

Appendix E, Table 4: Differential Item Functioning of Dyspnea Domain, HF cross-sectional sample

Items	Chi <sup>2</sup> Values		McFadden Pseudo R <sup>2</sup> Change		DIF Interpret.
	Uniform	Non-uniform	Uniform	Non-uniform	
	Model 1 v 2	Model 2 v 3	Model 1 v 2	Model 2 v 3	
<b>Sex (male vs. female)</b>					
Over the past 7 days, how short of breath did you get with each of these activities?					
Walking 50 steps/paces on flat ground at a normal speed without stopping	0.920	0.350	0.000	0.001	No
Lifting something weighing 10-20 lbs (about 4.5-9 kg, like a large bag of groceries)	0.085	0.693	0.002	0.000	No
Walking (faster than your usual speed) for ½ mile (almost 1 km) without stopping	0.028	0.173	0.004	0.001	No
Walking 10 steps/paces on flat ground at a normal speed without stopping	0.996	0.001	0.000	0.007	No
Walking up 5 stairs without stopping	0.987	0.186	0.000	0.001	No
Walking up 10 stairs (1 flight) without stopping	0.003	0.967	0.006	0.000	No
Lifting something weighing less than 5 lbs (about 2 kg, like a houseplant)	0.012	0.017	0.004	0.004	No
Lifting something weighing 5-10 lbs (about 2-4.5 kg, like a basket of clothes)	0.024	0.841	0.003	0.000	No
Lifting something weighing more than 20 lbs (about 9 kg, like a medium-sized suitcase)	0.000	0.431	0.011	0.000	No
Carrying something weighing less than 5 lbs (about 2 kg, like a houseplant) from one room to another	0.009	0.668	0.004	0.000	No

Items	Chi <sup>2</sup> Values		McFadden Pseudo R <sup>2</sup> Change		DIF Interpret.
	Uniform	Non-uniform	Uniform	Non-uniform	
	Model 1 v 2	Model 2 v 3	Model 1 v 2	Model 2 v 3	
<b>Age (≤55 vs. &gt;55)</b>					
Over the past 7 days, how short of breath did you get with each of these activities?					
Walking 50 steps/paces on flat ground at a normal speed without stopping	0.648	0.577	0.000	0.000	No
Lifting something weighing 10-20 lbs (about 4.5-9 kg, like a large bag of groceries)	0.405	0.699	0.001	0.000	No
Walking (faster than your usual speed) for ½ mile (almost 1 km) without stopping	0.601	0.018	0.000	0.004	No
Walking 10 steps/paces on flat ground at a normal speed without stopping	0.036	0.786	0.003	0.000	No
Walking up 5 stairs without stopping	0.539	0.851	0.000	0.000	No
Walking up 10 stairs (1 flight) without stopping	0.408	0.431	0.001	0.000	No
Lifting something weighing less than 5 lbs (about 2 kg, like a houseplant)	0.166	0.294	0.001	0.001	No
Lifting something weighing 5-10 lbs (about 2-4.5 kg, like a basket of clothes)	0.814	0.814	0.000	0.000	No
Lifting something weighing more than 20 lbs (about 9 kg, like a medium-sized suitcase)	0.067	0.445	0.002	0.000	No
Carrying something weighing less than 5 lbs (about 2 kg, like a houseplant) from one room to another	0.279	0.724	0.001	0.000	No

Items	Chi <sup>2</sup> Values		McFadden Pseudo R <sup>2</sup> Change		DIF Interpret.
	Uniform	Non-uniform	Uniform	Non-uniform	
	Model 1 v 2	Model 2 v 3	Model 1 v 2	Model 2 v 3	
<b>Education (completed college or not)</b>					
Over the past 7 days, how short of breath did you get with each of these activities?					
Walking 50 steps/paces on flat ground at a normal speed without stopping	0.089	0.305	0.002	0.001	No
Lifting something weighing 10-20 lbs (about 4.5-9 kg, like a large bag of groceries)	0.010	0.099	0.005	0.002	No
Walking (faster than your usual speed) for ½ mile (almost 1 km) without stopping	0.024	0.095	0.004	0.002	No
Walking 10 steps/paces on flat ground at a normal speed without stopping	0.104	0.685	0.002	0.000	No
Walking up 5 stairs without stopping	0.696	0.488	0.000	0.000	No
Walking up 10 stairs (1 flight) without stopping	0.285	0.209	0.001	0.001	No
Lifting something weighing less than 5 lbs (about 2 kg, like a houseplant)	0.309	0.412	0.001	0.000	No
Lifting something weighing 5-10 lbs (about 2-4.5 kg, like a basket of clothes)	0.598	0.305	0.000	0.001	No
Lifting something weighing more than 20 lbs (about 9 kg, like a medium-sized suitcase)	0.104	0.204	0.002	0.001	No
Carrying something weighing less than 5 lbs (about 2 kg, like a houseplant) from one room to another	0.001	0.926	0.007	0.000	No

Abbreviation: DIF is Differential Item Functioning, Interpret. is Interpretation. Models: Model 1 = ability explanatory term only; Model 2 = ability + group explanatory terms; Model 3 = ability + group + ability-by-group interaction explanatory terms.