Supplement 8. The results of the sensitivity analysis.

The results of the sensitivity analysis stratified by physical activity outcome assessed in quantitative evidence (likelihood) are reported separately for each barrier and enabler in Table 1 in this supplement. Sensitivity analysis stratified by the physical outcome highlighted the following changes in the evidence in comparison to the main results. Studies (n = 2; Snipelisky et al., 2017; Witham, Argo, Johnston, Struthers, & McMurdo, 2006)) assessing physical activity using accelerometer did not support depression as a considerable barrier to physical activity (Table 2). Studies (n = 4; (Chien, Chen, Garet, & Wang, 2014; Lee et al., 2016; Moreno-Suarez, Liew, Dembo, Larbalestier, & Maiorana, 2019; Pozehl et al., 2018) assessing the relationships between energy expenditure (METs) provided evidence with moderate uncertainty regarding perceived symptoms in comparison to the main results suggesting that perceived symptoms is a barrier with low uncertainty in the evidence (Table 3). Studies (n = 3; (Alosco et al., 2012; Dontje et al., 2014; Werhahn et al., 2019) that assessed steps per day using an accelerometer suggest a considerably high uncertainty in the evidence regarding the barriers (i.e., Pro-BNP) and enablers (i.e., 6MWT, physical functioning, LVEF, Peak VO2), Table 4.

The findings of the meta-analysis restricted to the studies assessing self-reported physical activity duration per day (Table 5), self-reported exercise recommendation compliance (Table 6), self-reported general physical activity (IPAQ, Table 7), and physical activity as self-care behaviour (Table 8) did not differ from the main results. However, a study assessing exercise as a form of self-care provided evidence for only one of the enablers identified in this review – social support. Social support was not assessed as an enabler in studies with physical activity outcomes other than self-care (Table 8). The likelihood (quantitative evidence) and posterior (prior combined with likelihood) elicited from the evidence stratified by physical activity outcome are illustrated below in Figures 1-14.

Table 1. Likelihood: the summary results of the Bayesian meta-analysis of the quantitative evidence.

¤ **Construct**	Pooled *OR,* 95%*CrI**	Accelerometer units, *OR,* 95%*CrI*	Energy expenditure (METs, assessed objectively using accelerometer)	Exercise recommendation compliance (self-reported)	Duration per day (Mins/day, assessed objectively using accelerometer)	Self-reported general physical activity (International Physical Activity Questionnaire, IPAQ)	Steps per day (pedometer)	Exercise self-care behaviour (self-reported)
Age	-0.41 [-0.57; -0.25]	--	-1.46 [-1.66;-1.26]	--	-0.94 [-1.05;-0.83]	--	--	--
Six-minute Walking Test (6MWT) (*Soma in qual*)	1.77 [1.00; 2.54]	2.13 [1.91;2.34]	1.54 [1.43;1.65]	1.24 [0.97;1.51]	1.88 [1.77;1.99]	--	**3.27** **[-1.11;7.65]**	--
Perceived Symptoms	0.48 [0.40; 0.55]	--	0.29 [0.18;0.4]	--	0.66 [0.55;0.77]	--	--	--
Left Ventricular Ejection Fraction (LVEF), % (*Soma in qual*)	0.16 [-0.47; 0.79]	--	0.33 [0.15;0.51]	--	--	--	**1.78** **[-1.2;4.76]**	--
Self-efficacy	0.84 [0.61; 1.06]	--	0.36 [0.16;0.56]	--	0.64 [0.54;0.75]	1.88 [1.47;2.29]	--	--
Social support	0.76 [0.65; 0.87]	--	--	--	--	--	--	0.76 [0.65;0.87]
Comorbidity	-0.94 [-1.16; -0.72]	--	-0.55 [-0.66;-0.44]	--	-0.66 [-0.77;-0.55]	--	--	--
Negative attitude	-0.51 [-0.62; -0.40]	--	-0.55 [-0.66;-0.44]	--	-0.51 [-0.62;-0.4]	--	--	--
Physical functioning	0.90	1.3	0.55	--	0.82	--	**2.45**	--

¤ **Construct**	Pooled *OR,* 95%*CrI**	Accelerometer units, *OR,* 95%*CrI*	Energy expenditure (METs, assessed objectively using accelerometer)	Exercise recommendation compliance (self-reported)	Duration per day (Mins/day, assessed objectively using accelerometer)	Self-reported general physical activity (International Physical Activity Questionnaire, IPAQ)	Steps per day (pedometer)	Exercise self-care behaviour (self-reported)
	[-0.06; 1.86]	[1.19;1.41]	[0.44;0.66]		[0.71;0.93]		**[-1.07;5.97]**	
Positive attitude	1.02 [0.80; 1.23]	1.58 [1.26;1.9]	0.66 [0.55;0.77]	--	0.59 [0.48;0.7]	--	--	--
Depression	-0.54 [-0.71; -0.38]	**0.01** **[-0.1;0.12]**	-0.29 [-0.4;-0.18]	--	-0.48 [-0.59;-0.37]	--	--	--
Digoxin prescription	-1.06 [-1.33; -0.79]	-1.06 [-1.33;-0.79]	--	--	--	--	--	--
Doppler estimated filling pressure	-0.71 [-0.82; -0.60]	-0.71 [-0.82;-0.6]	--	--	--	--	--	--
Dysphoria	0.38 [0.11; 0.65]			0.38 [0.11;0.65]				
Employment	-0.21 [-0.42; 0.01]	--	-0.21 [-0.43;0.01]	--	-0.62 [-0.84;-0.4]	--	--	--
Ethnicity	0.32 [0.21; 0.42]	0.14 [0.03;0.25]	0.11 [0; 0.22]	--	0.7 [0.59;0.81]	--	--	--
HF duration	-0.95 [-1.19; -0.71]	--	-0.74 [-0.96;-0.52]	-1.21 [-1.48;-0.94]	--	--	--	--
HFrEF (Yes, vs HFpEF)	-0.22 [-0.49; 0.05]	--	-0.22 [-0.49;0.05]	--	-0.3 [-0.35;-0.25]	--	--	--
High pro-BNP	-1.16 [-1.21; -1.11]	-1.16 [-1.21;-1.11]	--	--	--	--	**1.44** **[-1.32;4.2]**	--
Hostility	0.79 [0.52; 1.06]			0.41 [0.52;1.06]				

¤ **Construct**	Pooled *OR,* 95%*CrI**	Accelerometer units, *OR,* 95%*CrI*	Energy expenditure (METs, assessed objectively using accelerometer)	Exercise recommendation compliance (self-reported)	Duration per day (Mins/day, assessed objectively using accelerometer)	Self-reported general physical activity (International Physical Activity Questionnaire, IPAQ)	Steps per day (pedometer)	Exercise self-care behaviour (self-reported)
Income	0.18 [0.02; 0.34]	--	0.18 [0.02;0.34]	--	--	--	--	--
Left Atrial Volume index (LAV)	-1.12 [-1.23; -1.01]	-1.12 [-1.23;-1.01]	--	--	--	--	--	--
Left Ventricular Assist Device (LVAD)	1.98 [1.60; 2.36]	--	1.98 [1.6; 2.36]	--	--	--	--	--
Left Ventricular Remodelling (LVR)	-0.20 [-0.31; -0.09]	-0.2 [-0.31;-0.09]	--	--	--	--	--	--
Living with Partner	-0.37 [-0.51; -0.24]	--	-0.37 [-0.51; -0.24]	--	--	--	--	--
Peak VO2	1.54 [-0.41; 3.49]	--	--	1.45 [1.13;1.77]		--	**2.52** **[-1.05;6.09]**	--
Perceived exertion	-0.98 [-1.52; -0.44]	--	--	--	--	-0.98 [-1.52;-0.44]	--	--
Quality of Life (QoL)	0.51 [0.39; 0.64]	0.94 [0.83;1.05]	-0.23 [-0.39;0.07]					
Renal function	1.07 [0.96; 1.18]	1.07 [0.96;1.18]	--	--	--	--	--	--
Smoking	0.66 [0.44; 0.88]	--	0.66 [0.44;0.88]	--	--	--	--	--
Symptom distress	-0.25 [-0.47;-0.03]	--	-0.25 [-0.47;-0.03]	--	--	--	--	--

Note: 1. The results stratified by physical activity outcome that are different to the results of the pooled meta-analysis are highlighted in **bold**. 2. When a study reported several physical activity outcomes only one outcome from each study was included in the pooled analysis (supplement 3). ***OR*** – odds ratio; ***CrI*** – credible interval; **METs** – metabolic equivalents, one MET is equal to the amount of oxygen consumed while sitting at rest and is equal to 3.5 ml O2 per kg body weight x min.

