

Variables in Diabetic Children and Adolescents associated with High, Acceptable and Low range of Glycosylated Haemoglobin (HbA1c) in a DGH setting – An Analysis

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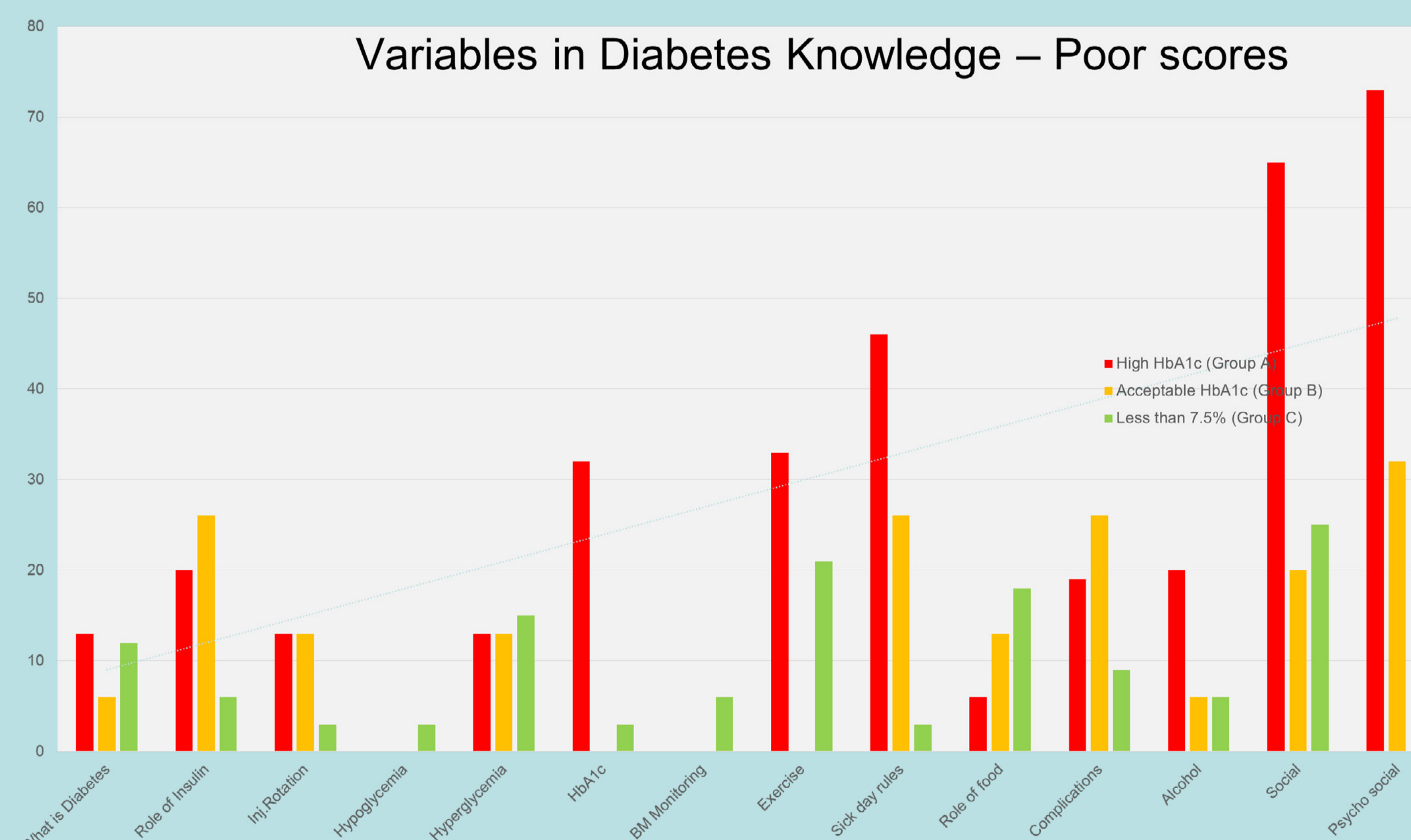
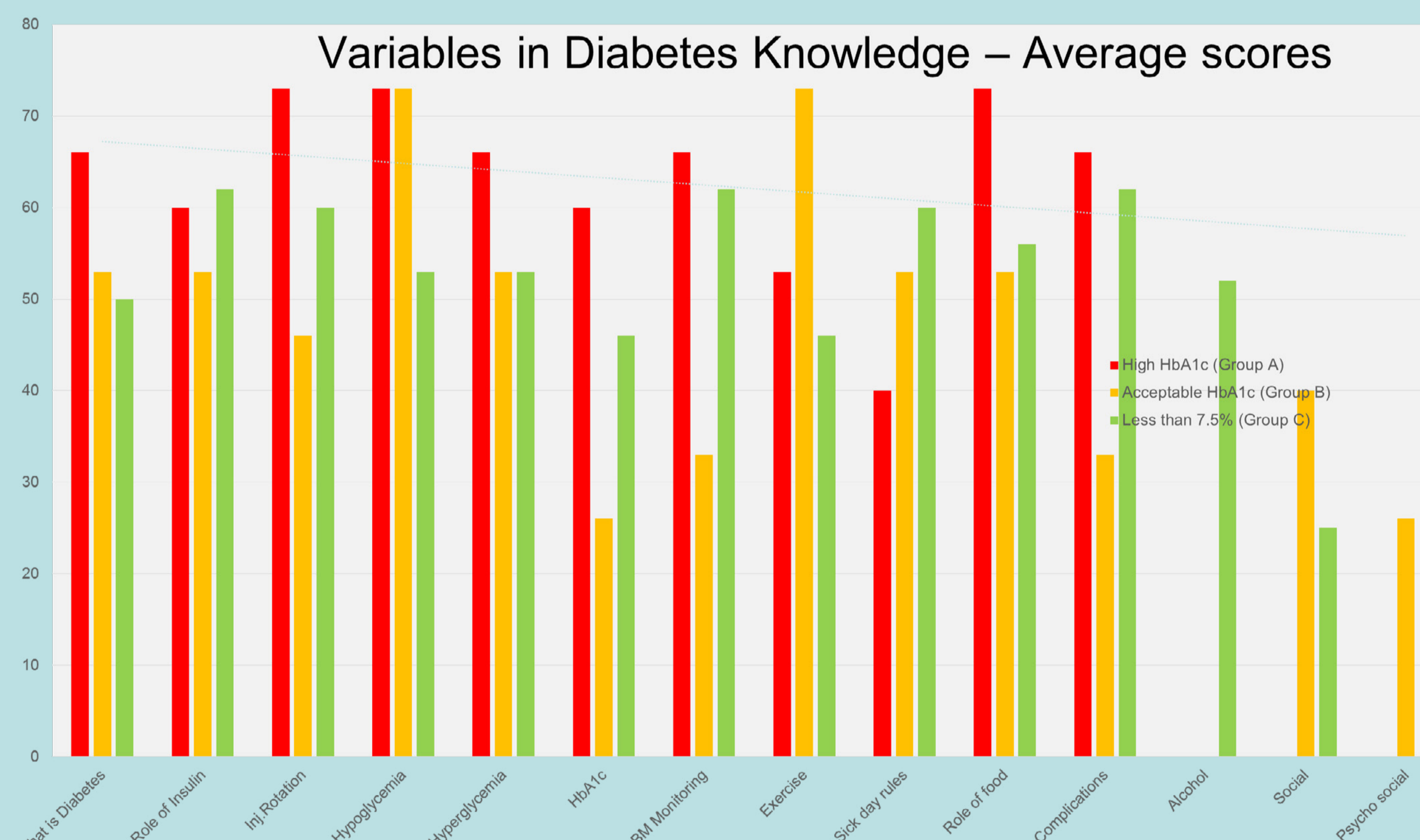
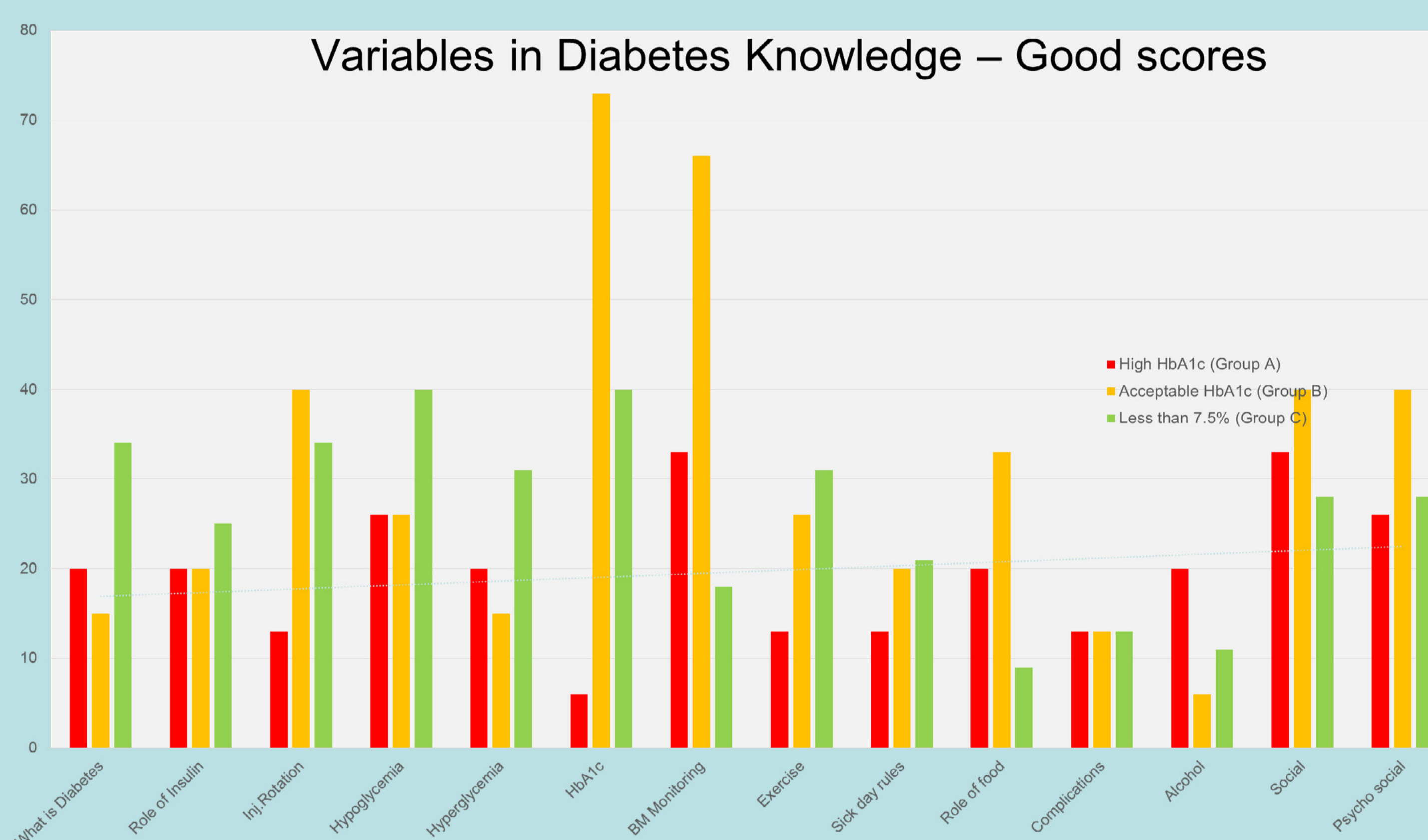
Background: Diabetes Education empowers children and adolescents with Diabetes to acquire practical skills in problem-solving and goal-setting to improve self sufficiency. Our aim was to identify variables that have an the impact on diabetes control in terms of psychosocial wellbeing and glycosylated haemoglobin (HbA1c).

