Quality of life of people with type 2 diabetes in Mauritius

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Introduction

A total of 126 adults with type 2 diabetes completed a diabetes specific quality of life (QoL) questionnaire. Analysis of QoL scores showed that men enjoyed higher physical, mental and emotional wellbeing and were more satisfied with their treatment. There was no significant relationship between QoL measures and age, duration of diabetes or ethnicity. Women reported a more negative impact of diabetes on their QoL. This study supports the need to consider QoL during management and care of people with diabetes in Mauritius.

The traditional way of assessing change in patients has been to rely on clinical and/or laboratory tests. Although the ultimate goal is the patient's wellbeing and these tests do give important information, they tend to focus on the disease rather than on the patient (Carr et al, 2001).

In the clinical setting, quality of life (QoL) measures are used with the intention of taking the patient's perspective into account in clinical decision-making about health and healthcare interventions (Rubin and Peyrot, 1999). However, Stover et al (2001) argue that QoL measures are the source of an:

> ***'overmedicalisation of life and clinical interference in aspects of patients' life that should not be the concern of the clinician.'***

A possible danger of the inappropriate use of QoL instruments is that they may replace real communication between patients and healthcare professionals (Testa et al, 1998).

People with diabetes often feel challenged by their disease and the daily management demands it creates. The psychosocial toll of living with diabetes can be heavy and can affect self-care behaviour, long-term glycaemic control, the risk of developing long-term complications and QoL (Mayou et al, 1990).

Diabetes is one of the most common non-communicable diseases globally, and has evolved in association with increased obesity, rapid cultural and socio-economic changes, ageing of the population, increasing urbanisation, dietary changes, reduced physical activity and other unhealthy lifestyle and behavioural patterns. Mauritius is second place in the top ten countries with the highest prevalence of diabetes, as compiled by the International Diabetes Federation (2002).

A longitudinal epidemiological study carried out in Mauritius has provided the best indicator of the type 2 diabetes epidemic occurring in the developing world (Ministry of Health and Quality of Life, 1999). The Mauritian population is currently around 1.3 million and includes people of Asian, Indian, Chinese and Black (Creole) origins. Since these ethnic groups compose nearly two-thirds of the world population, research data from Mauritius provides a microcosm of the epidemic. Available data show that diabetes prevalence is increasing in Mauritius and affects almost 20% of the population over 30 years of age (Ministry of Health and Quality of Life, 1999; 2001).

Patients and methods

This study was undertaken to assess the impact of diabetes on the QoL of people with type 2 diabetes in Mauritius and to

ARTICLE POINTS

1 This study was undertaken to assess the impact of diabetes on the quality of life of people with type 2 diabetes in Mauritius.

2 A total of 126 people with type 2 diabetes completed a questionnaire adapted from the Diabetes Specific Quality of Life Scale.

3 Men with type 2 diabetes had higher physical, mental and emotional wellbeing and were more satisfied with their treatment, than women with type 2 diabetes.

4 A holistic approach, which takes into account quality of life, should be used for the management and care of people with diabetes in Mauritius.

KEY WORDS

- **Quality of life**
- **Type 2 diabetes**
- **Employment status**
- **Marital status**
- **Holistic approach**

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1 The variables that had an impact on quality of life were demographic and medical factors such as age, medical problems and employment.

2 Single women reported less emotional and mental problems and less hassles and burdens in their daily functions than non-single women.

3 Participants aged in their fifties reported that diabetes had more effects on leisure than those under 50 years, or 65 years or over.

determine the relationship between demographic factors such as age, sex, marital status, ethnicity, occupation and the duration of diabetes on patients' reported QoL measures.

Measures

A version of a diabetes-specific questionnaire adapted from the Diabetes Specific Quality of Life Scale (DSQOLS) was used (Bott et al, 1998). The original instrument is a 64 item questionnaire divided into three main categories:

- Individual treatment goals.
- Satisfaction with treatment success.
- Diabetes-related distress and/or daily restrictions and burdens.

Although the English version of the DSQOLS is used for people with type 1 diabetes, 44 items concerning daily restrictions were found to be relevant for people with type 2 diabetes as well. Some items from the 'individual treatment goals' and the 'satisfaction with treatment success' sections were eliminated as they were inappropriate for people with type 2 diabetes. We changed the wording of some items where we considered it necessary.

Table1. Demographic and disease characteristics of people with with type 2 diabetes in Mauritius.

Parameters		Number of people
Gender	Men	73
	Women	53
Age (years)	52.5 (18–80)	
	< 30	5
	30–50	49
	> 50	72
Ethnic group	Hindu	83
	Muslim	20
	Creole	23
Marital status	Single	15
	Not single	111
Employment	Employed	66
	Unemployed	60
Duration of diabetes (years)	9.3 ± 7.7	
	< 10	70
	10–15	34
	15	22

Participants

Sample size was calculated using the Epi-info software (version 2000). Prior authorisation was sought from the Ministry of Health and Quality of Life, Mauritius, for recruitment of patients attending routine clinic visits in the various hospitals around the island. Informed verbal consent was obtained from each patient prior to inclusion into the survey. Upon entry into the study, participants were led to a quiet room and given instructions for completion of the questionnaires.

Statistical analysis

SPSS Version 10 was the statistical software used to analyse the data.