Table 2. Sensitivity analysis restricted to studies with accelerometer units outcome: the expected value for the log OR according to the expert elicitation task, quantitative evidence, and the posterior (qual + QUANT) describing the association between physical activity and identified barriers and enablers.

Construct	Prior		Likelihood		Posterior		
	Expected value (log OR)	95% CrI	Expected value (log OR)	95% CrI	Expected value (log OR)	95% Cr	SD (Uncertainty)
6MWT	0.02	[-0.2;0.24]	2.13	[1.91;2.34]	1.08	[0.97;1.19]	0.26
Physical Functioning	0.02	[-0.2;0.24]	1.3	[1.19;1.41]	0.88	[0.81;0.95]	0.21
Positive Attitude	0.69	[0.22;1.16]	1.58	[1.26;1.9]	1.22	[1.03;1.41]	0.34
Depression			0.01	[-0.1;0.12]			0.26
Ethnicity			0.14	[0.03;0.25]			0.26
highproBNP			-1.16	[-1.21;-1.11]			0.18
Renal Function			1.07	[0.96;1.18]			0.26
QoL			0.94	[0.83;1.05]			0.26
LAV			-1.12	[-1.23;-1.01]			0.26
LVR			-0.2	[-0.31;-0.09]			0.26
Digoxin			-1.06	[-1.33;-0.79]			0.41
Doppler			-0.71	[-0.82;-0.6]			0.26

Note. OR – Odds ratio; CrI – Credible Interval.

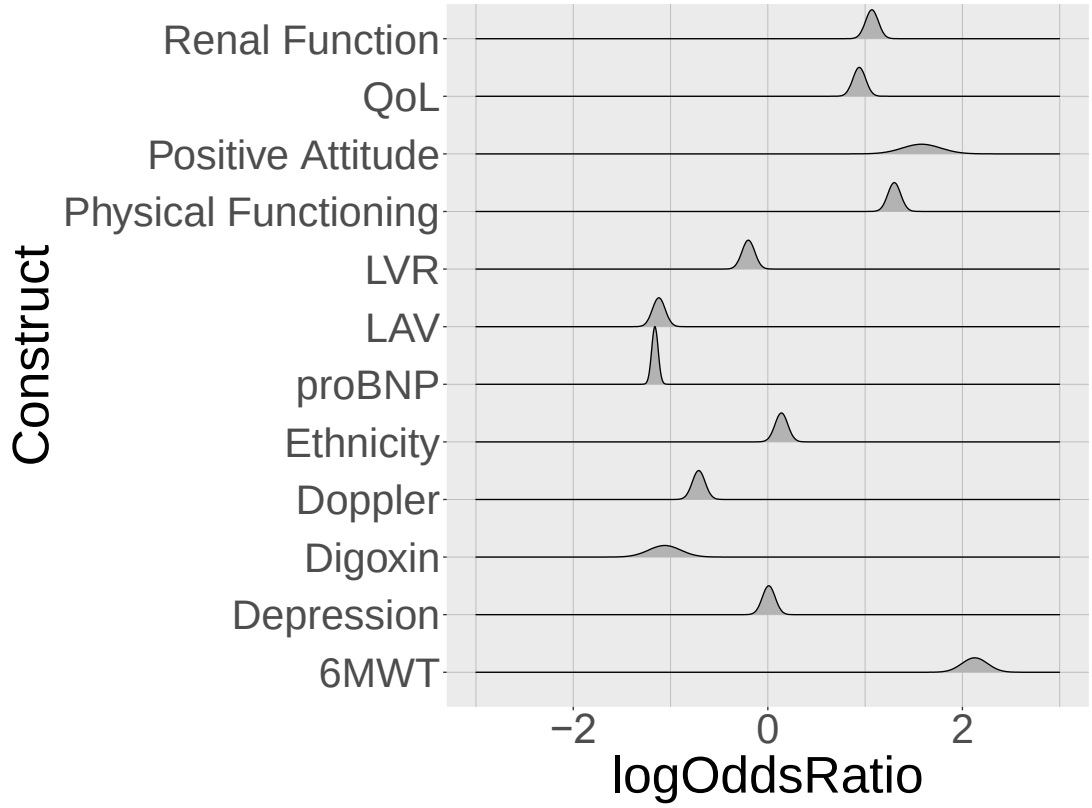

Figure 1. Accelerometer units: likelihood distribution for each construct.

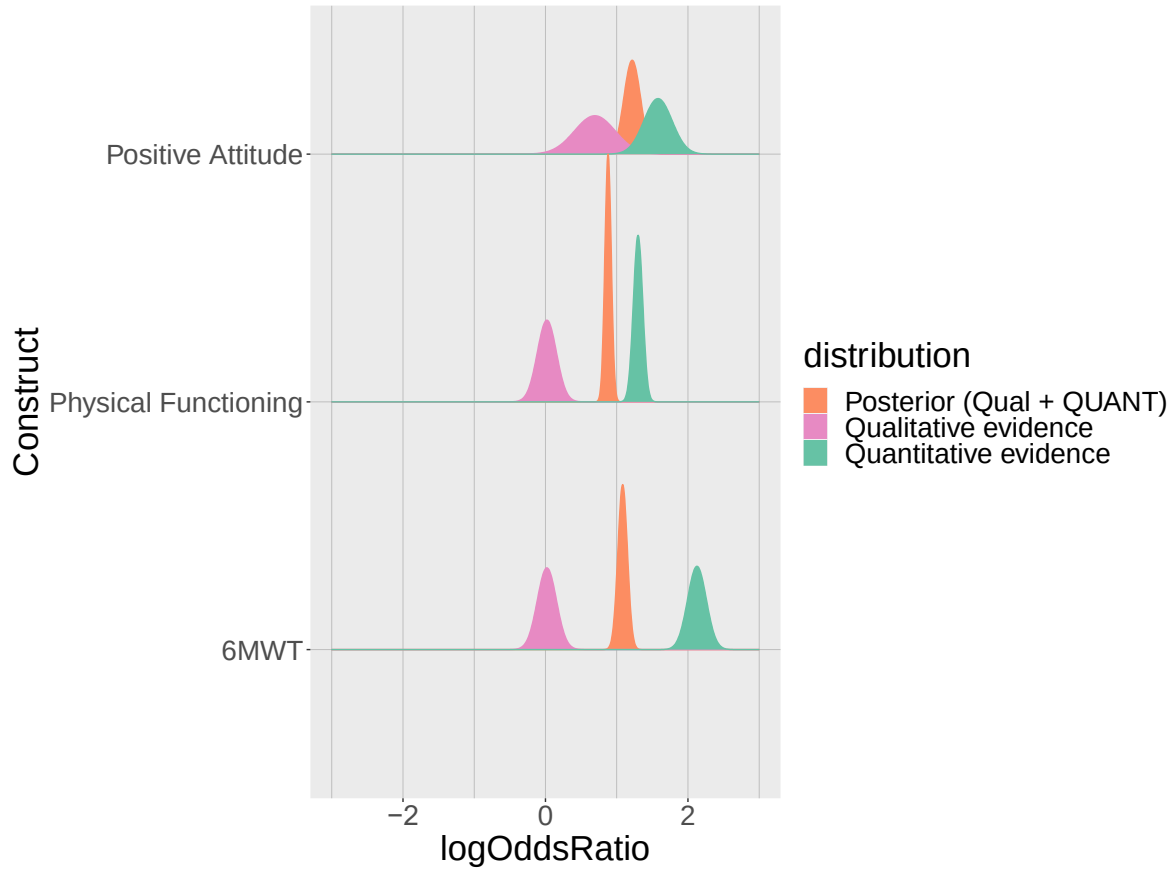

Figure 2 Accelerometer units: prior, likelihood and posterior distributions for each construct.

