
Health - Related Quality of Life of diabetic Adolescents in Iraq: A preliminary Report

Jawad K. A. Al-Diwan
MSc.

Abstract

Background: Diabetes comprises adolescent's wellbeing in physical, psychological and social functions.

Objective: The aim of the study was to characterize the health – related quality of life of diabetic adolescents.

Methods: A cross sectional study & 160 adolescents with type 1 diabetes mellitus was carried out. Full information about the adolescent was collected by direct interview. Data requested were age, sex, duration, practicing sport and visits to diabetic clinics. Burden of diabetes was assessed.

Results: The age and practicing sport were associated with burden of diabetes. Sex of the patient, duration of diabetes and number of visits to diabetic clinic were not associated with burden of diabetes.

Conclusion: Younger adolescents tolerate diabetes better than older adolescents, and that practicing sport reduce burden of diabetes among diabetic adolescents.

Key words: Health quality of life, diabetes, adolescent

Introduction:

Health - related quality of life is the recognized need and functional satisfaction with different life aspects^[1,2]. It is a multidimensional concept that encompasses the physical, emotional and social components associated with illness or its treatment^[3]. Diabetes affects virtually every day life to a greater or lesser degree. Diabetes comprises adolescent's wellbeing in physical function, psychological function and social function^[4]. The patient encouraged leading a "normal life" and although the treatment is demanding and often complex, the patient expected to bear much of the responsibilities for making decisions which may affect his health^[5].

This study was carried out to characterize the health – related quality of life of diabetic adolescents.

Materials & methods:

A total of 160 adolescents with type 1 diabetes mellitus were enrolled in the study from different diabetic centers (national diabetic center at Al-Yarmouk teaching hospital, diabetes consultancy clinic at Al-Kadhmia teaching hospital, diabetes consultancy clinic at Al-Mansour teaching hospital, and diabetes consultancy clinic at Ibn Al-Beldy teaching hospital) in Baghdad city. Adolescence period is considered between 10 and 20 years^[6, 7]. Full

information about the adolescent were collected by direct interview and filled in a special form as advised by Kovacs^[8] and Ma'ala^[9]. The data requested included age, sex, duration of diabetes mellitus, sport activity and number of visits to diabetic clinics.

Student- t test was used to find out the association between the burden of diabetes and studied variables . P value less than 0.05 was considered as statistically significant^[10]. Burden of diabetes was assessed by determination of the level of health status measured in term of objective level of symptoms, activities, function, emotion, cognition, and individual ability to perform work or job or school achievement in the society^[8,9]

Results:

The age range of the studied diabetic adolescents was 12 to 20 years (mean \pm SD = 15.1 ± 2.3) , with a male to female ratio was 1:1.12 . The mean of duration of diabetes was 5.5 ± 4.4 years. Statistical significant associations were detected between the burden of diabetes in the adolescents and age and practicing sport activities ($p < 0.05$) while no statistical significant association was found between the burden of diabetes and sex of the adolescents, duration of the disease, and visits to the diabetic clinics ($p > 0.05$) (Table 1) .

Table 1: Association of diabetic burden with the studied variables

Variable	No. (%)	Burden of diabetics (Mean ± SD)	P value*
Age			
< 15	70(43.7)	119 ± 36	0.02
≥ 15	90(56.3)	132 ± 34	
Sex			
male	76(47.5)	123 ± 35.2	NS
female	84(52.5)	129 ± 35.4	
Duration			
≤ 5	71(44.4)	122 ± 35	NS
> 5	89(55.6)	131 ± 35.4	
Sport			
Present	86(53.7)	121 ± 34	0.033
Not	74(46.3)	133 ± 36	
No. of visit / month			
≤ 2	116(72.5)	127 ± 35.3	NS
> 2	44(27.5)	125 ± 35	

* Student t test were applied

Discussion:

This study showed that age was significantly associated with the burden of the disease. This finding is in agreement with that of Jenny^[11]. He reported that younger patients have a more positive attitude to diabetes than those who are older. Grey et al^[12] attributed this difference to the effect of youthful optimism and the fact that the disease is still at an early stages. This study revealed, also, that sport activity affect the burden of diabetes in adolescents. Al-Hadi et al^[13] found a positive effect for practicing sport on the school achievement among the diabetic adolescents. Drash^[14] reported that achievement and maintaining high level of physical fitness provide long benefits to individuals with diabetes, involving an increase feeling of wellbeing and increase insulin sensitivity with tendency toward good metabolic control. The findings of this study could be attributed to good metabolic control of diabetes achieved by the diabetic clinics in Baghdad.

