Estimating a preference-based single index measuring the quality of life impact of self-management for diabetes

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Abstract

Objective: Self-management is becoming increasingly important in diabetes, but is neglected in conventional preference-based measures. The objective of this paper is to generate health state utility values for a novel classification system measuring the quality of life impact of self-management for diabetes, that can be used to generate Quality Adjusted Life Years (QALYs).

Methods: A large online survey was conducted using a discrete choice experiment (DCE) with duration as an additional attribute on members of the UK general population (n=1,493) to elicit values for health (social limitations, mood, vitality, hypoglycaemia) and non-health (stress, hassle, control, support) aspects of self-management in diabetes. The data was modelled using a conditional fixed-effects logit model and utility estimates were anchored on the 1-0 full health-dead scale.

Results: The model produced significant and consistent coefficients, with one logical inconsistency and three insignificant coefficients for the milder levels of some attributes. The anchored utilities range from 1 for the best state to -0.029 for the worst state (meaning worse than dead) defined by the classification system.

Conclusion: The results presented here can potentially be used to generate utility values capturing the day to day impact of interventions in diabetes on both health and self-management. These utility values can potentially be used to generate QALYs for use in economic models of the cost-effectiveness of interventions in diabetes.

Introduction

A widely used technique of economic evaluation compares the incremental cost per Quality Adjusted Life years (QALYs) of health care technologies (known as cost-utility analysis), where the QALY combines both quantity and quality of life by assigning a value to quality of life on a zero (for states as bad as being dead) to one (for full health) scale. There are many different methods for obtaining these health state utility values, and often a generic preference-based measure of health such as the EQ-5D (1) or SF-6D (2, 3) is used. There is increasing interest in taking account of the impact of the process of treatment, such as different self-management regimes in long-term conditions such as diabetes, asthma and COPD. However, to date, preference-based measures have tended to focus on health related quality of life, meaning that they exclude important non-health benefits of treatment.

New interventions used in the treatment of chronic long-term conditions such as diabetes mellitus often have implications for self-management, but existing measures do not take into account the impact of different self-management regimes on patient quality of life from their perspective. There are three diabetes-specific preference-based measures: Diabetes Utility Index (DUI) (4, 5), DHP-3D and DHP-5D (6). The focus of the classification systems of these measures is around health, though the DUI includes one dimension of "satisfaction with managing diabetes" which will include some of the impact of self-management. Other measures that are diabetes-specific that may also capture impact of self-management, such as Problem Areas in Diabetes (PAID) (7), are not preference-based and so cannot be used directly to generate QALYs. This means that economic analyses typically take into account the impact of diabetes on health through blood glucose, e.g., health-related complications of diabetes, but not the non-health impact of self-management, or use vignette-based approaches that are not based on patient experience. There is a concern that focussing on health outcomes may potentially discourage innovations aiming to promote patient experience. It is vital to be able to accurately measure the true value of interventions in long-term conditions, particularly around interventions designed to improve self-management. Diabetes is a growing concern, with costs rising globally due to increased prevalence and increased complexity of treatment. In the UK alone in 2015 £936 million was spent on prescriptions for diabetes (8), and the total cost is estimated to be £23.7 billion (9). NICE recommends structured education as one of nine key care process checks in diabetes which benefits patients through giving them the confidence and skills to self-manage their condition (10). However, of those patients who are newly diagnosed with diabetes less than 6% have been recorded as attending such a course on self-management.

This study uses a newly developed classification system, Health and Self-Management in Diabetes (HASMID), that was developed to directly consider the impact of different self-management regimes on patient quality of life from their own perspective (11). The measure is self-reported by patients with diabetes and includes questions covering both HRQoL and the impact of self-management. However, the measure cannot be used in economic evaluation in its current form without means of generating preference-based scoring.

This project generates health state utility values for the HASMID classification system (11). Utility values are generated for all states described by the classification system where these are anchored on a common scale where 1 represents optimal health and the impact of self-management, and 0 represents death. These utility values can then be used to estimate QALYs for use in cost-utility analysis of self-management interventions for diabetes, for submission to agencies such as NICE (National Institute of Health and Care Excellence) (12) or the Pharmaceutical Benefits Advisory Committee (13).