Table 3. Energy expenditure (METs, assessed objectively using accelerometer) outcome: the expected value for the log OR according to the expert elicitation task, quantitative evidence, and the posterior (qual + QUANT) describing the association between physical activity and identified barriers and enablers.

	Prior		Likelihood		Posterior		SD (Uncertainty)
Construct	Expected value (log OR)	95% CrI	Expected value (log OR)	95% CrI	Expected value (log OR)	95% Cr	
Age	0.01	[-0.4;0.42]	-1.46	[-1.66;-1.26]	-0.98	[-1.11;-0.85]	0.28
Comorbidity	0.01	[-0.41;0.43]	-0.55	[-0.66;-0.44]	-0.44	[-0.52;-0.35]	0.23
6MWT	0.02	[-0.2;0.24]	1.54	[1.43;1.65]	1.04	[0.97;1.11]	0.21
LVEF	0.02	[-0.2;0.24]	0.33	[0.15;0.51]	0.19	[0.09;0.29]	0.25
Physical Functioning	0.02	[-0.2;0.24]	0.55	[0.44;0.66]	0.38	[0.3;0.45]	0.21
Perceived symptoms	0.06	[-0.34;0.45]	0.29	[0.18;0.4]	0.24	[0.16;0.33]	0.23
Self-efficacy	0.06	[-0.15;0.27]	0.36	[0.16;0.56]	0.21	[0.11;0.32]	0.25
Negative attitude	0.09	[-0.38;0.56]	-0.55	[-0.66;-0.44]	-0.43	[-0.52;-0.34]	0.23
Positive attitude	0.69	[0.22;1.16]	0.66	[0.55;0.77]	0.67	[0.58;0.75]	0.23
Smoking			0.66	[0.44;0.88]			0.36
Income			0.18	[0.02;0.34]			0.31
Depression			-0.29	[-0.4;-0.18]			0.26
Partner			-0.37	[-0.51; -0.24]			0.41
HF Duration			-0.74	[-0.96;-0.52]			0.36
Ethnicity			0.11	[0; 0.22]			0.26
LVAD			1.98	[1.6; 2.36]			0.48
BMI			1.4	[1.18;1.61]			0.36
HFrEF (Yes)			-0.22	[-0.49;0.05]			0.41
Employment			-0.21	[-0.43;0.01]			0.36
Symptom distress			-0.25	[-0.47;-0.03]			0.36
QoL			-0.23	[-0.39;-0.07]			0.31

Note. OR – Odds ratio; CrI – Credible Interval.

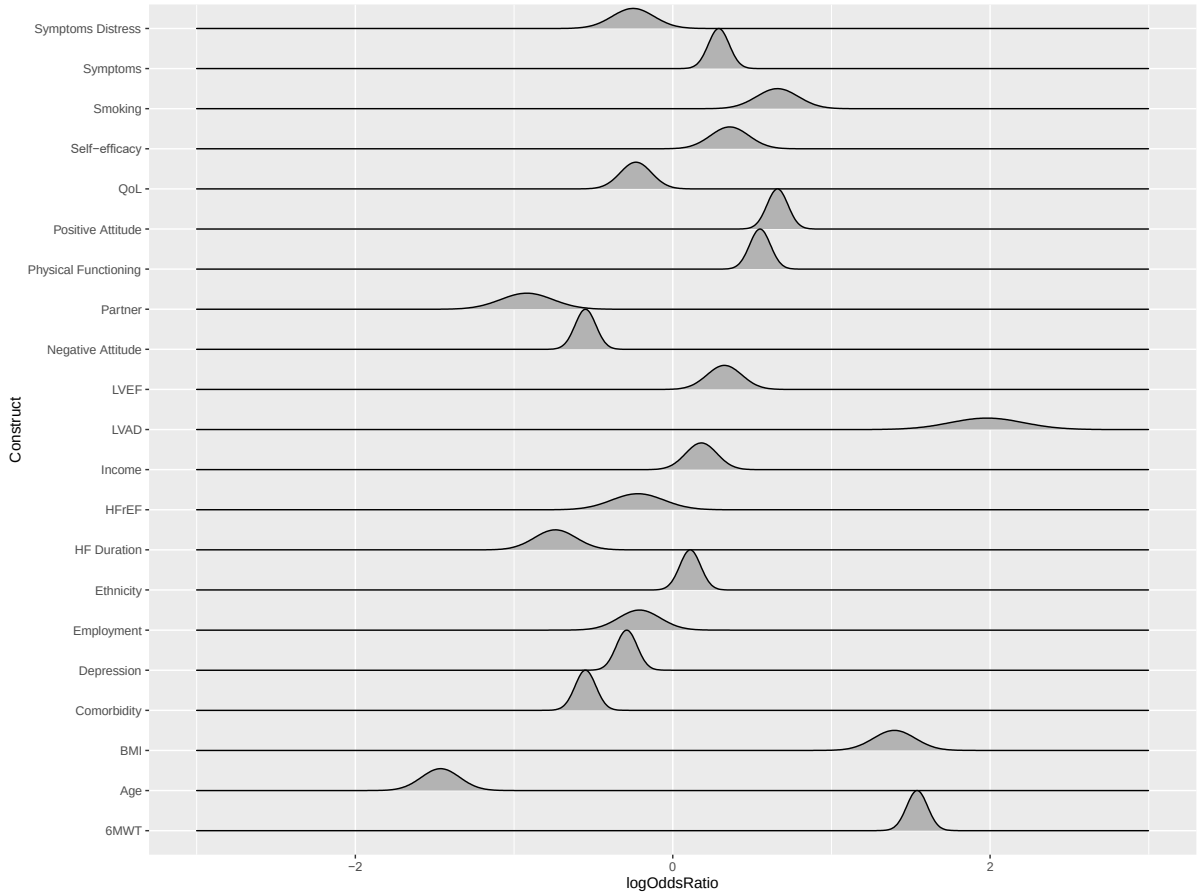

Figure 3. Energy expenditure: likelihood distribution for each construct.

