

Supplementary material 1. Matrix of behaviour determinants, performance and change objectives and behaviour change techniques (BCTs).

Behaviour determinants reported in Keeping Active Study	Performance objective (PO)	Change objective (CO)	Relevant BCTs identified in the literature and NICE guidelines (numerically coded in line with the v1 BCT taxonomy ¹)
Physical capability determinants: Factors facilitating PA maintenance			
Improved physical autonomy as a result of being physically active	PO1. A) Increase physical independence B) Increase PA related self-efficacy.	CO1. A) Provide services to improve physical function and skill B) Improve self-efficacy through PA practice	1.4 Action planning 1.6 Discrepancy between current behaviour and goal 2.2 Feedback on behavior 2.3 Self-monitoring of behavior 2.4 Self-monitoring outcome(s) of behavior 4.1 Instruction on how to perform a behavior 6.1 Demonstration of the behavior 8.1 Behavioral practice/ rehearsal 8.3 Habit formation 8.7 Graded tasks 15.3 focus on past success
Positively evaluated the benefits of PA	PO2. A) Develop positive attitudes and beliefs about PA and its outcomes	CO2. A) Provide education on PA to help facilitate positive beliefs in PA outcomes	1.2 Problem solving 1.4 Action planning 1.5 Review behavior goal(s) 1.7 Review outcome goal(s) 2.2 Feedback on behavior 2.3 Self-monitoring of behavior 2.4 Self-monitoring outcome(s) of behavior 3.1 Social support (unspecified) 8.1 Behavioral practice/ rehearsal 8.3 Habit formation 8.7 Graded tasks

			11.2 Reduce negative emotions
Improved physical function as a result of being physically active	PO3. A) Improve physical function	CO3. A) Provide services to improve physical function and skill via PA practice	1.1 Goal setting (behaviours) 1.2 Problem solving 1.3 Goal setting (outcome) 1.4 Action planning 1.5 Review behavior goal(s) 1.7 Review outcome goal(s) 2.2 Feedback on behavior 2.3 Self-monitoring of behavior 2.4 Self-monitoring outcome(s) of behavior 4.1 Instruction on how to perform a behavior 6.1 Demonstration of the behavior 8.1 Behavioral practice/ rehearsal 8.3 Habit formation 8.7 Graded tasks
Witnessing physical deterioration in friends and family members	PO4. A) Improve intention and motivation to be active B) Change attitudes and beliefs	CO4. A) Increase recognition of the importance of PA B) Use social comparison to highlight the importance of remaining PA	1.1 Goal setting (behaviours) 1.2 Problem solving 1.3 Goal setting (outcome) 1.4 Action planning 1.5 Review behavior goal(s) 1.7 Review outcome goal(s) 2.2 Feedback on behavior 2.3 Self-monitoring of behavior 2.4 Self-monitoring outcome(s) of behavior 3.1 Social support (unspecified) 8.3 Habit formation 9.2 Pros and cons 9.3 Comparative imaging of future outcomes
Physical capability determinants: Factors acting as barriers to PA maintenance			
Deterioration in physical health	PO5. A) Increase knowledge of PA poor health B) Increase self-efficacy to overcome barriers	CO5. A) Increase recognition of the importance of PA B) Increase skills and confidence in overcoming barriers	1.1 Goal setting (behaviours) 1.2 Problem solving 1.3 Goal setting (outcome) 1.4 Action planning 1.5 Review behavior goal(s) 1.7 Review outcome goal(s) 2.2 Feedback on behavior