Methods

Classification system

HASMID was developed to capture the impact of self-management on quality of life in diabetes, with four dimensions covering HRQoL (mood, hypoglycaemic attacks, vitality and social limitations) and four dimensions covering self-management (control, hassle, stress, support) each with four severity levels (e.g. never, sometimes, usually and always) (see Figure 1). HRQoL dimensions were taken from the DHP-5D (6), a diabetes preference-based measure developed from the Diabetes Health Profile (DHP) (14, 15) and the SF-36 (the vitality item) (16). The development of HASMID and the self-management dimensions in particular involved multiple stages including a literature review, interviews with patients with type 1 and type 2 diabetes, a focus group, and Public and Patient Involvement using a PPI panel and is reported in detail elsewhere (11). Current research assessing the psychometric performance and factor structure of the HASMID measure using a large online and postal survey of people with both type 1 and type 2 diabetes suggest that there are three factors: self-management (control, hassle, stress, support); mood; health-related quality of life (hypoglycaemic attacks, vitality, social limitations). The ongoing analysis suggests that most items are able to differentiate by treatment modality, Type 1/Type 2 of diabetes and show responsiveness following a change in health or self-management over time.

Valuation technique

Recent years has seen the application of discrete choice experiments (DCE) that are arguably a cognitively simpler task to understand and can be administered online. A DCE typically involves the choice of two scenarios, where each scenario is described using a selected level for each attribute. These methods have been used in the past to value processes of care, and more recent research has used DCE to value classification systems of health, to generate preference based-measures, by anchoring the modelled latent values onto the 0-1 scale required for QALYs through the inclusion of an additional attribute for duration (17-21), often called DCE_{TTO}. DCE with a duration attribute, DCE_{TTO}, was selected in this study to enable the estimation of utility values for each state defined by the classification system that can be used to generate QALYs.. The DCE tasks ask respondents to choose between two profiles: health description A and health description B. Each profile is made up of a selection of one level for each dimension in the classification system (see figure 2 for an example).

Selecting profiles for the DCE survey

The duration levels were selected as 1 year, 4 years, 7 years and 10 years, since these have been successfully used in previous DCE_{TTO} valuation surveys of the SF-6Dv2 and EQ-5D valuation (21). Since it was infeasible to value all possible combinations of health states, NGene software was used to select a subset of profiles using D-optimal methods (22) to produce a design that would enables estimation of a pre-specified regression model with precision for each parameter. NGene designs are optimised for the multinomial logit model using D-error as the model assessment criteria. The swapping algorithm within NGene was used to iterate and improve the design until there was no improvement in D-error for 2 minutes, as these swapping methods have been shown to produce generally monotonic coefficient patterns in previous DCE_{TTO} studies (23). The final design generated using this process was piloted using a small online survey of 50 respondents and used to generate priors (preliminary coefficient estimates) for each attribute level of each dimension. The choice sets for the main study design were then generated using these priors. The rationale for using this process was that prior information of the magnitude of the parameters for the pre-specified regression model enabled the design to be more efficient. In total 120 choice sets were selected across 10 survey versions, with 12 choice sets per survey.

The DCE survey

Respondents were recruited using a market research agency via an existing online panel and were targeted to be representative of the UK population in terms of age and gender. In return for completing the survey respondents received a nominal amount of vouchers that can be accumulated and exchanged for goods.

At the start of the survey respondents were shown the project information sheet and gave consent to take the survey. First respondents completed questions on their sociodemographics and health including whether they have diabetes. Second respondents were provided with information describing what it is like to live with diabetes and completed the HASMID classification for themselves if they had diabetes or otherwise imagining someone with diabetes. This ensured that respondents were familiar with the different attributes and severity levels in the classification system. Third respondents completed one practice DCE and 12 DCE tasks (see Figure 2 for an example task).

Prior to undertaking the main survey, the survey was taken to a general Patient and Public Involvement (PPI) panel for comments and then piloted with 50 members of the general population to inform the final survey design. The PPI panel were asked for feedback on the survey including wording, explanation of the cost attribute and the recruitment strategy.

Analysis

Socio-demographic and self-reported health characteristics were summarised. The DCE_{TTO} data was analysed using the model specification suggested by Bansback et al (2012) (17):

$$\mu_{ij} = \alpha_i + \beta_1 t_{ij} + \beta'_2 \mathbf{x}_{ij} t_{ij} + \varepsilon_{ij} \tag{1}$$

where μ_{ij} represents the utility of individual i for health/self-management state profile j, α_i is an individual specific constant term, ε_{ij} represents the error term, β_1 is the coefficient for duration in life years t and β'_2 represents the coefficients on the 24 interaction terms of duration and attribute variables composed of levels 2, 3 and 4 of each health and self-management attributes (where level one is the baseline). Duration was modelled as a linear and continuous variable. These coefficients are the 'unanchored' values, as they are latent values which are not anchored onto a scale that can be meaningfully interpreted. This model was estimated using the conditional logit fixed effects model with cluster adjusted standard errors. Model

performance was checked by the sign, significance and logical consistency of coefficients, log likelihood and pseudo R-squared.

