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The Promoting Activity, Independence and Stability in Early Dementia (PrAISED) research programme is a NIHR funded project that has been designed to help people with mild cognitive impairment or early stage dementia to remain healthier and more independent for longer. We have designed an activity and exercise programme consisting of a combination of exercises, activities of daily living and memory strategies to help improve and maintain individual physical and mental health.

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PrAISED Therapist's Manual

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PrAISED

Promoting Activity, Independence and Stability in Early Dementia and Mild Cognitive Impairment





Therapist's manual





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Welcome to PrAISED

Welcome to the PrAISED manual. This is a manual for therapists delivering the PrAISED intervention. It will guide them through the PrAISED intervention programme, describing what it is, what it involves, and how to deliver it.

The PrAISED intervention was developed by a multidisciplinary team consisting of clinical academics, occupational therapists, physiotherapists, geriatricians, rehabilitation support workers, nurses, health psychologists and Public and Patient Involvement (PPI) representatives [1A, 1B].

The programme's feasibility and practicality was evaluated and established in a feasibility study which recruited 60 participants [2]. This study informed developments for the multi-site, randomised controlled trial (for protocol see [1A]). The results of the multi-centre, individually randomised, pragmatic, parallel group, randomised controlled trial will be published in due course [3- forthcoming].

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Background

What is PrAISED?

Who is PrAISED for?

Who delivers PrAISED?

Core Principles

Background to PrAISED

PrAISED stands for Promoting Activity, Independence and Stability in Early Dementia.

It aims to help people with mild dementia:

- 1. Be active
- 2. Stay stable
- 3. Remain independent

By doing so, people with mild dementia can maintain their independence, well-being, and quality of life. Ultimately, PrAISED aims to reduce some of the adverse consequences of dementia, ensuring safe completion of activities and maintaining stability with a view to reduce the risk of falls and increase physical activity and participation levels.

To achieve this the PrAISED programme involves participants doing at least 150 minutes of physical activity or exercise per week in addition to their usual routine. We understand this may be a challenge for some participants. However, ultimately all participants should be prepared to increase their activity levels during the programme.

What is PrAISED?

The PrAISED intervention is a multi-component programme that uses motivational theory, activities of daily living and physical exercise to help improve and maintain an individual's physical and mental health.

Therapists work with the participants to design and complete the programme in their own home and local community. The programme is person-centred and tailored to the lifestyle, abilities, interests, needs, and ambitions of each person. It establishes safe and independent activities of daily living and physical exercise that can be maintained and sustained once the participants have completed the programme.

The programme aims to promote activity, independence and stability through:

- 1. Motivational theories that establish and sustain active habitual routines
- 2. Physical activities of daily living to develop and maintain an individual's independence
- 3. Progressive physical exercises to improve and maintain bodily stability and strength



Who is PrAISED for?

The PrAISED intervention is for adults, aged over 65 years, who have mild dementia. Those taking part in the programme must be able to walk without human help and provide informed consent.

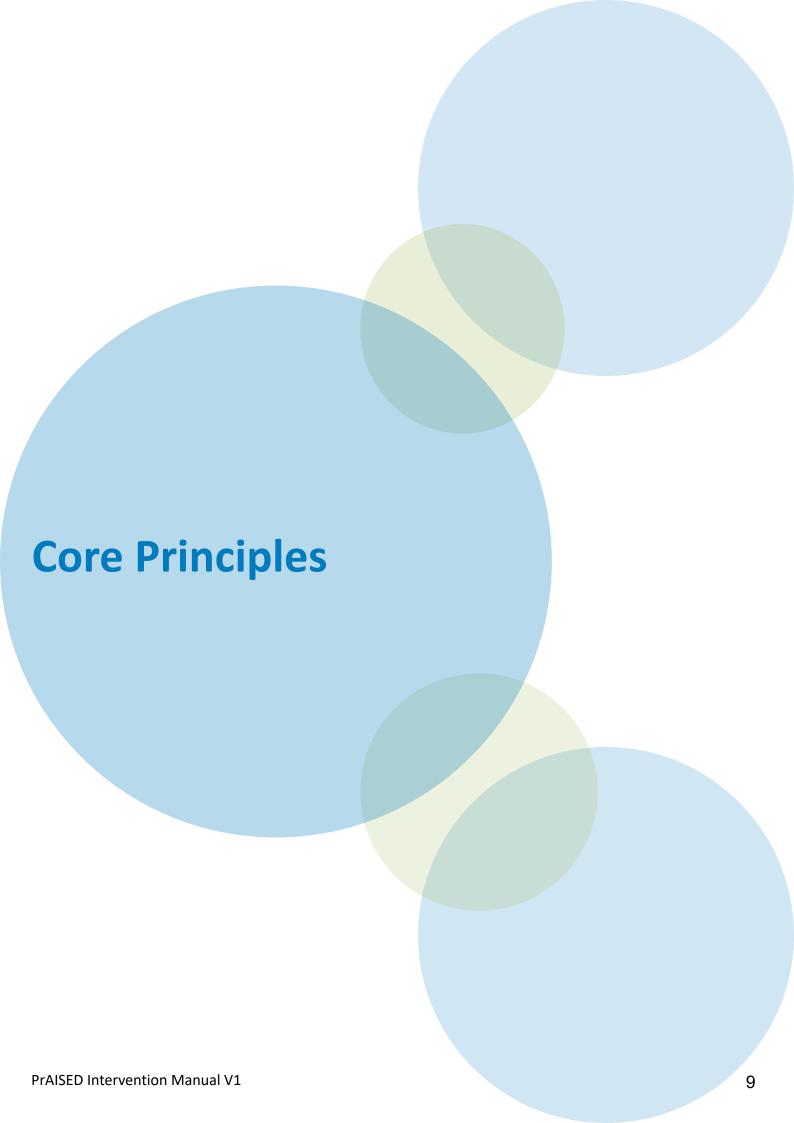
The PrAISED programme recognises the vital role that caregivers play in the lives of individuals with dementia. The programme can involve participants' caregivers, family members and/or friends, if they are available and happy to be involved. This could be through answering questions about themselves, the participant, and their relationship with the participant, or by getting involved with some of the activities or doing an activity together.

Who delivers PrAISED?

The intervention is delivered by therapists trained in the PrAISED programme. The PrAISED therapists include state registered Occupational Therapists (OT) and Physiotherapists (PT), and experienced Rehabilitation Support Workers (RSW).

All the therapists work with the participants and their caregivers, family members and/or friends to deliver the programme which will be tailored to that individual and their circumstances.





There are 14 core PrAISED principles

- 1. Intensive (150 minutes of physical activity per week)
- 2. Focused on tailored physical activity
- 3. The tasks must be challenging
- 4. The tasks must be progressive
- 5. The tasks must promote or improve independence
- 6. Supporting activities of daily living
- 7. Supporting dual tasking
- 8. Accessing the environment
- 9. Embracing positive risk taking
- 10. Using motivational theories
- 11. Assisting in habit formation
- 12. Using tapering to promote self-management
- 13. Promoting long term engagement
- 14. Participant specific goal setting

Intensive (150 minutes physical activity per week)

Guidelines for older adults recommend that at least 150 minutes of physical activity is completed per week [4]. Research studies have shown improvements in functional ability [5] and cognition [6] and reduction in falls risk [7] following this intensity of physical activity and exercise.

Physical activity must be performed for at least **150** minutes per week. In between visits from therapists, participants may complete the activities independently, or with support from a caregiver, family member or friend.



Focused on tailored physical activity

Physical activity and stability is central to PrAISED. There is extensive research and understanding about falls and older people. NICE guidelines [15] state that clients should have a tailored exercise programme for each person, combining both balance and strength training. Booth, Hood [90] looked at a meta-analysis of multicomponent interventions and found that there was evidence to support that dual task training had an effect on improving balance and functional mobility in clients with cognitive impairment.

A meta-analysis of 2020 subjects [72] demonstrated that exercise training in elderly persons with dementia had a positive effect on cognition and physical ability. Although the provision of this exercise varied greatly, the overall outcomes were positive.

A more recent 3 arm randomised controlled trial [5] looked at a tailored and individualised exercise programme either delivered at home (1 hour twice a week) or at a group setting (1 hour, twice a week at a day centre) for 1 year. There was also a control group for whom the only intervention was advice about exercise and nutrition, and access to community physiotherapy. All subjects had a diagnosis of Alzheimer's disease. Over the year physical function deteriorated significantly, however less so in the intervention group when compared to the control group. This demonstrates the potential protective benefits of exercise in this population.

Not everyone with dementia recognises that they are at an increased risk of falls because of their cognitive impairment or wants to focus on the fact that they are at increased risk of falls [8].

Physical activity is a broad term that describes many different things, such as exercise. By focusing on physical activity, PrAISED can incorporate a wide range of exercise, activities and challenging tasks that are both acceptable and individual to the person with dementia, and help address some of the reasons why they are more at risk of falls.

Tailoring is important to provide an intervention programme that is specific, relatable and meaningful for the individual participant. Prescription by a registered therapist allows appropriate tailoring and facilitates participation [9, 10].



The tasks must be challenging and progressive

People with dementia are at risk of falls. Multi-factorial interventions can reduce falls risk factors [11,12], thereby reducing the number of falls experienced or the risk of falling in the future.

Muscle weakness and postural instability are two of the main falls risk factors. Research has shown that progressive muscle strengthening and challenging balance exercises can significantly reduce falls rates. We know that levels of physical activity are low among older people [13]. The challenge is how to get sufficient participation, adherence and persistence in the NHS and UK cultural environment, and to be inclusive, for example, of the 50% of people with early dementia who live alone.

It is recognised that falls prevention interventions are poorly adapted to the needs of people with dementia [14]. Falls guidelines recommend that cognitive function is assessed, but do not provide guidance on how to proceed or how to adapt standard interventions for people with dementia [15]. Identifying the challenges for someone completing a physical activity or functional task allows the problems to be solved.

3 & 4

Promoting and improving independence

Dementia is a progressive condition where dependence upon others increases over time as the person loses the ability to perform activities of daily living.

At the mild stage of dementia there are still many things the individual can do and it is important to prolong this ability and independence for as long as possible.

There is a logical but complex relationship between independence and well-being for people with dementia [16]. However, a continued ability to complete normal everyday activities is an important indicator of independence [8].

Supporting activities of daily living

Activities of daily living incorporates many different tasks and activities that are done throughout the day. They include things we need to do and things we want to do. All are activities that have meaning and purpose (occupations). People with dementia want to continue with activities and everyday tasks [17].

Many people strive to maintain a similar pattern to their everyday life that they had before their dementia diagnosis, however, those patterns and levels of activities are different for each person [18].

Engaging in occupations and activities which are meaningful and purposeful to the individual allows the use of procedural memory and continuation of preserved skills [19, 20]. Doing meaningful activities also contributes to a sense of well-being, particularly for people still living in their own homes [18]. Training in these functional activities has been shown to improve functional ability [21, 22], cognitive function [23], and caregiver stress [24, 25].

Supporting dual tasking

Dual-task exercises challenge the brain as well as the body. By completing two exercises at once the participant's ability to maintain and divide their attention is challenged.

By training someone to do this efficiently, in a safe environment, they should be more adept at maintaining their balance when they are in a risky situation and their attention is divided.

It is important that we challenge the participant's ability to divide their attention, but we must do this in a controlled and graded way. The research suggests that it is possible to help people with dementia to maintain their ability to do two tasks, such as walking and counting.



Accessing the environment and embracing positive risk taking

Loss of or reduced social engagements and leisure activities are common in people with dementia, even when they are still living in the community with a spouse or family member and when in the early stages of their condition [17].

People with dementia are increasingly reliant on a caregiver, not only for completing activities of daily living but also to continue activities or other previously enjoyed occupations or activities. It is understandable how these social and leisure activities are therefore reduced, especially when caregivers are also aiming to reduce risky behaviours that can also manifest in dementia.

Assessing and managing risk involves both the person with dementia and their caregiver. Having an active and socially integrated lifestyle has a protective effect against cognitive decline [26] and is associated with wellbeing. Many social and leisure activities take place away from the home, so it is therefore important to be able

to access different environments.

Environmental assessment to reduce environmental risk factors and risky behaviours is a known element of falls prevention in older adults [15].

