



Arabic speakers with diabetes mellitus

A study of their care

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People with diabetes have higher risks of fatal and nonfatal macrovascular and microvascular diseases, and have a worse quality of life than people without diabetes.¹⁻³ Australian data remain largely inadequate to describe the entire burden of disease, plan health services, or assess outcomes.⁴ This is especially so for diabetes among ethnic minorities.⁴ Australian residents born in countries of southern Europe and the Middle East report a higher prevalence of diabetes.⁵ Arabic speaking immigrants from Lebanon have a higher death rate from diabetes (25.4 per 100 000) than other New South Wales residents (13.4 per 100 000).⁶

General practitioners who conduct consultations in a language other than English have high proportions of patients from their own ethnic community.^{7,8} We set out to determine quality of life, quality of care, and unmet need among Arabic speaking patients in central Sydney (New South Wales).

Methods

Ten Arabic speaking GPs participated, identifying 389 eligible Arabic speaking patients with diabetes who had attended their practices at least once in the previous 2 years. We contacted 252 patients who were asked to participate in telephone interviews in Arabic. 'Satisfaction' and 'impact' of the Diabetic Quality of Life (DQOL) subscales are complementary measures of diabetes related quality of life, having good reliability, internal consistency and construct validity,^{9,10} with 15 and 20

items respectively. Before the formal study, a pilot study revealed the cultural insensitivity of asking direct questions about sexual health, so this item was dropped from the 'satisfaction' and 'impact' subscales, and treated as missing data.

Associations between 'satisfaction' scores, 'impact' scores and study variables were examined using regression models. We included variables that showed significant association ($p \leq 0.05$) in univariate analyses. Results are expressed as beta coefficient with corresponding 95% confidence interval based on two sided significance. For 'satisfaction', higher scores indicate greater satisfaction. For 'impact', higher scores indicate less impact of diabetes on quality of life.

Additional subgroup analyses were performed using data from 134 patients for whom GPs provided HbA1c results within the previous 6 months.

Results

Of the 252 contactable patients, 235 (93% response rate) (129 men and 106 women) completed telephone interviews. Patient median age was 56 years (range 19–70). Most patients (91%) had type 2 diabetes with a median duration of 6 years, (range <1–53 years). Over half of the sample (57%, $n=134$) had an HbA1c test within the previous 6 months as recommended by accepted guidelines.¹²

Of the 134 patients who had an HbA1c test within the previous 6 months, 47%

($n=63$) had HbA1c levels less than the recommended level of 7.5%. Patients who reported having diabetes for more than 10 years had HbA1c levels higher than 7.5% ($p=0.006$). Our subgroup analyses did not show significant association between better glycaemic control (HbA1c $\leq 7.5\%$) and frequency of GP visits, number of GPs consulted, attendance at a diabetes clinic, or using specialist services for diabetes.

Diabetes quality of life measures

Respondents' quality of life measure scores for 'satisfaction' ranged from 21–100% (mean 68.5%, $SD=16.07$). Scores for the 'impact' subscale ranged from 34–92% (mean 69.6%, $SD=10.4$). Men were significantly more likely than women to report higher 'satisfaction' of life with diabetes ($p=0.03$). Duration of diabetes illness was negatively correlated with both 'satisfaction' ($R=-0.204$, $p=0.002$) and 'impact' ($R=-0.194$, $p=0.004$).

Regression analyses revealed that duration of diabetes remained an independent predictor of lower 'satisfaction' ($\beta=-0.439$, $p=0.004$) and higher 'impact' ($\beta=-0.24$, $p=0.01$) after controlling for patient's demography and diabetes related factors.

Subgroup analyses demonstrated that higher levels of HbA1c were correlated to lower satisfaction scores ($R=-0.212$, $p=0.01$) but not impact scores. Regression analysis demonstrated glycaemic control as an independent predictor for patients' higher

Table 1. Arabic speaking patients' preferred strategies for better management of diabetes

	Would help a lot (%)	Would help a little (%)	Already happens (%)	Unsure (%)
Culturally specific service				
Health professionals understanding Arabic culture and honouring Arabic traditions	72.8	11.9	4.3	8.1
Health professionals speaking Arabic	68.1	14	6.4	8.1
Interpreters available during all medical consultations	67.2	16.2	1.7	11.5
Dietary recommendations based on Arabic cuisine	54	26	2.1	14.9
Service reconfiguration				
Diabetes clinics open 'after hours' and on Saturdays	45.1	34	0	18.3
Home visits for patients with diabetes who are unable to go to hospital clinics	58.3	24.7	0.9	13.6
Reminders about the dates for diabetes check ups	57	27.2	0.9	11.1
Diabetes clinics accessible by public transport	44.3	31.5	0.4	21.3
Specialist visits free of charge	42.1	8.5	31.1	15.3
Health promotion strategies				
Programs about diabetes, diabetes care, and services on Arabic radio	66.8	14	0.9	15.3
Videos about diabetes and services available in Arabic	62.1	17	0	18.3
Written resources in Arabic for patients about diabetes	60	16.6	0.9	20.4

satisfaction with life ($\beta=-2.2$, $p=0.01$), after controlling for patients' demography and diabetes related factors.

Use of health services

Use of diabetes related specialist services among these Arabic speaking patients was lower than for the general population.¹³ For example, less than a quarter (22.1%, $n=52$) had visited any diabetes clinic in the preceding year. Only 45 (19.1%) patients indicated having received written information about diabetes from their GP in the previous 12 months. Receiving written information was not significantly associated with duration of diabetes, frequency of GP visits, number of GPs, or DQOL scores.

Respondents recommended strategies that would overcome language and cultural barriers to manage better their diabetes (Table 1).

Discussion

Consistent with earlier studies in other popula-

tions, we have demonstrated an independent association between glycaemic control, duration of diabetes illness, and quality of life measures among an ethnic minority.^{3,10}

Research into the quality of life of patients from ethnic minorities with chronic disease including diabetes is limited. In the current study, DQOL measure scores for 'satisfaction' and 'impact' were comparable to a previous study in a sample of English speaking patients with diabetes in central Sydney, with a median score of 68% (range 18–100%) for satisfaction and 74% (range 9–94%) for impact.¹¹

Many patients with diabetes do not receive care in accordance with the published guidelines to prevent diabetes complications and improve quality of life.^{11,15} Epidemiological analysis of the UKPDS data shows that for every 1% reduction in HbA1c, the relative risk for microvascular complications decreases by 37%, diabetes related deaths by 21%, and myocardial infarction by 14%.¹⁴ Yet only 57%

of patients in this study had an HbA1c test within the previous 6 months, of whom more than half (53%) had levels of HbA1c higher than those recommended by guidelines.

That over two-thirds of the patients had never received written information about diabetes nor were referred to a dietician, or attended a diabetes clinic, is noteworthy. Patients' views about preferred strategies to address their needs in terms of better management of their diabetes demonstrate that language and lack of services tailored to the needs of the Arabic speaking community are barriers to access services provided to mainstream patients. Better models of care stemming from the primary hub of general practice need to be developed and evaluated for Arabic speaking people with diabetes.

Implications of this study for general practice

- Glycaemic control predicts quality of life in Arabic speakers with diabetes.
- Better models of care are needed to achieve optimal outcomes including glycaemic control and referral to other diabetes services such as Educator and Dietician.
- Accessible linguistically and culturally relevant services and patient education programs are perceived as valuable.

Conflict of interest: none declared.

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