The coefficients are anchored onto the QALY scale where full health is one, and states as bad as being dead are zero using the marginal rate of substitution, which is calculated by dividing the coefficient for each level γ of each attribute δ by the coefficient for duration, $\frac{\beta_{2\gamma\delta}}{\beta_1}$. Standard errors of the QALY estimates were calculated using the Delta method. These are summed across attributes to generate an overall QALY value of health and self-management. A consistent model was estimated, where adjacent inconsistent coefficients are merged into a single variable, to ensure a final model where a worsening in health/self-management leads to the same or lower utility values.

Preference heterogeneity, where preferences vary across respondents, according to sociodemographic characteristics was examined by including interaction effects for sex, age, low or high household income group, having diabetes and EQ-5D-5L value.

Results

The sample

The socioeconomic and health-related characteristics of the sample are presented in Table 1, and compared to the UK general population. The sample has 1,493 respondents and is similar to the UK population in terms of gender and employment status, but has a lower proportion of individuals of age 65 and higher.

Regression analysis

The conditional fixed-effects logit model with cluster adjusted standard errors is reported in table 2 for the anchored values. Results are reported for the first model and a fully consistent model (where adjacent inconsistent coefficients are merged into a single variable). For the unanchored models (coefficients not reported) coefficients for all health and self-management attributes multiplied by duration are negative as expected, where individuals prefer to live with better health and self-management levels, as increasing severity reduces utility. The duration coefficient also has the expected positive coefficient, showing that individuals prefer to live longer, as increasing duration increases utility. In the anchored models reported in

Table 2 (where the coefficients for the health and self-management attributes multiplied by duration are divided by the coefficient for duration) all values are negative as expected.

All anchored values for the health and self-management attribute levels are logically consistent. In the standard model the values for stress levels 2 and 3 are the same when rounded to 3 decimal places, suggesting that respondents do not distinguish between "You find your life with diabetes is *sometimes* stressful" (level 2) and "You find your life with diabetes is *often* stressful" (level 3) in terms of their impact on utility. In the consistent model stress level 2 x duration and stress 3 x duration were merged into a single variable of stress level 2 or 3 x duration and the model was re-estimated. In the consistent model all values are significant with the exception of level 2 coefficients for mood, hypoglycaemic attacks and social limitations, suggesting that there is no difference between level 2 of these attributes and the reference level 1 of the attribute. Across all attributes, vitality has the largest absolute values at levels 3 and 4 and social limitations has the smallest absolute value at level 4 in the conditional fixed-effects logit regression, meaning that these are the most and least important attributes respectively in terms of their impact on utility. In terms of the attributes covering self-management, stress has the largest absolute value at level 4 and control has the smallest absolute value at level 4.

Preference heterogeneity according to sociodemographic characteristics was examined through the inclusion of interaction effects for sex, age, low or high household income group, having diabetes, EQ-5D-5L value, yet there was no systematic pattern of significant coefficients observed.

Discussion

This paper presents the valuation of a classification system that brings together the impact of diabetes on health and the self-management of the condition on day to day life in a single descriptive system. This has two benefits. First the description of self-management is generic and is concerned with the way it impacts on the day to day lives of people with diabetes rather than using descriptions of specific interventions as done in previous research (e.g. such as injections). Second this allows the classification system and the utility values reported here to potentially be used to compare different self-management interventions for diabetes using QALYs, through the use of a single value to represent both. This is important since many interventions have implications for both health and the self-management of the condition. The classification system was valued by members of the general population as recommended to inform decision-making for agencies such as NICE (12). The results presented here can be potentially used in economic models of the

cost-effectiveness of interventions in diabetes to value the day to day impact of the interventions for health and self-management, and these could be potentially combined with the QALY impact of longer term complications from diabetes.

