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Predicting outcomes from engagement with specific components of an internet-based physical activity intervention with financial incentives: process analysis of a cluster randomized controlled trial

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Multimedia Appendix 2. Description of assessed variables and baseline characteristics.

Table 2.1: Description of the assessed variables¹

Concept	Items (n)	Example question item and answering option	α^2	Time-points	Reference
Mediators					
Physical activity self-efficacy	5	How confident are you that you could do at least 150 minutes of physical activity over the next 7 days if each of the following situations arose? When I am tired. <i>Not at all confident</i> (1) to <i>Extremely confident</i> (5)	0.86	Baseline, 4 weeks	Marcus, Selby, Niaura, & Rossi, 1992 [1]
Intentions	2	I intend to do at least 150 minutes of physical activity over the next 7 days. <i>Strongly agree</i> (1) to <i>Strongly disagree</i> (7)	0.92	Baseline, 4 weeks	Fishbein & Ajzen, 1975 [2]
Outcome expectations	8	Doing at least 150 minutes of physical activity over the next 7 days will make me feel better physically. <i>Strongly agree</i> (1) to <i>Strongly disagree</i> (5)	0.93	Baseline, 4 weeks	Finch et al., 2005 [3]
Financial motivation	7	I am physically active because I want to earn extra money. <i>Not at all true for me</i> (1) to <i>Very true for me</i> (7)	0.93	Baseline, 4 weeks	Moller, Buscemi, McFadden, Hedeker, & Spring, 2014 [4]
Planning	9	I have made a detailed plan regarding when to do physical activity. <i>Completely disagree</i> (1) to <i>Totally agree</i> (4)	0.96	Baseline, 4 weeks, 6 months	Sniehotta et al., 2005 [5]
Social norms	3	Most people who are important to me do at least 150 minutes of physical activity over the next 7 days. <i>Completely true</i> (1) to <i>Completely false</i> (7)	0.58	Baseline, 4 weeks, 6 months	Ball et al., 2010 [6]
SDT: Identified regulation	4	It's important for me to be physically active regularly. <i>Not at all true</i> (0) to <i>Very true for me</i> (4)	0.84	Baseline, 4 weeks, 6 months	Markland & Tobin, 2004 [7]; Wilson et al., 2007 [8]
SDT: Integrated regulation	4	I am physically active because it is consistent with my life goals. <i>Not at all true</i> (0) to <i>Very true for me</i> (4)	0.93	Baseline, 4 weeks, 6 months	Markland & Tobin, 2004 [7]; Wilson et al., 2007 [8]
SDT: Intrinsic motivation	4	I am physically active because it's fun. <i>Not at all true</i> (0) to <i>Very true for me</i> (4)	0.93	Baseline, 4 weeks, 6 months	Markland & Tobin, 2004 [7]; Wilson et al., 2007 [8]
Habit	4	Doing at least 150 minutes of physical activity over the next 7 days is something that I do automatically. <i>Agree</i> (1) to <i>Disagree</i> (5)	0.96	Baseline, 6 months	Verplanken & Orbell, 2003 [9]
Workplace norms	4	I often see other work colleagues walking in my workplace. <i>Strongly agree</i> (1) to <i>Strongly disagree</i> (5)	0.62	Baseline, 6 months	Ball et al., 2010 [6]

Recovery self-efficacy	4	I am confident that I can return to doing at least 150 minutes of physical activity over the next 7 days again, even if I did not do 150 minutes of physical activity per week for some time because I felt weak. <i>Not at all true</i> (1) to <i>Exactly true</i> (4)	0.81	Baseline, 6 months	Scholz et al., 2005 [10]
Maintenance self-efficacy	5	I am confident that I can keep doing at least 150 minutes of physical activity over 7 days on a regular basis, even if I am troubled or worried. <i>Not at all true</i> (1) to <i>Exactly true</i> (4)	0.95	Baseline, 6 months	Scholz et al., 2005 [10]
Outcome satisfaction	8	How satisfied are you with any changes in how you feel physically, as a result of trying to do 150 minutes of physical activity per week? <i>Very dissatisfied</i> (-2) to <i>Very satisfied</i> (2)	0.94	Baseline, 6 months	Finch et al., 2005 [3]; Rothman, Baldwin, Hertel, & Fuglestad, 2011 [11]

