

Note. Due to an unknown error, during the first week of the text-messaging intervention, all participants' weight was incorrectly recorded as 100 pounds, which did not allow for an estimation of response rate to the weight question for the first week of the intervention.

Figure S1 Percentage of participants who responded to text-messages that asked questions.

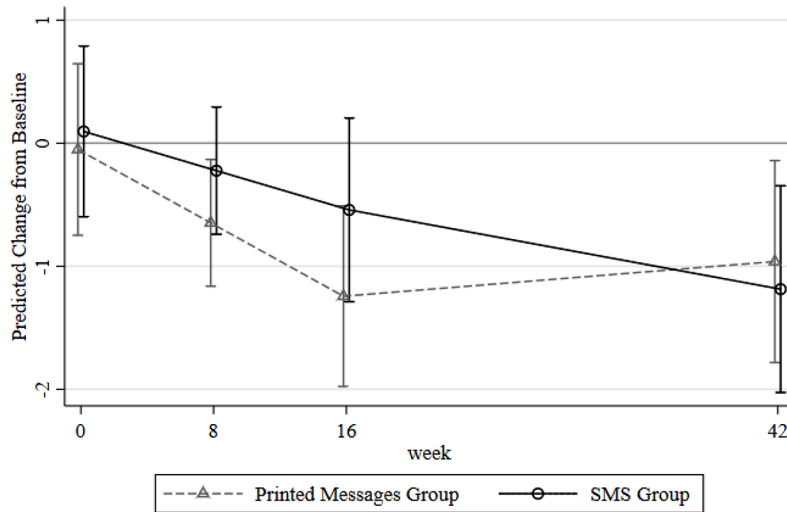
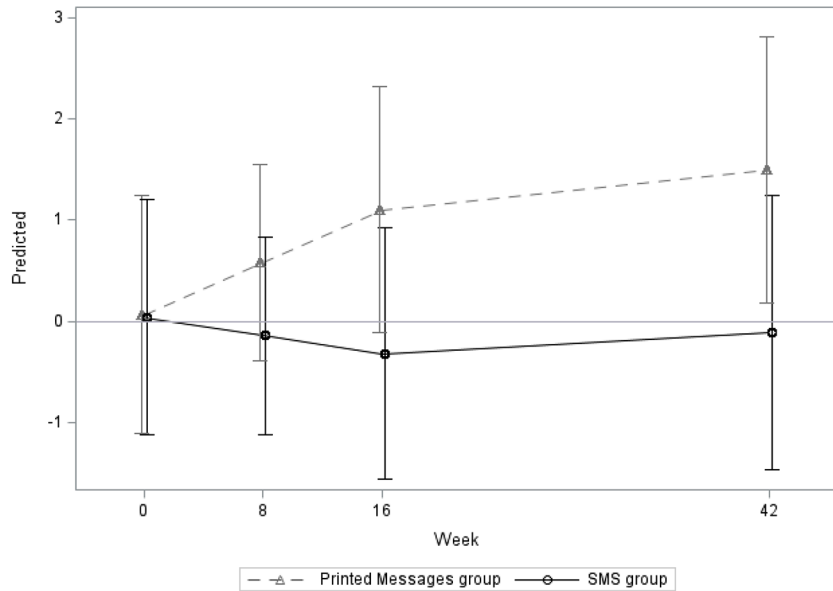
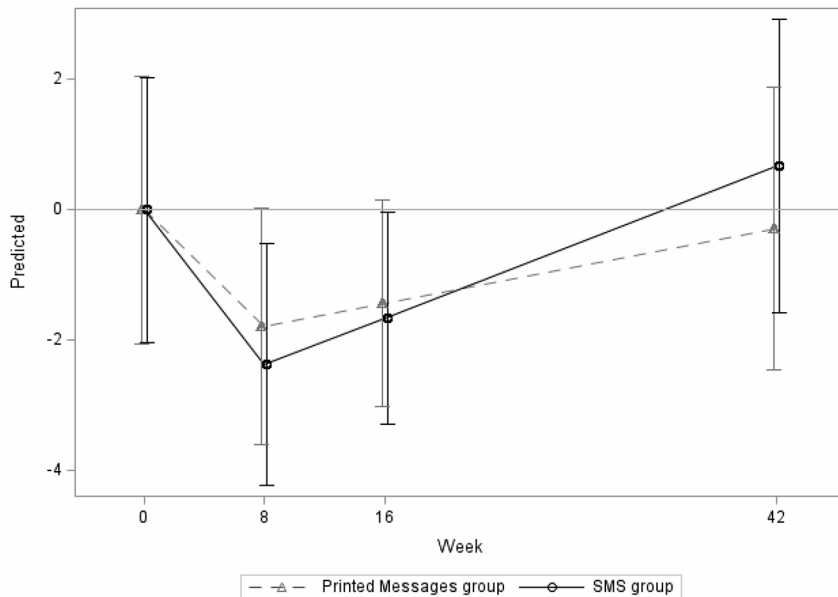