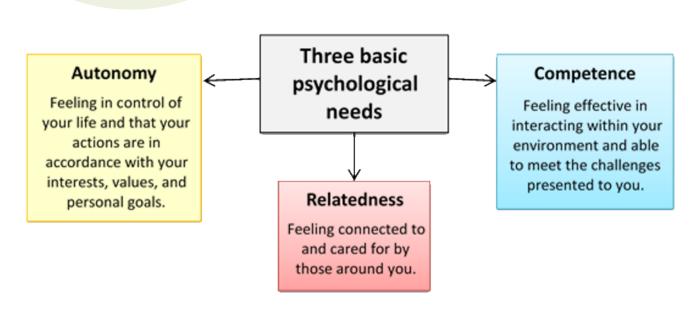


Using motivational theories

Regular exercise can reduce the rate of falls in individuals with dementia. However, in this patient group, as well as many others, compliance and adherence to an exercise programme can be problematic [5]. If individuals do not engage with exercise programmes and adhere in the long-term then the potential benefits associated with exercise (e.g., reduction in falls rate, increased quality of life) will not be sustained [7]. Exercising has to be an ongoing activity to obtain the immediate and long-term positive effects.

The intervention is person-centred, putting the participant at the heart of the programme. PrAISED is mainly based upon Self-Determination Theory (SDT) [27, 28], a theory of motivation which helps to explain what energises and directs behaviour, or in other words, why people think and behave as they do. A key principle of SDT is that all individuals have three innate psychological needs (competence, autonomy and relatedness). When these three needs are satisfied it leads to positive outcomes, such as increased motivation and well-being.





(Deci and Ryan [27], [28])



Prior to the PrAISED programme, existing behaviour change models had not been developed and/or validated in a population with dementia. Consequently, these models did not consider dementia-specific factors which may impinge on a person's motivation to engage in physical activity and/or exercise. For example, they did not reflect barriers to independently sustain intrinsic motivation because of cognitive impairment [29].

As part of the PrAISED programme, the research team developed and validated a behaviour change theoretical model in dementia (Physical Activity Behaviour Change Theoretical model in dementia [PHYT in dementia] [29, 30]. The synthesis work identified factors affecting uptake and maintenance in behaviour change activities in a population without dementia [29]. The validation work validated these factors through data collected from people living with dementia participating in the PrAISED study [30]. The resulting model identifies factors affecting motivation to uptake and maintain physical activity and/or exercise in people with dementia [29, 30].

These include personal factors (e.g., personal history, capability, self-efficacy, personal beliefs, personal characteristics, expectations/goals, autonomy/control), support (e.g., practical and emotional support of the person from family/caregivers and professionals supporting behaviour change), and activity factors (e.g., availability of information, activity characteristics, physical infrastructure, social opportunity) [30]. Therefore, the PHYT in dementia model advocates a more holistic approach than traditional behaviour change approaches, emphasising the need to consider the whole "ecological system" where the person lives in [30].

Assisting in habit formation

Habits are defined as "automatic behavioural responses to environmental cues, thought to develop through repetition of behaviour in consistent contexts" [34]. Habits become more ingrained when the same action is repeated in response to a certain cue and intention and in a consistent situation or context [95]. It is through repetition that the action becomes more automatic, requiring less cognitive effort to initiate [90]. Some research has demonstrated that once a habit has been formed for a particular action, such as physical activity, it is then less likely that other intentions or a reduction in motivation will hinder that habitual activity from being completed [96, 97].

There are four documented stages of habit formation. The initial three are not specific to habit formation but behaviour change. Habit formation has considerable overlap with behaviour change, however, to make that new behaviour a habit requires an additional "stage." Lally and Gardner [34] describe these four stages including the explicit and unique stage for habit formation:

- a) "a decision must be made to take action"
- b) "the decision to act must be translated into practice"
- c) "the behaviour must be repeated"
- d) "the new action must be repeated in a fashion conducive to the development of automaticity"

To be able to repeat an action a number of times, the person must have a desire or reason to repeat it and is a decision that is largely based on the consequences or response from doing it [34].

Research that the individuals has suggested "satisfaction" following the action (e.g., how much they feel doing the activity relates to what they are aiming to do) may be important [98]. However, the evidence is inconclusive [34]. the outcome or goal of action must be otherwise it will influence the repetition and continuation, or type of motivation for reason starting the new behaviour (see Motivational Theories, page 91). action or

"Context-dependent repetition for habit is necessary formation" [34]. Repeating the action in the same same situation or context is important as a basis for forming a however. to make it autonomous requires additional aspects. Lally and Gardner report that consideration of the rewards, consistency, level of complexity of the behaviour, and cues can all promote the development of automatic responses.

There is no research that has specifically looked at habit formation in people with dementia. PrAISED will be one of the first to use motivational strategies with a focus on maintenance and habit formation for physical activity in people with mild dementia and mild cognitive impairment.

Research evidence [27, 28] has found that when participants' feelings for competence, autonomy and relatedness are satisfied they are more likely to behave in self-determined ways; performing activities because they want to do them, rather than feeling that they have to, or becoming disengaged from the activity altogether. This increased self-determination has been found to be associated with older adults' feelings of vitality [31],

well-being [32], and initiation and persistence in exercise programmes [33]. Continuing or maintaining an exercise programme is more likely when a habit is formed [34].

Using tapering to promote self-management

Tapering can be viewed as a period of adaptation for the participant until the physical activity becomes routine. More intensive support is provided initially that is then reduced.

Participants and caregivers reported that an adaptation phase for an exercise intervention was useful but needed to be for a decent period of time [35]. By grading the amount of support and supervision provided during the study period, the participant receives appropriate introduction to the intervention at the beginning when goals and consistency are being ascertained, before responsibility and autonomy for completing the activities and exercises are encouraged at the end.

Tapering has effectively been used in other physical activity interventions and sedentary patient groups [36].



Promoting long-term engagement

For people with dementia, as well as many others, compliance and adherence to an exercise programme can be problematic [5]. If individuals do not engage with exercise programmes and adhere in the long-term, then the potential benefits associated with exercise (e.g., reduction in falls rate, increased quality of life) will not be sustained [7].

Exercising has to be an ongoing activity to obtain the immediate and long-term positive effects. When an individual feels pressured into doing an activity then they are also more likely to disengage and dropout in the long-term [37]. Participants are more likely to engage with the programme and continue in the long-term if the reasons for completing the intervention are more **intrinsic** (e.g., becomes part of their life, routine or who they are).



Participant specific goal setting

Goal setting has been used in people with dementia and MCI to aid identification of intervention content and success. Four out of the ten intervention sessions in the study by Graff, Adang [24] were used to define personal goals and assist people with dementia and their caregivers chose activities they wished to engage in.

However, evidence also suggests that an individual's personal goal may not always relate to the research topic. For example, in the Wesson, Clemson [91] falls study, participants with dementia were more motivated to get out of the house and be more independent rather than improve their individual falls risk. Similarly, in a systematic review exploring the effectiveness of behavioural interventions at increasing physical activity, Hobbs, Godfrey [92] found individually tailored goals and information on local community activities were the most beneficial.

Goal setting and considering one's own progress during an intervention is important. Earlier studies by Ziegelmann and Lippke [93] and Freund and Baltes [94] on the model of selection, optimisation, and compensation (SOC) looked at the success of using four self-management strategies in ageing and disability. The patient self-report found that the strategies worked positively with older people by maximising their independence and self-maintenance and leading to

successful ageing.

14



Getting started

Introductions

Assessments and outcome measures

Goal setting and planning

Core content

Session structure and intensity

Introductions

Introduce the programme fully to participants so they have an understanding of what they will have to do. It is important during the initial visits to go over the PrAISED principles again and answer any questions the participant and their/family/caregiver(s) may have).

It is up to the therapists to plan and implement the PrAISED programme with the individual. The therapist assessments will help identify the issues to work on, levels of ability for the individual and motivational considerations.

What to say...

"The PrAISED programme is designed to help keep you active, stable and independent. We want to help you to keep doing the things that you value and enjoy doing. Together we will identify some exercises and activities that may be of benefit and have a go at trying them out. We are here to support you. At any point, if you have any questions, please let us know and we will do our best to answer them."

Therapist assessment and outcome measures

Therapy Assessments should ideally be completed within the first week of the programme. The therapy assessment and use of outcome measures should be used to facilitate goal setting and action planning. The assessments and outcome measures can thus be used to adapt and progress the programme in line with the aims of the intervention.

The following assessments are recommended:

- Guide to Action to Prevent Falls [100]
- Physical Ability Assessment
- Functional Assessment/Assessment of Activities of Daily Living
- Weekly Plan
- Interest Checklist
- Goal Setting and Action Planning

The following outcome measures may assist with these assessments:

- Berg Balance Scale
- Tinetti Gait and Balance Assessment Tool [44]
- Elderly Mobility Scale
- Timed Up and Go

What to do...

Give the participant a task to get started with. The task can be something related to their goal or general ability. A task such as moving from sitting to standing is simple, functionally relevant, and can relate to many different activities (e.g., how many sit-to-stands can you do in 30 seconds). Explain to the participant that the aim is to get them into the PrAISED programme as quickly as possible, and that this task will be adapted as the assessment process goes on. Explain to the participant how this task relates to their goal or general ability (e.g., practising sitting to standing improves leg strength that can help you do...).

Goal setting and action planning

After assessments have been completed, therapists should set *goals* and an *action plan* with the participant.

In PrAISED we want participants to increase their physical activity levels by becoming involved in either past or new activities. It's really important people choose activities which are inspirational and realistic to increase their motivation to achieve them. Setting specific goals is really important to aid progression. Through discussion and actively listening the therapist can assist the participant to pitch their goals at a level which can challenge them but by achieving can bring a sense of satisfaction. We want participants to be in the driving seat of making positive change. Think of PrAISED as an insurance policy which you pay into weekly or monthly; the payment here is the exercise and functional activity and the pay-out will be the participant's independence for longer.

Types of goals or actions

It is important that participants have goals that are linked with the PrAISED intervention. To help with this, the goals are split into two areas that either focus on, i) activities of daily living, or ii) risk enablement and accessing the environment.

The participant goals set with the therapist will fit into these categories:

- 1. Domestic (e.g., cooking, shopping, laundry)
- 2. Personal (e.g., personal care, eating/drinking)
- 3. Leisure (e.g., gardening, sports)
- Safety and risk enablement inside the home (mobility, falls)
- Safety and risk enablement outside the home (getting to locations)

Activities of daily living

Risk enablement and accessing environments

The therapist and participant should negotiate and agree on a *minimum of two goals*. The two goals should cover at least two different categories; one ADL (domestic/ personal/ leisure), and one risk enablement (safety and risk enablement inside/outside). This will ensure participants will be doing a range of physical activities both inside and outside of the home and encouraging community access.

Some participants may not have any goals in mind or may find setting goals difficult. Sometimes it can take a few intervention sessions to agree or refine the goals for that participant. That is OK. However, the goals should be set promptly and can always be adapted.

Process

The goal setting and action planning is a 3 step process that involves the therapist, participant and often their caregiver:

- The therapist uses the My Week form (see following) and the Interest Checklist (see following) to discuss the participant's interests and routines.
- The 'likes' and 'want to try' activities are written on the Interest Summary and the Action Shortlist of 3 chosen activities with an action plan of how they are going to be met. This should ideally be written by the participant for ownership. However, the therapist can write this, but in the participant's own words.
- The Action Plan is evaluated by the participant and therapist to either add or amend the activity or to aid progression and eventual goal attainment.

Once the goals have been set the participant should have a copy of them. They should also be included in the initial participant letter.

'My week' form

In order to find out more about a participant's activities, interests and routines, therapists can invite participants to complete the 'My week' form. The 'My week' form can be used to detail activities and events (e.g., time of waking, showering/bathing, getting dressed, eating, walking the dog, reading, gardening, going to the shops etc) that the participant has performed that week.

To help demonstrate to participants how to complete the form, therapists could talk through the current day as an example, noting down their visit and any other activities which the participant mentions that they have done that day. Ideally, the participant would then complete the rest of the form in their own time as a diary of their week. The participant and therapist can then revisit it in the following session.

Some participants may feel more comfortable just talking through a 'typical week' and either the therapist, or the participant themselves, noting down what is said. If the participant is not able to complete the 'My Week' form, then the therapist can ask the key informants (e.g., caregivers or relatives) if they are willing to provide the information or the therapist could complete it. Therapists may want to use some of the following questions to explore participants' weekly routines:

- Describe a typical weekday/weekend day
- How do you pass your day?
- Are there any activities that you do on your own?
- Are there any activities that you do with others?
- Do you find time to do the things you want to do?
- Has your daily routine changed?
- Are you satisfied with your current routine?

