

## Self-care and glycaemic control: a cross-sectional study

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**Background** Diabetes mellitus type 2 is a leading cause of morbidity and mortality in the occupied Palestinian territory (oPt), with a prevalence of 12.5% in adults aged 25–64 years in 2010–11. Studies of the management and control of diabetes mellitus in the oPt are lacking. The association between diabetes self-care, provider recommendations, and glycaemic control was investigated in a sample of adults with diabetes mellitus type 2 in Ramallah, West Bank, oPt.

**Methods** A sample of 517 individuals with diabetes mellitus type 2 (166 men and 351 women who were not pregnant) was selected from 11 diabetes clinics owned by the Palestinian Ministry of Health (MoH; n=5), UN Relief and Works Agency for Palestine Refugees in the Near East (n=4), and jointly by non-governmental organisations and MoH (n=2). The number of individuals selected from each clinic was proportional to the number of patients being treated for diabetes at the clinic. Patients were identified from the clinics' databases; 62 (11%) of 579 refused to participate. All participants provided verbal informed consent. The Summary of Diabetes Self-Care Activities questionnaire was used to assess self-care behaviour and providers' recommendations. The glycated haemoglobin A<sub>1c</sub> (HbA<sub>1c</sub>) test was done to assess glycaemic control. Data were gathered during March to June, 2012, and analysed with SPSS (version 18.0). Logistic regression analysis was used to ascertain factors associated with poor glycaemic control. Approval to undertake the study was obtained from the Institute of Community and Public Health, Birzeit University, Ramallah, West Bank, oPt.

**Findings** The mean HbA<sub>1c</sub> was 8.8% (73 mmol/mol [SD 2.0 and 2, respectively]). One in five patients had glycaemic control (HbA<sub>1c</sub> <7%). 303 (59%) of 517 participants did not have a healthy eating plan, 276 (53%) of 516 did not exercise, 307 (59%) of 516 did not check their blood sugar level, 86 (17%) of 517 were not given nutritional advice, 127 (25%) of 517 were not given advice about exercise, and 341 (66%) had not been advised to check their blood sugar regularly. Results of the logistic regression analysis showed that demographics, socioeconomic status, self-care, and providers' recommendations for self-care were not associated with poor glycaemic control. The only significant finding was a negative association between poor glycaemic control and duration of diabetes (p<0.001).

**Interpretation** The results of this study show that although patients in the West Bank are provided medication, health education and monitoring are insufficient and support is non-existent—these would help patients to control their diabetes mellitus. Further research is needed to confirm these findings.

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### Contributors

SI, NM, and RGh contributed to the conceptualisation of the research and the Abstract, formulating the methods for the study, gathering and analysing the data, and writing the Abstract. RGi, MN, LJ, HS, and AH contributed to conceptualisation of the research and the Abstract, formulating the methods for the study, data analysis, and writing the Abstract.

### Conflicts of interest

We declare that we have no conflicts of interest.

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