Figure S2 Results of piecewise linear mixed model: average change in weight (kgs) from baseline in the SMS and printed messaging groups with 95% confidence intervals. SMS, short messaging service.



Note. Higher scores on the Exercise Barriers Scale represent greater perceived barriers to exercise.

Figure S3 Results of piecewise linear mixed model: average differences in exercise barriers from baseline in the SMS and printed messaging groups with 95% confidence interval. SMS, short messaging service.



Note. Higher scores on the Exercise Benefit Scale represent greater perceived benefit of exercise.

Figure S4 Results of piecewise linear mixed model: average differences in exercise benefit from baseline in the SMS and printed messaging groups with 95% confidence intervals. SMS, short messaging service.

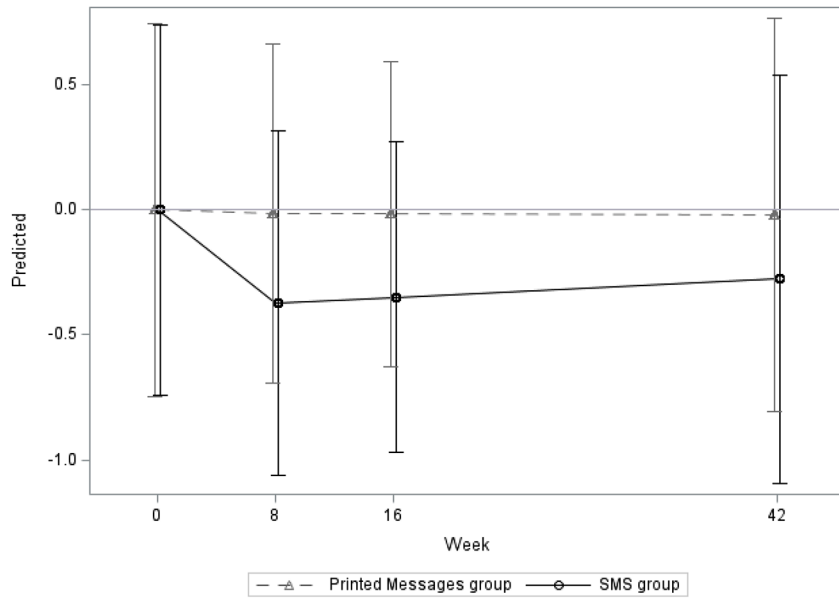
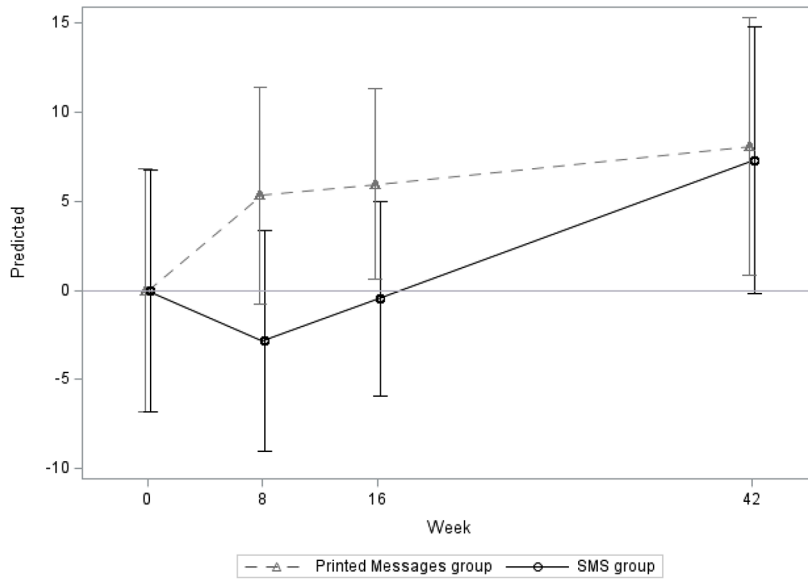


