

Multimedia Appendix - List of the apps included in the review and their major characteristics.

Name of apps (version)	Developer Store	User rating	Target group	App features (0-12)	Type of measurements for PA	Guideline for PA	Behaviour Change Techniques (0-23)	MARS A	MARS B	MARS C	MARS D	MARS Total
C25K® 5K Trainer (v. 4.7)	Zen Labs LLC (CA) Apple App Store	4.8	General	n=5; Allows sharing; App community; Calendarization; Sends reminders; Works in background;	Time;	No;	n=9; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting; Provide opportunities for social comparison; Provide contingent rewards; Provide instructions; Prompt practice; Set graded tasks; Use follow-up prompts;	3.00	4.75	4.67	4.00	4.10
Wokamon Fitness Game (v. 3.6)	Noodum Co. Ltd Apple App Store	4.5	General	n=4; Allows sharing; App community; Connects with peripheral devices; Works in background;	Steps; Distance; Time;	No;	n=5; Provide feedback on performance; Prompt self-monitoring of behaviour; Provide opportunities for social comparison; Plan social support or social change; Provide contingent rewards;	3.60	4.25	4.00	4.00	3.96
Pedometer. Step Counter & Weight Loss Tracker (v. p5.1.2)	Pacer Health Google Play	4.6	General	n=6; Allows sharing; App community; Connects with peripheral devices; Has videos showing exercises and/or other information; Sends reminders; Works in background;	Steps; Distance; Time; Velocity;	Yes; Steps;	n=8; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting; Provide opportunities for social comparison; Plan social support or social change; Provide instructions; Prompt practice; Use follow-up prompts;	3.60	4.75	5.00	4.17	4.38

10K Trainer by C25K® (v. 6.0)	Zen Labs LLC (CA) Apple App Store	4.7	General	n=5; Allows sharing; App community; Calendarization; Sends reminders; Works in background;	Time;	No;	n=9; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting; Provide opportunities for social comparison; Provide contingent rewards; Provide instructions; Prompt practice; Set graded tasks; Use follow-up prompts;	3.00	4.75	4.67	4.00	4.10
Accupedo Pedometer (v. 3.6.5)	Corusen LLC Apple App Store	4.7	General	n=2; Allows sharing; Works in background;	Steps; Distance; Time; Velocity;	Yes; Steps;	n=5; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting; Provide opportunities for social comparison; Plan social support or social change;	3.60	4.25	4.33	3.29	3.87
ActivityTracker Pedometer (v. 2.6)	Bits&Coffee Ltd. Apple App Store	4.4	General	n=4; Allows sharing; Connects with peripheral devices; Sends reminders; Works in background;	Steps; Distance; Time;	No;	n=5; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting; Provide opportunities for social comparison; Plan social support or social change;	3.60	4.50	4.67	4.33	4.28

Cash for Steps (v. 1.31)	Taras Bekhta Apple App Store	4.5	Adults (age >17 years)	n=5; Allows sharing; App community; Geographic information; Requires login; Works in background;	Steps; Distance;	No;	n=5; Provide feedback on performance; Prompt self-monitoring of behaviour; Provide opportunities for social comparison; Plan social support or social change; Provide contingent rewards;	2.80	3.75	3.33	3.50	3.35
Fit Simply - Pedometer to Watch your Steps (v. 2.2)	Alaric Cole Apple App Store	4	General	n=2; Allows sharing; Works in background;	Steps;	Yes; Steps;	n=6; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting; Provide opportunities for social comparison; Plan social support or social change; Provide contingent rewards;	3.00	4.25	4.00	3.75	3.75
Pedometer α (v. 1.1.9)	ITO Technologies. Inc. Apple App Store	4.6	General	n=2; Allows sharing; Works in background;	Steps; Distance; Time; Velocity;	No;	n=4; Provide feedback on performance; Prompt self-monitoring of behaviour; Provide opportunities for social comparison; Plan social support or social change;	3.20	4.75	5.00	3.67	4.15
Pedometer++ (v. 3.2.6)	David Smith & Cross Forward Consulting. LLC Apple App Store	4.7	General	n=1; Works in background;	Steps; Distance;	Yes; Steps;	n=4; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting; Provide contingent rewards;	3.20	4.00	4.00	3.83	3.76