It may also be useful to gain an understanding of what a participant values or feels is important in their life, therapists may want to use these value questions to explore these concepts further:

- What is important to you (in health, relationships)?
- What do you enjoy?
- What would be a good day for you?
- What makes you happiest?
- What things in your life do you feel you do well? Are proud of?
- What things have gone less well?
- What challenges are you facing at the moment?
- Has the way you've been stopped you from doing anything you want to do?

EXAMPLE: My Week

Occasional	Look after grandchildren	Book club (once a month on a Tuesday	morning)						
Sunday	9:00 - get up, L shower, get dressed.	9:30- breakfast	10:00- change bed sheets		13:00- lunch	14:00- walk with	18:00- dinner	22:20- go to bed	
Saturday	9:00- get up, shower, get dressed.	9:30- breakfast	10:00 - meet 10:00- walk to neighbour for shops to get coffee the paper	11:00- read the paper	13:00- lunch	14:00-16:00- shopping & market	18:00- dinner	22:20- go to bed	
Friday	8:00- get up, shower, get dressed.	8:30 - breakfast	10:00 - meet neighbour for coffee		13:00- lunch	14:00- water garden	18:00- dinner	19:00- water garden	22:30- go to bed
Thursday	8:00- get up, shower, get dressed.	8:30- breakfast			13:00- lunch	15:00- meet 14:00-16:00- 14:00- water with daughter watch TV garden	18:00- dinner	19:00- watch garden garden	22:30- go to 22:30- go to bed
Wednesday Thursday	8:00 - get up, shower, get dressed.	10:00 - hairdressers			13:00- lunch	15:00- meet with daughter for coffee	18:00- dinner	22:30- go to bed	
Tuesday	8:00- get up, shower, get dressed.	8:30 - breakfast			13:00- lunch	14:00-15:00- cleaning & listen to radio	18:00- dinner		22:30- go to bed
Monday	8:00- get up, shower, get dressed.	8:30- breakfast	10:00-12:00 - shopping and collect		Afternoon 13:00- lunch	14:00-16:00- read book	Evening 18:00-dinner 18:00-dinner 18:00-dinner 18:00-dinner 18:00-dinner	19:00- watch	20:30- go to 22:30- go to bed bed
Time of Monday	ning				Afternoon		Evening		

Interest checklist

In order to facilitate discussion around the participant's interests and routines the therapist can use the Interest Checklist and/or 'My Week' form.

The Leisure Interest Checklist is a list of activities which may be of interest to participants. Therapists can invite participants to have a look through the list and indicate which activities they are interested in. This could include physically taking part in the activities or being involved in some other way (e.g., going to watch a particular sports event or activity).

Some participants may be happy to complete the checklist during the visit, alongside the therapist; others may prefer to complete it in their own time between therapist visits. If the paticipant is not able to complete the checklist, then the therapist can ask the key informants (e.g., caregivers or relatives) if they are willing to provide the information.

INTEREST CHECKLIST UK (Adapted Version)

Namo:	Date of Birth:
Name	

		De	egree of	Interest	t
		Like	OK	Don't	Want
1. Health	Activity			Like	to try
and Fitness		\odot		8	
	Aerobics / Gym				
	Cycling				
	Running / Jogging				
	Roller blading / Ice Skating				
	Swimming				
	Yoga / Tai Chi				
Other Health					
and fitness:					

2. Sports	Activity	Like	ок Ок	Don't Like	Want to try
	Athletics				
	Basketball / Netball				
	Bowling				
	Cricket / Baseball / Rounders				
	Darts				
	Football / Rugby / Hockey				
	Golf				
	Martial Arts / Boxing / Fencing				

3	Pool / Snooker	
	Spectator Sports	
	Table Tennis	
	Tennis / Squash / Badminton	
Other Sports:		

V6.1. David Heasman / Paul Brewer. 2008 Adapted version Aoife McCormack, 2014

3. Creative	Activity	Like	ОК	Don't Like	Want to try
	Crafts / Needlework				
	Fashion: Clothes / Hair / Cosmetics				
	Making music – incl. instrument, DJ'ing				
	Model Building				
	Painting / Drawing (Art)				
	Photography				
	Pottery				
	Singing				
	Writing: letters / poems / stories				
	Woodworking – incl. Picture Framing, Furniture Restoration				
Other Creative:	T difficult (Cotofacion				

4.Productivity	Acti	vitv	Like	OK	Don't Like	Want to try
at home		,	©	(1)	8	
	Car Repair					
	Cooking / B	Baking				
	Gardening Indoor Plan					
	Mending / [YIC				
	Pet owners	hip				
Other Productivity at home:						

5. Leisure at home	Activity	Like	ок •••	Don't Like	Want to try
	Board games – chess, scrabble etc.				
	Collecting eg. Stamp collection				
	Computing – games / pc / internet				
	Listening to music				
	Playing cards				
(2) 0 N TO (2) (2) (3) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4	Puzzles / Crosswords				
	Radio				
	Reading				
	Television / Video				
Other Leisure at home:					

6. Social	Activity	Like	OK	Don't Like	Want to try
		\odot		8	
	Clubs: Social / Nightclubs				
	Eating out				
	Faith-related activities				
	Inviting / visiting friends / family				
	Pubs / bars				
	Voluntary work				
Other social:					

7. Outdoor Pursuits	Activity	Like	ОК	Don't Like	Want to try
	Bird watching / Wildlife				
	Camping				
	Climbing				
	Fishing				
	Horse riding				
	Walking				
	Water Sports incl. canoeing / rowing				
Other					
outdoor pursuits:					

8. Out and	Activity	Like	OK	Don't Like	Want to try
About		0			
SIN CO	Bingo				
Por Grb	Cinema				
	Concerts /Theatre				
	Dancing				
	Driving				
	Museums / art galleries				
	Places of interest / day trips				
	Shopping (incl. Markets)				
	Traveling / Holidays				
Other out and about:					Prower 2008

9.Educational	Activity		Like	ОК	Don't Like	Want to try
	Antiques					
	Courses / adu education	lt				
HISTORY	History					
	Politics / Philo	sophy				
	Science					
Other educational:						

Occupational Therapist	Signed	Date

INTEREST SUMMARY

Li	ikes	Want to try	
		ACTION PLAN	
		ACTION PLAN	
	SHORTLIST	ACTION PLAN ACTION PLAN	
	SHORTLIST		

Core content

The PrAISED programme will be different for different people. However, there is *core content* that must be included.

The PrAISED activity must:

- 1. Be a physical activity that meets A and B:
 - A. promote or maintain independence in activities of daily living
 - B. exercise which is a combination of:
 - ii. challenge balance (e.g., be difficult to complete but achievable to do)
 - iii. progress strength (e.g., require physical exertion or effort)
 - iv. dual-task training (e.g., doing a thinking and physical activity concurrently)
- 2. be continuous for at least 10 minutes
- 3. total at least 150 minutes per week

One activity will not accomplish all the initial components. For example, an activity might be balance challenging but does not progress strength. Therefore, there might be a range of activities completed to accomplish the 150 minutes.

Session structure and intensity

After completing the assessments with the individual and their caregiver, the therapist will be able to agree the programme for that person. A core principle of PrAISED is that the programme is specific to each person, their situation and motivating factors individual to them.

Participants can have up to 50 supervised sessions over the 12 months of the PrAISED intervention. Some people will need all these sessions to get them to do enough physical activity.

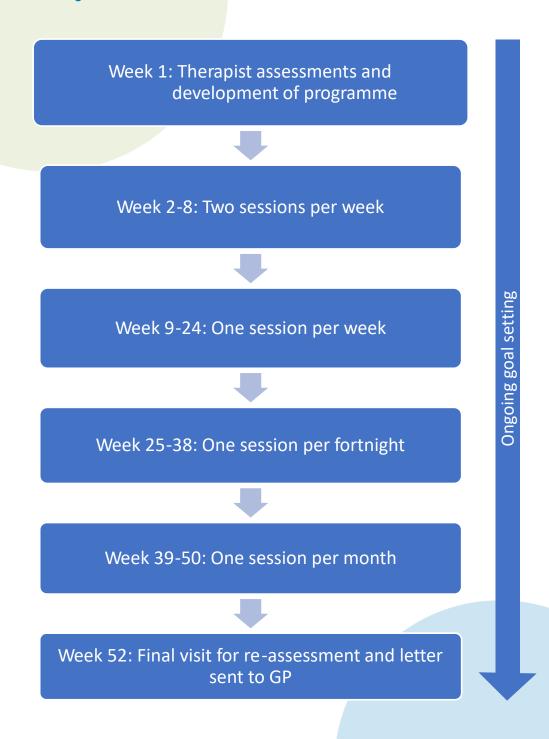
Registered therapists (physiotherapists and occupational therapists) are allocated a total of eleven sessions between them. These are to assess, review, and progress the programme. These are expected to be 60 minutes each.

Non-registered rehabilitation support workers (RSWs) are allocated 39 sessions; each session, regardless of whomever completes it, should last for at least 90 minutes.

The therapists that have completed the assessment should meet with the RSW to inform them and discuss the treatment plan to be completed. Joint sessions can be done where therapist and RSW attend together if required (this single, joint visit would count as two sessions). The RSW will be supervised by the therapists.

The frequency of the sessions should be tailored to the individual and their circumstances. It is recommended that the number of sessions are more frequent at the start of the programme (e.g., two visits every week by the RSW) and less intense at the end of the programme (e.g., a review once a month, or a telephone call). Figure 1 presents the suggested structure for the frequency of sessions.

Figure 1: Suggested frequency of therapist sessions



Intensity

There may be some participants who cannot, or do not need, to follow the recommended pattern. That is OK. There are some key pieces of information that will help make the decision to reduce the number of recommended sessions or pattern (Frequency and Intensity Clinical Decision Tool, page 55). Some participants may need *less intensive* support from the PrAISED therapists to complete their programme. For example, some participants may integrate the PrAISED activities very quickly into their daily routine and may not need the RSW to support their PrAISED sessions.

The decision-making tool (page 55) should be used to help the therapist make the decision to provide less intensive therapist sessions. It should be used within the first month of the PrAISED programme. Do not complete it straight away as it may take a few sessions to get to know the participant. Therapists can use it with other members of the team involved with that participant, or can complete it independently. The decision-making tool is not designed to be completed in front of the participant, but the decisions made should always be discussed with the participant and their family or caregivers if involved. Once completed a copy should be placed within the participants' therapist records.

The tool can be used again during the PrAISED programme if required. For example, a participant's living arrangements might change or they may have had a period of illness. If there is any doubt or concern, the therapist should follow the recommended session structure and intensity (Figure 1).

Life can sometimes get in the way of best intentions. Some participants may be unable to commit to the programme for a period of time during the 12 months. This could be for a number of reasons, such as a change in personal circumstances, illness or holiday, and it may be appropriate for them to be put on hold until they are able to do the programme again. They should be monitored regularly until a joint decision is made to re-start their therapist sessions. All participants should receive a minimum of 9 sessions.

Frequency and Intensity Clinical Decision Tool

Components to consider when decide	ding frequency	and intensity o	f visits
Level of cognitive ability	HIGH	MEDIUM	LOW
zerer er eegimerte azımış		25.6	
	i.e., subtle memory	i.e., noticeable	i.e., obvious
	problems	memory problems	memory problems
Amount of regular physical activity	HIGH	MEDIUM	LOW
A second of a sisteman that are the	i.e., 6 days a week		i.e., 1 day a week
Amount of assistance that can be	HIGH	MEDIUM	LOW
provided by the supporter to do			
the PrAISED programme	i.e., 4 times weekly	i.e., 3 times weekly	i.e., no supporter
Level of motivation	HIGH	MEDIUM	LOW
	i.e., meets all 3	i.e., occasionally	i.e., not motivated
	aspects of SDT	motivated	
Struggling with the frequency of	HIGH	MEDIUM	LOW
the PrAISED programme*			
1 3	i.e., struggles with	i.e., managing	i.e., requires
And a country of relativistics	frequent visits	frequent visits	frequent visits
Amount of physical activity	HIGH	MEDIUM	LOW
being maintained	,		. , ,
	i.e., easily	i.e., maintaining with intervention	i.e., struggling to
Level of independence in	maintaining HIGH	MEDIUM	maintain LOW
-	111011	IVIEDIOIVI	
domestic functional ability	i.e., no problems	i.e., some problems	i.e., has difficulty
Level of independence in	HIGH	MEDIUM	LOW
personal functional ability			
	i.e., no problems	i.e., some problems	i.e., has difficulty
Level of independence in	HÌGH	MEDIUM	LOW
leisure activities			
	i.e., no problems	i.e., some problems	i.e., has difficulty
Amount of engagement in other	HIGH	MEDIUM	LOW
social activities/engagements/			
regular commitments	i.e., regular	i.e., monthly or	i.e., no regular
Action by therapist	rommitments If mostly in	inconsistent If mostly in	social activities If mostly this
Action by therapist	,	•	•
	this column,	this column,	column,
	discuss	consider	follow
	reducing	modifying the	PrAISED
	frequency of	frequency of	programme
	visits/support	visits	frequency of
			visits

^{*}If participants are struggling with the frequency of visits, this may overrule all other decision-making regarding intensity to maintain adherence to the PrAISED programme.