			<ul style="list-style-type: none"> 2.3 Self-monitoring of behavior 2.4 Self-monitoring outcome(s) of behavior 3.1 Social support (unspecified) 4.1 Instruction on how to perform a behavior 6.1 Demonstration of the behavior 8.1 Behavioral practice/ rehearsal 8.3 Habit formation 8.7 Graded tasks
Fatigue	<ul style="list-style-type: none"> PO6. A) Increase self-efficacy to overcome barriers B) Develop knowledge of PA and fatigue 	<ul style="list-style-type: none"> CO6. A) Increase skills and confidence in overcoming barriers B) Develop knowledge and pacing strategies 	<ul style="list-style-type: none"> 1.1 Goal setting (behaviours) 1.2 Problem solving 1.3 Goal setting (outcome) 1.4 Action planning 1.5 Review behavior goal(s) 1.7 Review outcome goal(s) 2.2 Feedback on behavior 2.3 Self-monitoring of behavior 2.4 Self-monitoring outcome(s) of behavior 3.1 Social support (unspecified) 4.1 Instruction on how to perform a behavior 6.1 Demonstration of the behavior 8.1 Behavioral practice/ rehearsal 8.3 Habit formation 8.7 Graded tasks
Psychological capability determinants: Factors facilitating PA maintenance			
Motivation sourced by convenience of organised PA programmes	<ul style="list-style-type: none"> PO28. A) Increase motivation and intention to attend convenient PA opportunities B) Make local PA programmes accessible 	<ul style="list-style-type: none"> CO28. A) Increase intention to attend local PA programmes B) Organise PA programmes that are considered convenient 	<ul style="list-style-type: none"> 1.1 Goal setting (behaviours) 1.2 Problem solving 1.3 Goal setting (outcome) 1.4 Action planning 1.5 Review behavior goal(s) 1.7 Review outcome goal(s) 2.2 Feedback on behavior 2.3 Self-monitoring of behavior 2.4 Self-monitoring outcome(s) of behavior 3.1 Social support (unspecified) 4.1 Instruction on how to perform a behavior 5.1 Information about health consequences 5.3 Info –social/ environmental consequences

			6.1 Demonstration of the behavior 8.1 Behavioral practice/ rehearsal 8.3 Habit formation 8.7 Graded tasks
Measurable activity with pedometers and tick charts	PO29. A) Monitor PA levels via monitoring tools B) Increase knowledge on how to use technology	CO29. A) Increase intention to monitor PA B) Education people on the use of technology and diaries	1.1 Goal setting (behaviours) 1.3 Goal setting (outcome) 1.4 Action planning 1.5 Review behavior goal(s) 1.7 Review outcome goal(s) 2.2 Feedback on behavior 2.3 Self-monitoring of behavior 2.4 Self-monitoring outcome(s) of behavior 2.5 Monitoring outcomes of behaviour without feedback 2.7 Feedback on outcomes of behaviour 3.1 Social support (unspecified) 4.1 Instruction on how to perform a behavior 5.1 Information about health consequences 5.3 Info –social/ environmental consequences 6.1 Demonstration of the behavior 7.1 Prompts/cues 8.1 Behavioral practice/ rehearsal 8.3 Habit formation 8.7 Graded tasks
Increased self-efficacy	PO30. A) Increase PA related self-efficacy	CO30. A) Improve self-efficacy through PA practice	1.1 Goal setting (behaviours) 1.2 Problem solving 1.3 Goal setting (outcome) 1.4 Action planning 1.5 Review behavior goal(s) 1.7 Review outcome goal(s) 2.2 Feedback on behavior 2.3 Self-monitoring of behavior 2.4 Self-monitoring outcome(s) of behavior 3.1 Social support (unspecified) 4.1 Instruction on how to perform a behavior 5.1 Information about health consequences 5.3 Info –social/ environmental consequences

			6.1 Demonstration of the behavior 8.1 Behavioral practice/ rehearsal 8.3 Habit formation 8.7 Graded tasks
Development of a positive routine or habit	PO31. A) Manage habit formation	CO31. A) Facilitate behaviour repetition and develop relapse prevention strategies	1.1 Goal setting (behaviours) 1.2 Problem solving 1.3 Goal setting (outcome) 1.4 Action planning 1.5 Review behavior goal(s) 1.7 Review outcome goal(s) 2.2 Feedback on behavior 2.3 Self-monitoring of behavior 2.4 Self-monitoring outcome(s) of behavior 3.1 Social support (unspecified) 4.1 Instruction on how to perform a behavior 5.1 Information about health consequences 5.3 Info –social/ environmental consequences 6.1 Demonstration of the behavior 7.1 Prompts/cues 7.5 Remove aversive stimulus 8.1 Behavioral practice/ rehearsal 8.2 Behaviour substitution 8.3 Habit formation
Improved confidence relating to a reduction in falls	PO32. A) Manage attitude towards in physical capacity B) Manage confidence in physical function	CO32. A) Increase recognition of the importance of PA on physical function B) Improve self-efficacy through PA practice	1.1 Goal setting (behaviours) 1.2 Problem solving 1.3 Goal setting (outcome) 1.4 Action planning 1.5 Review behavior goal(s) 1.7 Review outcome goal(s) 2.2 Feedback on behavior 2.3 Self-monitoring of behavior 2.4 Self-monitoring outcome(s) of behavior 3.1 Social support (unspecified) 4.1 Instruction on how to perform a behavior 7.1 Prompts/cues 8.1 Behavioral practice/ rehearsal 8.3 Habit formation