Figure S5 Results of piecewise linear mixed model: average differences in daily servings of fruits and vegetables consumed (excluding potatoes) from baseline in the SMS and printed messaging groups with 95% confidence intervals. SMS, short messaging service.



Note. Higher scores on the Weight Efficacy Questionnaire indicate greater self-efficacy to resist eating in tempting situations.

Figure S6 Results of piecewise linear mixed model: average differences in lifestyle weight efficacy from baseline in the SMS and printed messaging groups with 95% confidence intervals. SMS, short messaging service.

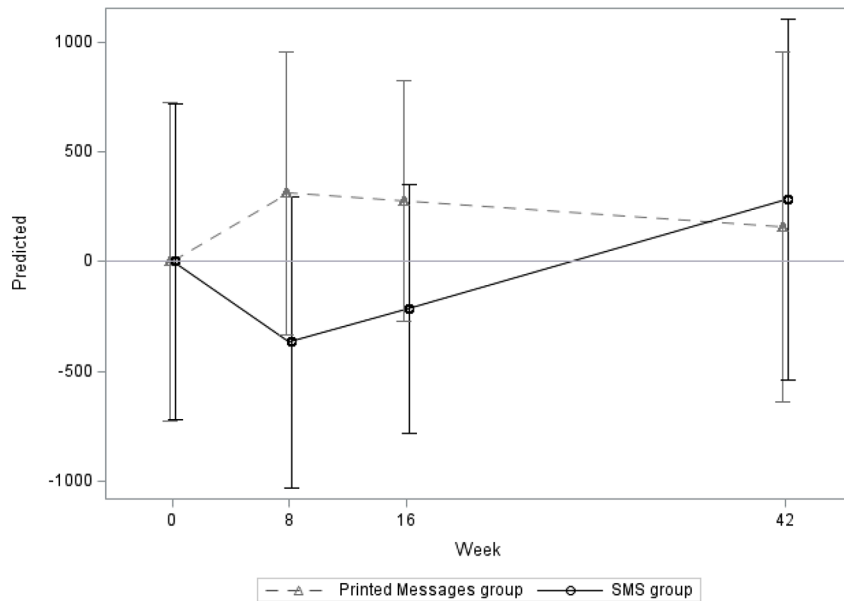


Figure S7 Results of piecewise linear mixed model: average differences in physical activity-total MET mins/week from baseline in the SMS and printed messaging groups with 95% confidence intervals. SMS, short messaging service.

