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Quality of life of patients with type 2 diabetes mellitus: A descriptive study in Sri Lanka

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Abstract

Aim: The aim of this study was to examine the quality of life among patients who were diagnosed as type 2 diabetes mellitus in diabetic clinic of Colombo South Teaching Hospital, Sri Lanka.

Background: Type 2 diabetes mellitus is a common health problem which is increasing worldwide. Given the complex nature of the disease, incidence of complication has been reported in increasing tendency result in lowering the quality of life of the people with Type 2 diabetes. But, little attention has been paid to study the quality of life among patients with type 2 diabetes mellitus, in Sri Lanka.

Methodology: In this quantitative descriptive study, purposive sampling method was used to select participants. Data collected from 150 patients who were diagnosed as type 2 diabetes mellitus in diabetic clinic of Colombo South Teaching Hospital, Sri Lanka. Data collection was done using self-administered questionnaire to assess quality of life of type 2 diabetes mellitus patients. Data were analyzed by using Microsoft Excel 2010.

Findings: More than half of the patients suffered from physical health problems like, physical pain (67%), excessive hunger (63%) and frequent urination (63%). Majority of the participants were having impact of diabetes on mental health like family interferences (64%) worrying about disease (58%) and negative feelings on self (55%). Related to the social life, 48% of participants have limited their social events such as weddings and 52% were having limited social interaction with their neighbors because of diabetes related discomforts.

Conclusion: Overall quality of life is very low among patients with type 2 diabetes mellitus in all three aspects: physical health, mental health and social life.

Keywords: Diabetes mellitus, quality of life

1. Introduction

Diabetes mellitus is a chronic disease that occurs when the pancreas does not produce enough insulin, or when the body cannot effectively use the insulin it produces (WHO, 2008). Type 2 diabetes is the most common type of diabetes, contributing to more than 90% of diabetes mellitus cases worldwide (Nathan *et al.*, 2009). It has been reported that about 171 million people globally suffer from diabetes (WHO, 2006). Diabetes is known to have a reflective impact on life expectancy. It is also known to affect patient's general health and well-being in various ways such as a severe dietary restriction and daily self-administration of oral medications or insulin which may adversely affect an individual's quality of life (Boulton, Meneses & Ennis, 1999). The quality of life defined as the perceived quality of an individual's daily life, that is, an assessment of their well-being or lack thereof. This includes all emotional, social, and physical aspects of the individual's life ("Quality of Life-health care," n.d.). The life quality of patients with diabetes is threatened by the disease and condition become worse with its long term complications such as nephropathy, neuropathy, heart disease and stroke (Oguntibeju *et al.*, 2012).

Despite its deadly nature that bring the people more adverse effects for their quality of life, the prevalence of diabetes among all age groups going to be high in the global context. It was estimated to be increased from 2.8% in year 2000 up to 4.4% by 2030 worldwide. This situation becomes a national health issue in Sri Lanka too. According to the Ministry of Health (2013) latest statistics reveal that 25% of the population in Sri Lanka is suffering from diabetes and the figure is estimated to be doubled by 2050. The increment of morbidity situation gives an alarm sign to have a deeper look into the quality of life of the people with diabetes in Sri Lanka.

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2. Materials and methods

Using a quantitative approach, descriptive study was carried out at Colombo South Teaching Hospital, Sri Lanka. Study population was patients who come for the treatment to diabetic clinic at Colombo South Teaching Hospital, Sri Lanka (CSTH). Purposive sampling method was used for this study and 150 subjects were selected. Data collection was done by using a questionnaire. Patients, who have already been diagnosed as type 2 diabetes mellitus for more than five years and who were in age between thirty to seventy years, were recruited to the sample and patients who cannot read and understand either Sinhala or English were excluded. A researcher developed, pre tested self-administered questionnaire was used to collect data in both local dialects: Sinhala and English medium. It consists of four parts including demographic data, impact of diabetes on physical health, mental health, and social life. For data analysis descriptive statistics were used and Microsoft 2010 was utilized.

Ethical approval was obtained from ethics review board of CSTH and all participants were provided a letter of invitation which included all the details of this study. Informed consent was obtained from every subject. No any vulnerable subject was included in the study.

3. Results and Discussion

Majority (47.3%) of respondents were in age group of 60-70 years. Of these, 30% were male and 70% were female. Only 11.3% of participants had educated up to Advanced level. Most of them (40.7%) had low income level like less than 10,000 rupees per month while nearly half of the participants were dependent. This low socio-economic status and low educational level could explain the poor metabolic control which can lead to various complications and therefore the poor quality of life. More than 63% were suffering from diabetic related complications and diabetic retinopathy was identified as the most common complication (48.3%). All the participants in this sample were control their diabetes using hypoglycemic drugs either tablet or insulin or both. In similar to this findings Papadopoulos *et al* (2007) [7] found that diabetic complications are more prevalent and majority of patients were suffering from micro vascular diseases, specially angiopathy and retinopathy. Similar findings were noticed by Jacobson *et al* (1994) [3] too indicating that severity of diabetes complications of patients was a significant predictor of individuals' quality of life.