The programme

- A. Activities of Daily Living
- **B. Physical Exercise**
- **C.** Motivation
- **D.** Maintenance

The programme

The PrAISED programme has four main sections to it:

- A. Activities of Daily Living: functional task analysis, risk enablement, and environmental/community access
- B. Physical exercise: balance challenging, progressive strengthening, gait re-education, and dual-task training
- C. Motivation: the implementation through communication, goal setting, and intervention delivery
- Maintenance: ways to support the continuation of the programme

The sections are colour coded to aid identification in the manual.

Core principles

Each section of the programme has core principles. These principles are provided in the relevant section with a description of intervention content. Many core principles are relevant for all aspects of the programme.

Core Principle(s):

1. Physical activity must be performed for at least 150 minutes per week. In between visits from therapists, participants may complete the activities independently, or with support from a caregiver, family member or friend.

A. Activities of Daily Living

The activities of daily living component consists of functional activities analysis, risk enablement and environment access.

Core Principle(s):

- 2. The programme must aim to promote or improve *independence* in the individual.
- 3. The activities completed must be both *functional* and *active*.
- Activities must *encourage positive risk taking* and only restrict activities if absolutely necessary where safety is compromised.
- 5. The programme must consider community or environmental access to promote the individuals' independence and integration into the community. This may involve individuals getting out and about in the community e.g., shopping, leisure centre.

It is important to ensure that the participant and their family members or caregiver(s) understand why they are being encouraged to do certain activities. This should be done so participants can relate the activity to what is important to them (e.g., gardening to maintain muscle strength, emptying the washing machine to work on balance, and shopping to maintain independence in communicating with people).

How to apply the functional activities

The aim of the functional activities grid is to give the therapist a visual aid on how to solve each of the cognitive components. The list is not exhaustive and is merely given as a starting point when issues arise. Through completion of the initial assessment, leisure interest checklist and general conversation you will have gained valuable information on the individual's likes, dislikes, strengths and weaknesses.

It is important to use activities that are meaningful and purposeful to gain maximum engagement from the individual.

- The treatment activities could include personal, domestic or leisure tasks.
- The tasks should be progressed by the therapist to ensure the participant has sufficient challenge.
- To progress the tasks, participants will be encouraged to develop their ability to concentrate on multiple tasks at the same time to reflect the demands of daily life; such as talking whilst cooking (dual task).
- The treatment will not only focus on strength and balance but will utilise cognitive strategies to maintain independence.

Definitions and examples

Prompts

Things to consider: Prompts should be consistent. Try to use the same language, photograph or place on the body to facilitate. The number of prompts can be increased or decreased depending on the progress of the participant, decreasing the number of prompts will make the task harder.

Example(s):

Verbal prompt: "Can you tell me what you need to do next Mrs B?"

Visual prompt: photograph of the participant completing an exercise in the correct posture; a pictorial 'menu' card of how to cook a recipe.

Physical prompt: a light, brief touch to a participant's hand to make them aware of the action they are completing or about to complete; a supportive hold of the participant's shoulder to encourage the correct posture during a physical exercise.

Be aware: time of day, fatigue, distractions etc., may increase or decrease the usual number of prompts required.

Exercise

Things to consider: The exercises will be tailored to the participant and their environment. They must be completed in a safe and consistent place. Additional equipment or objects may be needed to complete the exercise and must be clearly documented on that exercise sheet.

Example(s):

Physical exercise: balancing on one leg, sit to stands, knee bends with weights

Functional exercise: walking to the shops, writing out a recipe, gardening

Dual task exercise: balancing on one leg whilst reciting a recipe out loud

Be aware: time of day, fatigue, environmental temperature, nutrition, mood, feeling unwell/cold/flu, and other activities completed that day, will all affect ability to exercise. Exercises must only be completed if the instructor feels it is safe to do so and that it will not compromise the participant's safety for the rest of their day. Exercises must only be done as prescribed or trained to do.

Written Instructions

Things to consider: Keep it simple and clear; presented in a number of ways, written only in a 'menu' or recipe format or including photographs of the actual item (e.g.: walking stick) so the participant can recognise and relate to it. The instruction may be in written or picture format; laminated instructions may be harder wearing for humid environments such as the kitchen or bathroom.

Use a clear font such as 'verdana' and ensure that it is large enough for the participant to read and understand.

Example(s):

Physical exercise: balancing on one leg, sit to stands, knee bends with weights

Functional exercise: walking to the shops, writing out a recipe, gardening

Dual task exercise: balancing on one leg whilst reciting a recipe out loud

Be aware: try to keep the instructions as simple as possible so the message is correctly conveyed.

Giving reassurance

Things to consider: Be mindful of your communication style, body language, touch (not everybody responds positively to touch). Actively listen to the person; give good eye contact, ask questions and be empathetic about what is frightening them. People will generally calm easier by using this method.

Be aware: Giving too much reassurance can make the person dependent on you emotionally and can affect the therapeutic relationship.

Repetition

Things to consider: Good organisation is important to facilitate memory; encourage the person to keep items in a designated space. A good routine is also key, so encourage the participant to write down information on a calendar or diary. Try to encourage the participant to associate a picture of the information they wish to recall, rehearse and repeat it and translate it in their own words.

Be aware: Try to encourage participants to relax and concentrate, as stress or tension can impact on memory. Rushing reduces the attention to the task. People with weak visual memory usually require lots of repetition to remember.

Using equipment

Things to consider: Specialist equipment is usually provided by a healthcare professional. If purchased privately by the participant, consider whether the equipment is being used for the intended purpose? Does the participant need the equipment for the task? Is the equipment intended for the participant; for example, are they using their spouse's walking aid? Is the equipment set at the correct height for the participant and is it functional? Is the equipment safe to use? Does the participant need help locating the equipment?

Be aware: Limit the specialist equipment within the environment, as too much can be disabling and also become a trip hazard.

Functional activity analysis and strategies

Physical activity is the core component of the programme, and some of this may be gained through functional strategies which maintain or improve independence.

The Functional Strategies grid (see following) has been compiled detailing how certain skills can be progressed or addressed when someone is completing a functional task. The grid can be used with any task and any level of ability.

The activities could be activities of daily living such as bathing, grooming, shopping, laundry, cooking, and hobbies/leisure activities (e.g., gardening), or they may be sports such as running cycling or active hobbies such as ball room dancing. Sedentary activities of daily living should not be included in the programme unless part of a progression into a more physically active task.

These strategies can be used to *increase* or *decrease* physical and mental challenge.

The therapist must determine which aspects of the task require development and how the participant can be supported to accomplish the task. Initially, the task being completed should remain constant, being repeated with the same strategies to help independence.

As the participant improves, other tasks may be used with the same or different strategies tried (e.g., the task might be mowing the lawn and strategies to help the participant's independence are initially related to initiation and planning; these can then be progressed if suitable to either more gardening tasks or by reducing or changing the strategies to challenge initiation and planning).

Participants will be encouraged to develop the ability to concentrate on multiple tasks at the same time to reflect the demands of everyday life such as talking whilst cooking (dual-tasking).

To improve ability within the functional task, the therapist may include physical exercises into the participant's programme (see Section B. Physical Exercise).

What to do...

- Once a task has been selected, the functional activities analysis grid (see following) should be consulted to determine what cognitive component is influencing that task
- If a cognitive component is limiting the independence of the individual from completing that task, refer to the How to solve it section of the table
- Implement the chosen ways to support the participant

Functional Strategies Grid

	I= 1	
Component	Example	How to solve it Prompts – verbal, visual, physical
Initiation	e.g., starting the task	
		Multiple choice/questioningCalendar
Dlanning	e.g., getting things	Timetable List of things needed
Planning		
	together needed for	Orientation in the room (Getting the person into the room) Photo of workspace
	the task	Photo of workspace
		Visual map on the work surface
Sequencing and	e.g., doing things in the	
concentration	right, logical order	Putting into steps, demonstration, mirroring
		Using equipment (e.g., timer)
		Written instructions
		Consider distractions (e.g., increase or decrease distractions)
		Part completion of the task (e.g., adding or reducing steps to a
		task)
Bending	e.g., moving from one	Balance challenging exercises (e.g., appendix 14)
	height to another	Adjust height of items
	(down)	Provide or reduce support (e.g., aid, equipment)
	, ,	Adjust amount of reach to items
Reaching	e.g., moving outside of	Balance challenging exercises (e.g., appendix 14)
ricaciiiig	the base of support	Provide or reduce physical support
	the base of support	Prompts – verbal, visual, physical
		Provide or reduce use of equipment (e.g., helping hand)
		Adjust amount of reach to items
Lifting	e.g., moving an item	Strengthening exercises (e.g., appendix 15)
26	from one space to	Adjust the distance, height or weight of item
	another	Part completion of the task or move items into reach
		Provide or reduce adaptive equipment (e.g., perching stool,
		helping hand)
		Adjust how objects are moved (e.g., lift or slide)
Manoeuvring and	e.g., moving around	Increase awareness of furniture and objects
perception	objects and within	Prompts – verbal, visual, physical
perception	space	Verbally plan the route
		• Familiarise with environment (e.g., identify where things are kept)
		Clear area or remove excess items to navigate around
		Stickers to prompt where to stand/navigate
		Visual map of where items should be (e.g., where items are
		located)
		Adjust location of items (e.g., amongst or separate from other
		items)
Confidence	e.g., how confidence or	
and anxiety	anxiety can impact on	walk)
and anxiety	the task	Place items and equipment so more visually identified/noticed
		Prompts – verbal, visual, physical
		Reassurance
		Planning of the task
		Label or colour code items/objects
		Provide or reduce instructions for task
		Repetition of task
		•

Risk enablement

It is important that the activities selected for the programme promote movement and independence rather than limit or restrict the individual.

Positive risk taking is encouraged through the use of a risk enablement tool. The risk enablement tool and heat map (see following) should be used to assess the activity, its value and how the risks associated with the activity should be managed.

Activities should only be restricted if absolutely necessary, such as where safety is compromised.

Justification for the activity should be provided and explained for the caregiver to reassure them that the person with dementia is "safe" to do the activity. The risk enablement tool provides the therapist with justification for activity to make sure all the risks have been considered.

What to do...

- Once an activity has been selected, the risk enablement tool (see following) should be completed on that activity
- If you have any concerns regarding the safety of the activity, use the safety "heat map" (see following) to aid your decision-making to determine if the activity selected has too many risks
- Use the functional strategies grid (page 65) to aid decisions on how to increase or decrease challenge in the activity selected

	Considerations			
The activity	What are the risks associated with	How would quality of life be enhanced by	How will the risks associated with this	
	the activity?	doing this activity?	activity be managed?	

Risk enablement tool and heat map

Personal Risk Portfolio or "Heat Map"

Contr	ibution
1	^

quality of life

High

Medium

Low

High

Maximise safety enhancement and risk management protect the individual and manage the activity	Carefully balance safety enhancement and activity management to protect the person	Minimal safety enhancement necessary – carry out with normal levels of safety enhancement
Substitute. Can the same personal benefit be delivered in a different way?. Seek different activities.	Carefully balance. Safety enhancement and activity management to protect the person	Minimal safety enhancement necessary – carry out with normal levels of safety enhancement
Do not allow Level of risk is not related to the benefit/value to the person. Find alternatives	Challenge real value of the activity to the individual. Seek alternatives that are more attractive and lower risk	Minimal safety enhancement necessary – carry out with normal levels of safety enhancement

Risk of Harm or risk to quality of life

Low

Medium

Environmental access

Maintaining or improving an individual's access to the community and/or different environments will promote independence and integration into the community. This might be through outdoor walking, shopping, or using community exercise or hobby classes. During PrAISED sessions, participants can be introduced and supported to attend local community resources, if appropriate. This will engage them with their local area and prolong activities and hobbies beyond the PrAISED intervention.