			8.7 Graded tasks
Psychological capability determinants: Factors acting as barriers to PA maintenance			
Poor beliefs towards own health and/or the ageing process	PO33. A) Develop a positive attitude about PA B) Manage beliefs and expectations on the outcomes of poor health behaviours	CO33. A) Increase recognition of the importance of PA B) Use social comparison to highlight the importance of remaining PA	1.2 Problem solving 1.4 Action planning 1.5 Review behavior goal(s) 1.7 Review outcome goal(s) 2.2 Feedback on behavior 3.1 Social support (unspecified) 4.1 Instruction on how to perform a behavior 5.1 Information about health consequences 5.3 Info –social/ environmental consequences 8.1 Behavioral practice/ rehearsal
Others attitude towards ageing	PO34. A) Manage anticipated regret about others approval B) Manage resistance to social pressure C) Manage attitudes towards physical activity in later life years	CO34. A) Increase recognition of the importance of PA in older life years in social networks B) Overcome barriers to social stigma C) Reinforce health outcomes of physical inactivity	1.2 Problem solving 1.4 Action planning 2.2 Feedback on behavior 3.1 Social support (unspecified) 5.1 Information about health consequences 5.3 Info –social/ environmental consequences
Depression/ low mood	PO35. A) Improve motivation to be active B) Improve attitude towards being active	CO35. A) Educate on the use of reward systems B) Educate on the positives of PA effects of mental state.	1.1 Goal setting (behaviours) 1.2 Problem solving 1.3 Goal setting (outcome) 1.4 Action planning 1.5 Review behavior goal(s) 1.7 Review outcome goal(s) 2.2 Feedback on behavior 2.3 Self-monitoring of behavior 2.4 Self-monitoring outcome(s) of behavior 3.1 Social support (unspecified) 4.1 Instruction on how to perform a behavior 5.1 Information about health consequences 5.3 Info –social/ environmental consequences 7.1 Prompts/cues 8.1 Behavioral practice/ rehearsal 8.3 Habit formation 8.7 Graded tasks 10.4 Social reward

			10.7 Self incentive 10.9 Self reward
Memory impairment	PO36. A) Manage coping responses B) Develop habits	CO36. A) Develop cues/ stimulus and coping responses B) Form automatic habits via repetition	1.2 Problem solving 1.4 Action planning 2.2 Feedback on behavior 2.3 Self-monitoring of behavior 2.4 Self-monitoring outcome(s) of behavior 3.1 Social support (unspecified) 5.1 Information about health consequences 5.3 Info –social/ environmental consequences 7.1 Prompts/cues 8.1 Behavioral practice/ rehearsal 8.3 Habit formation
Social Environment determinants: Factors facilitating PA maintenance			
Social interaction	PO7. A) Improve social networks in PA classes B) Increase intention to make friendships	CO7. A) Facilitate social support in PA services B) Promote social interaction during classes	1.2 Problem solving 1.4 Action planning) 3.1 Social support (unspecified) 6.1 Demonstration of the behavior 7.1 Prompts/cues 12.1 Restructuring physical environment 12.5 Adding objects to the environment
Enjoyment of community based structured exercise programmes	PO8. A) Manage provision of community-based classes B) Deliver motivating services that improve skill and self-efficacy	CO8. A) Improve accessibility to community-based classes B) Provide services to improve physical skill and self-efficacy	1.1 Goal setting (behaviours) 1.2 Problem solving 1.3 Goal setting (outcome) 1.4 Action planning 1.5 Review behavior goal(s) 1.7 Review outcome goal(s) 3.1 Social support (unspecified) 6.1 Demonstration of the behavior 12.1 Restructuring physical environment 12.5 Adding objects to the environment
Motivation gained by	PO9. A) Mobilise social support	CO9. A) Create mechanisms in services to reinforce social support	1.1 Goal setting (behaviours) 1.2 Problem solving 1.3 Goal setting (outcome)