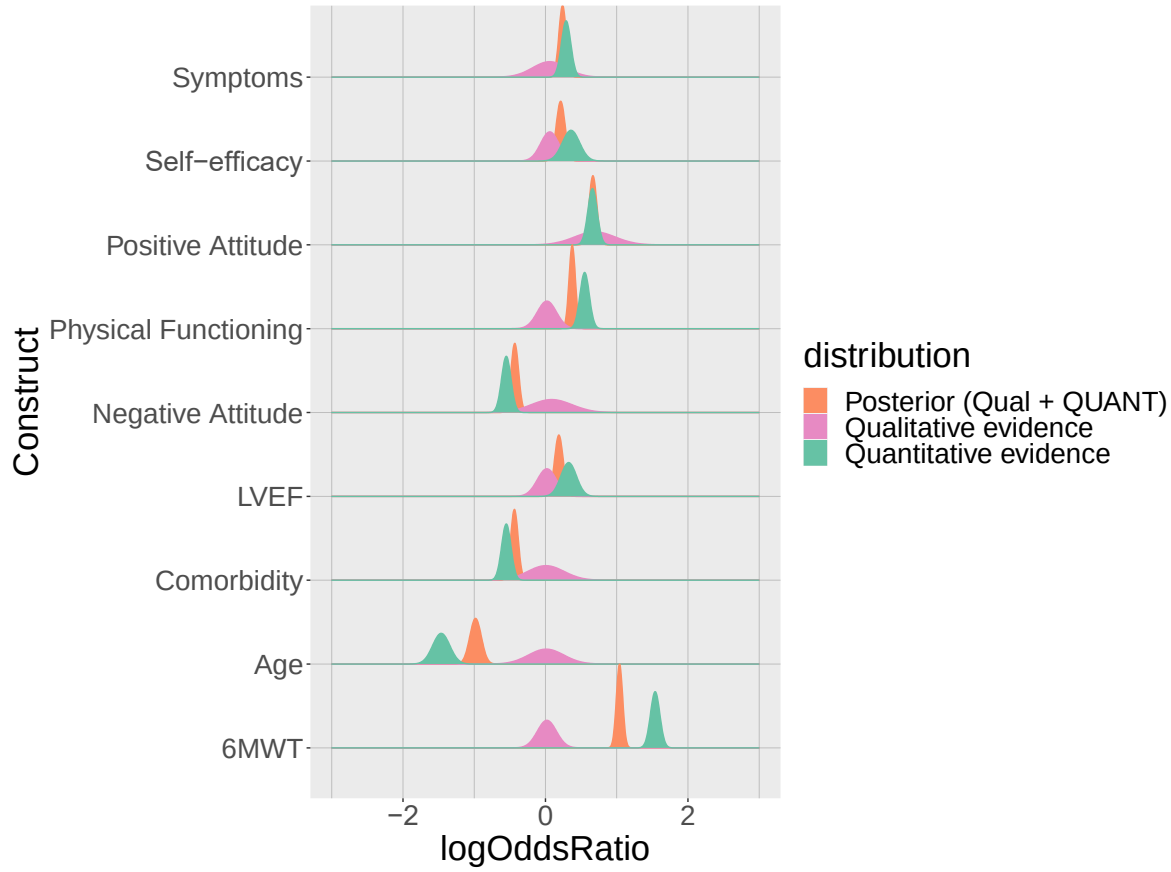

Figure 4. Energy expenditure: prior, likelihood and posterior distributions for each construct.

Table 4. Exercise recommendation compliance (self-reported) outcome: the expected value for the log OR according to the expert elicitation task, quantitative evidence, and the posterior (qual + QUANT) describing the association between physical activity and identified barriers and enablers.

Construct	Prior		Likelihood		Posterior		SD
	Expected value (log OR)	95% CrI	Expected value (log OR)	95% CrI	Expected value (log OR)	95% Cr	(Uncertainty)
Comorbidity	0.01	[-0.41;0.43]	-1.4	[-1.72;-1.08]	-0.79	[-0.97;-0.6]	0.33
6MWT	0.02	[-0.2;0.24]	1.24	[0.97;1.51]	0.57	[0.45;0.69]	0.27
PeakVO2			1.45	[1.13;1.77]			0.44
Depression			0	[-0.14;0.14]			0.29
Dysphoria			0.38	[0.11;0.65]			0.41
HF Duration			-1.21	[-1.48;-0.94]			0.41
Hostility			0.41	[0.52;1.06]			0.41

Note. OR – Odds ratio; CrI – Credible Interval.

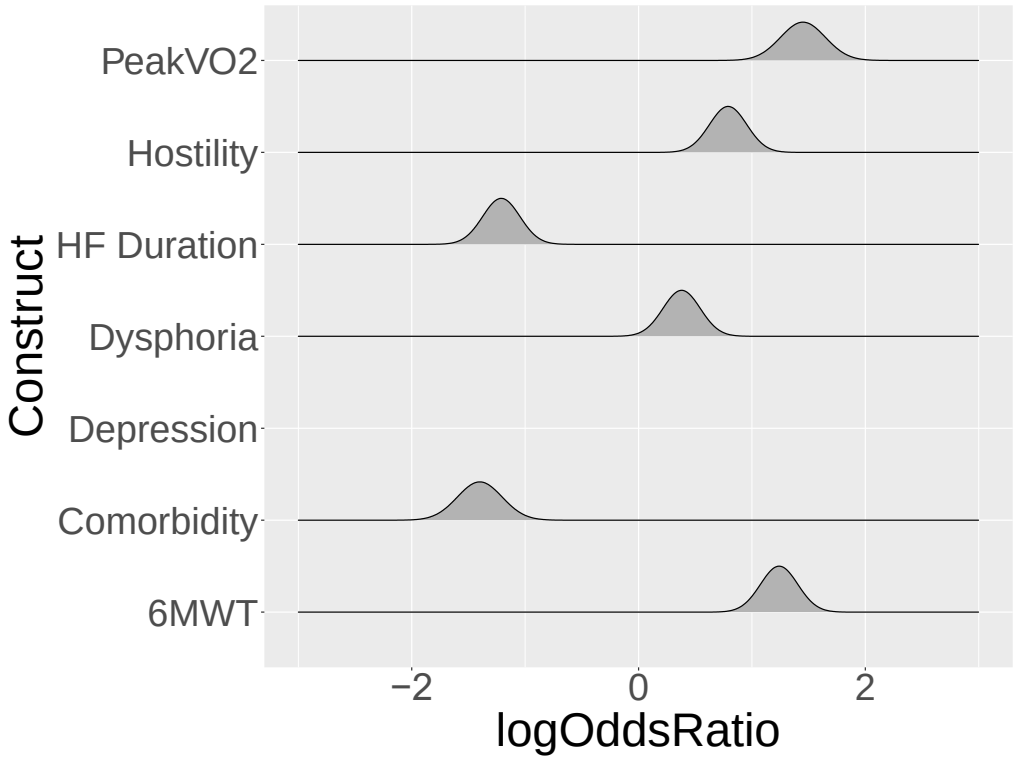

Figure 5. Exercise recommendation compliance: likelihood distribution for each construct.

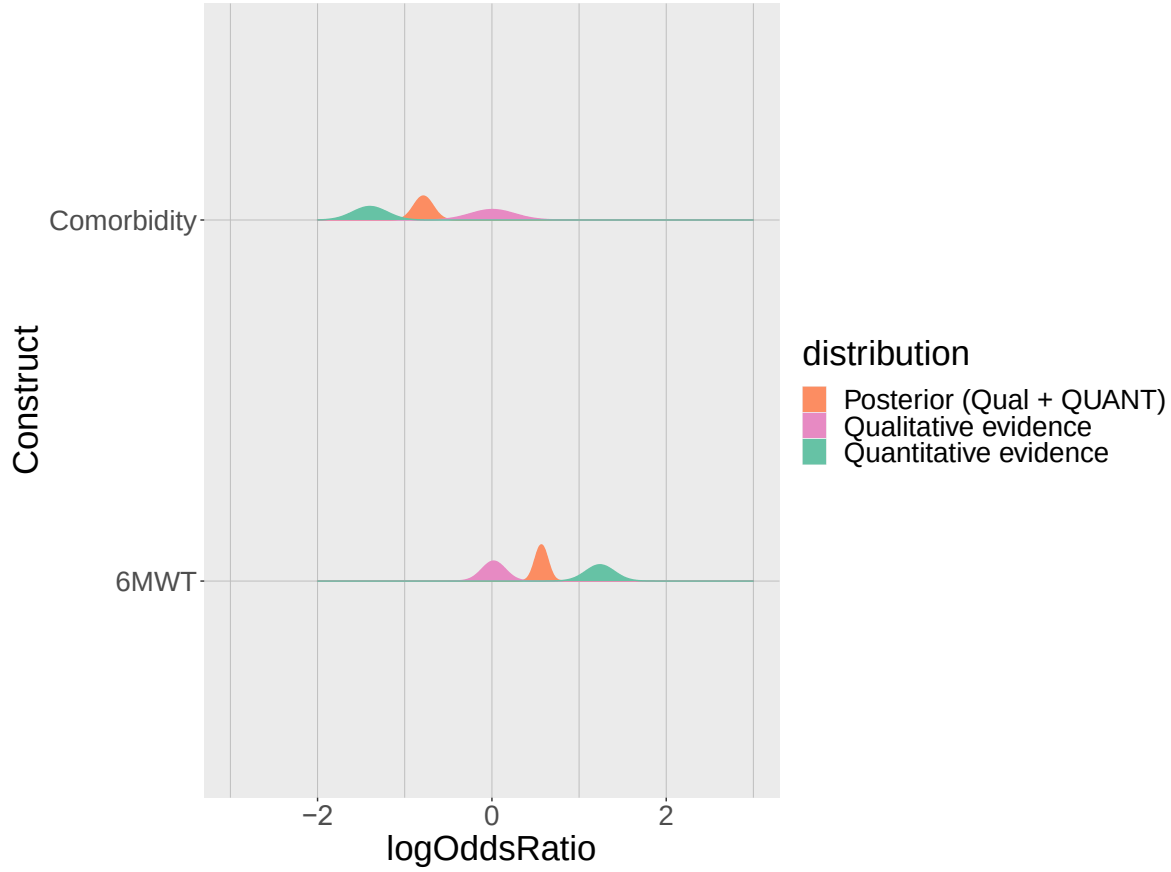

Figure 6. Exercise compliance and compare plot: prior, likelihood and posterior distributions for each construct.