The finding that no association between sex of the patient and the burden of diabetes is inconsistent with that of Skelton^[15] and Verbrugge^[16]. They found that sex of the person affect the perception of health. This might be due to the fact their studies were of different age groups while this study was dealing with adolescents only. This study revealed, also, that the burden of diabetes was not significantly associated with the duration of the disease. Al-Hadi et al^[13] reported that school achievement of diabetic adolescents is not affected by the duration of the diabetes which is similar to this finding. However, Golden et al^[17] and Delamater^[18] found that early onset of diabetes lead to poor cognitive performance and Larsson et al^[19] stated that poor metabolic control affect learning abilities of the diabetic and increase the burden of

the disease. Sport practicing by groups of adolescents has an important role in the adolescent's life, and any bad treatment or criticism by the colleagues to the diabetic adolescent may create feeling of inferiority, inadequacy and in competency^[20].

It may be concluded from this study that younger adolescents tolerate diabetes better than older adolescents and that practicing sport reduce the burden of diabetes among diabetic adolescents.

References:

- 1-Hornquist J O. Quality of life: Concept and assessment. Scand J Soc Med, 1989;18:69-79.
- 2-Hornquist J O. The concept of quality of life. Scand J Soc Med, 1982;10:57-61.
- 3-Revicki D A. Health related quality of life in the evaluation of Medical therapy for chronic illness. J Fam Prac, 1989; 29:377-380.
- 4-Polonsky W. Understanding and assessing diabetes-specific quality of life. Diabetes Spectrum, 2000;13:36-40.
- 5-Tattersal R B, Jackson J G. Social and emotional complications of diabetes. In: Keen H, Jarrett J, editors. Complication of diabetes. 2nd edition. London: Edward Arnold, 1982, pp:271-285.
- 6-Paxaman J. M. and Zuckerman R. P. Laws and policies affecting Adolescents Health. WHO, editor. Geneva. 1987:pp4-10.
- 7-WHO technical report series. (Health problems of adolescence : report of a WHO Expert Committee), No. 308, 1965
- 8-Kovacs M., Iynger S., Mukerji P., Drash A. Psychiatric disorders and metabolic control among youths with IDDM: a longitudinal study. Diabetes Care, 1996;19:318-323.

- 9-Ma'ala E. G. Assessment of health-related quality of life of diabetic adolescents (type 1 diabetes), PhD thesis, College of Nursing, University of Baghdad, 2001.
- 10-Daniel W. W. Biostatistics: A foundation for analysis in the health sciences. 7th ed, New York : John Wiley and Sons. Inc., 1999.
- 11-Jenny J L . A comparison of four age group's adaptation to diabetes. *Can J Publ Health*, 1984;75:237-244.
- 12-Grey M., Lipman T., Cameron M. E. and Thurber F. W. Coping behaviors at diagnosis and adjustment one year later in children with diabetes. *Nursing Research*, 1997;46:312-317.
- 13-Al-Hadi A., Al-Diwan J. K., Ma'ala E., and Niazi A. A school achievement in diabetic adolescents : a preliminary's report. *Iraqi Journal for Medical Sciences*. Submitted for publication.
- 14-Drash A. L. Clinical care of diabetes: what is the role of diabetes professionals? *Diabetes Care*, 1984; 17(suppl): 40-42.
- 15-Skeleton R. Man's role in society and its effect on health. *Nursing (London)*, 1988;26:953-956.
- 16-Verbrugge L. M. Gender and health: an update on hypothesis and evidence. *J Health Soc Behav*, 1985;26:156-182.
- 17-Golden M. P., Ingersoll G. M., Brack C. I., Wright J. C. and Huberty T. J. Longitudinal relationship of a symptomatic hypoglycaemia to cognitive function of IDDM. *Diabetic Care*, 1989;12:89-93.
- 18-Delamater A. M. Quality of life in youths with diabetes. *Diabetes Spectrum*, 2000;13:42-46.
- 19-Larsson D., Lager I. and Socioeconomic characteristics and quality of life in diabetes mellitus in relation to metabolic control. *Scan J Public Health*, 1999;27:101-105.
- 20-Craven R. F. and Hrinle J. *Fundamental of nursing human health and function*. 2nd ed., Philadelphia, Lippincott, 1996;pp 264-275.

Dept. of Community Medicine College of
Medicine Al-Anbar University