Someone with dementia may be reluctant to go out. This may be challenging for all concerned. The therapist will need to ask the participant what they want to achieve and aim to match their planned community activities with their interests.

It is important that any risks involved with the individual accessing the community or different environments are identified and addressed. The risk enablement section can assist in this process. There are also certain aspects that might make getting out and about achievable and independence promoting for the participants.

Consideration of community access can be started early in the programme and should be reviewed throughout the remainder of the therapist's involvement with the participant.

Participants can be encouraged to start a diary of activities (see My Week Form p.37). The diary can be used to aid goal-making, as an aide memoire for the participant to discuss progress or issues with the therapist, or as a motivational prompt to continue the activities.

What to do...

- The goal-setting process should be used to identify accessing the community or other environments outside the house
- Once identified, the Going outside the house table should be considered (see following)
- Over the course of the study, try to progress the task

Going outside the house

Pre-Going Out	Considerations	Discussed?
Memory prompts	 Does the paticipant need memory prompts? 	
	i.e., signs, calendars/diary, placing clothing/	
	footwear out	
Places they usually go (routine)	 Does the participant know how to get to where 	
	they are intending to go?	
Fear of falling/low confidence	Is the participant hesitant, reaching out, or	
	furniture walk?	
Pain (taking medication)	Does the participant need to take any medication	
	with them?	
Mobility (equipment)	Does the participant need any equipment to	
Transfers	mobilise when going outside? • Can the participant get on and off furniture	
Transiers	 Can the participant get on and off furniture (chairs, toilet)? 	
Steps and stairs (equipment)	• Can the participant get up and down stairs safely?	
Hearing or visual impairment	Does the participant need any support when out	
(equipment)	to see or hear?	
Vision (short and long distances)	 Does the participant need their glass(es) to see or 	
	read?	
Money recognition	Does the participant recognise all denominations	
, , , , , , , , , , , , , , , , , , , ,	of money and know their value?	
Communication/language skills	Is the participant confident and clear in asking for	
(asking for things/diretions)	things or gaining directions?	
Usual transportation	What mode of transport would the participant	
	usually take?	
	asaany take.	
Going Out	Considerations	Discussed?
Going Out Time of day		Discussed?
	Considerations	Discussed?
Time of day	Considerations • Does the participant need a torch if it's dark?	Discussed?
Time of day Money handling skills	 Considerations Does the participant need a torch if it's dark? Can the participant handle coins, paper, or cards? 	Discussed?
Time of day Money handling skills	 Considerations Does the participant need a torch if it's dark? Can the participant handle coins, paper, or cards? Are the items needed (i.e. mobile phone, purse, umbrella) close at hand? Or kept in a certain place 	Discussed?
Time of day Money handling skills	 Considerations Does the participant need a torch if it's dark? Can the participant handle coins, paper, or cards? Are the items needed (i.e. mobile phone, purse, 	Discussed?
Time of day Money handling skills Items they will need	 Considerations Does the participant need a torch if it's dark? Can the participant handle coins, paper, or cards? Are the items needed (i.e. mobile phone, purse, umbrella) close at hand? Or kept in a certain place together? 	Discussed?
Time of day Money handling skills Items they will need	 Considerations Does the participant need a torch if it's dark? Can the participant handle coins, paper, or cards? Are the items needed (i.e. mobile phone, purse, umbrella) close at hand? Or kept in a certain place together? Is the clothing choice appropriate for the weather outside? (i.e. coat, gloves, hat, footwear, sunscreen) 	Discussed?
Time of day Money handling skills Items they will need	 Considerations Does the participant need a torch if it's dark? Can the participant handle coins, paper, or cards? Are the items needed (i.e. mobile phone, purse, umbrella) close at hand? Or kept in a certain place together? Is the clothing choice appropriate for the weather outside? (i.e. coat, gloves, hat, footwear, 	Discussed?
Time of day Money handling skills Items they will need What they will wear	 Considerations Does the participant need a torch if it's dark? Can the participant handle coins, paper, or cards? Are the items needed (i.e. mobile phone, purse, umbrella) close at hand? Or kept in a certain place together? Is the clothing choice appropriate for the weather outside? (i.e. coat, gloves, hat, footwear, sunscreen) 	Discussed?
Time of day Money handling skills Items they will need What they will wear	 Considerations Does the participant need a torch if it's dark? Can the participant handle coins, paper, or cards? Are the items needed (i.e. mobile phone, purse, umbrella) close at hand? Or kept in a certain place together? Is the clothing choice appropriate for the weather outside? (i.e. coat, gloves, hat, footwear, sunscreen) Can the participant carry the items needed and 	Discussed?
Time of day Money handling skills Items they will need What they will wear Mobilising and carrying objects	 Considerations Does the participant need a torch if it's dark? Can the participant handle coins, paper, or cards? Are the items needed (i.e. mobile phone, purse, umbrella) close at hand? Or kept in a certain place together? Is the clothing choice appropriate for the weather outside? (i.e. coat, gloves, hat, footwear, sunscreen) Can the participant carry the items needed and walk in a safe way? Is the surface shiny/slippery/uneven/have different levels? 	Discussed?
Time of day Money handling skills Items they will need What they will wear Mobilising and carrying objects	 Considerations Does the participant need a torch if it's dark? Can the participant handle coins, paper, or cards? Are the items needed (i.e. mobile phone, purse, umbrella) close at hand? Or kept in a certain place together? Is the clothing choice appropriate for the weather outside? (i.e. coat, gloves, hat, footwear, sunscreen) Can the participant carry the items needed and walk in a safe way? Is the surface shiny/slippery/uneven/have 	Discussed?
Time of day Money handling skills Items they will need What they will wear Mobilising and carrying objects Mobility (inside or outside) Orientation	 Considerations Does the participant need a torch if it's dark? Can the participant handle coins, paper, or cards? Are the items needed (i.e. mobile phone, purse, umbrella) close at hand? Or kept in a certain place together? Is the clothing choice appropriate for the weather outside? (i.e. coat, gloves, hat, footwear, sunscreen) Can the participant carry the items needed and walk in a safe way? Is the surface shiny/slippery/uneven/have different levels? Does the participant know the correct direction? Can the participant use signs? 	Discussed?
Time of day Money handling skills Items they will need What they will wear Mobilising and carrying objects Mobility (inside or outside)	 Considerations Does the participant need a torch if it's dark? Can the participant handle coins, paper, or cards? Are the items needed (i.e. mobile phone, purse, umbrella) close at hand? Or kept in a certain place together? Is the clothing choice appropriate for the weather outside? (i.e. coat, gloves, hat, footwear, sunscreen) Can the participant carry the items needed and walk in a safe way? Is the surface shiny/slippery/uneven/have different levels? Does the participant know the correct direction? Can the participant use signs? Does the participant use the crossing safely? 	Discussed?
Time of day Money handling skills Items they will need What they will wear Mobilising and carrying objects Mobility (inside or outside) Orientation	 Considerations Does the participant need a torch if it's dark? Can the participant handle coins, paper, or cards? Are the items needed (i.e. mobile phone, purse, umbrella) close at hand? Or kept in a certain place together? Is the clothing choice appropriate for the weather outside? (i.e. coat, gloves, hat, footwear, sunscreen) Can the participant carry the items needed and walk in a safe way? Is the surface shiny/slippery/uneven/have different levels? Does the participant know the correct direction? Can the participant use signs? Does the participant use the crossing safely? Is the participant safe and confident getting on 	Discussed?
Time of day Money handling skills Items they will need What they will wear Mobilising and carrying objects Mobility (inside or outside) Orientation Road crossings	 Considerations Does the participant need a torch if it's dark? Can the participant handle coins, paper, or cards? Are the items needed (i.e. mobile phone, purse, umbrella) close at hand? Or kept in a certain place together? Is the clothing choice appropriate for the weather outside? (i.e. coat, gloves, hat, footwear, sunscreen) Can the participant carry the items needed and walk in a safe way? Is the surface shiny/slippery/uneven/have different levels? Does the participant know the correct direction? Can the participant use signs? Does the participant use the crossing safely? Is the participant safe and confident getting on & off transportation? (i.e. standing whilst the 	Discussed?
Time of day Money handling skills Items they will need What they will wear Mobilising and carrying objects Mobility (inside or outside) Orientation Road crossings	 Considerations Does the participant need a torch if it's dark? Can the participant handle coins, paper, or cards? Are the items needed (i.e. mobile phone, purse, umbrella) close at hand? Or kept in a certain place together? Is the clothing choice appropriate for the weather outside? (i.e. coat, gloves, hat, footwear, sunscreen) Can the participant carry the items needed and walk in a safe way? Is the surface shiny/slippery/uneven/have different levels? Does the participant know the correct direction? Can the participant use signs? Does the participant use the crossing safely? Is the participant safe and confident getting on 	Discussed?
Time of day Money handling skills Items they will need What they will wear Mobilising and carrying objects Mobility (inside or outside) Orientation Road crossings Getting on and off transportation	 Does the participant need a torch if it's dark? Can the participant handle coins, paper, or cards? Are the items needed (i.e. mobile phone, purse, umbrella) close at hand? Or kept in a certain place together? Is the clothing choice appropriate for the weather outside? (i.e. coat, gloves, hat, footwear, sunscreen) Can the participant carry the items needed and walk in a safe way? Is the surface shiny/slippery/uneven/have different levels? Does the participant use signs? Does the participant use the crossing safely? Is the participant safe and confident getting on & off transportation? (i.e. standing whilst the bus is in motion) 	Discussed?
Time of day Money handling skills Items they will need What they will wear Mobilising and carrying objects Mobility (inside or outside) Orientation Road crossings Getting on and off transportation Problem solving skills (what to do if lost)	 Does the participant need a torch if it's dark? Can the participant handle coins, paper, or cards? Are the items needed (i.e. mobile phone, purse, umbrella) close at hand? Or kept in a certain place together? Is the clothing choice appropriate for the weather outside? (i.e. coat, gloves, hat, footwear, sunscreen) Can the participant carry the items needed and walk in a safe way? Is the surface shiny/slippery/uneven/have different levels? Does the participant use signs? Does the participant use the crossing safely? Is the participant safe and confident getting on & off transportation? (i.e. standing whilst the bus is in motion) Is the participant calm/confident/anxious/coherent if lost? 	Discussed?
Time of day Money handling skills Items they will need What they will wear Mobilising and carrying objects Mobility (inside or outside) Orientation Road crossings Getting on and off transportation Problem solving skills (what to	 Does the participant need a torch if it's dark? Can the participant handle coins, paper, or cards? Are the items needed (i.e. mobile phone, purse, umbrella) close at hand? Or kept in a certain place together? Is the clothing choice appropriate for the weather outside? (i.e. coat, gloves, hat, footwear, sunscreen) Can the participant carry the items needed and walk in a safe way? Is the surface shiny/slippery/uneven/have different levels? Does the participant use signs? Does the participant use the crossing safely? Is the participant safe and confident getting on & off transportation? (i.e. standing whilst the bus is in motion) Is the participant calm/confident/anxious/ 	Discussed?



B. Physical Exercise

The physical activity section will consist of balance challenging, progressive strengthening, and dual-task training activities.

Other activities such as gait re-education may also be relevant and dependent upon the individual participant and their goals.

Core Principle(s):

- 6. The physical activity must be *challenging* and *progressive*.
- 7. The therapist must work with the participant to select and tailor physical exercises and/or activities that will be of most benefit and interest (*what exercises are done*).
- 8. The therapist must work with the participant to determine how best the individual can do the exercises (*how the exercises can be done*). Ways to help this could include providing photographs, written materials, and/or training family members, friends or caregivers to help.

The exercises may be included in the programme to aid functional ability (see Section A: Activities of Daily Living). It is important to ensure that the participant and their family members or caregiver(s) understand why they are being encouraged to do certain exercises or activities. This should be done so the participant can relate the activity to what is important to them (e.g., leg-raises increases leg strength to help them to keep walking independently and enable them to continue picking up their grandchildren from school) and should relate to their goals (see goal setting & action planning p.32).

All the physical exercises are presented in table format on pages 79 and 81. There are different levels of difficulty to allow tailoring and progression appropriate for the individual; Level A is the lowest/ easiest and Level D is the hardest. The therapist decides on which level the participant is on. The levels are not consistent across the strength, balance and dual tasking, e.g., someone may be at a lower level in their strength exercises than they are in their balance exercises.