When considering the impact of diabetes on physical health, it is revealed that physical pain (67%), excessive hunger (63%), frequent urination (63%) and sleeping disturbances (62%) were the most common physical health problems experienced by type 2 diabetes mellitus patients (figure 1). Frequent urination and physical pain (neuropathy pain) can disrupt the sleep pattern among diabetic patients and it may severely affect their quality of life. Increased appetite will further increase their blood glucose level thereby can worsen the current situation. This study results are compatible with one of the studies done in Greece (Papadopoulos *et al.*, 2007) [7]. They stated that diabetes symptoms, complications, or treatment can cause patient distress and end up with poor quality of life. In addition Surani *et al* (2015) [12] stated that diabetes mellitus can cause several chronic illnesses like obstructive sleep apnoea, and depression which can impair the quality of life of patients.

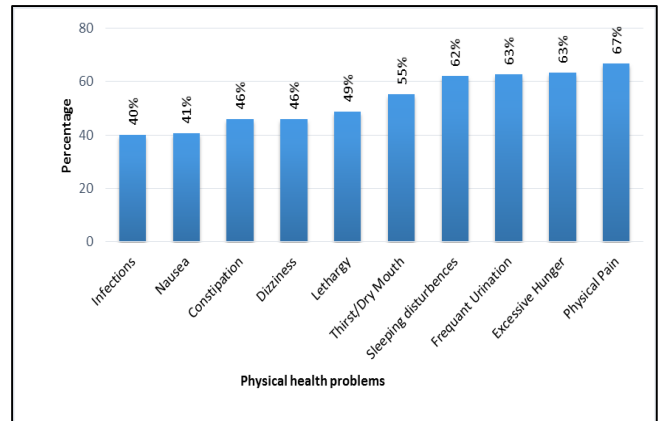


Fig 1: Impact of diabetes on physical health

According to the study findings, it is clearly indicated that more than half of the patients were suffering from many mental health problems including family interferences (64%), worrying about disease (58%), having negative feelings on self (55%) and moodiness (45%) (figure 2). This study results match with one of the studies done in USA which showed a significant psychological distress level among young adults with diabetic condition (Egede & Dismuke, 2012) [12]. Furthermore Polonsky *et al* (1995) [8] stated that the measurement of diabetes-related emotional distress is uniquely associated with diabetes-relevant outcomes. But, Sørensen *et al* (2007) [11] reported that diabetic patients who undergo dialysis procedure are characterized by reduced self-rated physical health while having relatively good mental health.

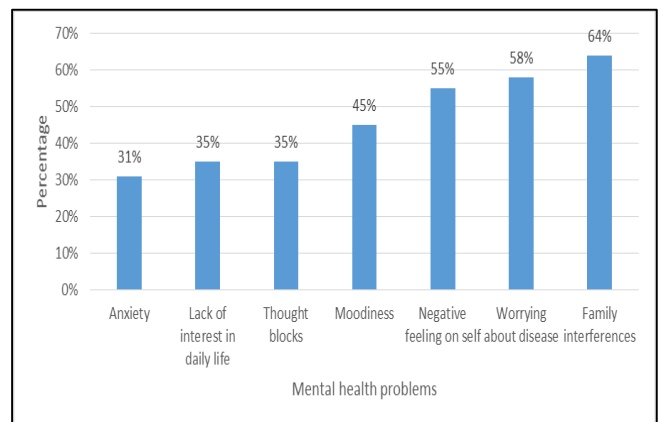


Fig 2: Impact of diabetes on mental health

In relation to their social life, social withdrawal is predominant among majority of the participants. Only half of the sample were participate for the social events such as weddings (48%) and trips (54%). Their social relationships were limited as they avoided interaction with their neighbors (52%) and relations (48%). Wandell *et al* (1997) [13] highlighted that diabetic patients had significantly lower scores on physical and mental health except for social health, which is contrasting with the findings of this study as half of the sample had limited social relationships. As it is not a normal persons' routine, this may strongly affect for their quality of life than other important disease-related variables such as diabetic related complications (Rubin & Peyrot, 1999) [10].

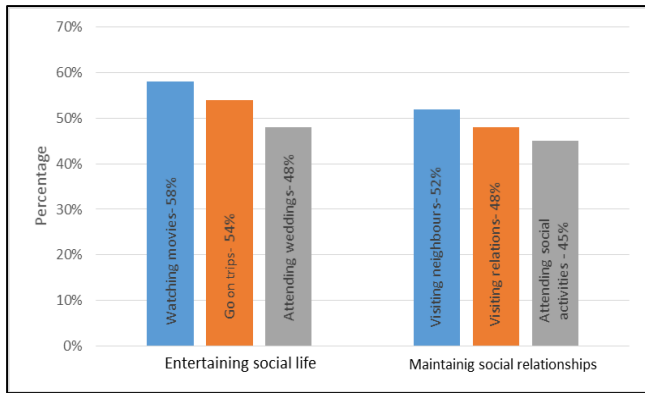


Fig 3: Impact of diabetes on social life

4. Conclusion

According to the study findings, it can be concluded that overall quality of life is very low among patients with type 2 diabetes mellitus in all three aspects: physical health, mental health and social life although mental health problems receive a comparatively low weighting. However, study findings clearly explicit that major aspects of health of the participants' lives have been threatened by diabetes. Thus, it would be a challenge for health care professionals to develop remedial interventions to address individual problems in tailored way. But, the study findings shed light on the need to implement educational and counselling programs addressing the physical, mental and social health needs of the population. Educational interventions should be focused to improve their knowledge aiming to reduce physical health problems, to modify the attitudes and beliefs aiming to reduce the intensity of psychological and social health problems relating to the diabetes.

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