Our results show that the four self-management attributes are perceived to have an important impact on the lives of patients with diabetes and are similar in magnitude to more conventional health attributes like mood, social limitations and hypoglycaemia. This is important as it suggests that changes in self-management alone will impact on utility values for use in economic models. Research examining this impact is encouraged. Further research is also ongoing to compare utility values derived from the HASMID preference-based measure that was designed to assess the quality of life impact of self-management to utility values derived from the EQ-5D-5L which is a generic preference-based measure of health.

The consistent model estimated using the conditional logit is recommended as the best currently available to determine the preference weights that can be used to generate QALYs for use in economic evaluation. The model has a large number of significant coefficients, all consistent coefficients (note there is only one merged variable for stress levels 2 and 3), and as severity of health/self-management increases utility reduces. The range of utility values for this model range from 1.0 to -0.029, which is a smaller range than the UK values for EQ-5D (1 to -0.594) (12) and EQ-5D-5L (1 to -0.281) (24). All responses have been included in the main models presented here to ensure that the preference weights reflect all data and all preferences, and therefore do not impose any subjective judgements on which preferences are considered inappropriate for inclusion. The model therefore benefits from the large sample size of 1,493 respondents.

We argue that the HASMID preference-based measure can be used to generate QALYs using the preference weights generated here. However, the scope of the HASMID classification system to cover the impact of self-management on quality of life broadens the scope of the QALYs that are generated to cover aspects beyond health per se. The expansion of the QALY to incorporate outcomes beyond health has been gaining interest in recent years, with the development of preference-based measures such as ASCOT (25) that was designed to assess the impact of interventions in social care to generate a social-care related QALY. Interest has also been raised in the development of a capability-adjusted life year (26) and the development of a broader quality of life measure describing functioning and well-being, and this option is being explored in the E-QALY project being undertaken by a number of the authors (DR, JC, JB) (27). However, the broadening of the scope of the QALY beyond health raises issues of comparability with QALYs that capture health alone. The two will

not be measuring the same concepts, even where they are valued using the same method (e.g. time trade-off (TTO)) as different descriptive systems have been shown elsewhere to generate different utility values on the same patients (see for example (28). However, the advantage of broadening the scope of QALYs beyond health can have advantages in terms of comparability of assessments undertaken across different sectors (e.g. health and social care) and different government agencies. Further research is encouraged examining the impact of broadening the scope of QALYs to capture outcomes beyond health.

An alternative approach to QALYs that can be used to assess the impact of self-management on quality of life is to generate scoring for the HASMID classification system through the use of willingness-to-pay. This can then be used to provide monetary estimates of the impact of self-management that can be used to inform cost-benefit analysis to assess interventions. This approach has been undertaken for the HASMID classification system using an online DCE involving an attribute representing cost to the patient, DCE_{WTP}, and is reported elsewhere (29). The advantage of using a monetary valuation of the impact of self-management on quality of life is that this is a non-health outcome that may be more naturally measured using money rather than QALYs that capture the equivalent number of years in full health. Monetary valuation removes the assumption that people will trade years of life for improvements in the quality of life impact of self-management, but instead requires the assumption that people will pay for these improvements. However in the UK where this study was conducted healthcare is provided free at the point of consumption (with minimal prescription charge) by the publicly funded National Health Service (NHS) and it is possible that this affects peoples' responses. Table 3 provides a comparison of the relative results of the DCE_{TTO} results reported here and the DCE_{WTP} results for the same classification system (29). Table 3 presents the absolute ranking of the level 4 utility decrements/willingness to pay to avoid for the 8 dimensions in the classification system. All values were elicited using an online survey of the UK general population. Relative rankings are largely similar across both methods, with vitality having the largest absolute values, and hypoglycaemia attacks and social limitations having the smallest absolute values. In addition the rankings of the factors of health and self-management are largely consistent across the two methods. However the rankings of control, stress and mood vary across method, with control in particular being more important relative to the other attributes using the DCE_{TTO} methods than using the DCE_{WTP} method. This indicates that choice of method is important, as the two methods will generate different results which will impact on the results of economic evaluation. Further research examining this is encouraged.

Limitations of the study include a number arising from the use of an existing online panel recruited via a market research agency to provide the sample. Members of the panel may differ to the general population through their exclusion of people who are computer illiterate or without internet access, though in terms of their measurable sociodemographic characteristics they are largely representative of the UK general population. Another potential limitation is that the analyses presented here assume that the impact of each attribute was additive and models have not been presented that account for preference heterogeneity, such as latent class or mixed logit models, as it is unclear how these types of models can be used to generate a single set of preference weights for use to generate QALYs. Another possible limitation is that respondents were not able to state that they could not choose between the two health descriptions in the DCE surveys, though this should not have impacted upon the results as if respondents are genuinely indifferent their choice will be random.

