Fixed effects			
Predictors	***Estimate***	***Std. Error***	***t-value***
Intercept	*6.615*	*0.185*	*35.794**
Time (Baseline = Intake)	-	-	-
Quarterly follow-up 1	*0.535*	*0.040*	*13.271**
Quarterly follow-up 2	*0.839*	*0.042*	*20.054**
Quarterly follow-up 3	*0.679*	*0.043*	*15.692**
Quarterly follow-up 4	*0.586*	*0.045*	*12.953**
Quarterly follow-up 5	*0.663*	*0.050*	*13.237**
Quarterly follow-up 6	*0.874*	*0.060*	*14.533**
Quarterly follow-up 7	*0.798*	*0.092*	*8.654**
Quarterly follow-up 8	*0.773*	*0.192*	*4.025**
Quarterly follow-up 9	1.589	1.429	1.112
Age	0.111×10^{-2}	0.275×10^{-2}	0.405
Sex (Baseline = Female)	-	-	-
Male	*-0.589*	*0.078*	*-7.537**
Marital Status (Baseline: Married)	-	-	-
Unmarried	*0.367*	*0.091*	*4.052**
Race (Baseline: African American)	-	-	-
Asian	*-0.515*	*0.139*	*-3.702**
Caucasian	-0.083	0.112	-0.745
Other	-0.041	0.155	-0.267
Apple Exercise Time	-0.021×10^{-2}	0.007×10^{-2}	*-2.885**

Random effects			
Groups	***Name***	***Variance***	***Std. Dev.***
Patient ID	Random intercept	7.562	2.750
Residual	White noise	3.693	1.922

Table 2: *Summary of linear mixed model fit to examine association of self-reported PROMIS® scores with HealthKit-based Apple Exercise Time, while controlling for age, sex, race and marital status. A categorical time covariate is included given the unbalanced longitudinal nature of the data. We note a significant association between time spent exercising and self-reported PROMIS® scores. A negative effect size is*

noted. Specifically, for every additional 100 minutes spent exercising, the expected decrease in PROMIS® scores is -0.021, implying improved perception of cognitive functioning in study participants, controlling for other covariates in the model. Other significant associations include a negative effect size of -0.589 for male participants as compare to their female counterparts in the study, controlling for variation in all other covariates. Unmarried participants report significantly higher PROMIS® scores, indicating poorer cognitive functioning as compared to (otherwise identical) married participants, with an estimated effect size of 0.367. Asian participants report significantly better cognitive functioning as compared to the baseline group of African Americans in the study, with an effect size of -0.515. All significant associations are italicised in the table above.