Table 5. Duration per day (mins/day) outcome: the expected value for the log OR according to the expert elicitation task, quantitative evidence, and the posterior (qual + QUANT) describing the association between physical activity and identified barriers and enablers.

Construct	Prior		Likelihood		Posterior		SD (Uncertainty)
	Expected value (log OR)	95% CrI	Expected value (log OR)	95% CrI	Expected value (log OR)	95% Cr	
Age	0.01	[-0.4;0.42]	-0.94	[-1.05;-0.83]	-0.74	[-0.83;-0.66]	0.23
Comorbidity	0.01	[-0.41;0.43]	-0.66	[-0.77;-0.55]	-0.52	[-0.61;-0.44]	0.23
6MWT	0.02	[-0.2;0.24]	1.88	[1.77;1.99]	1.27	[1.2;1.34]	0.21
Physical Functioning	0.02	[-0.2;0.24]	0.82	[0.71;0.93]	0.56	[0.48;0.63]	0.21
Perceived Symptoms	0.06	[-0.34;0.45]	0.66	[0.55;0.77]	0.53	[0.45;0.62]	0.23
Self-efficacy	0.06	[-0.15;0.27	0.64	[0.54;0.75]	0.45	[0.37;0.52]	0.21
Negative Attitude	0.09	[-0.38;0.56]	-0.51	[-0.62;-0.4]	-0.4	[-0.49;-0.31]	0.23
Positive Attitude	0.69	[0.22;1.16]	0.59	[0.48;0.7]	0.61	[0.52;0.7]	0.23
Depression			-0.48	[-0.59;-0.37]			0.26
Ethnicity			0.7	[0.59;0.81]			0.26
BMI			-0.4	[-0.51;-0.29]			0.26
HFrEF (Yes)			-0.3	[-0.35;-0.25]			0.18
Employment			-0.62	[-0.84;-0.4]			0.36
QoL			0.51	[0.4;0.62]			0.26

Note. OR – Odds ratio; CrI – Credible Interval.

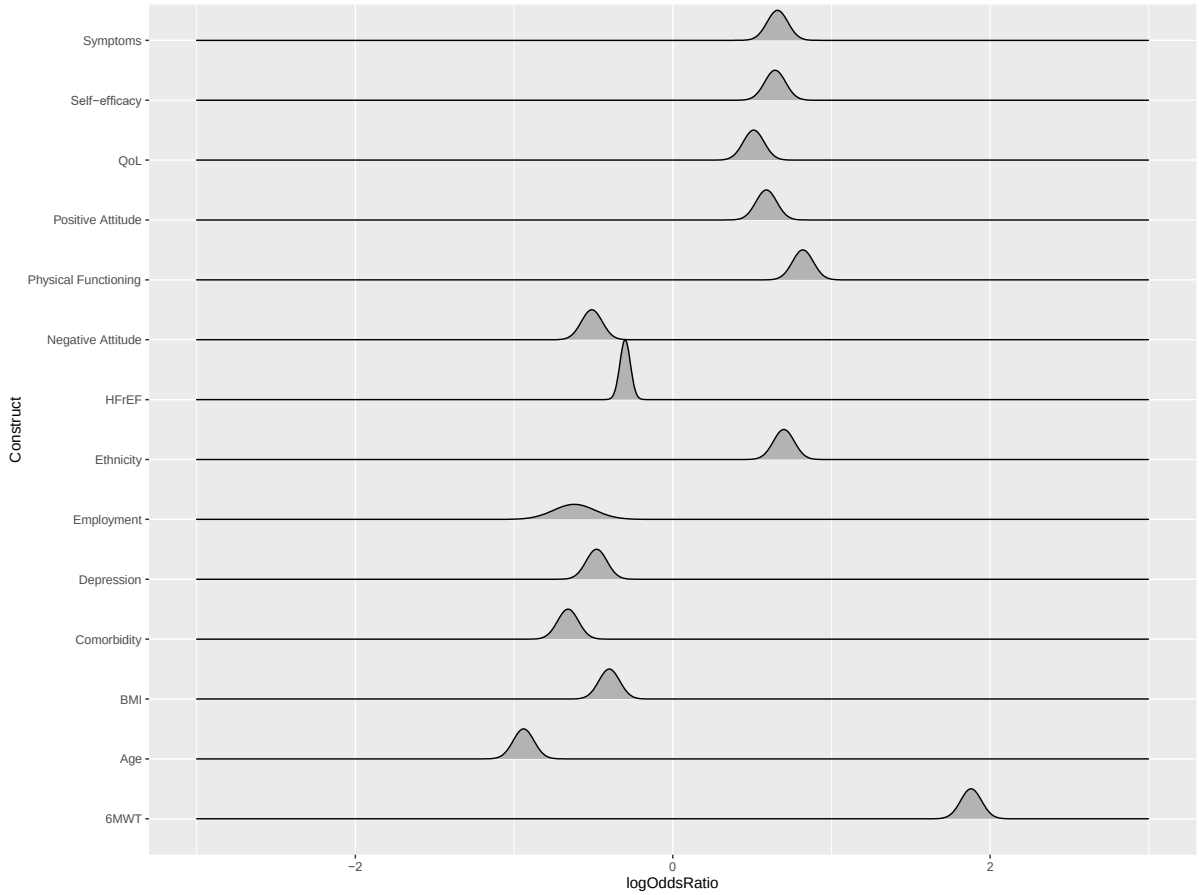

Figure 7. Duration (mins/day): likelihood distribution for each construct.

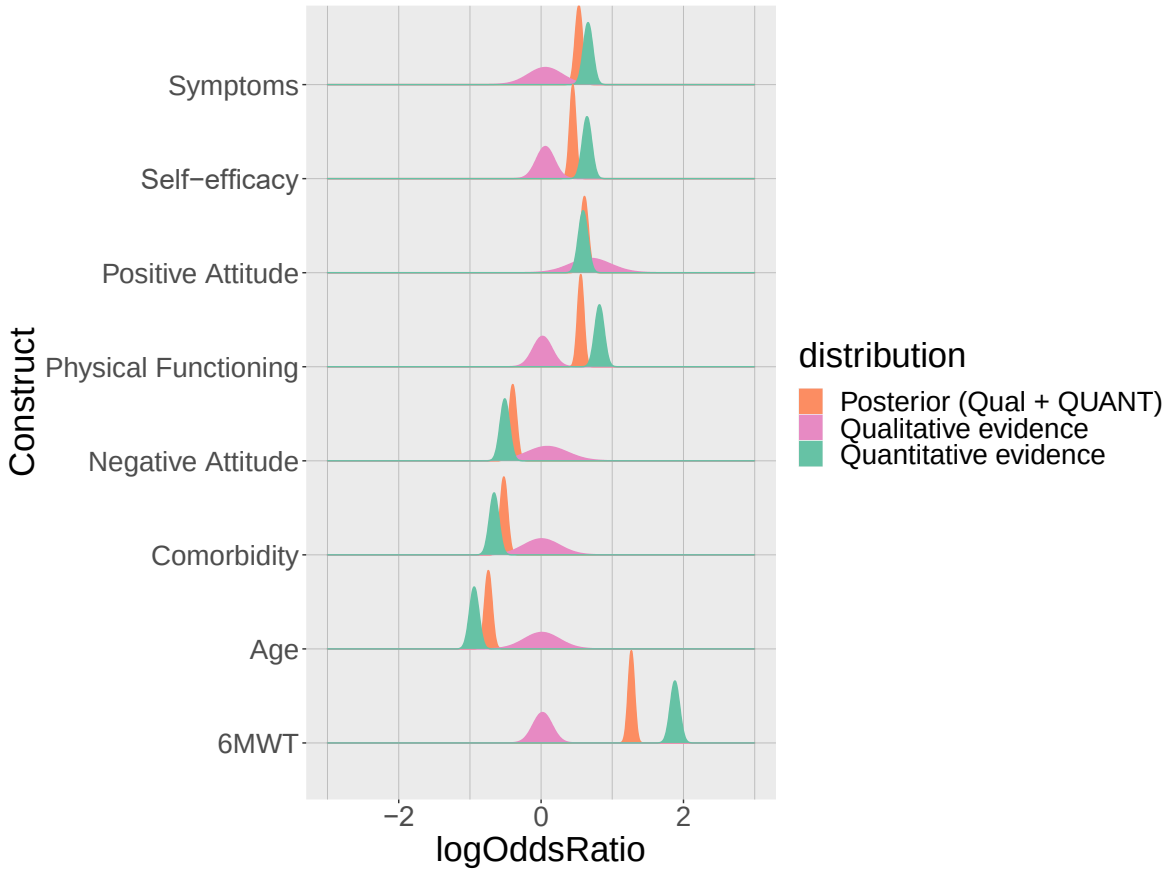

Figure 8. Duration (mins/day): prior, likelihood and posterior distributions for each construct.