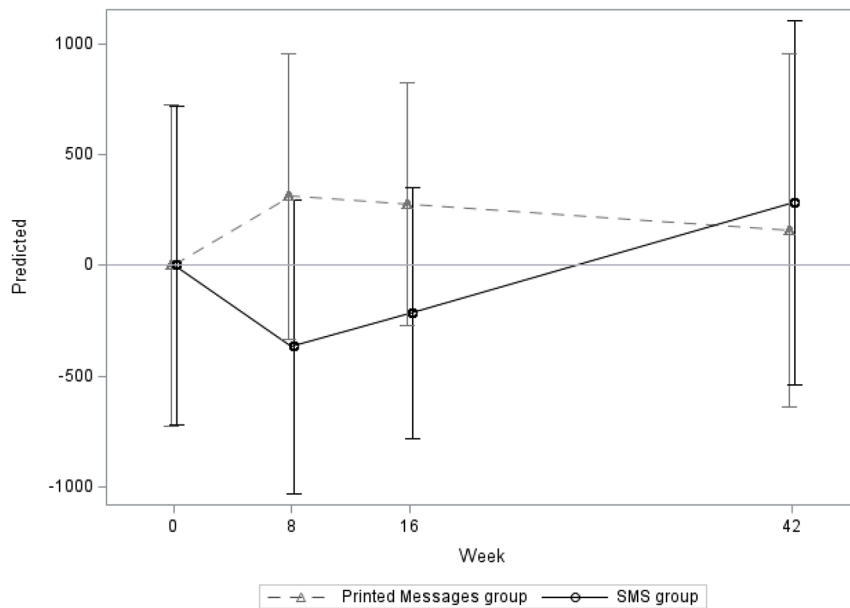


Figure S8 Results of piecewise linear mixed model: average differences in physical activity-walking MET mins/week from baseline in the SMS and printed messaging groups with 95% confidence intervals. SMS, short messaging service.

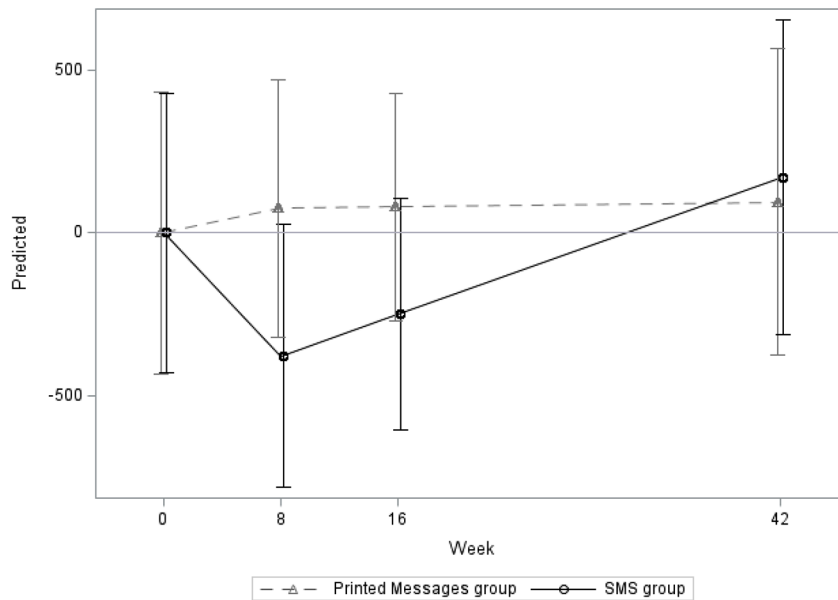


Figure S9 Results of piecewise linear mixed model: average differences in moderate physical activity MET mins/week from baseline in the SMS and printed messaging groups with 95% confidence intervals. SMS, short messaging service.

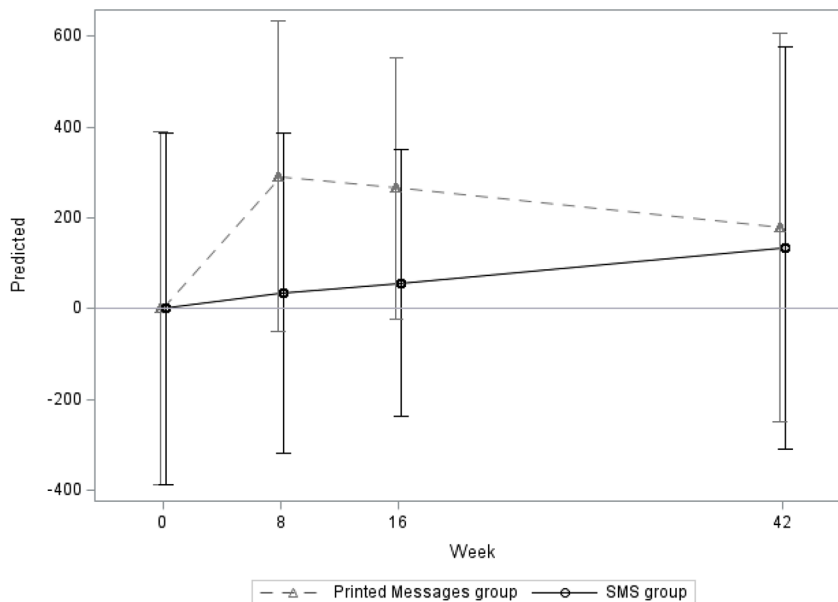


Figure S10 Results of piecewise linear mixed model: average differences vigorous physical activity MET mins/week from baseline in the SMS and printed messaging groups with 95% confidence intervals. SMS, short messaging service.