Walking for Weight Loss (v. 4.6.1)	Grinasy Corp Apple App Store	4.3	General	n=4; Allows sharing; Calendarization; Connects with peripheral devices; Works in background;	Distance; Time; Velocity;	No;	n=8; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting; Provide opportunities for social comparison; Plan social support or social change; Provide instructions; Set graded tasks; Provide information about behaviour health link;	3.20	4.25	4.00	4.50	3.99
Runkeeper—GPS Running Tracker (v. 8.7)	FitnessKeeper. Inc Apple App Store	4.5	General	n=7; Allows sharing; App community; Connects with peripheral devices; Geographic information; Requires login; Sends reminders; Works in background;	Distance; Time; Velocity;	No;	n=9; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting; Provide opportunities for social comparison; Plan social support or social change; Provide contingent rewards; Provide instructions; Prompt practice; Prompt review of behavioural goals;	3.60	4.75	5.00	3.83	4.30
Runtastic Steps: Step Counter & Pedometer (v. 2.1)	Runtastic Google Play	4.2	General	n=6; Allows sharing; App community; Connects with peripheral devices; Has a back-office; Requires login; Works in background;	Steps; Distance; Time;	Yes; Steps;	n=7; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting; Provide opportunities for social comparison; Plan social support or social change; Provide instructions; Prompt information about behaviour health link;	3.40	4.25	5.00	3.71	4.09

Sports Tracker for All Sports (v. 4.2.2)	Sport Tracking Technologies Ltd. Apple App Store	4.8	General	n=7; Allows sharing; App community; Connects with peripheral devices; Geographic information; Has a back-office; Requires login; Works in background;	Distance; Time; Velocity;	No;	n=5; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting; Provide opportunities for social comparison; Plan social support or social change;	3.80	5.00	5.00	3.75	4.39
Step It Up (v.1.10.1)	Bean's Bytes. LLC Apple App Store	4.7	General	n=1; Works in background;	Steps; Distance;	No;	n=3; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting;	2.80	4.00	3.00	3.60	3.35
Steps Pedometer & Step Counter Activity Tracker (v. 1.4.3)	Supercritical Flow Apple App Store	4.2	General	n=2; Allows sharing; Works in background;	Steps; Distance; Time;	Yes; Steps;	n=5; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting; Provide opportunities for social comparison; Plan social support or social change;	3.20	4.75	4.00	3.50	3.86
Steps: Pedometer step counter (v. 2.1)	Adappt LLC Apple App Store	4.6	General	n=3; Allows sharing; App community; Works in background;	Steps; Distance;	Yes; Steps;	n=5; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting; Provide opportunities for social comparison; Plan social support or social change;	3.40	4.25	4.00	3.75	3.85

StepsApp Pedometer (v. 4.5.7)	StepsApp Google Play	4.7	General	n=2; Allows sharing; Works in background;	Steps; Distance; Time;	Yes; Steps;	n=5; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting; Provide opportunities for social comparison; Plan social support or social change;	3.60	4.75	4.33	4.00	4.17
StepUp Pedometer Step Tracker (v. 1.0.42)	StepUp Lab Google Play	4.4	General	n=6; Allows sharing; App community; Connects with peripheral devices; Has a back-office; Requires login; Works in background;	Steps; Distance;	Yes; Steps;	n=6; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting; Provide opportunities for social comparison; Plan social support or social change; Prompt review of behavioural goals;	3.40	3.75	3.67	4.00	3.70
Stepwise Pedometer (v. 3.1.22)	Progress Concept Limited Apple App Store	4.6	General	n=3; Allows sharing; Sends reminders; Works in background;	Steps; Distance; Time; Velocity;	Yes; Steps;	n=6; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting; Provide opportunities for social comparison; Plan social support or social change; Prompt practice;	3.20	4.50	4.00	3.83	3.88

Stepz - Step Counter (v. 2.3.1)	Michael Szumielewski Apple App Store	4.6	General	n=3; Allows sharing; App community; Works in background;	Steps; Distance;	Yes; Steps;	n=7; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting; Provide opportunities for social comparison; Plan social support or social change; Provide contingent rewards; Prompt review of behavioural goals;	3.60	4.00	4.33	4.00	3.98
The Walk: Fitness Tracker Game (v. 2.0.3)	Six to Start Apple App Store	4.2	Adults and Adolescent (Age>12 years)	n=2; Allows sharing; Works in background;	Distance; Time;	No;	n=6; Prompt specific goal setting; Provide opportunities for social comparison; Plan social support or social change; Provide contingent rewards; Provide instructions; Set graded tasks;	4.00	4.50	5.00	4.00	4.38
Track My Steps - Pedometer (v. 1.3)	Zen Labs LLC (CA) Apple App Store	4.6	General	n=3; Allows sharing; App community; Works in background;	Steps; Distance; Time;	Yes; Steps;	n=5; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting; Provide opportunities for social comparison; Plan social support or social change;	3.60	4.25	4.00	4.00	3.96
Walker - Pedometer Lite (v. 2.5.9)	Amuser Labo Apple App Store	4.5	General	n=4; Allows sharing; Allows password-protection; Geographic information; Works in background;	Steps; Distance; Time;	No;	n=4; Provide feedback on performance; Prompt self-monitoring of behaviour; Provide opportunities for social comparison; Plan social support or social change;	3.00	4.50	3.67	3.33	3.63

