CORRIGENDUM

Relation of health-related quality of life to metabolic syndrome, obesity, depression, and comorbid illness

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After publication of the above article,¹ we discovered that the measurement of glucose, triglycerides and HDL-cholesterol (criteria required for the diagnosis of the metabolic

Table 1 Baseline characteristics of participants with and without metabolic syndrome^a

	Participants without metabolic syndrome (n = 70)	Participants with metabolic syndrome (n = 320)	P-value
<i>Demographics</i>			
Age	47.9 (12.3)	52.3 (11.2)	0.003
Gender			0.003
Male (%)	7.1	22.8	
Female (%)	92.9	77.2	
Race (n = 380)			0.349
White (%)	57.4	61.2	
Black (%)	42.6	38.8	
Education			0.527
Less than high school (%)	4.3	5.6	
High school (%)	15.7	20.9	
College (%)	34.3	36.6	
College or greater (%)	45.7	36.9	
Household income (n = 378)			0.064
< \$25 000 (%)	14.7	12.6	
\$25 000 – < \$35 000 (%)	13.2	12.3	
\$35 000 – < \$70 000 (%)	23.5	40.3	
≥ \$70 000 (%)	48.5	34.8	
<i>Clinical and metabolic variables</i>			
Weight (kg)	102.3 (18.0)	109.1 (18.3)	0.005
Body mass index (kg m ⁻²)	37.5 (4.7)	38.7 (4.7)	0.058
Functional comorbidity index ^b (n = 381)	2.3 (1.2)	2.4 (1.1)	0.608
Number of medications	2.2 (2.0)	3.6 (2.8)	<0.001
Fasting blood glucose (mg dl ⁻¹)	88.0 (13.1)	108.0 (35.3)	<0.001
Total cholesterol (mg dl ⁻¹)	191.8 (32.6)	197.0 (40.0)	0.309
LDL cholesterol (mg dl ⁻¹)	120.3 (28.7)	123.4 (36.0)	0.501
HDL cholesterol (mg dl ⁻¹)	52.9 (12.2)	43.2 (12.7)	<0.001
Triglycerides (mg dl ⁻¹)	92.9 (29.9)	152.3 (71.4)	<0.001
Systolic blood pressure (mm Hg)	114.7 (10.98)	121.7 (15.3)	<0.001
Diastolic blood pressure (mm Hg)	74.5 (9.23)	76.7 (10.9)	0.116
Diabetes (%)	4.3	22.5	<0.001
Hyperlipidemia (%)	31.4	69.4	<0.001
Hypertension (%)	48.6	76.6	<0.001
Smoker (%) (n = 389)	7.1	10.3	0.414
Number of servings of alcohol consumed per week	1.3 (2.1)	1.2 (2.0)	0.836

Abbreviations: HDL, high-density lipoprotein; LDL, low-density cholesterol. ^aVariables are reported as means (s.d.), unless otherwise stated. ^bObesity and diabetes were excluded from calculation of the functional comorbidity index score (39) if participants met both of those conditions.

Table 2 Baseline scores on the health-related quality of life and depression measures for participants with and without metabolic syndrome^a

	Participants without metabolic syndrome (n = 70)	Participants with metabolic syndrome (n = 320)	P value
PCS-12 (n = 378)	43.9 (9.2)	43.5 (9.8)	0.802
MCS-12 (n = 378)	49.2 (10.1)	49.3 (9.8)	0.908
EQ-5D (n = 358)	0.852 (0.128)	0.820 (0.143)	0.110
IWQoL-Lite (n = 389)	70.1 (23.4)	68.4 (21.6)	0.553
PHQ-8 (n = 382)	5.9 (4.9)	5.2 (4.0)	0.185

Abbreviations: EQ-5D, EuroQoL-5D; IWQoL, Impact of Weight on Quality of Life; MCS-12, Mental Component Summary; PCS-12, Physical Component Summary; PHQ-8, Patient Health Questionnaire-8. ^aVariables are reported as means (s.d.).

syndrome) was affected by a change in the laboratory assay that occurred during the baseline data collection. (We were not aware of this change until examining the end-of-study data and comparing them with the baseline.) A Deming regression analysis, which takes into account the measurement error for both sets of measurements, was performed.² As a result of the corrected metabolic values, an additional 51 participants were reclassified at baseline as having metabolic syndrome on the basis of meeting the glucose, triglyceride or HDL-cholesterol criteria. In total, 320 (82%) participants were found to meet the criteria for metabolic syndrome, compared with the 269 (69%) who were identified in the original report. We have corrected baseline demographic, clinical and metabolic data for participants with and without the metabolic syndrome. The revised table (Table 1) is reproduced here. Findings were essentially unchanged from what we previously reported, although BMI no longer differed significantly between groups ($P=0.058$). Baseline scores on the Medical Outcomes Short-Form 12 (SF-12), EuroQual 5D (EQ-5D), Impact of Weight on Quality of Life (IWQoL-Lite) and Patient Health Questionnaire 8 (PHQ-8) were also recalculated (corrected Table 2 is reproduced here), and there were no significant differences between participants with and without metabolic syndrome, as originally reported.

The main conclusions of the study were not affected by the change in the number of participants with metabolic syndrome. In the unadjusted analysis, metabolic syndrome was not associated with impaired QoL on any of the measures. In the adjusted models, only depression remained significantly associated with all four measures, as observed in the original report. As previously reported, secondary analyses showed no evidence of an interaction between metabolic syndrome and obesity class, or between metabolic syndrome and diabetes.

We appreciate the opportunity given to us to correct the tables, and we regret any confusion this may have caused. The overall conclusions of the study were unchanged; metabolic syndrome was not associated with worse health-related quality of life on two generic and one disease-specific quality of life measure. We would like to apologize for these errors.

References

- 1 Vetter ML, Wadden TA, Lavenberg J, Moore RH, Volger S, Perez JL *et al.* Relation of health-related quality of life to metabolic syndrome, obesity, depression, and comorbid illness. *Int J Obes* 2011; **35**: 1087–1094.
- 2 Linnet K. Performance of Deming regression analysis in case of misspecified analytical error ratio in method comparison studies. *Clin Chem* 1998; **44**: 1024–1031.