Table 6. Self-reported general physical activity (International Physical Activity Questionnaire, IPAQ) outcome: the expected value for the log OR according to the expert elicitation task, quantitative evidence, and the posterior (qual + QUANT) describing the association between physical activity and identified barriers and enablers.

Construct	Prior		Likelihood		Posterior		SD
	Expected value (log OR)	95% CrI	Expected value (log OR)	95% CrI	Expected value (log OR)	95% Cr	(Uncertainty)
Self-efficacy	0.06	[-0.15;0.27]	1.88	[1.47;2.29]	0.68	[0.54;0.82]	0.29
Perceived Exertion			-0.98	[-1.52;-0.44]			0.57

Note. OR – Odds ratio; CrI – Credible Interval.

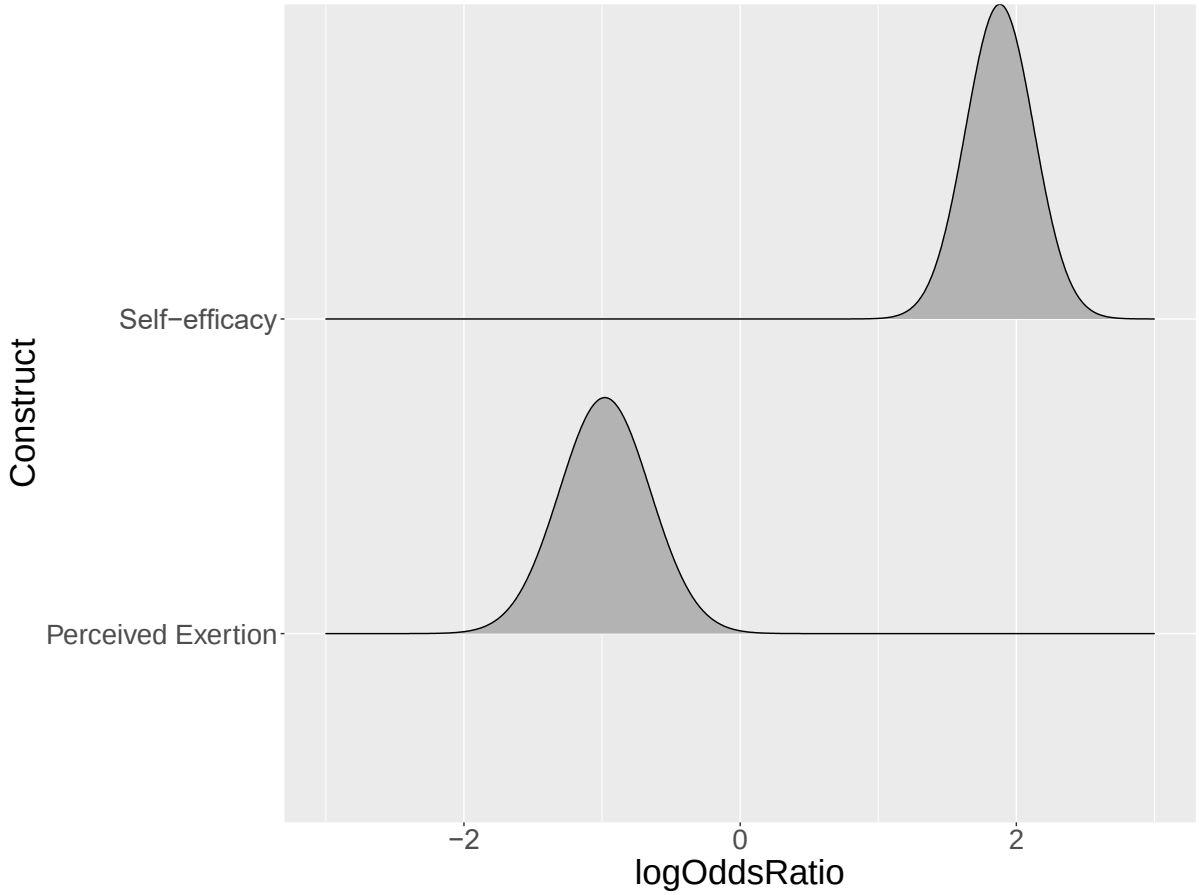

Figure 9. Self-reported general physical activity (International Physical Activity Questionnaire, IPAQ): likelihood distribution for each construct.

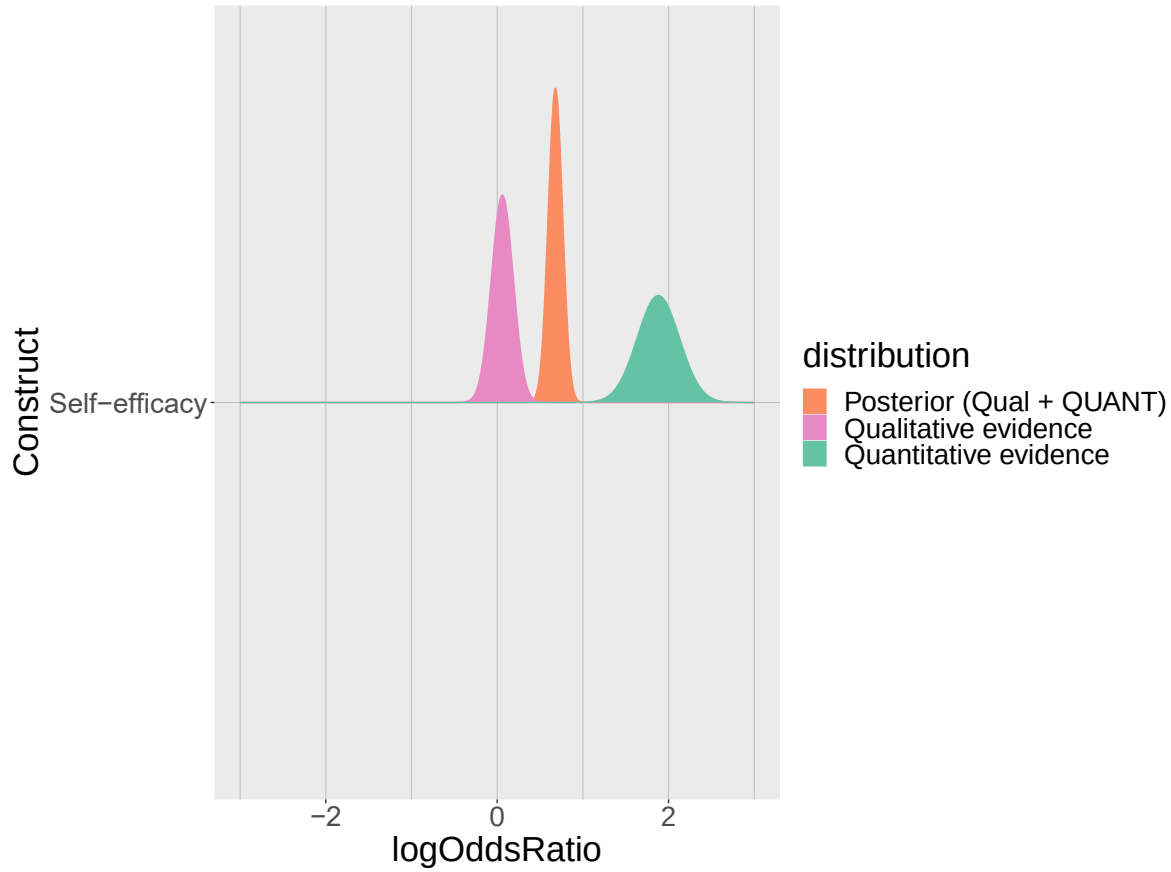

Figure 10. Self-reported general physical activity (International Physical Activity Questionnaire, IPAQ): prior, likelihood and posterior distributions for each construct.

