Parental Knowledge and Attitudes toward Diabetes Mellitus type 1: a cross sectional study

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INTRODUCTION

According to a recent report from the International Diabetes Federation (IDF) Saudi Arabia has 14,900 children with T1DM, and considered to have the highest number in the Middle East Region. The incidence of type 1 diabetes mellitus is increasing over the last years with prevalence rates of 109.5 per 100,000 and 48 per 100,000 in the eastern region specifically. Delayed diagnosis and management of T1DM can lead to serious complications such as diabetic ketoacidosis which is the most common cause of death in diabetic children

Parents play an important role in the management of T1DM in children specially in there early-life-years. As a result, it's important to assess parents' knowledge about child diabetic care and insulin therapy.

Till now there is no specific studies dedicated to this important subject in Al-Ahsa city, Eastern Region nethir Saudi Arabia.

OBJECTIVE

To assess the knowledge of parents regarding T1DM and its optimal therapy.

METHODOLGY

Participants: were recruited from the maternity and children's hospital (MCH) in Al-Ahsa city, Eastern Region of Saudi Arabia.

Data Collection : A self-administered questionnaire

Statistics: The age was calculated using the mean and standard deviation other demographics were calculated by number and percentage. Scoring was done for the questions assessing parents' knowledge.

Spearman test was used to find the correlation between level of education and the total score of right answers. Independent T test was used to find the difference between the groups of continues data. All Statistical analyzes were done with SPSS ٧.20

RESULTS

A total of 120 parents completed the questionnaire

Demographics:

Table 1. Demographics

Parents Demographics	NO(%)
Gender	
Male	46(38.3%)
Female	74(61.7%)
Age	36.2±6.7
Education level	
Uneducated	2 (1.5%)
Elementary	14 (12%)
Intermediate	17 (14%)
High	35 (29%)
University degree	49 (41%)
Other	3 (2.5%)
Monthly income	
Less than 3000 SR	19 (15.8 %)
3000-6000 SR	26 (21.7 %)
6000-12000 SR	30 (25 %)
More than 12000 SR	20 (16.7 %)
Not mentioned	25 (20.8%)
Region	
Urban	73 (60.8%)
Rural	47 (39.2%)
Type of insulin regimen	
NPH + Regular insulin	52 (43.3 %)
Basal + Bolus	68 (56.7%)

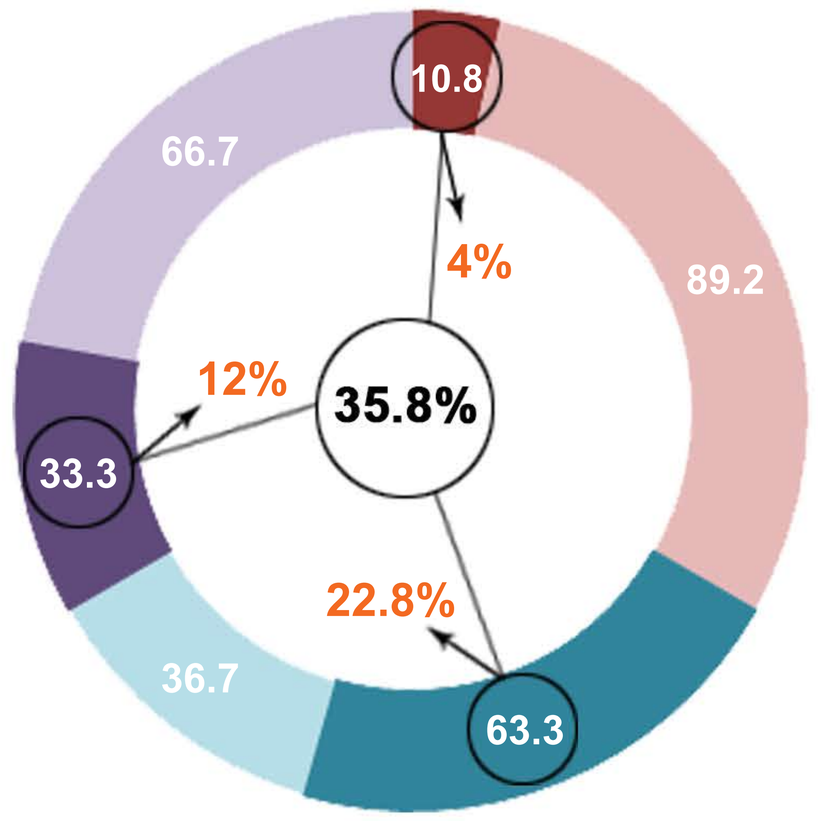
Knowledge:

The average score of participants was 18.8±3.9 out of 26 with a range of (7-26).

Table 2. Questionnaire Results

	%
Disease related knowledge (total)	82.7
Insulin therapy knowledge (total)	71.82
NPH + Regular insulin specific (total)*	53.85
Basal + Bolus insulin specific (total)*	80.15
Diabetes monitoring knowledge (total)	63.63
Hypoglycemia knowledge (total)	82
Hyperglycemia knowledge (total)	35.8
Nutritional knowledge (total)	85.66

*There are two specific questions about each type of insulin regimen , (52 answer were received for NPH + Regular, 68 for Basal + Bolus regimen)



Mothers showed a significantly higher level of knowledge (p = 0.02).

Positive correlation (p = 0.01) between the total score of correct answers and the education level.

A significant difference was found (p = 0.01) between the parents knowledge on Basal + Bolus vs NPH + Regular insulin users

CONCLUSION

This study provided an initial identification of the major deficiencies in parental knowledge with regard to type 1 diabetes mellitus and its management. More attention should be paid to these deficiencies in future parents' education practice. Specially blood glucose levels and hyperglycemia knowledge.

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