exercising with others			1.4 Action planning 1.5 Review behavior goal(s) 1.7 Review outcome goal(s) 2.3 Self-monitoring of behavior 2.4 Self-monitoring outcome(s) of behavior 3.1 Social support (unspecified) 6.1 Demonstration of the behavior 12.1 Restructuring physical environment
Partner's motivating and encouraging one another	PO10. A) Mobilise social support B) Manage and create social support networks C) Reinforce accessing social support	CO10. A) Create mechanisms in services to reinforce social support networks B) Create social support networks C) Reinforce modes of social support outside of PA service venues	1.1 Goal setting (behaviours) 1.2 Problem solving 1.3 Goal setting (outcome) 1.4 Action planning 1.5 Review behavior goal(s) 1.7 Review outcome goal(s) 2.3 Self-monitoring of behavior 2.4 Self-monitoring outcome(s) of behavior 3.1 Social support (unspecified) 6.1 Demonstration of the behavior 12.1 Restructuring physical environment
Positive feedback and evaluation of PA from friends and family	PO11. A) Mobilise social support B) Manage and create social support networks C) Manage access to social support networks D) Manage feedback given by social support networks	CO11. A) Create mechanisms in services to reinforce social support networks B) Create social support networks C) Reinforce modes of social support outside of PA service venues D) Improve knowledge of PA within social networks	1.1 Goal setting (behaviours) 6.1 Demonstration of the behavior 1.3 Goal setting (outcome) 1.4 Action planning 1.5 Review behavior goal(s) 1.7 Review outcome goal(s) 2.3 Self-monitoring of behavior 2.4 Self-monitoring outcome(s) of behavior 3.1 Social support (unspecified) 12.1 Restructuring physical environment
Social Environment determinants: Factors acting as barriers to PA maintenance			
Caring roles prevented participation in structured organised PA.	PO12. A) Plan and manage coping responses B) Manage intention to remain physically active	CO12. A) Create relapse prevention plans B) Increase knowledge on different types of PA	1.1 Goal setting (behaviours) 6.1 Demonstration of the behavior 1.2 Problem solving 1.3 Goal setting (outcome) 1.4 Action planning 1.5 Review behavior goal(s)

			<ul style="list-style-type: none"> 1.7 Review outcome goal(s) 2.3 Self-monitoring of behavior 2.4 Self-monitoring outcome(s) of behavior 3.1 Social support (unspecified) 7.1 Prompts/cues 7.3 Reduce prompts/cues 12.1 Restructuring physical environment 12.5 Adding objects to the environment
Lack of time and PA not a priority	<p>PO13. A) Manage competing demands on time B) Improve beliefs on the priority of PA and health</p>	<p>CO13. A) Acknowledge demands on time and demonstrate ability to time manage B) Increase recognition of the importance of PA</p>	<ul style="list-style-type: none"> 1.1 Goal setting (behaviours) 1.2 Problem solving 1.3 Goal setting (outcome) 1.4 Action planning 1.5 Review behavior goal(s) 1.7 Review outcome goal(s) 1.8 Behaviour contract 1.9 Commitment 2.3 Self-monitoring of behavior 2.4 Self-monitoring outcome(s) of behavior 3.1 Social support (unspecified) 7.1 Prompts/cues 7.3 Reduce prompts/cues 12.1 Restructuring physical environment 12.5 Adding objects to the environment
Social isolation	<p>PO14. A) Mobilise social support B) Manage and create social support networks within services C) Manage access to social support networks</p>	<p>CO14. A) Create mechanisms in services to reinforce social support networks B) Create social support networks within PA services C) Reinforce access to social support within PA services.</p>	<ul style="list-style-type: none"> 1.2 Problem solving 1.4 Action planning 3.1 Social support (unspecified) 6.1 Demonstration of the behavior 7.1 Prompts/cues 12.1 Restructuring physical environment 12.5 Adding objects to the environment