Table 7. Exercise self-care behaviour (self-reported) outcome: the expected value for the log OR according to the expert elicitation task, quantitative evidence, and the posterior (qual + QUANT) describing the association between physical activity and identified barriers and enablers.

Construct	Prior		Likelihood		Posterior		SD
	Expected value (log OR)	95% CrI	Expected value (log OR)	95% CrI	Expected value (log OR)	95% Cr	(Uncertainty)
Social Support	0.03	[-0.24;0.31]	0.76	[0.65;0.87]	0.56	[0.48;0.63]	0.22

Note. OR – Odds ratio; CrI – Credible Interval.

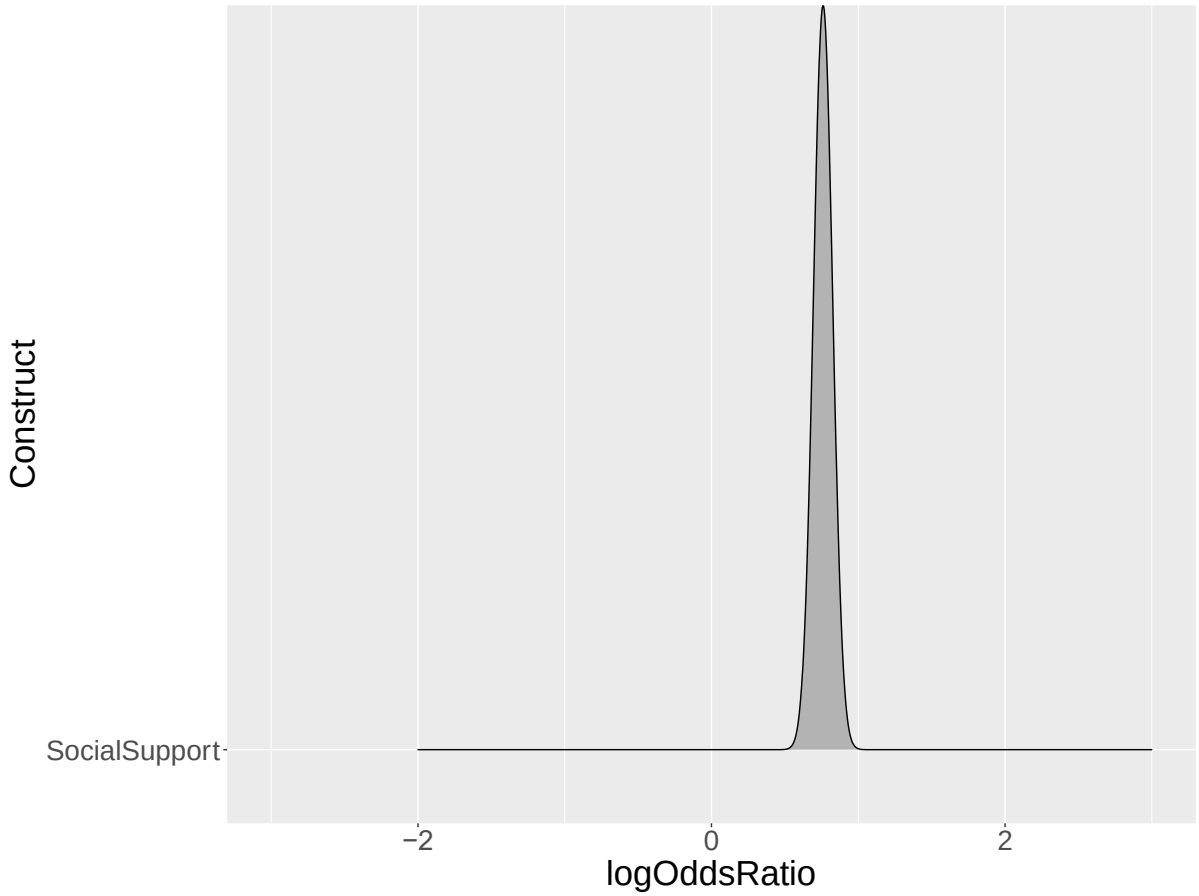

Figure 11. Exercise self-care behaviour (self-reported): likelihood distribution for each construct.

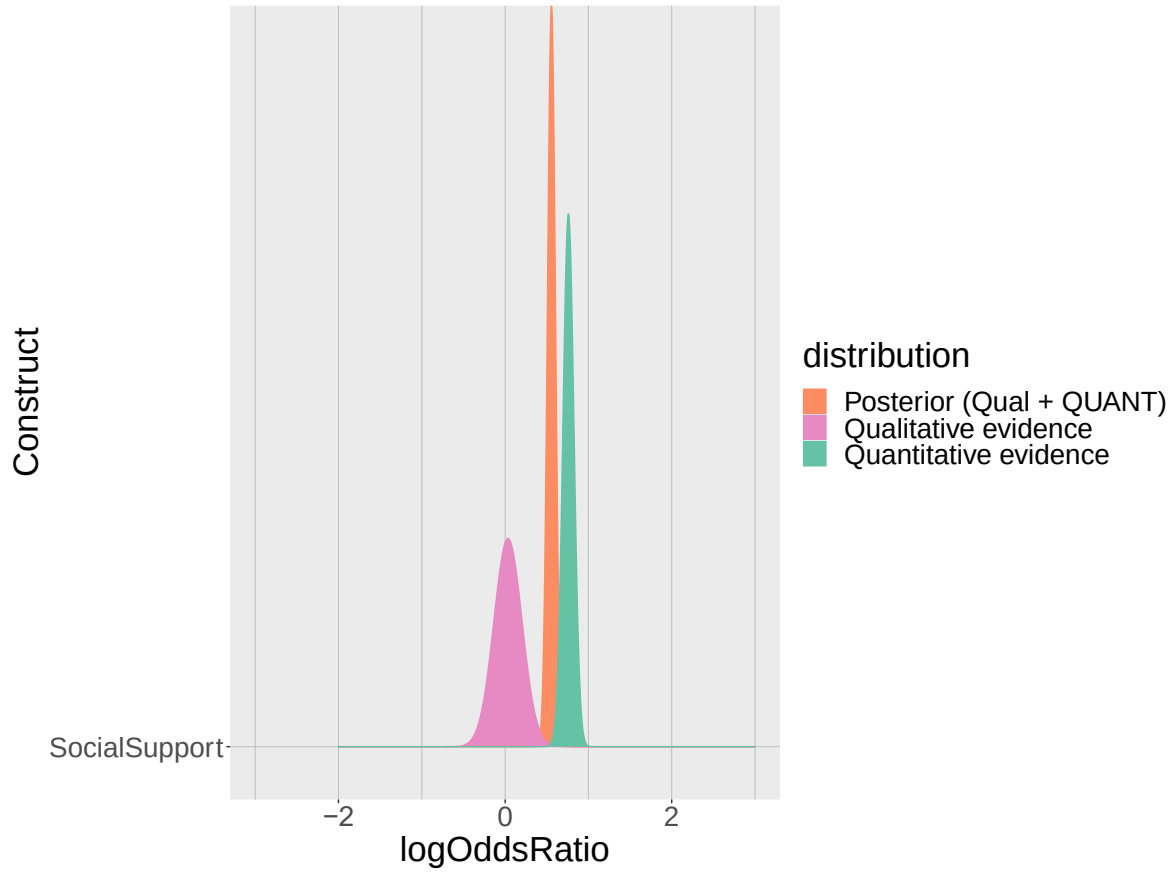

Figure 12. Exercise self-care behaviour (self-reported): prior, likelihood and posterior distributions for each construct.