Table S1 Results of mixed linear regressions using intention to treat analysis: weekly changes in MTRIMM2 outcomes over 42 weeks

Outcomes	Printed Messages Group			SMS Group			Difference: SMS minus Printed Messaging Group		
	B	95% CI	p	B	95% CI	p	B	95% CI	p
Weekly Change in Weight (in kgs) from Baseline	-0.019	-0.042 – 0.005	0.116	-0.030	-0.054 – -0.006	0.013	-0.011	-0.044 – 0.022)	0.506
Percent Weight Lost from Baseline Weight per Week	-0.016	-0.040 – 0.008	0.190	-0.031	-0.055 – - 0.006	0.014	-0.015	-0.049 – 0.020	0.402
Weekly BMI Change from Baseline	-0.007	-0.015 – 0.002	0.142	-0.013	-0.022 – -0.004	0.005	-0.006	-0.019 – 0.006	0.319
Weekly Exercise Barriers Score Change from Baseline [†]	0.032	0.000 - 0.064	0.050	-0.003	-0.036 – 0.031	0.880	-0.035	-0.081 – 0.012	0.141
Weekly Exercise Benefit Score Change from Baseline [‡]	0.007	-0.052 – 0.066	0.817	0.034	-0.026 – 0.095	0.268	0.027	-0.057 – 0.112	0.525
Weekly Change in Average Number of Fruit and Vegetable Servings Consumed per Day Excluding Potatoes	0.000	-0.020 – 0.019	0.965	-0.004	-0.025 – 0.016	0.673	-0.004	-0.032 – 0.024	0.784
Weekly Change in Percent of Energy from Fat Consumed: Change from Baseline	-0.024	-0.057 – 0.008	0.139	-0.041	-0.075 – -0.008	0.016	-0.017	-0.063 – 0.030	0.483
Weekly Change in Lifestyle Weight Efficacy Score from Baseline [§]	0.163	-0.027 – 0.353	0.093	0.205	0.008 – 0.401	0.041	0.042	-0.232 – 0.315	0.763
Weekly Change in Physical Activity – Total MET mins/week from Baseline	1.720	-20.710 – 24.150	0.880	9.551	-13.467 – 32.568	0.415	7.831	-24.308 – 39.970	0.632
Weekly Change in Physical Activity – Walking MET mins/week from Baseline	-2.285	-10.524 – 5.954	0.586	-0.464	-8.926 – 7.998	0.914	1.821	-9.990 – 13.631	0.762
Weekly Change in Moderate Physical Activity MET mins/week from Baseline	1.832	-10.332 – 13.997	0.767	6.829	-5.675 – 19.333	0.284	4.997	-12.448 – 22.442	0.574
Weekly Change in Vigorous Physical Activity MET mins/week from Baseline	2.367	-9.966 – 14.700	0.706	3.137	-9.510 – 15.783	0.626	0.769	-16.895 – 18.434	0.932

Note. Mixed Linear Regressions fixed effects were the study arm (SMS vs. printed messaging), time in weeks, and interactions of study arm and time. The random effect was the participants. Slopes represent change per week in the study outcomes over a 42-week period. No statistically significant differences between the text-messaging and control group were detected for any of the study outcomes. [†] Higher scores represent greater perceived barriers to exercise. [‡] Higher scores represent greater perceived benefit of exercise. [§] Higher scores indicate greater self-efficacy to resist eating in tempting situations. SMS, short messaging service.