Objectives and hypotheses: To compare the level of understanding & knowledge of Diabetes between three groups of diabetic children. To explore psychosocial variables that distinguish the three groups.

Method: Retrospective analysis of HbA1c and the variables in the Patient's Diabetes Education Assessment Questionnaire (adapted from the East of England Paediatric Diabetic Network guidelines) over a one year period from Sep 2013 and August 2014. 30 children were randomly chosen in each group. High HbA1c group (Group A): Range 9 -14 %, mean 9.6%. Acceptable HbA1c Group (Group B): Range 5.7-8.8, mean 7.4%. HbA1c less than 7.5% (Group C): Range 5.7- 7.4%, mean 7.2%

Results: General knowledge about Diabetes, Injection rotation, Hypoglycemia and Hyperglycemia was 10 - 15% greater in Group C than other two groups. Group C's knowledge on exercise was at least 2 times greater than the other groups. Group C also had good understanding of Diabetes. Knowledge about HbA1c was greatest (73%) and blood glucose monitoring (66%) in Group B. In spite of a good overall knowledge, Group B topped Group C in psycho social adjustment in terms of accepting the diagnosis better, involving friends in their care and being happy (40%). Knowledge about complications was similar in all age groups (13%)

Conclusions: The children in group C appear to have good diabetes control secondary to being empowered by general knowledge about diabetes, hypo and hyperglycaemia. An important factor in good diabetes control is exercise. Group A contains children who are at the age where they are more likely to have knowledge about alcohol, a confounding variable. The role of psychosocial variables appear to be important in Group B despite acceptable HbA1c levels.



References

- East of England Children's Diabetes network guidelines - NEWLY DIAGNOSED TYPE 1 DIABETES CARE PATHWAY FOR CHILDREN & YOUNG PEOPLE (UP TO 19TH BIRTHDAY)
- Association of Children's Diabetes (ACDC) - Care of the well child, newly diagnosed with Type 1 Diabetes Mellitus

The authors have nothing to disclose