How to apply the physical activities

The physical exercise component is composed of 3 different types of exercises: balance, strength and dual task. The full programme is provided in this manual, but not every participant will be asked to do every exercise. A copy of each exercise must be placed within the participant's Home File in a format that is easily accessible for them and their caregiver.

PrAISED is an individualised tailored programme. The aim is to keep individuals engaged and enthused for physical activity not only during the intervention but after the intervention period ends.

- The activities prescribed can come from our stated examples, there is no exact number to how many should be given.
- There should be a mix of balance, strength, and dual task exercises.
- The exercises need to be at the right level of difficulty for the participant. Make sure balance is being challenged and strength is being progressed.
- There needs to be enough for the participant to meet the >150 minutes of activity per week (e.g., 30 mins for 5 days = 150 mins per week). However, the participant might also be doing other activities that are functional or community based.

- It is recommended that the exercises are completed for blocks of time (at least 10 minutes)
- It may be that you are required to introduce activities weekly rather than setting activities all in one session, this may help with compliance, concentration, motivation and execution of the activity.
- Exercises should be able to be safely completed as a single task
 prior to a dual task being added. The exercises stated are not
 completely prescriptive and we wish for the therapist to be flexible
 around them however, the focus is around evidence based
 strength and balance exercises with dual tasking.
- Exercises must be set so that other therapists and RSWs attending the client can perform the intervention.
- Use the effort rating scale (see following) to ensure the level of difficulty is right for the participant.
- Make sure the exercises are in a format the participant can understand (e.g., change the wording on the exercise sheets for that individual) and stored in their home file. Initially the participant will be doing these exercises with the RSWs, but eventually the intention is that they form a habit and can do them by themselves. The time with the therapists must facilitate this and think about the whole programme time frame.

Effort Rating Scale

How much effort was the exercise?

1 2 3 4 5 6 7 8 9 10

NO EFFORT AT ALL (i.e. breathing normally)

MAXIMAL EFFORT (i.e. completely out of breath)

Therapists can use the effort rating scale to assess how difficult the participant feels each exercise is and adapt the exercises accordingly to provide an appropriate level of challenge.

The regular reviews through the programme will allow for the therapist to progress and regress the exercises as the client progresses or deteriorates with time or progression of the disease.

It may be that there is not an overall improvement of client's abilities and function. Especially due to the longevity of the intervention it may be that the PrAISED intervention reduces the rate of deterioration of dementia and gives reduction in function, rather than clients having large gains in their function. The on-going ability and maintenance of the activity should be prioritised over the progression of the programme.

Balance challenging

The balance exercises are based on a well-established and evidenced falls prevention programme [33] with some additions for more physically able individuals.

All of the balance exercises will challenge the participant and therefore there is a falls risk whilst completing them. A careful judgement must be made between challenging the participant and keeping them safe. The participant should only just be able to complete the exercise – if the exercise is too easy they will not get any benefit and too hard will foster frustration.

Each balance exercise must be done in a suitable and safe environment. Ideally, a stable surface should be close by that the participant can use for support. Encourage the participant to complete the exercises in the same place each time. These balance exercises must be completed as a single task, with no chat or distractions, and with focus only on that exercise.

To increase the level of challenge and therefore progress the balance exercises, the systems used to help us balance can be targeted. For example:

- Vision: closing eyes, looking at different items in the room
- Vestibular: turning task, turning head
- Proprioception: reducing base of support, standing on alternative surface
- Postural control: reducing base of support, reaching task
 What to do...
- Complete the physical activities assessment
- Prescribe as many of the balance exercises (see following) as appropriate for the individual depending upon their level of ability
- Ensure the participant has a safe and stable environment in which to complete the exercises, and promote that this area should be used every time
- Progress the exercises as able

Balance exercises

Balance Exercise		Le	evel	
	Level A			Level D
Unsupported	Stand 30	Stand 30	Stand 30 seconds,	
standing	seconds, 1 hand	seconds,1 hand	no support	
, in the second	off support, with	off support		
		on support		
Backwards	helper x4 sets of x10	x4 sets of x10	x4 sets of x10	x4 sets of x10
Walking	steps, with	steps, with	steps, no support	steps, with dual-
	helper	support	1 / 11	task
Walking and	Walk and turn	Walk and turn	Walk and turn	Walk and turn
turning	around (figure 8)	around (figure 8)	around (figure 8)	around (figure 8)
	x2, with helper	x2, with support	, , ,	x2, with dual-task
	XZ, With helper	, xz, with support	X2, 110 Support	X2, With addi task
Side stepping	x4 sets of x10	x4 sets of x10	x4 sets of x10	x4 sets of x10
	steps, with	steps, with	steps, no support	steps, with dual-
	helper	support	steps, no support	task
	Псірсі	зарроге		tusk
Tandem stance	10 seconds, with	10 seconds, with	10 seconds, no	30 seconds, no
	helper	support	support	support OR 10
	ricipei	зарроге	зарроге	seconds, with
				dual-task
Tandem walking	x4 sets of x10	x4 sets of x10	x4 sets of x10	x4 sets of x10
random training	steps, with	steps, with	steps, no support	steps, with dual
	helper	support	steps, no support	task
One leg stance	10 seconds, with	10 seconds, with	10 seconds, no	30 seconds, no
Offereg staffee	helper	,	·	support OR 10
	Heipei	support	support	• •
				seconds, with
Heel walking	x4 sets of x10	x4 sets of x10	x4 sets of x10	dual-task x4 sets of x10
	steps, with	steps, with	steps, no support	steps, with dual
	helper	support		task
				33.513
Toe walking	x4 sets of x10	x4 sets of x10	x4 sets of x10	x4 sets of x10
J	steps, with	steps, with	steps, no support	steps, with dual-
	helper	support		task
		336633		
Tandem	x4 sets of x10	x4 sets of x10	x4 sets of x10	x4 sets of x10
backwards	steps, with	steps, with	steps, no support	steps, with dual-
walking	helper	support		task
	P V	11/4		
Side taps	x10 steps each	x10 steps each	x10 steps each	x10 steps each
(alternate)	leg, with helper	leg, with support	leg, no support	leg, with dual-
	26,	,	36, 3666016	task
				LUSIN

Progressive strengthening

The strength exercises are based on a well-established and evidenced falls prevention programme [38] with some additions for more physically able individuals.

It is important that the exercises are set at the correct level for the individual and are progressed in a timely manner. The variable cuff weight can be used to provide the required amount of resistance during the exercise. The strength exercise should be completed at an effort level of 6-8 (on the visual analogue scale of exertion).

What to do...

- Complete the physical activities assessment
- Prescribe as many of the strength exercises (see following) as appropriate for the individual depending upon their level of ability
- Ensure the participant can place the variable cuff-weight to complete the exercises (the participant may need a caregiver/ family member to do this if required, or may need practise to complete independently)
- Progress the exercises as able

Strength exercises

Strength Exercise	Level			
	Level A	Level B	Level C	Level D
Sit to stand	x5 stands, with	x5 stands, with	x10 stands, no	x10 stands, with
	hand support and helper	hand support	support	weight
Knee extension		x10 repetitions,	x10 repetitions,	
(sitting)		no weight	with weight	
Knee flexion		x10 repetitions,	x10 repetitions,	
(standing)		no weight	with weight	
Hip abduction		x10 repetitions,	x10 repetitions,	
(standing)		no weight	with weight	
Ankle PF	x10 repetitions,	x10 repetitions,	x10 repetitions,	x10 repetitions,
	sitting	standing with	standing no	standing with
		support	support	weight OR no
				support dual task
Ankle DF	x10 repetitions,	x10 repetitions,	x10 repetitions,	x10 repetitions,
	sitting	standing with	standing no	standing with
		support	support	weight OR no
Courate (standing)	v10 repetitions	v10 repetitions	v10 repetitions	support dual task
Squats (standing)	x10 repetitions, with support	x10 repetitions, no support	x10 repetitions, with weight	
Hip extension	11	x10 repetitions,	x10 repetitions,	
(standing)		no weight	with weight	
(The Weight	With Weight	
Tricep curls	x10 repetitions,	x10 repetitions,	x10 repetitions,	x10 repetitions,
	sitting no	sitting with	standing no	standing with
	weight	weight	weight	weight
Bicep curls	x10 repetitions,	x10 repetitions,	x10 repetitions,	x10 repetitions,
	sitting no	sitting with	standing no	standing with
	weight	weight	weight	weight
Step ups	x2 sets x10 steps	x2 sets x10 steps	x2 sets x10 steps	x2 sets x10 steps
	each leg, with	each leg, with	each leg, no	each leg, repeat
	helper	support	support	OR with dual task

Dual task training

The dual-task exercises have been selected from the literature and previous studies using people with dementia [39].

The aim of using dual-task exercises is to challenge the brain as well as the body. By completing two exercises at once you are theoretically challenging the participant's ability to maintain and divide their attention. By training someone to do this efficiently, in a safe environment, they should become adept at maintaining their balance when they are in a risky situation and their attention is divided. It is important that we challenge the participant's ability to divide their attention, but we must do this in a controlled and graded way.

If two exercises are being done at once, only one of them should be "new" or "challenging" for them. Both exercises should not be made more difficult at once. When an individual is doing a dual task, both of the tasks are affected, reducing ability. It is important that the dual tasking is not too hard (to avoid frustration) or too easy (not challenging or progressing ability). Therefore, only one of the two exercises is progressed at one time.

For example, the dual-task exercise may be standing on one leg and counting backwards. Both of the exercises are at Level A initially. During the next supervised visit, the thinking component of the dual task is progressed to Level B, but the physical/balance component remains at Level A. The participant's physical ability may be reduced whilst doing a dual-task exercise, therefore extra caution should be taken to ensure the exercise is completed safely.

The dual-task exercises are divided into areas of neurological deficit. The dual-task exercises can be completed singularly (the participant only) or jointly (with the caregiver or supervisor). Consideration has also been made for the commands and instructions given during the intervention programme from a dual-task perspective.

What to do...

- 1. Complete the physical ability assessment
- Prescribe as many of the dual-task exercises (see following) as appropriate for the individual depending upon their level of ability
- 3. Progress the exercises as able, ensuring only one element of the dual task (physical OR cognitive) is progressed at once

Dual task exercises

Dual task		Lo	vel	
Duai task	Level A		Level C	Level D
Counting	Start 10 in 1's		Start 30,50,100 in	
backwards	Start 10 III 1 3	1's	2's or 5's	3's, 7's, 9's
(working memory)		13	230133	3 5, 7 5, 3 5
Digit-span recall		3 to 5 digit recall	5 to 7 digit recall	7 to 9 digit recall,
(working memory)			OR 3 to 5 digit	OR 5 to 7 digit
			backwards recall	backwards recall
Say as many		Familiar topic,	Familiar topic,	Unusual topic,
words in a topic		any order	each letter of	each letter of
(verbal fluency)		any oraci	the alphabet	the alphabet
(forwards	forwards OR
			ioiwaius	
		- /\a/ · .		backwards
Listening to	Music on in	Focus/Whistle		
music (attention)	background	along to the		
		music		
Conversation	Discuss different		Recall of shopping	
(attention/	topics of		list or	
memory)	conversation		conversation	
Walking whilst	Holding a non-	Holding a glass	Full glass, OR tray	Tray with
carrying (motor/	breakable item		with glass	multiple glasses
attention				, 0
allocation)				
Say opposite		Static exercise,	Dynamic exercise,	Dynamic exercise,
direction of		do opposite of	do opposite of	do opposite of
action (cognitive		instructions (one	instructions (one	instructions (two
flexibility)		stage commands)	•	•
		,	,	,
Throwing	Passing from	Throwing to a	Throwing to	Throwing to
(reaction time/	hand to hand	target	helper, short	helper, long
visual spatial)			distance	distance
Following		i.e., when I clap I	i.e., one clap do	i.e., one clap do
instructions		want you to	A, two claps do B	A, two claps do B,
(attention/		change direction		but not if I
reaction time)		_		clapped above my
				head
Sequencing task	Short slow	Short slow	Long sequence	Long and fast
(processing speed)	sequence, with	sequence, no	Long sequence	sequence
(brocessing speed)	•	·		sequence
	prompts	prompts		

Gait re-education

Providing prompts, exercises or equipment to aid a participant's gait pattern may be required to facilitate other aspects of the PrAISED programme. People with mild dementia walk slower and are more variable in their step length, time and speed [40]. Addressing an issue with someone's walking pattern may manage or reduce their risk of falling (e.g., the provision or prompted use of a stick, or providing strengthening and balance exercises). Gait may also be used as an exercise to promote strength and physical activity (e.g., brisk walking or dual tasking). Or it might be for leisure or social activities that allow the core content of PrAISED to be incorporated into their daily routine (e.g., attending a walking group or walking the dog with a family member). However, brisk walking should not be considered as a standalone or individual intervention. Previous research has indicated that brisk walking by itself actually increases the risk and opportunity for falls [41].