Table S2 Results of mixed linear regressions using intention to treat analysis: changes in MTRIMM2 outcomes over 42 weeks as a function of response rate to SMS messages for participants in the SMS group

Outcomes	Response rate to text messages (%)			Week			Interaction between Week and Response Rate to SMS Messages		
	B	95% CI	p	B	95% CI	p	B	95% CI	p
Weekly Change in Weight (in kgs) from Baseline	-0.001	-0.023 – 0.021	0.944	0.012	-0.042 – 0.066	0.669	-0.001	-0.002 – 0.000	0.106
Percent Weight Lost from Baseline Weight per Week	-0.002	-0.026 – 0.021	0.840	0.022	-0.035 – 0.080	0.442	-0.001	-0.002 – 0.000	0.054
Weekly BMI Change from Baseline	0.000	-0.009 – 0.008	0.911	0.003	-0.018 – 0.023	0.779	0.000	-0.001 – 0.000	0.104
Weekly Exercise Barriers Score Change from Baseline [†]	-0.014	-0.066 – 0.037	0.578	0.074	-0.019 – 0.168	0.120	-0.001	-0.003 – 0.000	0.088
Weekly Exercise Benefit Score Change from Baseline [‡]	-0.009	-0.082 – 0.063	0.796	0.043	-0.120 – 0.207	0.602	0.000	-0.003 – 0.003	0.908
Weekly Change in Average Number of Fruit and Vegetable Servings Consumed per Day Excluding Potatoes	0.017	-0.010 – 0.044	0.220	-0.018	-0.073 – 0.037	0.526	0.000	-0.001 – 0.001	0.627
Weekly Change in Percent of Energy from Fat Consumed: Change from Baseline	0.005	-0.031 – 0.041	0.798	-0.064	-0.134 – 0.005	0.069	0.000	-0.001 – 0.002	0.479
Weekly Change in Lifestyle Weight Efficacy Score from Baseline [§]	-0.031	-0.245 – 0.182	0.770	0.491	0.053 – 0.928	0.028	-0.005	-0.013 – 0.002	0.170
Weekly Change in Physical Activity – Total MET mins/week from Baseline	-12.698	-40.956 – 15.560	0.374	42.242	-23.306 – 107.790	0.205	-0.581	-1.697 – 0.534	0.305
Weekly Change in Physical Activity – Walking MET mins/week from Baseline	1.005	-8.931 – 10.941	0.841	4.822	-17.589 – 27.232	0.672	-0.097	-0.478 – 0.284	0.616
Weekly Change in Moderate Physical Activity MET mins/week from Baseline	-6.040	-22.370 – 10.289	0.464	45.649	11.564 – 79.734	0.009	-0.700	-1.280 – -0.121	0.018
Weekly Change in Vigorous Physical Activity MET mins/week from Baseline	-7.844	-20.720 – 5.031	0.229	-7.118	-40.381 – 26.145	0.673	0.200	-0.367 – 0.767	0.488

Note. Mixed Linear Regressions fixed effects were the response rate to text messages, time in weeks, and interactions of between time in weeks and response rate to SMS messages. The random effect was the participants. Slopes represent change per week in the study outcomes over a 42-week period. [†] Higher scores represent greater perceived barriers to exercise. [‡] Higher scores represent greater perceived benefit of exercise. [§] Higher scores indicate greater self-efficacy to resist eating in tempting situations. SMS, short messaging service.

Table S3 Sensitivity analysis: results of piecewise mixed linear regressions as treated analysis-weekly changes in MTRIMM2 outcomes over 42 weeks