Physical Environmental determinants: Factors facilitating PA maintenance			
Location and availability of exercise programmes	PO15. A) Manage access to local PA programmes	CO15. A) Deliver PA programmes in local/accessible venues	1.2 Problem solving 1.4 Action planning 3.1 Social support (unspecified) 12.1 Restructuring physical environment 12.5 Adding objects to the environment
Proximity to venues offering different types of exercise classes	PO16. A) Manage access to a variety of local PA programmes	CO16. A) Deliver a variety of PA programmes in local/accessible venues	1.2 Problem solving 1.4 Action planning 3.1 Social support (unspecified) 12.1 Restructuring physical environment 12.5 Adding objects to the environment
Technology (apps, smart phones and pedometers) provided motivation and encouragement.	PO17. A) Monitor PA levels via technology B) Increase knowledge on how to use technology	CO17. A) Increase intention to monitor PA B) Provide education on technology	1.1 Goal setting (behaviours) 1.2 Problem solving 1.3 Goal setting (outcome) 1.4 Action planning 1.5 Review behavior goal(s) 1.7 Review outcome goal(s) 2.2 Feedback on behavior 2.3 Self-monitoring of behavior 2.4 Self-monitoring outcome(s) of behavior 3.1 Social support (unspecified) 4.1 Instruction on how to perform a behavior 6.1 Demonstration of the behavior 8.1 Behavioral practice/ rehearsal 8.3 Habit formation 12.5 Adding objects to the environment
Having transport	PO18. A) Manage access to transport	CO18. A) Explore car sharing with people without transport	1.2 Problem solving 1.4 Action planning 3.1 Social support (unspecified) 12.1 Restructuring physical environment 12.5 Adding objects to the environment
Cost or affordability	PO19. A) Manage access to affordable PA programmes	CO19. A) Improve access to affordable PA programmes	1.2 Problem solving 1.4 Action planning 3.1 Social support (unspecified)

			12.1 Restructuring physical environment 12.5 Adding objects to the environment
Physical Environmental determinants: Factors acting as barriers to PA maintenance			
Distractions in the home reduce people's commitment towards home-based exercises	PO20. A) Manage competing demands in the home B) Overcome barriers to increasing PA	CO20. A) Demonstrate the ability to manage competing demands in the home B) Identify barriers and ways to overcome them.	1.1 Goal setting (behaviours) 1.2 Problem solving 1.3 Goal setting (outcome) 1.4 Action planning 1.5 Review behavior goal(s) 1.7 Review outcome goal(s) 2.2 Feedback on behavior 2.3 Self-monitoring of behavior 2.4 Self-monitoring outcome(s) of behavior 3.1 Social support (unspecified) 4.1 Instruction on how to perform a behavior 6.1 Demonstration of the behavior 7.1 Prompts/cues 7.3 Reduce prompts/cues 8.1 Behavioral practice/ rehearsal 8.3 Habit formation 12.1 Restructuring physical environment 12.5 Adding objects to the environment
Lack of advertisement of local PA opportunities	PO21. A) Improve peoples knowledge of how to find out about local community services B) Manage knowledge mobilisation of local PA services	CO21. A) Improve peoples skills in researching local community services B) Improve advertising of local PA services	1.2 Problem solving 1.4 Action planning 2.2 Feedback on behavior 3.1 Social support (unspecified) 4.1 Instruction on how to perform a behavior 6.1 Demonstration of the behavior 8.1 Behavioral practice/ rehearsal 12.1 Restructuring physical environment 12.5 Adding objects to the environment
Not having transport	PO22. A) Manage access to transport	CO22. A) Explore car-sharing and local transport services	1.2 Problem solving 1.4 Action planning 3.1 Social support (unspecified) 12.1 Restructuring physical environment 12.5 Adding objects to the environment