The therapists should use the gait assessment component of the Physical Abilities Assessment to gain an understanding of the participant's current level of mobility and any gait issues. Not every participant will have issues to address. Some participants will not need any specific gait re-education included in their PrAISED programme but may have issues with their gait addressed by other aspects of the intervention (e.g., strength exercises to improve specific muscle imbalance, memory prompts for functional strategies to stay safe when mobilising outside alone).

What to do...

- 1. Complete the physical ability assessment
- Consider how to address any issues with gait and include in PrAISED programme
- 3. If using strength, balance or dual-task exercises to address issues make sure the reasoning is explained to the participant to reinforce their motivation and goal-attainment
- 4. Progress the exercises as able
- 5. If including outdoor gait in the programme, complete the Risk Enablement and Environmental Access (see pages 67-68 and 71).



C. Motivation

The motivational component consists of principles that can be used to encourage participants to do the exercises and activities during sessions, unsupervised in-between visits and to continue in the long-term.

Motivation is important for all aspects of the programme and should be considered across all activities.

Core principle(s):

- 9. Participants are more likely to engage with the programme if they feel *autonomous* (in control and that the exercises/ activities are in accordance with their interests, values, and personal goals), *competent* (optimally challenged and confident doing the exercises/activities), and *related* (cared for and connected to those around them).
- 10. The activities and exercises must be tailored to enable them to be delivered in a way which supports participants' feelings of autonomy, competence and relatedness.
- 11. The PrAISED activities must be specific to the participant and their *goals*.

As with the activities of daily living and physical exercise sections, the motivational strategies are described and presented in a grid format with further information on how to implement the motivational strategies on page 91.

How to motivate participants

When therapists talk about motivation, they often discuss how motivated someone is. In other words, the individual's *quantity* of motivation – how much motivation they have. Just because someone has a high quantity (a lot) of motivation, doesn't mean that they necessarily have a high *quality* of motivation. It is important to consider both how motivated a participant is during intervention sessions and also why they are motivated (or not).

Within the PrAISED intervention, therapists should consider the reasons underlying participants' engagement and try to select activities that individuals find interesting and enjoyable. Therapists should also explore how they can support participants' sense of competence, autonomy and relatedness via their interactions with the participant and their caregiver (if there is one). The communication style of significant others (e.g., physiotherapists, teachers, instructors) has been found to influence the extent to which individuals' basic psychological needs (for autonomy, competence and relatedness: see page 20) are satisfied and, in turn, the degree to which individuals' motivations are more autonomous or controlled.

One way to do this is through using *motivational strategies* and a motivationally supportive *communication style*. Both of which are inter-related and can optimise participants' motivation by helping them to feel more autonomous, competent, and related.

Strategies for motivation and communication have been organised into three categories: rapport building, setting goals and activities, and teaching and instructing. The rapport building strategies can be used to develop a strong rapport and connection with participants. These strategies can be used at any time within the intervention (including when setting goals or activities and teaching and instructing).

The strategies for setting goals and activities can be used to help therapists deliver the goal-setting process in a more motivationally supportive manner. The teaching and instructing strategies can be used to enhance delivery of the exercises or activities of daily living.

It is likely that therapists already utilise most of these strategies within practice. For example, therapists are taught to listen to patients, set SMARTER goals, and provide choices and options. However, the PrAISED programme takes a look at these motivation strategies from a slightly different perspective. We are not just focusing on whether or not therapists use the strategies, it is about the *quality of delivery*. Put another way, it is not just about what is said, but how it is said. The strategies explore the *subtleties of language* within communication and how subtle differences can support or undermine individuals' motivation. A table of these strategies are provided in the motivational strategies grid on page 91.

What to do...

- Use the motivation strategy table (page 91) to select appropriate strategies to motivate participants.
- Once the programme is established, return to the motivation strategies table to consider how best to enhance the participants sense of autonomy, competence and relatedness.
- Use the motivational strategies table if the participant:
 - doesn't want to do the exercises or activities
 - has depression and lacks energy and motivation
 - has an injury
 - can't come up with any goals

Motivational strategies

Strategy	Description		Targeted basic
			needs
Rapport buildin			
1. Take time to	Develop an understanding of the participant's backgroun		Relatedness
understand	motives. Ask open-ended questions, strike up conversati		Competence
2. Actively listen	(e.g., photos, guitar), and use the interest checklist and 'Demonstrate listening by using non-verbal communication	ny week' form. ons (e.g., eye contact and	Autonomy Relatedness
and respond	nodding), staying silent when the participant is talking, p	araphrasing, using summaries	Competence
appropriately	and asking further questions. Pay attention to facial gest	ures, body language and	Autonomy
3. Acknowledge	energy and use this information to provide appropriate s Acknowledge participants' positive and negative feelings	upport. . Demonstrate empathy by	Relatedness
feelings	showing the participant that you understood the emotio		Competence
reemigs			Autonomy
4. Use inclusive	the issue being discussed (e.g., "I can see this upsets you Use a questioning style (e.g., "How about we?") and we		Relatedness
as opposed to	possibility of choice (e.g., "Perhaps"). Replace command	s and directives (e.g., "You have	Autonomy
controlling	to" or "I want you to") with more inclusive phrases (e	.g., "Let's", "Shall we").	
language Setting goals ar	nd activities		
5. Gauge	Consider the participants 'stage of change' and readiness	to engage with specific	Autonomy
readiness to	aspects of the intervention. If unsure ask the participant		Relatedness
accept advice/	feel that they are at. Adopt a therapeutic approach whic	σ ,	Competence
change	stage of change.	Tillateries the marviadars	
behaviour	stage of change.		
6. Actively	Set the scene for active engagement in goal setting from	day one. Encourage input	Autonomy
engage	and suggestions from participants. Take into account the	participant's subjective	Relatedness
participants in	history (e.g., family commitments).		
goal setting	, , , , ,		
7. Ensure goals	Agree on goals which are Specific, Measurable, Achievab	le, Relevant and Time-based.	Competence
are SMART	Make the goals truly relevant to the individual by aligning	g them with the individual's	Autonomy
	intrinsic interests, motivations and values. Identify and discuss challenges the participant may face		Relatedness
8. Identify			Competence
challenges and	goals into action. Ask the participant, use questions to tr	gger participants' thoughts	Autonomy
solutions Teaching and in	and ideas, and revise and reframe conflicting goals.		Relatedness
9. Provide	Identify participants' communication preferences and ne	eds and use a variety of	Autonomy
rationale	techniques to help make instructions as clear and meani	•	Competence
rationale	rationale behind instructions.	igrar as possible. Explain the	Relatedness
10. Give	Reduce the use of empty praise and make it meaningfu	by relating it directly to	Competence
meaningful	a specific goal, action or outcome. Focus on individual		Autonomy
praise and	and explain specifically what was accomplished and h	now the participant can	Relatedness
constructive	improve.		
feedback			
11. Encourage	Encourage questions from day one and directly ask for o	uestions in relation to	Relatedness
questions and	specific exercises/activities. Invite general feedback (e.g.	how paticipants are getting	Competence
feedback	on) and specific feedback in relation to a particular activi	ty. Follow-up on previously	Autonomy
	discussed goals or problems and encourage the use of n Offer choices and variety which are realistically achievable	on-verbal feedback.	
12. Offer choice			Autonomy
and variety	to the participant's interests, values or goals. Be creative		Competence
	fun. Phrase choice in a positive way and convey choice a	s a challenge.	Relatedness
and relevant			

How to apply motivational strategies

Each of the motivation strategies are designed to mainly target the satisfaction of one or two of the needs. However, most strategies can be delivered in a way which optimises satisfaction of all three basic psychological needs for competence, autonomy and relatedness. The motivational strategies grid on page 91 is a table with a short description of each strategy and the targeted basic needs (ordered with those most targeted by the strategy first). It is important to note that the motivation strategies are interrelated to one another. Each strategy can be enhanced by being used in conjunction with other strategies.

Once therapists feel comfortable with one or two strategies then they can start to gradually work on other strategies which they feel would be beneficial. The idea is that slowly over the course of the PrAISED intervention, therapists can adapt and 'tweak' their teaching towards a more motivationally supportive approach.

Rapport building

1. Taking time to understand the participant

Each person is unique, with their own life history, personality, likes and dislikes. Such an understanding is critical for the delivery of participant-centred practice and the promotion of long-term motivation. A key benefit of the PrAISED programme is that the length of the intervention (12 months) enables therapists to take the time during visits to talk to participants about their lives.

How can this strategy be used in PrAISED?

 Ask open-ended questions - Open-ended questions invite more than one word answers, allowing participants to elaborate on the information they are giving. Useful terms for asking open-ended questions include: "What"/ "How"/ "Why" (e.g., "What sort of things do you enjoy doing?").

- Strike up conversation about items in the home Therapists can find out about an individual's past and present interests by noticing things in the home environment (e.g., photos, musical instruments, trophies, artwork) showing interest.
- Use tools such as the interest checklist or 'my week' form -These tools can spark further conversation about the participant's interests and routine and provide insight into their motivations, lifestyle, values, beliefs, and roles (e.g., "How often do you go swimming?", "What is it that you like about swimming?" and "How important is swimming to you?")
- Do an activity they enjoy In some cases it may be easier to get to know someone by doing an activity that they enjoy with them (e.g., watching the football, going for a walk, or doing some gardening).

Why is this strategy important for motivating PrAISED participants?

Relatedness - In order to be motivated to change their behaviour an individual must first feel personally accepted and valued. Taking the time to talk with the participant and showing a genuine interest in the things which are important to them, communicates that they are valued and cared about. This will help to create a sense of relatedness between the participant and therapist, which is important for continued engagement within the intervention.

Autonomy - Taking time to understand the participant helps with tailoring the intervention to the specific needs and preferences of the individual. Only by really getting to know the participant, can goals be selected which fit within the individual's lifestyle, interests, values, beliefs, roles, and current routine and thus promote a sense of autonomy.

Competence – By gaining an in depth understanding of participants, therapists can more easily work out how best to deliver the other communication strategies in a way that would support participants' feelings of competence. For example, some people may lack confidence and value receiving a lot of advice, direction, feedback and praise from therapists. Whereas other individuals may feel very confident and clear with what they want to do and may only need a small amount of guidance. By tailoring the way that they communicate to the individual in front of them, therapists can more effectively support participants' basic needs for competence, which in turn, will promote longer-term motivation to engage with the intervention.

Possible challenges with using this strategy:

- Opening up to someone that they have only just met some participants may need more time before they feel ready to talk openly to therapists. Try doing an activity with the participant which is less invasive (see previous).
- Talking about interests or activities which they can no longer partake in - focus on what the person still does have and how they can maintain the things which are currently important to them.

2. Actively listening to the participant and responding appropriately

An important part of the therapist's role involves listening to participants and responding appropriately. Although listening and responding is implicit within practice, there are techniques that can enhance the extent to which this is done in a motivationally supportive way. Active listening ensures the therapist has understood what the participant is saying and the response overtly demonstrates this to participant.

How can this strategy be used in PrAISED?

- Demonstrate listening by using non-verbal communications This could include the use of eye contact, nodding and leaning in towards the participant.
- Stay silent when the participant is talking Allow the participant to complete sentences and finish speaking before following up with further questions.
- Paraphrasing Paraphrasing or 'parroting back' the key content of what the paticipant is expressing demonstrates that the therapist has heard and is trying to understand the participant and affirming the participant's thoughts and feelings without judgement.
- Summaries Therapists can provide a brief summary at the end of the discussion of the thoughts, emotions, and plans that the participant has expressed. For example, "So what I am hearing is that you enjoy sitting on the sofa. You feel comfortable and secure there. You are happy watching television programmes and don't want to give up your time spent on the sofa for other activities. On the one hand, you feel that it is important to be active and would like to do more activity but you also feel that changing would mean giving up time doing the things that you want to do." Even if the summary provided by the therapist is inaccurate or highlights discrepancies in the participant's explanations, through the act of correcting the therapists, the participant may clarify their thoughts and feelings and move the discussion forward.
- Ask further questions Further questioning can help to explore a topic or issue in more depth and workout how best to address the participant's needs.
- Pay attention to facial gestures, body language and energy -Reading participants' non-verbal communications can help to determine if the participant is comfortable, clear on what they are doing, and enjoying themselves.