Another possible limitation is the large number of attributes in the DCE that may mean that respondents did not fully consider all attributes when making their choices. Similar valuation surveys of health state classification systems have also included a large number of attributes (for example (30) included 11 attributes), yet in the design used to select choice sets some attributes were fixed at the same level across both health descriptions in the DCE. Surveys could potentially be easier for respondents by fixing the levels of some attributes and this should be explored in future research.

The final potential limitation concerns the DCE_{TTO} elicitation technique that has been used to generate the health state utility values. Whilst there is no gold standard method to elicit utility values, different elicitation methods generate different results meaning that the choice of elicitation technique will impact on results. For example, DCE_{TTO} has been found to generate lower values than TTO (17). Further research is encouraged comparing DCE_{TTO} to other elicitation methods to enable a better understanding of the difference between utility values elicited using the newer technique of DCE_{TTO} and more established techniques such as TTO.

This study has generated preference weights for the HASMID classification system that can potentially be used to assess the impact of self-management on quality of life. These results can be used in economic evaluation of future self-management interventions in diabetes. These utility weights are currently the best available for the HASMID classification system, though it is important to note that different values may have been derived using a different elicitation technique.

Acknowledgements

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Table 1: Sociodemographic characteristics of respondents to the DCE survey

	Sample (n=1,493)	UK general population
Male	48.8%	49.1%
Age 18-44	47.4%	46.6% [σ]
45-64	38.0%	32.5%
65+	14.6%	20.9%
Degree	52.4%	
Partnership status: Single	25.1%	
Partner	65.1%	
Separated	1.5%	
Divorced	6.2%	
Widowed	2.1%	
Employed	61.8%	61.7%
Retired	18.9%	13.9%
Housework	6.4%	4.3%
Student	3.8%	9.3%
Seeking work	1.3%	
Unemployed	2.3%	4.4%
Long term sick	5.0%	4.3%
Other	0.5%	2.2%
EQ-5D, mean (s.d.)	0.79 (0.25)	
Do not have diabetes	86.5%	
Have Type 1 diabetes	2.9%	
Have Type 2 diabetes	9.7%	
Have another form of diabetes	0.9%	

Note: Statistics for England in the Census 2011. The census includes persons aged 16 and above whereas this study only surveys persons aged 18 and above. [σ] Age distribution is here reported as the percentage of all adults aged 18 and over.

Table 2: Anchored estimates for the DCE with duration analysis (DCE$_{TTO}$)

	First model	Consistent model
Mood L2	-0.0018 (0.0126)	-0.0018 (0.0125)
Mood L3	-0.0614*** (0.0118)	-0.0614*** (0.0118)
Mood L4	-0.1351*** (0.0120)	-0.1351*** (0.0120)
Hypoglycaemia L2	-0.0140 (0.0120)	-0.0140 (0.0120)
Hypoglycaemia L3	-0.0385*** (0.0126)	-0.0386*** (0.0126)
Hypoglycaemia L4	-0.0891*** (0.0119)	-0.0891*** (0.0119)
Vitality L2	-0.0313*** (0.0116)	-0.0313*** (0.0116)
Vitality L3	-0.1149*** (0.0109)	-0.1148*** (0.0109)
Vitality L4	-0.1839*** (0.0125)	-0.1839*** (0.0125)
Social limitations L2	-0.0102 (0.0126)	-0.0102 (0.0126)
Social limitations L3	-0.0229** (0.0117)	-0.0229** (0.0117)
Social limitations L4	-0.0643*** (0.0116)	-0.0643*** (0.0116)
Control L2	-0.0453*** (0.0124)	-0.0453*** (0.0124)
Control L3	-0.0890*** (0.0110)	-0.0889*** (0.0110)
Control L4	-0.1266*** (0.0114)	-0.1266*** (0.0114)

Hassle L2	-0.0644*** (0.0117)	-0.0644*** (0.0117)
Hassle L3	-0.1022*** (0.0117)	-0.1021*** (0.0117)
Hassle L4	-0.1382*** (0.0117)	-0.1382*** (0.0116)
Stress L2	-0.0772*** (0.0115)	-0.0770*** (0.0094)
Stress L3	-0.0769*** (0.0112)	
Stress L4	-0.1622*** (0.0111)	-0.1622*** (0.0111)
Support L2	-0.0357*** (0.0112)	-0.0357*** (0.0112)
Support L3	-0.0775*** (0.0121)	-0.0775*** (0.0121)
Support L4	-0.1298*** (0.0115)	-0.1298*** (0.0114)
Pseudo-R2	0.121	0.121
AIC	21877.3	21875.3
BIC	22089.5	22079.0

Notes: Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. AIC =Akaike Information Criterion; BIC = Schwartz Information Criterion.

