

Data supplement

Table DS1 Effect size estimates ^a					
	AQoL-8D	EQ-5D	SF-6D	HUI3	15D
DASS stress categories					
Normal v. mild	0.56	0.41	0.57	0.49	0.57
Moderate v. mild	0.32	0.16	0.11	0.12	0.27
Severe v. mild	0.79	0.52	0.45	0.44	0.62
Extremely severe v. mild	1.03	1.06	0.90	0.89	0.92
DASS depression categories					
Normal v. mild	0.78	0.59	0.41	0.66	0.54
Moderate v. mild	0.37	0.20	0.56	0.06	0.33
Severe v. mild	0.99	0.36	0.80	0.53	0.56
Extremely severe v. mild	1.76	0.97	1.34	1.23	1.19
DASS anxiety categories					
Normal v. mild	0.40	0.33	0.31	0.27	0.33
Moderate v. mild	0.40	0.19	0.42	0.27	0.45
Severe v. mild	0.76	0.55	0.74	0.55	0.78
Extremely severe v. mild	1.26	0.94	1.07	0.92	1.12
K10 category					
Likely to be well v. mild depression/anxiety	1.20	0.52	0.98	0.63	0.75
Moderate v. mild depression/anxiety	0.76	0.29	0.49	0.36	0.38
Severe v. mild depression/anxiety	1.53	0.97	1.12	1.13	1.08
AQoL-8D, Assessment of Quality of Life – Eight Dimension Scale; EQ-5D, EuroQoL–five dimension; SF-6D, Short Form 6D; HUI3, Health Utilities Index Mark 3; DASS-21, Depression Anxiety Stress Scale; K10, Kessler Psychological Distress Scale. a. Cohen's <i>d</i> statistics presented in the Table, adjusted for uneven group sample sizes.					

Table DS2 Goodness-of-fit results for transformation Depression Anxiety Stress Scales (DASS-21) and/or the Kessler Psychological Distress Scale (K10) scores to utilities ($n = 917$)^a

Method	(1) Mean utility	(2) Min utility	(3) Max utility	(4) Correlation	(5) MAE	(6) RMSE	(7) R-square
<i>Panel A – AQoL-8D</i>							
Observed	0.4517	0.1049	0.9961	–	–	–	–
DASS-21							
OLS ^b	0.4517	0.2469	0.7504	0.7232	0.0987	0.1275	0.5229
GLM	0.4514	0.2153	0.7509	0.7230	0.0986	0.1275	–
K10							
OLS	0.4517	0.2295	0.8488	0.7502	0.0954	0.1220	0.5629
GLM ^b	0.4514	0.2011	0.8698	0.7513	0.0951	0.1218	–
DASS-21 and K10							
OLS ^b	0.4517	0.2135	0.8332	0.7771	0.0903	0.1162	0.6039
GLM	0.4518	0.2062	0.8438	0.7757	0.0904	0.1165	–
<i>Panel B – EQ-5D</i>							
Observed	0.5871	–0.3020	1.0000	–	–	–	–
DASS-21							
OLS ^b	0.5871	0.1659	0.7849	0.5765	0.1554	0.2055	0.3323
GLM	0.5876	0.1852	0.7640	0.5758	0.1556	0.2056	–
K10							
OLS ^b	0.5871	0.0942	0.8352	0.6009	0.1499	0.2010	0.3610
GLM	0.5878	0.1829	0.7829	0.5960	0.1501	0.2020	–
DASS-21 and K10							
OLS ^b	0.5871	0.0825	0.8357	0.6251	0.1472	0.1963	0.3907
GLM	0.5883	0.1646	0.7895	0.6183	0.1481	0.1977	–
<i>Panel C – SF-6D</i>							
Observed	0.6012	0.3010	1.0000	–	–	–	–
DASS-21							
OLS	0.6012	0.4424	0.7443	0.6220	0.0637	0.0837	0.3869
GLM ^b	0.6012	0.4442	0.7425	0.6222	0.0637	0.0837	–
K10							
OLS	0.6012	0.4668	0.7983	0.6791	0.0601	0.0785	0.4611
GLM ^b	0.6012	0.4682	0.8111	0.6808	0.0599	0.0783	–
DASS-21 and K10							
OLS	0.6012	0.4532	0.7925	0.6910	0.0593	0.0773	0.4782
GLM ^b	0.6012	0.4596	0.8050	0.6911	0.0592	0.0773	–
<i>Panel D – HUI3</i>							
Observed	0.5331	–0.3291	1.0000	–	–	–	–
DASS-21							
OLS ^b	0.5331	0.0199	0.8904	0.6180	0.1869	0.2354	0.3819
GLM	0.5334	0.1298	0.9079	0.6121	0.1878	0.2368	–
K10							
OLS ^b	0.5331	–0.0354	0.9750	0.6426	0.1848	0.2294	0.4129
GLM	0.5342	0.1099	0.9036	0.6395	0.1852	0.2302	–
DASS-21 and K10							
OLS ^b	0.5331	–0.0660	0.9172	0.6727	0.1763	0.2216	0.4525
GLM	0.5352	0.1015	0.9450	0.6590	0.1802	0.2253	–
<i>Panel E – 15D</i>							
Observed	0.7588	0.3059	1.0000	–	–	–	–
DASS-21							
OLS	0.7588	0.4803	0.8955	0.6247	0.0793	0.1009	0.3902
GLM ^b	0.7588	0.5079	0.9056	0.6248	0.0792	0.1009	–
K10							
OLS ^b	0.7588	0.5300	0.9374	0.6210	0.0791	0.1013	0.3857
GLM	0.7589	0.5550	0.9538	0.6192	0.0792	0.1014	–
DASS-21 and K10							
OLS ^b	0.7588	0.4637	0.9269	0.6634	0.0760	0.0967	0.4401
GLM	0.7589	0.4974	0.9398	0.6604	0.0761	0.0970	–