Moderators					
SF-8 Mental Component Score	8	During the past four weeks, how much have you been bothered by emotional problems (such as feeling anxious, depressed or irritable)? <i>Not at all</i> (1) to <i>Extremely</i> (5)	-	Baseline	Ware et al., 2001 [12]
SF-8 Physical Component Score	8	During the past four weeks, how much difficulty did you have doing your daily work, both at home and away from home, because of your physical health? <i>Not at all</i> (1) to <i>Could not do daily work</i> (5)	-	Baseline	Ware et al., 2001 [12]
EQ5D: Health State	1	How is your health today? <i>The worst health you can imagine</i> (0) to <i>The best health you can imagine</i> (100)	-	Baseline	EuroQol Group, 1991 [13]
EQ5D: Weighted Health Index	5	Please indicate which statements best describe your own health state today. Mobility: <i>I have no problems in walking about</i> (1) to <i>I am unable to walk about</i> (5)	-	Baseline	EuroQol Group, 1991 [13]
WEMWBS: Mental wellbeing scale	14	Over the last 2 weeks I've been feeling optimistic about the future. <i>None of the time</i> (1) to <i>All of the time</i> (5)	-	Baseline	Tennant et al., 2007 [14]; Lloyd & Devine, 2012 [15]
WE: Attractiveness	4	In my workplace environment it is pleasant to walk. <i>Strongly agree</i> (1) to <i>Strongly disagree</i> (5)	0.67	Baseline	Ogilvie et al., 2008 [16]
WE: Safety	4	In my workplace environment the roads are dangerous for cyclists. <i>Strongly agree</i> (1) to <i>Strongly disagree</i> (5)	0.54	Baseline	Ogilvie et al., 2008 [16]

WE: Accessibility	3	In my workplace environment there is convenient public transport. <i>Strongly agree</i> (1) to <i>Strongly disagree</i> (5)	0.28	Baseline	Ogilvie et al., 2008 [16]
WE: Availability	3	In my workplace environment there is a park within walking distance. <i>Strongly agree</i> (1) to <i>Strongly disagree</i> (5)	0.27	Baseline	Ogilvie et al., 2008 [16]
WE: Overall	14	<i>See examples above</i>	0.74	Baseline	Ogilvie et al., 2008 [16]

EQ5D: EuroQol (five dimensions); SDT: Self-determination Theory; SF: short form; WE: Workplace environment; WEMWBS: Warwick-Edinburgh Mental Wellbeing Scale; WTA: willingness-to-accept.

¹All questionnaire items were scored so that higher numerical values equated to higher levels of the construct. All self-report measures were collected online via Qualtrics (www.Qualtrics.com).

²Cronbach's alpha calculated on baseline data.

Table 2.2. Baseline characteristics of participants in the intervention group (n=457)

	Intervention group
Characteristics of clusters	n = 19
Number of participants; mean (range)	24 (4 to 147)
Randomisation stratum, clusters (n, % participants)	
Small (<20)	11 (114, 25%)
Medium (20-50)	5 (167, 37%)
Large (>50)	1 (147, 32%)
Schools	2 (29, 6%)
Characteristics of participants^a	n=457
Age (years)	44.0 (9.3)
Female gender; n (%)	329 (72%)
BMI (kg/m ²)	27.2 (5.6)
Income >£20k; n (%)	341 (75%)
Education some higher level; n (%)	295 (65%)
Marital status married/co-habiting; n (%)	313 (68%)
Objective physical activity: pedometer steps (steps/day)	7,977 (3,602)
Objective: physical activity category, n (%)	
High (>7,500 steps/day)	204 (45%)
Moderate (>2,500-≤7,500 steps/day)	199 (44%)
Low (<2,500 steps/day)	11 (2%)
GPAQ: minutes of work physical activity (minutes/week)	42 (138)
GPAQ: minutes of MVPA (minutes/week)	296 (342)
GPAQ: physical activity category, n (%)	
High	70 (15%)
Moderate	140 (31%)
Low	141 (31%)
SF-8: Mental Component Score	48.0 (8.9)
SF-8: Physical Component Score	52.5 (6.6)
EQ5D: Health State	82.4 (13.8)
EQ5D: Weighted Health Index	0.89 (0.11)
WEMWBS: Mental wellbeing scale	50.2 (8.2)
Physical Activity Self-Efficacy scale	2.91 (0.97)
HPQ: 4-week absolute absenteeism	5.04 (41.3)
HPQ: Absolute presenteeism	80.3 (13.6)
HPQ: Combined relative absenteeism and absolute presenteeism	8.84 (12.57)
Environmental variables	
WE: Attractiveness (4-20)	10.83 (2.71)
WE: Safety (4-20)	10.63 (2.47)
WE: Accessibility (3-15)	9.27 (2.14)
WE: Availability (3-15)	10.36 (2.00)

^aMean (SD) unless otherwise stated

EQ5D: EuroQol; five dimensions; GPAQ: Global Physical Activity Questionnaire; HPQ: Health and Work Performance Questionnaire; MVPA: moderate- to vigorous-intensity physical activity; NHS: National Health Service; SD: standard deviation; SF: short form; WE: Workplace environment; WEMWBS: Warwick-Edinburgh Mental Wellbeing Scale.

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