Poor weather	PO23. A) Overcome barriers to increasing PA within the home	CO23. A) Identify barriers and ways to overcome them.	<ul style="list-style-type: none"> 1.1 Goal setting (behaviours) 1.2 Problem solving 1.3 Goal setting (outcome) 1.4 Action planning 1.5 Review behavior goal(s) 1.7 Review outcome goal(s) 2.2 Feedback on behavior 2.3 Self-monitoring of behavior 2.4 Self-monitoring outcome(s) of behavior 3.1 Social support (unspecified) 4.1 Instruction on how to perform a behavior 6.1 Demonstration of the behavior 8.1 Behavioral practice/ rehearsal 8.3 Habit formation 8.7 Graded tasks 12.1 Restructuring physical environment 12.5 Adding objects to the environment
Class times	PO24. A) Manage access to local PA programmes	CO24. A) Deliver day-time classes for older adults	<ul style="list-style-type: none"> 1.1 Goal setting (behaviours) 1.2 Problem solving 1.3 Goal setting (outcome) 1.4 Action planning 1.5 Review behavior goal(s) 1.7 Review outcome goal(s) 2.2 Feedback on behavior 2.3 Self-monitoring of behavior 2.4 Self-monitoring outcome(s) of behavior 3.1 Social support (unspecified) 4.1 Instruction on how to perform a behavior 6.1 Demonstration of the behavior 8.1 Behavioral practice/ rehearsal 8.3 Habit formation 8.7 Graded tasks 12.1 Restructuring physical environment 12.5 Adding objects to the environment
Personal safety when attending evening classes	PO25. A) Manage access to local PA programmes	CO25. A) Deliver day-time classes for older adults	<ul style="list-style-type: none"> 1.2 Problem solving 1.4 Action planning 3.1 Social support (unspecified)

			12.1 Restructuring physical environment 12.5 Adding objects to the environment
Uneven terrain or hard surfaces caused joint pain	PO26. A) Overcome barriers to increasing PA	CO26. A) Identify barriers and ways to overcome them.	1.1 Goal setting (behaviours) 1.2 Problem solving 1.3 Goal setting (outcome) 1.4 Action planning 1.5 Review behavior goal(s) 1.7 Review outcome goal(s) 2.2 Feedback on behavior 2.3 Self-monitoring of behavior 2.4 Self-monitoring outcome(s) of behavior 3.1 Social support (unspecified) 4.1 Instruction on how to perform a behavior 6.1 Demonstration of the behavior 8.1 Behavioral practice/ rehearsal 8.7 Graded tasks 12.1 Restructuring physical environment 12.5 Adding objects to the environment
Cost or affordability	PO27. A) Manage access to free or affordable PA programmes	CO27. A) Improve access to affordable PA programmes	1.2 Problem solving 1.4 Action planning 3.1 Social support (unspecified) 12.1 Restructuring physical environment 12.5 Adding objects to the environment
Reflective motivation: Factors facilitating PA maintenance			
Positively evaluated the benefits of PA	PO2. A) Develop positive attitudes and beliefs about PA and its outcomes	CO2. A) Provide education on PA to help facilitate positive beliefs in PA outcomes	1.2 Problem solving 1.4 Action planning 1.5 Review behavior goal(s) 1.7 Review outcome goal(s) 2.2 Feedback on behavior 2.3 Self-monitoring of behavior 2.4 Self-monitoring outcome(s) of behavior 3.1 Social support (unspecified) 8.1 Behavioral practice/ rehearsal 8.3 Habit formation 8.7 Graded tasks

Witnessing physical deterioration in friends and family members	PO4. A) Improve intention and motivation to be active B) Change attitudes and beliefs	CO4. A) Increase recognition of the importance of PA B) Use social comparison to highlight the importance of remaining PA	1.4 Goal setting (behaviours) 1.5 Problem solving 1.6 Goal setting (outcome) 1.4 Action planning 1.5 Review behavior goal(s) 1.7 Review outcome goal(s) 2.2 Feedback on behavior 2.3 Self-monitoring of behavior 2.4 Self-monitoring outcome(s) of behavior 3.1 Social support (unspecified) 8.3 Habit formation
Motivation gained by exercising with others	PO9. A) Mobilise social support	CO9. A) Create mechanisms in services to reinforce social support	1.1 Goal setting (behaviours) 1.2 Problem solving 1.3 Goal setting (outcome) 1.4 Action planning 1.5 Review behavior goal(s) 1.7 Review outcome goal(s) 2.3 Self-monitoring of behavior 2.4 Self-monitoring outcome(s) of behavior 3.1 Social support (unspecified) 6.1 Demonstration of the behavior 12.1 Restructuring physical environment
Reflective motivation: Factors acting as barriers to PA maintenance			
Others attitude towards ageing	PO34. A) Manage anticipated regret about others approval B) Manage resistance to social pressure C) Manage attitudes towards physical activity in later life years	CO34. A) Increase recognition of the importance of PA in older life years in social networks B) Overcome barriers to social stigma C) Reinforce health outcomes of physical inactivity	1.2 Problem solving 1.4 Action planning 2.2 Feedback on behavior 3.1 Social support (unspecified) 5.1 Information about health consequences 5.3 Info –social/ environmental consequences
Motivation sourced by convenience of organised PA programmes	PO28. A) Increase motivation and intention to attend convenient PA opportunities B) Make local PA programmes accessible	CO28. A) Increase intention to attend local PA programmes B) Organise PA programmes that are considered convenient	1.1 Goal setting (behaviours) 1.2 Problem solving 1.3 Goal setting (outcome) 1.4 Action planning 1.5 Review behavior goal(s) 1.7 Review outcome goal(s) 2.2 Feedback on behavior