MAE, mean absolute error; RMSE, root mean squared error; OLS, ordinary least squares.

a. Results in bold are best performing results.

b. Chosen methods.

Table DS3 Transformation equations from Depression Anxiety Stress Scales (DASS-21) and/or the Kessler Psychological Distress Scale (K10) to multi-attribute utility instruments^a (without including country dummies)

Instruments	Transformation equations
Panel A – AQoL-8D	
DASS-21	$AQoL-8D = 0.7503867 - 1.516705 \times DASS-21D - 0.6564706 \times DASS-21A + 1.408039 \times DASS-21D^2 + 0.9375113DASS-21A^2$
K10	$AQoL-8D = \exp(0.2121519 - 3.613014K10)$
DASS-21 and K10	$AQoL-8D = 1.07836 - 0.500666 \times DASS-21D - 2.612654 \times K10 + 2.607031 \times K10^2$
Panel B – EQ-5D	
DASS-21	$EQ-5D = 0.7848984 - 0.8450922 \times DASS-21A - 1.496702 \times DASS-21D^2$
K10	$EQ-5D = 0.8594439 - 2.944893 \times K10^2$
DASS-21 and K10	$EQ-5D = 0.8584133 - 0.4632134 \times DASS-21A - 0.6400611 \times DASS-21D^2 - 1.87376 K10^2$
Panel C – SF-6D	
DASS-21	$SF-6D = \exp(-0.3219665 - 0.6644112 \times DASS-21D - 0.4628189 \times DASS-21A + 0.0224419 \times \text{Male})$
K10	$SF-6D = \exp(-0.0059462 - 2.165542 \times K10 + 1.319628K10^2)$
DASS-21 and K10	$SF-6D = \exp(-0.0384405 - 0.1992122 \times DASS-21D - 0.170769 \times DASS-21A - 1.84622 \times K10 + 1.357882 \times K10^2)$
Panel D – HUI3	
DASS-21	$HUI3 = 0.8632086 - 1.263676 \times DASS-21D - 0.4887384 \times DASS-21A$
K10	$HUI3 = 0.8924695 - 3.681704 \times K10^2 - 0.0552875 \times \text{Male}$
DASS-21 and K10	$HUI3 = 0.9289973 - 0.7260911 \times DASS-21D - 2.484936 \times K10^2 - 0.0394635 \times \text{Male}$
Panel E – 15D	
DASS-21	$15D = \exp(-0.0994472 - 0.4573922 \times DASS-21D - 0.6515793 \times DASS-21A)$
K10	$15D = 1.031581 - 0.9345305 \times K10$
DASS-21 and K10	$15D = 0.9891885 - 0.1393141 \times DASS-21D - 0.3077726 \times DASS-21A - 0.5497805 \times K10$
<p>DASS-21D, DASS-21 depression score; DASS-21A, DASS-21 anxiety score; K10, K10 score; Male, dummy for male; exp, exponential function. a. The DASS-21 and K10 scores included in the regression model were calculated as original scores divided by 100.</p>	