Computer based diabetes education module during clinic waiting time and its impact on short term glycaemic control

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ABSTRACT

Diabetes education is important as it allows empowerment of patients which leads to improvement in diabetes. Computer based education modules have shown benefits in several aspects of diabetes care including glycaemic control. We assessed the effect of a computer aided education module on short term glycaemic parameter eg hba1c in Type 2 diabetes patients in Hospital UiTM.

An education module which comprises a computer aided learning programme with interactive quiz elements and immediate feedback on nutrition, physical activity, medications, and complications was completed within 5 minutes by participants. Language modality is both English and Malay. Glycaemic parameter (hbA1c) was assessed prior to participation in education module and 6 months post completion of module.

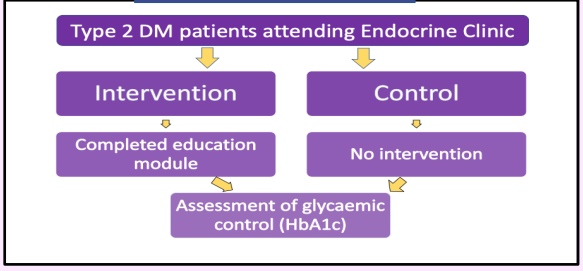
54 patients completed the module, compared to 55 in the control group (Total N = 109). Median age was 55 ± 11.3 years. Mean weight was 82 ± 18.1 kg and mean body mass index (BMI) was 31 ± 6.9 kg/m². Mean hba1c in the intervention group was 8.1 ± 1.8 % while the control group was 8.2 ± 1.5 %. Six months post intervention, there was a non-significant reduction in hba1c of 0.3% in the intervention group compared to 0.1% in the control group (p=0.55; p=0.82).

The use of a computer aided education module showed a slight but not significant improvement in diabetes control over 6 months' period. Continued education may be required to enable behaviour change which can lead to improved glycaemic parameters in the future.

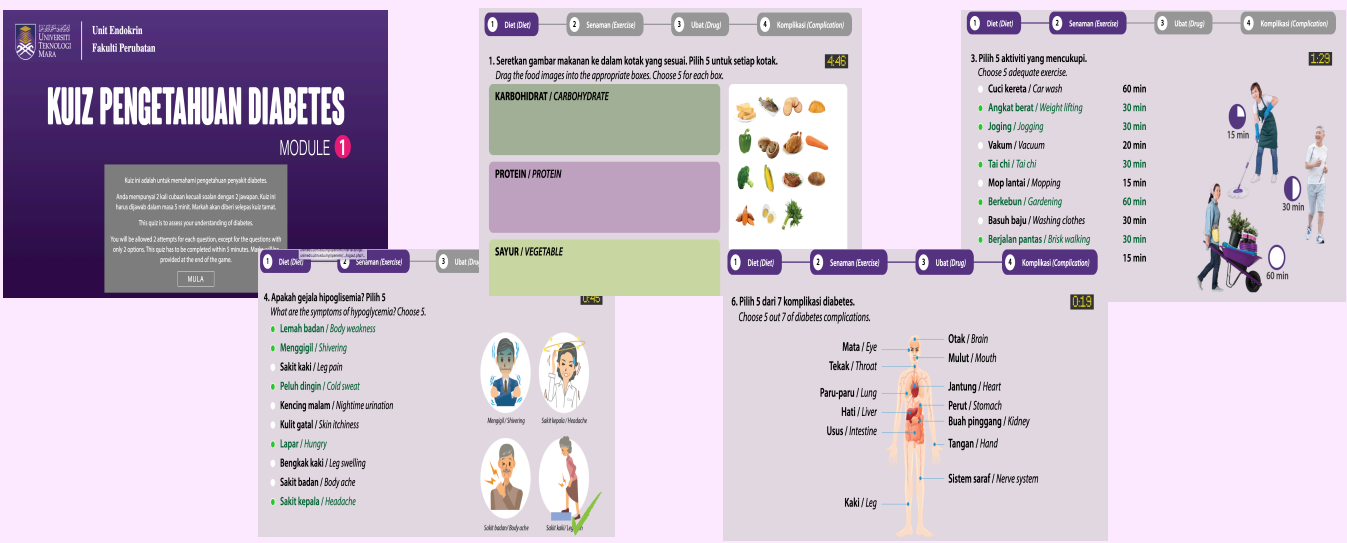
INTRODUCTION

- Patient education is an important aspect of diabetes management.
- This can be achieved with a computer based education module.
- We assessed impact of such module on patient's glycaemic control.

METHODOLOGY



EDUCATION MODULE



RESULTS

54 patients completed the module, compared to 55 in the control group (Total N = 109). Mean hba1c in the intervention group was 8.1 ± 1.8 % while the control group was 8.2 ± 1.5 %. Six months post intervention, there was a non-significant reduction in hba1c of 0.3% in the intervention group compared to 0.1% in the control group (p=0.55; p=0.82).

	Intervention (n=54)	Control (n=55)	p value
Age (years)	52.1 (12.7)	55.2 (8.9)	0.207
HbA1c (%)	8.1 (1.7)	8.2 (1.5)	0.804
Weight (kg)	84.0 (19.5)	80.0 (16.6)	0.257
BMI (kg/m²)	32.8 (7.9)	30.8 (5.8)	0.228
Systolic Blood Pressure (mmhg)	139.5 (15.7)	141.8 (14.8)	0.433
Diastolic Blood Pressure (mmHg)	79.8 (11.6)	80.5 (10.9)	0.787

Table 1: Demographics of study population. Values depicted in mean (SD)

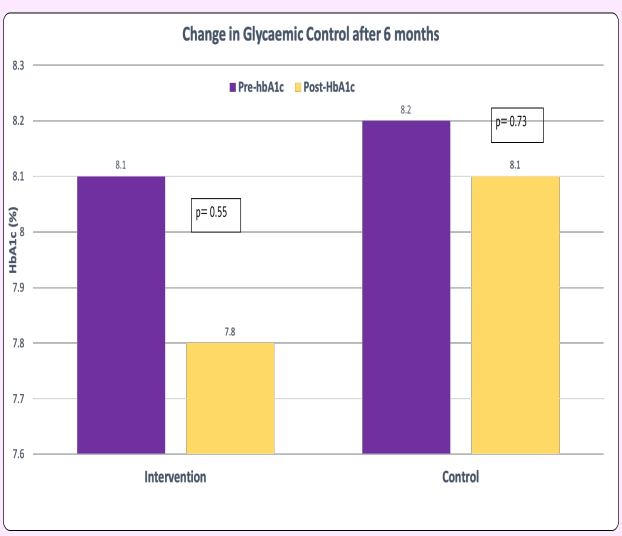


Figure 1: Change in glycaemic control after 6 months.

CONCLUSION

The use of a computer aided education module showed a slight but not significant improvement in diabetes control over 6 months' period. Continued education may be required to enable behaviour change which can lead to improved glycaemic parameters in the future.

REFERENCES

Boren et al Computer-Aided Diabetes Education: A Synthesis of Randomized Controlled Trials *AMIA Annu Symp Proc*. 2006; 2006: 51-55.

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Fatin Abu Yazid, Zarina Ishak, Nurul Izza Mokhtar and Nurhidayah Mohd Lias.