			<ul style="list-style-type: none"> 2.3 Self-monitoring of behavior 2.4 Self-monitoring outcome(s) of behavior 3.1 Social support (unspecified) 4.1 Instruction on how to perform a behavior 5.1 Information about health consequences 5.3 Info –social/ environmental consequences 6.1 Demonstration of the behavior 8.1 Behavioral practice/ rehearsal 8.3 Habit formation
Measurable activity with pedometers and tick charts	<p>PO29. A) Monitor PA levels via monitoring tools</p> <p>B) Increase knowledge on how to use technology</p>	<p>CO29. A) Increase intention to monitor PA</p> <p>B) Education people on the use of technology and diaries</p>	<ul style="list-style-type: none"> 1.1 Goal setting (behaviours) 1.3 Goal setting (outcome) 1.4 Action planning 1.5 Review behavior goal(s) 1.7 Review outcome goal(s) 2.2 Feedback on behavior 2.3 Self-monitoring of behavior 2.4 Self-monitoring outcome(s) of behavior 3.1 Social support (unspecified) 4.1 Instruction on how to perform a behavior 5.1 Information about health consequences 5.3 Info –social/ environmental consequences 6.1 Demonstration of the behavior 7.1 Prompts/cues 8.1 Behavioral practice/ rehearsal 8.3 Habit formation 8.7 Graded tasks
Development of a positive routine or habit	PO31. A) Manage habit formation	CO31. A) Facilitate behaviour repetition and develop relapse prevention strategies	<ul style="list-style-type: none"> 1.1 Goal setting (behaviours) 1.2 Problem solving 1.3 Goal setting (outcome) 1.4 Action planning 1.5 Review behavior goal(s) 1.7 Review outcome goal(s) 2.2 Feedback on behavior 2.3 Self-monitoring of behavior 2.4 Self-monitoring outcome(s) of behavior 3.1 Social support (unspecified) 4.1 Instruction on how to perform a behavior

			<p>5.1 Information about health consequences 5.3 Info –social/ environmental consequences 6.1 Demonstration of the behavior 7.1 Prompts/cues 8.1 Behavioral practice/ rehearsal 8.3 Habit formation</p>
Partner's motivating and encouraging one another	<p>PO10. A) Mobilise social support B) Manage and create social support networks C) Reinforce accessing social support</p>	<p>CO10. A) Create mechanisms in services to reinforce social support networks B) Create social support networks C) Reinforce modes of social support outside of PA service venues</p>	<p>1.1 Goal setting (behaviours) 1.2 Problem solving 1.3 Goal setting (outcome) 1.4 Action planning 1.5 Review behavior goal(s) 1.7 Review outcome goal(s) 2.3 Self-monitoring of behavior 2.4 Self-monitoring outcome(s) of behavior 3.1 Social support (unspecified) 6.1 Demonstration of the behavior 12.1 Restructuring physical environment</p>
Enjoyment of community based structured exercise programmes	<p>PO8. A) Manage provision of community based classes B) Deliver motivating services that improve skill and self-efficacy</p>	<p>CO8. A) Improve accessibility to community based classes B) Provide services to improve physical skill and self-efficacy</p>	<p>1.1 Goal setting (behaviours) 1.2 Problem solving 1.3 Goal setting (outcome) 1.4 Action planning 1.5 Review behavior goal(s) 1.7 Review outcome goal(s) 3.1 Social support (unspecified) 6.1 Demonstration of the behavior 12.1 Restructuring physical environment 12.5 Adding objects to the environment</p>
Positive feedback and evaluation of PA from friends and family	<p>PO11. A) Mobilise social support B) Manage and create social support networks C) Manage access to social support networks D) Manage feedback given by social support networks</p>	<p>CO11. A) Create mechanisms in services to reinforce social support networks B) Create social support networks C) Reinforce modes of social support outside of PA service venues D) Improve knowledge of PA within social networks</p>	<p>1.1 Goal setting (behaviours) 6.1 Demonstration of the behavior 1.3 Goal setting (outcome) 1.4 Action planning 1.5 Review behavior goal(s) 1.7 Review outcome goal(s) 2.3 Self-monitoring of behavior 2.4 Self-monitoring outcome(s) of behavior 3.1 Social support (unspecified)</p>