Table 3: Absolute size ranking of level 4 anchored coefficients for the DCE with duration analysis (DCE$_{TTO}$) and DCE with cost analysis (DCE$_{WTP}$)

Absolute ranking of level 4 coefficient	DCE$_{TTO}$		DCE$_{WTP}$	
	Dimension	Utility decrement	Dimension	Willingness to pay to avoid
1	Vitality	-0.1839	Vitality	-£236.17
2	Stress	-0.1622	Control	-£177.22
3	Hassle	-0.1382	Hassle	-£164.95
4	Mood	-0.1351	Stress	-£148.25
5	Support	-0.1298	Support	-£119.19
6	Control	-0.1266	Mood	-£108.25
7	Hypoglycaemia	-0.0891	Hypoglycaemia	-£96.38
8	Social limitations	-0.0643	Social limitations	-£68.12

Figure 1: Health and self-management in diabetes (HASMID) classification system

Dimension	Level	Wording
Mood	**1**	You <u>never</u> find yourself losing your temper over small things
	2	You <u>sometimes</u> find yourself losing your temper over small things
	3	You <u>usually</u> find yourself losing your temper over small things
	4	You <u>always</u> find yourself losing your temper over small things
Hypoglycaemic attacks	**1**	You <u>never</u> worry about going hypo
	2	You <u>sometimes</u> worry about going hypo
	3	You <u>usually</u> worry about going hypo
	4	You <u>always</u> worry about going hypo
Vitality	**1**	You are <u>never</u> tired
	2	You are <u>sometimes</u> tired
	3	You are <u>usually</u> tired
	4	You are <u>always</u> tired
Social Limitations	**1**	Your days are <u>never</u> tied to meal times
	2	Your days are <u>sometimes</u> tied to meal times
	3	Your days are <u>usually</u> tied to meal times
	4	Your days are <u>always</u> tied to meal times
Control	**1**	You feel you have <u>a lot of control</u> of your diabetes
	2	You feel you have <u>some control</u> of your diabetes
	3	You feel you have <u>little control</u> of your diabetes

	4	You feel you have <u>no control</u> of your diabetes
Hassle	1	You find your life with diabetes is <u>never</u> a hassle
	2	You find your life with diabetes is <u>sometimes</u> a hassle
	3	You find your life with diabetes is <u>often</u> a hassle
	4	You find your life with diabetes is <u>always</u> a hassle
Stress	1	You find your life with diabetes is <u>never</u> stressful
	2	You find your life with diabetes is <u>sometimes</u> stressful
	3	You find your life with diabetes is <u>often</u> stressful
	4	You find your life with diabetes is <u>always</u> stressful
Support (All support you have; from family, friends and health care professionals)	1	You feel <u>totally supported</u> with your diabetes
	2	You feel you have <u>a lot of support</u> with your diabetes
	3	You feel you have <u>a little support</u> with your diabetes
	4	You feel you have <u>no support</u> with your diabetes

Figure 2: Example DCE question

Health description A	Health description B
You live for **4 years** with the following then you die:	You live for **1 year** with the following then you die:
You <u>usually</u> find yourself losing your temper over small things	You <u>never</u> find yourself losing your temper over small things
You <u>sometimes</u> worry about going hypo	You <u>never</u> worry about going hypo
You are <u>always</u> tired	You are <u>never</u> tired
Your days are <u>sometimes</u> tied to meal times	Your days are <u>sometimes</u> tied to meal times
You feel you have <u>a lot of</u> control of your diabetes	You feel you have <u>some</u> control of your diabetes
You find your life with diabetes is <u>sometimes</u> a hassle	You find your life with diabetes is <u>often</u> a hassle
You find your life with diabetes is <u>sometimes</u> stressful	You find your life with diabetes is <u>sometimes</u> stressful
You feel you have <u>no</u> support with your diabetes	You feel you have <u>a lot</u> of support with your diabetes
Which do you prefer?		