Walker - Pedometer M7 - M11 (v. 2.4.13)	Amuser Labo Apple App Store	4.6	General	n=5; Allows sharing; Allows password-protection; App community; Geographic information; Works in background;	Steps; Distance; Time;	Yes; Steps;	n=5; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting; Provide opportunities for social comparison; Plan social support or social change;	3.40	4.50	4.00	4.00	3.98
ActiFit – Auto Fitness Tracker (v. 2.5.3)	MicroMovie Media GmbH Google Play	4	General	n=5; Allows sharing; App community; Calendarization; Geographic information; Works in background;	Steps; Distance; Time;	No;	n=7; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting; Provide opportunities for social comparison; Plan social support or social change; Provide contingent rewards; Set graded tasks;	3.40	4.25	4.67	4.00	4.08

Pedometer & Fitness Tracker (v. 1.8.8)	SenseMe Google Play	4.2	General	n=2; Allows sharing; Works in background;	Steps; Distance; Time;	Yes; Steps;	n=8; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting; Provide opportunities for social comparison; Plan social support or social change; Provide instruction; Provided review of behavioural goals; Provide information about behaviour health link;	3.00	3.25	3.00	3.83	3.27
Livre Pedômetro-Contador Passo (v. 3.4.2)	Free Pedometer Google Play	4.6	General	n=3; Allows sharing; Has a back-office; Has videos showing exercises and/or other information;	Steps; Distance;	No;	n=6; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting; Provide opportunities for social comparison; Plan social support or social change; Provide contingent rewards;	2.60	4.25	3.67	3.50	3.50
Pedometer for Walking (v. 4.3.0)	SimplifiedApp Google Play	4.3	General	n=1; Works in background;	Steps; Distance; Velocity;	No;	n=4; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting; Provide instruction;	3.20	4.25	3.33	3.67	3.61
Pedometer 2.0 (v. 3.2.5)	DSD Google Play	4.1	General	n=1; Works in background;	Steps; Distance; Time; Velocity;	No;	n=3; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting;	3.20	4.00	3.33	3.33	3.47

Pedometer GPS Sport (v. 2.1)	Juan Francisco Google Play	4.1	General	n=2; Geographic information; Works in background;	Distance; Time; Velocity;	No;	n=3; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting;	2.80	3.75	3.00	3.33	3.22
Pedometer - Step Counter (v. 3.1.2)	Enjoy life more Google Play	4.4	General	n=2; Sends reminders; Works in background;	Steps; Distance; Velocity;	Yes; Steps;	n=4; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting; Provide information about behaviour health link;	3.60	4.75	4.67	3.75	4.19
Pedometer - Step Counter (v. 1.1.2)	Zeopoxa Google Play	4.1	General	n=2; Allows sharing; Works in background;	Steps; Distance; Time; Velocity;	No;	n=7; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting; Provide opportunities for social comparison; Plan social support or social change; Provide contingent rewards; Set graded tasks;	3.60	4.75	4.67	4.33	4.34
Pedometer & Step Counter - EasyFit Free (v. 1.3.8)	Mario Hanna Google Play	4.6	General	n=2; Allows sharing; Works in background;	Steps; Distance; Time;	No;	n=6; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting; Provide opportunities for social comparison; Plan social support or social change; Provide contingent rewards;	3.20	4.50	5.00	4.00	4.18

Pedômetro - tanquinho treino (v. 3.6.0)	iCare Fit Studio Google Play	4.6	Adults (age >17 years)	n=5; Allows sharing; App community; Has videos showing exercises and/or other information; Sends reminders; Works in background;	Steps; Distance; Time;	No;	n=10; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting; Provide opportunities for social comparison; Plan social support or social change; Provide contingent rewards; Provide instructions; Prompt practice; Set graded tasks; Model or demonstrate the behaviour;	3.60	4.00	5.00	3.80	4.10
Pedômetro & Frequência Cardíaca (v. 2.3.2)	Guava Studio Google Play	4.3	General	n=3; Allows sharing; Has videos showing exercises and/or other information; Works in background;	Steps; Distance; Time;	No;	n=7; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting; Provide opportunities for social comparison; Plan social support or social change; Provide instructions; Model or demonstrate the behaviour;	3.40	4.00	5.00	3.80	4.05
Accupedo+ Pedometer (v. 2.0.6.G)	Corusen LLC Google Play	4.1	General	n=2; Allows sharing; Works in background;	Steps; Distance; Time; Velocity;	Yes; Steps;	n=5; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting; Provide opportunities for social comparison; Plan social support or social change;	3.80	5.00	5.00	3.83	4.41