Outcomes	Printed Messages Group			SMS Group			Difference: SMS minus Printed Messages Group		
	B	(95% CI)	p	B	(95% CI)	p	B	(95% CI)	p
Weight Lost (kgs) per week									
Slope from Weeks 0 – 16	-0.07	(-0.14 – -0.01)	0.017	-0.04	(-0.10 – 0.02)	0.209	0.03	(-0.05 – 0.12)	0.425
Slope Weeks 16 – 42	0.01	(-0.03 – 0.05)	0.580	-0.02	(-0.06 – 0.01)	0.215	-0.04	(-0.09 – 0.02)	0.203
Slope difference between 16 – 42 weeks minus 0-16 weeks	0.09	(-0.00 – 0.17)	0.055	0.01	(-0.07 – 0.10)	0.742	-0.07	(-0.19 – 0.05)	0.263
Percent of Baseline Weight Lost per week									
Slope from Weeks 0 – 16	-0.08	(-0.14 – -0.01)	0.017	-0.04	(-0.11 – 0.02)	0.182	0.03	(-0.05 – 0.12)	0.464
Slope Weeks 16 – 4	0.02	(-0.02 – 0.05)	0.448	-0.02	(-0.06 – 0.02)	0.257	-0.04	(-0.09 – 0.02)	0.180
Slope difference between 16 – 42 weeks minus 0-16 weeks	0.09	(0.00 – 0.18)	0.046	0.02	(-0.07 – 0.11)	0.667	-0.07	(-0.20 – 0.06)	0.270
BMI change per week									
Slope from Weeks 0 – 16	-0.03	(-0.05 – -0.01)	0.011	-0.01	(-0.04 – 0.01)	0.274	0.02	(-0.02 – 0.05)	0.311
Slope Weeks 16 – 42	0.01	(-0.01 – 0.02)	0.449	-0.01	(-0.03 – 0.00)	0.092	-0.02	(-0.04 – 0.00)	0.083
Slope difference between 16 – 42 weeks minus 0-16 weeks	0.04	(0.00 – 0.07)	0.035	0.00	(-0.03 – 0.03)	0.983	-0.04	(-0.08 – 0.01)	0.141
Exercise Barriers[†]									
Slope from Weeks 0 – 16	0.07	(-0.02 – 0.15)	0.121	-0.03	(-0.11 – 0.06)	0.565	-0.09	(-0.21 – 0.03)	0.132
Slope Weeks 16 – 42	0.01	(-0.04 – 0.07)	0.582	0.01	(-0.05 – 0.06)	0.761	-0.01	(-0.08 – 0.07)	0.871
Slope difference between 16 – 42 weeks minus 0-16 weeks	-0.05	(-0.17 – 0.07)	0.393	0.03	(-0.09 – 0.16)	0.591	0.09	(-0.09 – 0.26)	0.324
Exercise Benefit[‡]									
Slope from Weeks 0 – 8	-0.22	(-0.46 – 0.02)	0.075	-0.26	(-0.47 – -0.06)	0.013	-0.04	(-0.24 – 0.15)	0.665
Slope Weeks 8 – 42	0.04	(-0.03 – 0.11)	0.243	0.11	(0.01 – 0.21)	0.025	0.07	(-0.05 – 0.20)	0.258
Slope difference between 8- 42 weeks minus 0-8 weeks	0.26	(-0.01 – 0.53)	0.061	0.38	(0.12 – 0.63)	0.004	0.12	(-0.16 – 0.39)	0.404
Average Number of Fruit and Vegetable Servings Consumed per Day Excluding Potatoes									
Slope from Weeks 0 – 8	-0.02	(-0.10 – 0.06)	0.581	-0.03	(-0.09 – 0.04)	0.465	-0.00	(-0.07 – 0.06)	0.927
Slope Weeks 8 – 42	0.00	(-0.02 – 0.03)	0.772	-0.00	(-0.03 – 0.03)	0.935	-0.00	(-0.05 – 0.04)	0.824
Slope difference between 8- 42 weeks minus 0-8 weeks	0.03	(-0.06 – 0.12)	0.574	0.02	(-0.06 – 0.11)	0.574	-0.00	(-0.09 – 0.09)	0.970
Percent of Energy from Fat									
Slope from Weeks 0 – 8	-0.19	(-0.32 – -0.05)	0.006	-0.22	(-0.33 – -0.10)	0.000	-0.03	(-0.14 – 0.08)	0.606
Slope Weeks 8 – 42	0.00	(-0.03 – 0.04)	0.809	-0.01	(-0.07 – 0.04)	0.668	-0.02	(-0.09 – 0.05)	0.637
Slope difference between 8- 42 weeks minus 0-8 weeks	0.19	(0.04 – 0.34)	0.012	0.20	(0.06 – 0.34)	0.005	0.01	(-0.14 – 0.16)	0.881