			12.1 Restructuring physical environment
Automatic motivation: Factors acting as barriers to PA maintenance			
Fatigue	PO6. A) Increase self-efficacy to overcome barriers B) Develop knowledge of PA and fatigue	CO6. A) Increase skills and confidence in overcoming barriers B) Develop knowledge and pacing strategies	1.1 Goal setting (behaviours) 1.2 Problem solving 1.3 Goal setting (outcome) 1.4 Action planning 1.5 Review behavior goal(s) 1.7 Review outcome goal(s) 2.2 Feedback on behavior 2.3 Self-monitoring of behavior 2.4 Self-monitoring outcome(s) of behavior 3.1 Social support (unspecified) 4.1 Instruction on how to perform a behavior 6.1 Demonstration of the behavior 8.1 Behavioral practice/ rehearsal 8.3 Habit formation 8.7 Graded tasks
Depression/ low mood	PO35. A) Improve motivation to be active B) Improve attitude towards being active	CO35. A) Educate on the use of reward systems B) Educate on the positives of PA effects of mental state.	1.1 Goal setting (behaviours) 1.2 Problem solving 1.3 Goal setting (outcome) 1.4 Action planning 1.5 Review behavior goal(s) 1.7 Review outcome goal(s) 2.2 Feedback on behavior 2.3 Self-monitoring of behavior 2.4 Self-monitoring outcome(s) of behavior 3.1 Social support (unspecified) 4.1 Instruction on how to perform a behavior 5.1 Information about health consequences 5.3 Info –social/ environmental consequences 7.1 Prompts/cues 8.1 Behavioral practice/ rehearsal 8.3 Habit formation 8.7 Graded tasks 11.3 Conserving mental resources

Lack of time and PA not a priority	PO13. A) Manage competing demands on time B) Improve beliefs on the priority of PA and health	CO13. A) Acknowledge demands on time and demonstrate ability to time manage B) Increase recognition of the importance of PA	1.1 Goal setting (behaviours) 1.2 Problem solving 1.3 Goal setting (outcome) 1.4 Action planning 1.5 Review behavior goal(s) 1.7 Review outcome goal(s) 2.3 Self-monitoring of behavior 2.4 Self-monitoring outcome(s) of behavior 3.1 Social support (unspecified) 7.1 Prompts/cues 7.3 Reduce prompts/cues 12.1 Restructuring physical environment 12.5 Adding objects to the environment
Distractions in the home reduce people's commitment towards home-based exercises	PO20. A) Manage competing demands in the home B) Overcome barriers to increasing PA	CO20. A) Demonstrate the ability to manage competing demands in the home B) Identify barriers and ways to overcome them.	1.1 Goal setting (behaviours) 1.2 Problem solving 1.3 Goal setting (outcome) 1.4 Action planning 1.5 Review behavior goal(s) 1.7 Review outcome goal(s) 1.8 Behaviour contract 1.9 Commitment 2.2 Feedback on behavior 2.3 Self-monitoring of behavior 2.4 Self-monitoring outcome(s) of behavior 3.1 Social support (unspecified)

1.

1. Abraham C, & Michie, S. A taxonomy of behavior change techniques used in interventions. *Health psychology* 2009; **27**(3): 379.