Pedometer Calorie - Step Counter (v. 2)	ALLTIMESOFT Google Play	4.2	General	n=1; Works in background;	Steps; Distance; Time; Velocity;	No;	n=3; Provide feedback on performance; Prompt self-monitoring of behaviour; Provide instruction;	2.60	4.25	3.67	3.67	3.55
Pedometer Step Counter - Fitness Tracker (v. 1.5)	AppAspect Technologies Pvt. Ltd Google Play	4	General	n=1; Works in background;	Steps; Distance;	No;	n=3; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting;	2.60	4.25	3.00	3.80	3.41
Pedometer (v. 5.20)	ITO Technologies. Inc. Google Play	4.4	General	n=2; Allows sharing; Works in background;	Steps; Distance; Time; Velocity;	No;	n=4; Provide feedback on performance; Prompt self-monitoring of behaviour; Provide opportunities for social comparison; Plan social support or social change;	3.20	4.75	5.00	3.67	4.15
Noom Walk Pedometer(v. 1.4.0)	Noom Inc. Google Play	4.1	General	n=3; Allows sharing; App community; Works in background;	Steps;	No;	n=4; Provide feedback on performance; Prompt self-monitoring of behaviour; Provide opportunities for social comparison; Plan social support or social change;	3.20	4.25	3.67	3.33	3.61
Accurate Pedometer (v. 4.3.0)	Enjoy life more Google Play	4.3	General	n=1; Works in background;	Steps; Distance; Velocity;	No;	n=4; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting; Provide instruction;	3.20	4.25	4.00	3.67	3.78

Simple Pedometer (Acurate) (v. 6.1)	Hello World Google Play	4.3	General	n=2; Sends reminders; Works in background;	Steps; Distance;	Yes; Steps;	n=4; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting; Prompt practice;	3.60	4.50	4.67	3.75	4.13
Pedometer Step Counter (v. 5.2.2)	SimplifiedApp Google Play	4.5	General	n=2; Sends reminders; Works in background;	Steps; Distance;	Yes; Steps;	n=4; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting; Prompt practice;	3.60	4.50	4.67	3.25	4.00
Step Counter - Pedometer Free & Walking Tracker (v. 1.0.19)	Leap Fitness Group Google Play	4.7	General	n=3; Allows sharing; Sends reminders; Works in background;	Steps; Distance; Time;	No;	n=8; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting; Provide opportunities for social comparison; Plan social support or social change; Provide contingent rewards; Prompt practice; Prompt review of behavioural goals;	3.60	4.50	4.67	3.67	4.11
Pedometer and Step Counter for Walking and Running (v. 3.0.21)	Health & Fitness Tracker Apps Google Play	4.1	General	n=2; Allows sharing; Works in background;	Steps; Distance;	No;	n=4; Provide feedback on performance; Prompt self-monitoring of behaviour; Provide opportunities for social comparison; Plan social support or social change;	3.00	4.00	3.33	4.00	3.58

Pedometer Plus – Step Counter & Walking Tracker (v. 1.1.2)	PVDApps Google Play	4.1	General	n=4; Allows sharing; Has a back-office; Requires login; Works in background;	Steps; Distance; Time;	No;	n=5; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting; Provide opportunities for social comparison; Plan social support or social change;	3.20	4.00	4.00	3.60	3.70
Sports Tracker Running Cycling (v. 3.20.0)	Amer Sports Digital Google Play	4.5	General	n=7; Allows sharing; App community; Connects with peripheral devices; Geographic information; Has a back-office; Requires login; Works in background;	Distance; Time; Velocity;	No;	n=7; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting; Provide opportunities for social comparison; Plan social support or social change; Provide instruction; Prompt review of behavioural goals;	3.60	4.00	4.67	4.00	4.07
StepWalk Pedometer (v. 3.14)	Fum4dev Google Play	4	General	n=3; Allows sharing; Geographic information; Works in background;	Steps; Distance; Time;	No;	n=4; Provide feedback on performance; Prompt self-monitoring of behaviour; Provide opportunities for social comparison; Plan social support or social change;	2.80	3.50	3.00	3.33	3.16
Walking Odometer Pro - GPS Pedometer & Fitness (v. 1.31)	DS Software Google Play	4	General	n=3; Allows sharing; Geographic information; Works in background;	Distance; Time; Velocity;	No;	n=5; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting; Provide opportunities for social comparison; Plan social support or social change;	2.80	4.00	3.00	3.60	3.35

WalkLogger Pedometer (v. 1.7.14)	WalkLogger Google Play	4.1	General	n=3; Allows sharing; Has a back-office; Works in background;	Steps; Distance; Time;	No;	n=6; Provide feedback on performance; Prompt self-monitoring of behaviour; Prompt specific goal setting; Provide opportunities for social comparison; Plan social support or social change; Provide contingent rewards;	3.20	4.00	3.33	4.00	3.63
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PA: physical activity; MARS: Mobile Application Rating Scale.