Rationale for Supplementary Materials

Supplementary Table S1 – The STROBE Checklist was included to provide the reporting guidelines we used for a cross-sectional study.

Supplementary Table S2 – We included the complete list of the possible comorbidities included in recruitment selection of the study.

Supplementary Table S3 – We included the table for the additional adjusted analyses that were requested, which include adjustments for ethnicity, duration of diabetes, employment, and family support.

**Supplementary Table 1.** Strobe Checklist for Cross-Sectional Design STROBE Statement—Checklist of items that should be included in reports of *cross-sectional studies* 

	Item No	Recommendation	
Title and abstract	1	(a) Indicate the study's design with a commonly used term in the title or the abstract	
		(b) Provide in the abstract an informative and balanced summary of what was done and what was found	
Introduction			
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported	
Objectives	3	State specific objectives, including any prespecified hypotheses	
Methods			
Study design	4	Present key elements of study design early in the paper	
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	
Participants	6	(a) Give the eligibility criteria, and the sources and methods of selection of participants	
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	
Data sources/	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of	
measurement		assessment methods if there is more than one group	
Bias	9	Describe any efforts to address potential sources of bias	
Study size	10	Explain how the study size was arrived at	
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	
Statistical methods	12	(a) Describe all statistical methods, including those used to control for confounding	
		(b) Describe any methods used to examine subgroups and interactions	
		(c) Explain how missing data were addressed	
		(d) If applicable, describe analytical methods taking account of sampling strategy	
		(e) Describe any sensitivity analyses	
Results			
Participants	13*	(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed	
		eligible, included in the study, completing follow-up, and analysed	
		(b) Give reasons for non-participation at each stage	
		(c) Consider use of a flow diagram	
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders	

Outcome data	15*	Report numbers of outcome events or summary measures	
Main results	16	(a) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval).	
		Make clear which confounders were adjusted for and why they were included	
		(b) Report category boundaries when continuous variables were categorized	
		(c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	
Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses	
Discussion			
Key results	18	Summarise key results with reference to study objectives	
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude	
		of any potential bias	
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar	
		studies, and other relevant evidence	
Generalisability	21	Discuss the generalisability (external validity) of the study results	
Other information			
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the	
		present article is based	

# Supplementary Table 2. List of Comorbidities Included in Recruitment Selection

Comorbidities in Addition to Type 1 or 2 Diabetes				
Heart disease (including ischemic, valvular, congestive, arrhythmic, congenital disease)				
Heart failure				
Stroke				
Mental health disorders (stress, anxiety, depression, multiple depressive disorders)				
Cancer (excludes nonmelanoma skin cancer)				
Respiratory (asthma, chronic bronchitis, COPD)				
Musculoskeletal (arthritis, osteoporosis)				
Kidney disease				
Eye disease				
Nerve damage				

# Supplementary Table 3. Additional Adjusted Analyses

Adjusted  $\beta$ -values of the selected associations between DDS and SF-12, PACIC and DCS and DCS and DDS with their respective selected sub-scores.

Scale Comparisons	β-value, CI (P-value)
SF-12 and DDS - emotional burden sub-score	-3.635, CI: -5.75 to -1.50 (P= 0.0010)
SF-12 mental component sub-score and DDS - emotional burden sub-score	-3.34, CI: -4.91 to -1.77 (P<0.0001)
PACIC and DCS	-6.7, CI: -9.1 to -4.32 (P<0.0001)
PACIC - patient activation sub-score and DCS	-4.305, CI: -6.25 to -2.375 (P<0.0001)
DCS and DDS (total scores)	0.0139, CI: 0.00372 to 0.0024 (P=0.0078)
DCS -uncertainty sub-score and DDS -emotional burden sub-score	0.00435, CI: -0.0066 to 0.0153 (P=0.4330)

 $\beta$  Values were adjusted for age, education, income, ethnicity, duration of diabetes, employment, and family support.