Lifestyle Weight Efficacy[§]									
Slope from Weeks 0 – 8	0.39	(-0.40 – 1.17)	0.337	0.10	(-0.57 – 0.77)	0.773	-0.29	(-0.92 – 0.35)	0.376
Slope Weeks 8 – 42	0.13	(-0.10 – 0.35)	0.267	0.34	(0.02 – 0.67)	0.040	0.21	(-0.20 – 0.63)	0.310
Slope difference between 8- 42 weeks minus 0-8 weeks	-0.26	(-1.15 – 0.63)	0.570	0.24	(-0.59 – 1.07)	0.566	0.50	(-0.39 – 1.39)	0.269
Physical Activity – Total MET mins/week									
Slope from Weeks 0 – 8	-1.97	(-93.97 – 90.02)	0.966	0.06	(-78.80 – 78.91)	0.999	2.03	(-72.28 – 76.34)	0.957
Slope Weeks 8 – 42	1.39	(-25.45 – 28.22)	0.919	15.06	(-23.74 – 53.86)	0.447	13.67	(-35.38 – 62.73)	0.585
Slope difference between 8- 42 weeks minus 0-8 weeks	3.36	(-101.13 – 107.84)	0.950	15.01	(-82.67 – 112.68)	0.763	11.65	(-93.27 – 116.56)	0.828
Physical Activity – Walking MET mins/week									
Slope from Weeks 0 – 8	-11.16	(-44.95 – 22.62)	0.517	-2.45	(-31.42 – 26.51)	0.868	8.71	(-18.67 – 36.10)	0.533
Slope Weeks 8 – 42	-0.80	(-10.65 – 9.05)	0.873	-2.67	(-16.90 – 11.56)	0.713	-1.87	(-19.86 – 16.12)	0.839
Slope difference between 8- 42 weeks minus 0-8 weeks	10.36	(-27.98 – 48.70)	0.596	-0.22	(-36.08 – 35.64)	0.990	-10.58	(-49.14 – 27.98)	0.591
Moderate Physical Activity MET mins/week									
Slope from Weeks 0 – 8	-10.21	(-60.01 – 39.59)	0.688	-19.07	(-61.78 – 23.65)	0.382	-8.85	(-49.34 – 31.64)	0.668
Slope Weeks 8 – 42	3.21	(-11.30 – 17.71)	0.665	17.52	(-3.43 – 38.47)	0.101	14.31	(-12.17 – 40.79)	0.289
Slope difference between 8- 42 weeks minus 0-8 weeks	13.42	(-43.06 – 69.90)	0.641	36.58	(-16.28 – 89.45)	0.175	23.17	(-33.70 – 80.04)	0.425
Vigorous Physical Activity MET mins/week									
Slope from Weeks 0 – 8	19.74	(-30.78 – 70.26)	0.444	21.07	(-22.23 – 64.37)	0.340	1.33	(-39.35 – 42.01)	0.949
Slope Weeks 8 – 42	-0.56	(-15.31 – 14.18)	0.940	-0.13	(-21.45 – 21.20)	0.991	0.44	(-26.53 – 27.41)	0.975
Slope difference between 8- 42 weeks minus 0-8 weeks	-20.31	(-77.72 – 37.11)	0.488	-21.20	(-74.85 – 32.45)	0.439	-0.89	(-58.46 – 56.68)	0.976

Note. For the Piecewise Mixed Linear Regressions fixed effects were the study arm (SMS vs printed messages), two time periods, and interactions of study arm and time. Depending on the trajectory of the study outcomes over times, either 0-8 and 8-42 weeks, or 0-16 and 16-42 weeks two time periods were employed in the models. The random effect was the participants. Slopes represent change per week in the study outcomes over a 42-week period. No statistically significant differences between the SMS and printed messages group were detected for any of the study outcomes. [†] Higher scores represent greater perceived barriers to exercise. [‡] Higher scores represent greater perceived benefit of exercise. [§] Higher scores indicate greater self-efficacy to resist eating in tempting situations. SMS, short messaging service.