (4%)
Living status (couples)	Away from their families N=118 (84%) With their families N=22 (16%)
Marriage duration (couples)	Less than one-year N=89 (64%) 1-3 years N=31 (22%) 3-5 years N=21 (15%)
Marriage procedure (couples)	Traditional marriage N=100 (71%) Modern marriage N=40 (29%)

Table.2 Marital satisfaction scores among studied couples regarding different marital aspects.

Question scope	Couple satisfaction aspect	Mean score (out of 5)	Standard deviation (SD)	Scoring ≥ 4 (highly satisfied)
Romantic relationship aspect	Our relationship is interesting	4.0	1.0	97 (69%)
	Our relationship is alright	4.1	1.1	99 (71%)
	Our relationship is complete	4.0	1.1	98 (70%)
	Our relationship is friendly	4.0	1.2	99 (71%)
	Our relationship is sturdy	4.0	1.1	97 (69%)
	Our relationship is hopeful	4.1	1.1	105 (75%)
	Our relationship is enjoyable	4.0	1.1	103 (74%)
	I feel that I have strong relationship with my couple	4.0	1.2	102 (73%)
Sharing family issues aspect	We have many times setting together to discuss	3.7	1.2	84 (60%)
	We always express our feelings/fears	3.8	1.2	90 (64%)
	We shared taking important decisions	4.0	1.1	101 (72%)
	I feel that me and my partner forming a complete team	4.0	1.2	105 (75%)
	I feel more comfortable when I'm dealing with my partner	4.2	1.2	111 (79%)
	I feel more confident when I'm dealing with my partner	4.2	1.1	116 (83%)
	My couple always give me the support in what I need	4.0	1.1	102 (73%)
General marital life aspect	I always express my gratitude in my relationship with my partner	4.1	1.1	107 (76%)
	I cannot imagine to be happy with someone else	4.0	1.4	104 (74%)
	In general, I feel that my relationship is alright	4.0	1.1	100 (71%)
	In general, I feel satisfied about our relationship	4.1	1.1	109 (78%)
All aspects		4.0	0.9	91 (65%)

Table.3 marital satisfaction relative to background variables among studied couples.

Variable		Satisfied couples N=116 (%)	Unsatisfied couples N=24 (%)	p-value
Number of children (couples)	No children N=49 (35%)	45 (39%)	4 (17%)	< 0.05
	Have at least one child N=91 (65%)	71 (61%)	20 (83%)	
Family income (couples)	More than 1300\$ N= 118 (84%)	95 (82%)	23 (96%)	> 0.05
	Less than 1300\$ N= 22 (16%)	21 (18%)	1 (4%)	
Living status (couples)	Away from their families N=118 (84%)	99 (85%)	19 (79%)	> 0.05
	With their families N=22 (16%)	17 (15%)	5 (21%)	
Marriage duration (couples)	Less than 3 years N=53 (%)	51 (44%)	2 (8%)	< 0.01
	>3 years N=87 (%)	65 (56%)	22 (92%)	
Marriage procedure (couples)	Traditional marriage N=100 (71%)	78 (67%)	22 (92%)	< 0.05
	Modern marriage N=40 (29%)	38 (33%)	2 (8%)	
Diabetic Complications ^Ω	Complicated N=22	19 (16%)	6 (25%)	> 0.05
	Not complicated N=118	97 (84%)	18 (75%)	
Chronic diseases ^γ	Yes N=31	24 (21%)	7 (29%)	> 0.05
	No N=109	92 (79%)	17 (71%)	

Ω Most frequent diabetic complications reported: retinopathy, arthritis, and sexual issues, respectively.

γ Most frequent chronic diseases reported: hypertension, thyroid gland disorders, sickle cell anemia, and asthma, respectively.

Declarations

Conflict of Interest

The authors have no conflict of interest.

Data Availability Statement

The data that support the findings of this study are available from the corresponding authors upon reasonable request.