Table 8. Steps per day outcome: the expected value for the log OR according to the expert elicitation task, quantitative evidence, and the posterior (qual + QUANT) describing the association between physical activity and identified barriers and enablers.

Construct	Prior		Likelihood		Posterior		SD
	Expected value (log OR)	95% CrI	Expected value (log OR)	95% CrI	Expected value (log OR)	95% Cr	(Uncertainty)
6MWT	0.02	[-0.2;0.24]	3.27	[-1.11;7.65]	0.18	[-0.03;0.39]	0.36
LVEF	0.02	[-0.2;0.24]	1.78	[-1.2;4.76]	0.14	[-0.06;0.35]	0.35
Physical Functioning	0.02	[-0.2;0.24]	2.45	[-1.07;5.97]	0.16	[-0.04;0.37]	0.36
PeakVO2			2.52	[-1.05;6.09]			1.47
proBNP			1.44	[-1.32;4.2]			1.3

Note. OR – Odds ratio; CrI – Credible Interval.

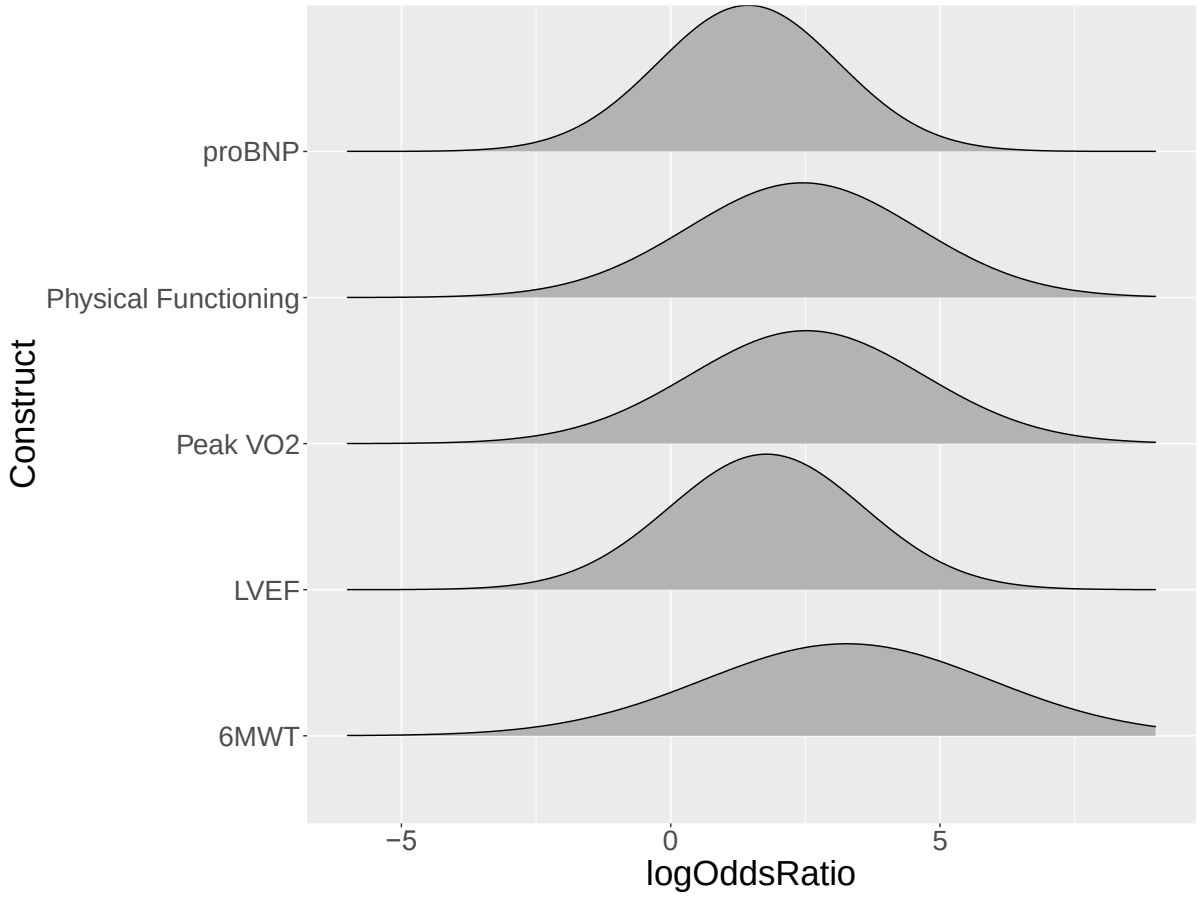

Figure 13. Steps per day: likelihood distribution for each construct.

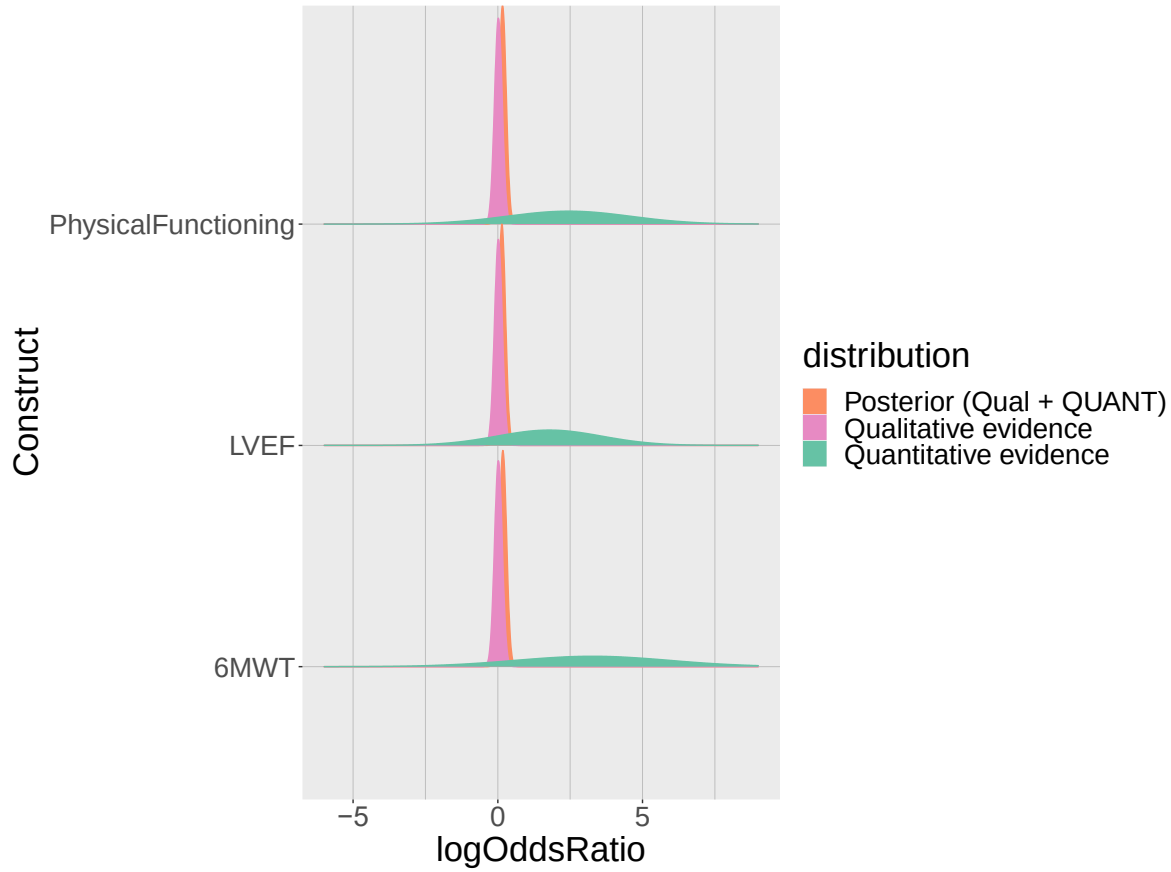

Figure 14. Steps per day: prior, likelihood and posterior distributions for each construct.

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