Results

A total of 126 patients participated in the study. Demographic and disease characteristics of the participants are given in *Table 1*. The variables that had an impact on QoL were demographic and medical factors, age, medical problems and employment.

Demographic and medical factors

The main findings from this study showed that men with type 2 diabetes had higher physical, mental and emotional wellbeing and were more satisfied with their treatment than women with type 2 diabetes.

Marital status played an important role. People who were not single reported higher physical wellbeing. Single women reported less emotional and mental problems and less hassles and burdens in their daily functions than non-single women. The criteria for being non-single was either being married or in a relationship for at least a year.

Age

Leisure difficulties were related to age. Participants aged in their fifties reported more effects on leisure than those under 50 years, or 65 years or over.

Medical problems

Few participants reported major complications of their diabetes, although a

considerable number had minor complications. Adverse QoL was not associated with the age of participant on diagnosis of diabetes or duration of diabetes.

Ethnicity

In general, QoL scores did not seem to be different between ethnic groups.

Employment

Having a job was associated with increased physical wellbeing and satisfaction with treatment. Male participants who were employed scored higher in the 'physical', 'diet' and 'worries' subscales than females who were employed. However, housewives (women < 60 years who did not have a job) reported more adverse QoL scores than employed women.

Discussion

Evidence from this study concurs with previous work in that men reported significantly higher QoL (in particular, a higher physical and mental wellbeing) than women (Brown et al, 2000; Glasgow et al, 1997; Hanestad, 1993). Men had less physical complaints and less anxiety about their future, and were more satisfied with their treatment than women. Rubin and Peyrot (1998) have reported that treatment satisfaction was higher and the burden of diabetes was lower in men than in women. Men missed fewer work and leisure activities than women. Men were less likely to report high levels of depression and anxiety symptomatology and were more confident in their ability to manage their diabetes (Wredling et al, 1995). Ward et al (1997) found that men with diabetes reported more satisfaction with treatment than women.

While we have found significant differences in physical and mental domains, Glasgow et al (1997) found that men reported significantly higher QoL than women in all three dimensions of QoL measured including social functioning. Mayou et al (1990) reported that diabetes had fewer social consequences for men than women, but more men felt that their social life and their sex life had deteriorated. Women reported more tension and fatigue than men. Men and women differed in health-related attitudes and behaviour. For example, men were less sensitive to illness, less willing to seek medical advice, reported fewer illnesses and have a smaller network of people with whom they discuss health problems.

It has been suggested that these gender differences may be the result of the different social roles traditionally played by men and women (Glasgow et al, 1997). The tendency for men to be more stoic than women may also account for some of the differences in perceived QoL (Glasgow et al, 1997).

No association between the age of the patient and QoL was found in this study. Our results are in agreement with those of several authors (Bourdel-Marchasso et al, 1997). Rubin and Peyrot (1998) also reported having found no meaningful pattern of association between age and QoL subscales, and found that young adults with diabetes did not perceive their lives to be radically compromised by the disease.

Findings concerning the possible effects of the duration of diabetes on QoL are diverse. Our study has found no significant association between the number of years that participants had diabetes and his or her QoL. Rubin and Peyrot (1998) have reported similar findings. Brown et al (2000) found no significant difference between people who had been diagnosed with diabetes for less than 15 years and those who had had diabetes for more than 15 years. There is no evidence from the present work of a significant association between patients' ethnicity and their QoL. Few studies have addressed the relationship between race or ethnicity and QoL in people with diabetes (Hanestad, 1993).

It has been reported elsewhere that marital status is related to QoL (Rubin and Peyrot, 1999). Our study lends further support to the findings that single women experienced higher physical wellbeing than those who were not

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1 Adverse QoL was not associated with the age of participant on diagnosis of diabetes, or duration of diabetes.

2 Having a job was associated with increased physical wellbeing and treatment satisfaction.

3 Housewives reported more adverse quality of life scores than employed women.

4 Evidence from this study concurs with previous work; men reported significantly higher quality of life (in particular, a higher physical and mental wellbeing) than women.

5 Gender differences may be the result of the different social roles traditionally played by men and women.

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1 Housewives may find themselves in a position where they have a greater flexibility and choice of diet.

2 Working women can be expected to have more constraints (such as lack of time) that limit their options.

3 This study lends support for the need of a holistic approach, which should take into consideration quality of life during management and care of people with diabetes in Mauritius.

single. Our results also suggest that non-single men receive support from their partner/spouse and are able to cope better with the burden of diabetes. On the other hand, the fact that single women scored significantly higher in the 'daily function' and 'worries' subscale than non-single women suggests that single women are better at coping with their diabetes. Perhaps men provide less support to their partners with diabetes than vice-versa. The higher score of single women in the 'daily function' subscale suggests that living with someone or having a family imposes certain physical and psychological constraints on women that make it harder for them to cope as successfully with their diabetes. In the Mauritian society, it is the housewives who usually carry out most of the household chores and care for the family. Diabetes could be an additional burden to women.

This study also revealed that on the 'diet' subscale, working women scored less than housewives. This can be explained by the fact that housewives find themselves in a position where they have a greater flexibility and choice of diet. They prepare most of the meals and can cook different dishes for members of the family who do not have diabetes. On the other hand, working women can be expected to have more constraints (such as lack of time) that limit their options.

Conclusion

This study lends support for the need of a holistic approach, which should take QoL into consideration during management and care of people with diabetes in Mauritius. ■

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