

The effect of impaired fasting glycaemia on quality of life in a South Australian population

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INTRODUCTION

Diabetes is recognised as a Health Priority in South Australia because of the significant burden it places on the community in terms of health, social and economic and emotional costs. The North West Adelaide Health Study has been designed to examine a large representative population sample according to stage of disease to identify characteristics of each stage.

In order to determine the effect of impaired fasting glucose (IFG) on quality of life, the following stages of diabetes progression based on fasting plasma glucose (FPG) were studied: no diabetes, impaired fasting glucose, and diabetes. These stages of disease progression were compared on the eight dimensions of the SF-36, namely Physical Functioning, Role Physical, Bodily Pain, General Health, Vitality, Social Functioning, Role Emotional and Mental Health.

METHODS

Data were obtained from the North West Adelaide Health Study (n=4060), a representative cohort study. All households within this region with a telephone connected and the telephone number listed in the Electronic White Pages were eligible for random selection. Within each household, the person who had their birthday last and was aged 18 years or older, was selected for interview and invited to attend the Study clinic. Of those interviewed, 69% participated in the clinic visit. Data was obtained from self-reported questionnaires and biomedical measurements.

IFG was defined as a FPG level of at least 6.1mmol/L and less than 7.0mmol/L, and diabetes was defined as a FPG level of 7.0mmol/L or greater or self-reported doctor diagnosis.

RESULTS

The prevalence of no diabetes, IFG and diabetes are shown in Table 1.

Table 1: Prevalence of no diabetes, IFG, and diabetes

	n	%
No Diabetes	3618	89.1
IFG	175	4.3
Diabetes	267	6.6
Total	4060	100.0

Controlling for the effects of age and sex, those with IFG scored significantly lower than those with normal glucose levels on the Physical Functioning, Bodily Pain, and General Health dimensions of the SF-36 (Figure 1, *).

Compared to those with diabetes however, those with IFG scored significantly higher on the Physical Functioning, General Health, Vitality, Social Functioning and Role Emotional dimensions of the SF-36, when controlled for age and sex (Figure 1, +).

Standardised scores were calculated for each SF-36 dimension by dividing the differences between the SF-36 scores for those with diabetes or IFG or normal glucose and the norm of the overall study population and dividing by the population standard deviation. The standard score for the overall study population was set at zero. Figure 1 shows a comparison of standard scores for the eight SF-36 dimensions by stage of diabetes progression.

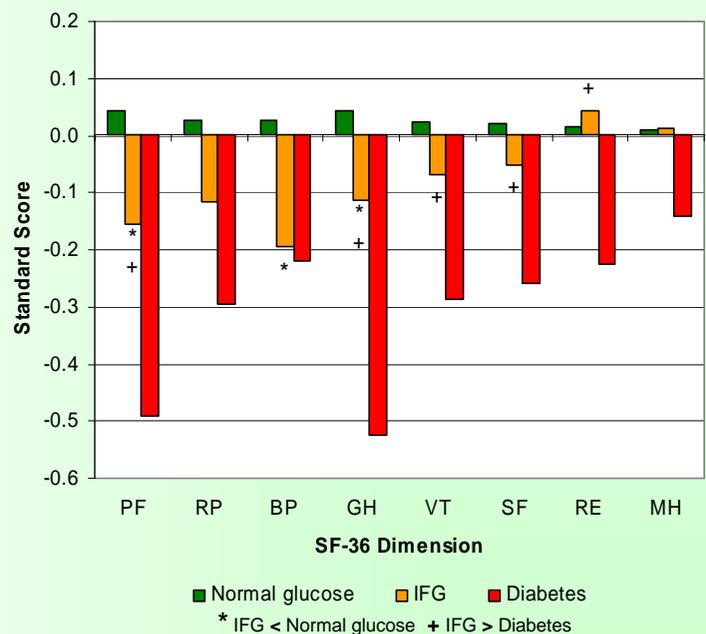


Figure 1: Comparison of standardised SF-36 scores by stage of diabetes progression

CONCLUSIONS

This analysis of health-related quality of life by stage of diabetes progression demonstrates that even before impaired glucose metabolism develops into diabetes, it has a significant effect on quality of life. This provides support for interventions that delay or halt the progression of diabetes.