Why is this strategy important for motivating PrAISED participants?

Relatedness - By actively listening and responding, therapists are showing a genuine interest in each participant. This will help participants feel valued and a sense of relatedness.

Competence - By listening and noticing the small things, therapists can use this information to adapt exercises or activities to a level at which the participant feels comfortable and competent.

Autonomy - By listening, therapists can gain an understanding of whether participants are engaging in particular activities because they 'want to' or because they feel that they 'have to' and respond in a way which may lead to more self-determined motivations. In other words, they can encourage participants to continue doing activities which they 'want to' do (i.e., enjoy and/or or value the benefits of doing). If participants are doing activities more because they feel that they 'have to' (i.e., in order to avoid feelings of guilt or to please a family member), then therapists can look at how they can help individuals to feel more confident, connected and in control when performing those activities.

Doing so will help to promote more intrinsic reasons for doing the activities and foster long-term engagement.

Possible challenges with using this strategy:

Finding a balance as the relationship progresses - there needs to be a balance between spending enough time listening to the participant that they feel valued and heard, but not too much time that they do not get the benefits of the programme:

- Try to be more directive and say "So, shall we do some exercises then."
- Engage the participant in some dual-tasking and talk whilst exercising.

3. Acknowledging the participant's feelings

Individuals participating in the PrAISED intervention may have recently received a diagnosis of dementia. As a result, they may be experiencing a range of emotions including, denial, fear, shame, anxiety and depression. The participant's friends and family are also likely to experience a variety of emotions as they try to come to terms with the diagnosis. It is important that both the person with dementia and the people around them feel able to, and are encouraged to, express their feelings without fear of being judged or pressured to change.

Acknowledging the feelings of the participants and their loved ones is an important step in building rapport and helping them to feel valued and supported during this stage in their lives.

Participants are also likely to experience a range of positive and negative emotions and physical feelings as a result of engaging in PrAISED exercises or activities. Acknowledgement of such feelings and emotions and appropriate support can help to promote long-term engagement with the intervention.

How can this strategy be used in PrAISED?

• Demonstrate empathy - Show the participant that you understood the emotions that went along with the issue being discussed (e.g., "I can see this upsets you"). It is important to acknowledge that it is perfectly natural and understandable for the individual to feel the way that they do. The therapist could then use this as an opening to link to how the PrAISED intervention can help the individual address their issue(s). For example, "If you would like, we can help you to find ways in which you can keeping doing the things that you want to do. We can work on helping you to maintain your independence for as long as possible. Does this sound like something that might interest you?"

- Acknowledge participants' positive and negative emotions -People are motivated to do things that feel good and avoid doing things that feel bad. Acknowledging positive psychological states and emotions (e.g., enjoyment, pleasure, creativity, and hope) experienced by individuals when engaging in activities can help to strengthen the association between the activity and these positive feelings. If the person associates positive feelings with the activity, then they are more likely to want to do it again. Over time, motivation for engaging in the activity will become more intrinsic as the person does the activity for the enjoyment of the activity itself. If a participant is experiencing negative emotions when engaging with activities, then it is important to acknowledge this and discuss with the individual the cause and how to address and resolve any issues.
- Acknowledge participants' positive and negative physical feelings - Individuals who are not currently regular exercisers may not be familiar with the physical feelings associated with exercise (e.g., increased heart rate, adrenaline rush, energy boost sweating, muscle fatigue, or sore muscles/tendons a few days later). Therefore, it may be necessary for the therapist to acknowledge that the participant may experience these feelings but that it is perfectly normal.

Why is this strategy important for motivating PrAISED participants?

Relatedness - Therapists acknowledging how a participant is feeling can increase participants' belief that they are cared for and understood. By acknowledging participants' negative feelings, therapists can help them to feel supported and less isolated.

Autonomy - In order to want to continue to engage in the intervention, participants need to feel that they can express their feelings without fear of being judged or pressured to change. Feeling that they are able to make changes when they feel ready is important for fostering a sense of autonomy and feelings of control.

Competence - Acknowledging that it is normal for participants to experience certain physical feelings during or after an activity or exercise (e.g., delayed onset muscle soreness) can help individuals to feel that they are doing the activity or exercise correctly, thus increasing their feelings of competence.

Possible challenges with using this strategy:

- Expressing feelings or beliefs that the therapist does not agree with - it is important for the therapist to suspend their own thoughts and beliefs in order to understand the individual's feelings and perspectives without judging or criticising.
- Discomfort with discussing feelings and emotions if the person wants to express their feelings but has trouble doing so verbally, they may feel more comfortable writing things down or expressing them in other forms (e.g., drawing, painting, or dance).
- Uncovering emotional issues that therapists feel uncomfortable talking about or unqualified to deal with - it is advised that the therapist refers the participant on to other services which are more equipped to deal with this.

4. Using inclusive as opposed to controlling language

Patient-centred practice and the promotion of autonomy is at the heart of the NHS. Healthcare providers are encouraged to take into account the needs of individual patients when providing information and advice, and patients are encouraged to take more responsibility and control over their own health and well-being. By using more inclusive, as opposed to controlling, language therapists can help to open up the possibility of choice and encourage individuals' sense of volition and feelings of self-determination within their own lives.

How can this strategy be used in PrAISED?

- Use plural pronouns Use more inclusive words which create a sense of togetherness, such as, "we", "us", and "let's". Such phrasing can help people to feel a sense of connectedness and part of a group or team.
- Use a questioning style A questioning style (e.g., "How about...?", "Shall we try...?", "How would you feel if...?", "Would you like to...") and words that open up the possibility of choice (e.g., "Perhaps...", "Maybe...", "Could..."). The use of this type of language can help people to feel consulted (asked, rather than told), important, respected and capable.
- Avoid the use of commands and directives Somettimes people in positions of authority are taught to use commands and directives (e.g., "I want you to...", "I need you to...", "You should be...", "You have to...") as they are associated with providing clear instructions and demonstrating a sense knowledge. However, when phrased in a way which could be perceived as controlling, the use of commands and directives can thwart individuals' sense of volition and autonomy and, in turn, negatively impact motivation and engagement. For example, by telling participants - "I need you to do that exercise 10 times" or "I want you to do 10 of those for me" it is likely that participants will feel controlled by the therapist, even if that is not the intention of the therapist. The use of commands and directives creates an unequal power balance, with the control being in the therapists' hands. Often, participants will comply with commands and instructions, but their compliance will be due to feelings of obligation, or because they do not want to let their therapist down. In such cases, the participant will be externally motivated as they are doing the exercise for the therapist, not for themselves.

Replace commands and directives with more inclusive phrases - It is recommended that therapists replace the use of commands and directives (e.g., "You have to..." or "I want you to...") with more inclusive phrases (e.g., "Let's...", "Shall we...", "How about...", "Have you thought about...", "Some people find X helpful, do you think that might be an option you'd be interested in exploring?"), which can help to create a more equal power balance between the therapist and participant.

Why is this strategy important for motivating PrAISED participants?

Language can have a really powerful impact upon individuals' motivation. It is not just what is said (the content) but the way in which it is said (the language, phrasing, and tone used) which can influence how people interpret and respond and feel in relation to a particular communication. Therefore it is particularly important to consider how this strategy can be used help to deliver other strategies in a more motivationally supportive way. Therapists can maximise the potential of all strategies by thinking about the words used to phrase the strategy and doing so in an inclusive as opposed to controlling way.

Relatedness - When therapists use more inclusive language, such as 'we' and 'us', participants are more likely to feel supported and that they are not on their own. This can help to promote a feeling of belonging and connection between the participant and therapist.

Autonomy - A questioning style and/or choice-relevant wording can also help to get participants on board with a request or an instruction being given. When using a choice style, as opposed to a command style, participants are more likely to feel that they are opting in of their own free will. This is a liberating feeling and promotes feelings of freedom in the activity, doing the activity because they 'want to' rather than because they feel that they 'have to'.

Possible challenges with using this strategy:

- Valuing a more directive approach (i.e., therapists viewed as the expert)- therapists may want to limit their use of a questioning style when giving advice or offering instructions, as the participant's feelings of autonomy and volition will not be thwarted.
- Questioning style becomes too complex or confusing for a participant whose dementia is progressing - clear, directive instructions may then be preferable, tailored to the person and their preferences.

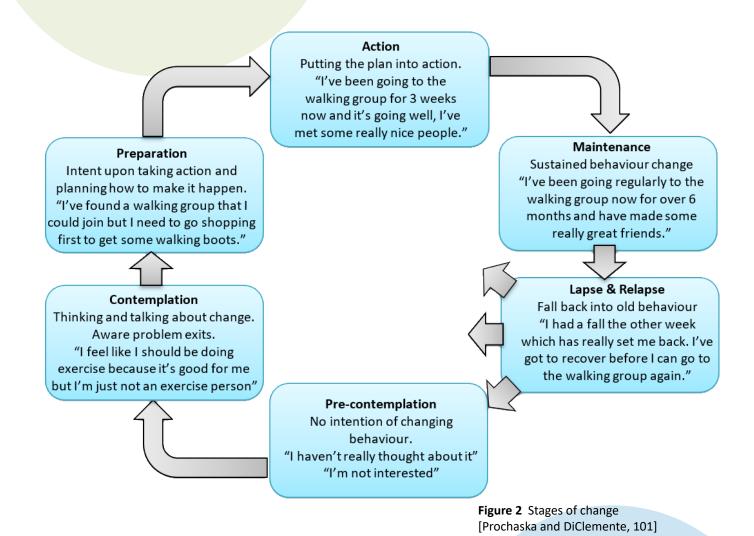
Setting goals and activities

5. Gauging participant readiness to accept advice/change behaviour

An individual needs to be ready to change before they will do what needs to be done to make that change. By understanding a patient's readiness for change, therapists can more effectively tailor discussions, advice and goals to the individual's needs. This approach increases the chances that the patient will feel motivated to engage in and continue with the programme. Within standard practice, service restrictions may pressure therapists into providing advice on what exercises or activities the participant should be doing before the participant has accepted that they need to change. In such circumstances it is unlikely that the patient will be willing to engage in the exercises or activities and/or adhere in the long-term.

There are six main stages that people go through when changing behaviour (see Figure 2 for details).

The aim is to identify which stage the participant is at and try to move them onto the next stage.



How can this strategy be used in PrAISED?

- Identify where the participant is in terms of their readiness to engage with the PrAISED intervention Most participants are likely to start somewhere around the contemplation to planning stages. They have probably thought about the fact that they need to change their behaviour in some way to adapt to the diagnosis of MCI or dementia but may not have started to plan what they would like to do or how they would go about doing it. However, there may be some individuals who are already regular exercisers (at the maintenance stage) but have trouble with relapses (e.g., getting back into activity after a fall). There may even be some people who are in the pre-contemplation stage, they have only agreed to take part to please a family member but have not thought about what it will involve.
- Assess where participants are in terms of their readiness to engage with specific aspects of the intervention (e.g., the physio exercises)

 The participant may already be in the action stages of doing activities which they enjoy (e.g., walking, gardening) but still be in the contemplation stages with regards to the physio exercises as they are not convinced that they will benefit from them. With this example, it would be important for the therapist to explore the participant's beliefs and concerns with regards to engaging with the physio exercises and how these may be overcome.
- Ask the participant themselves what stage they are at For some participants, it may not be easy to determine how ready they are to engage in an activity. For such participants, therapists could try explaining about the stages of change to the participant and ask them where they think they are in terms of the readiness to engage. Therapists could then ask the participant what they feel would help them to get closer to the next stage. This can be insightful as the participant may point to a stage different to where you thought that they might be. Or they may come up with suggestions for moving on to the next stage that you had not considered. Such an approach can enable therapists to adapt the intervention to fit with the participant's perspective and readiness to change.

• Adopt a therapeutic approach which matches the individual's stage of change - For example, if the participant is in the precontemplation stage with regards to performing exercises (i.e., they haven't really thought about it), then the therapist can support the individual by asking about any problems, worries or difficulties they are currently having with activities of daily living and raising their awareness of the potential benefits of engaging in regular exercise. It may be useful to explore any barriers or counterarguments that the participant brings up (e.g., "What's the point in exercising when it just causes me more pain?"). Identifying what makes the person feel valued and discussing how the PrAISED programme can link with their values may prove helpful.

Why is this strategy important for motivting PrAISED participants?

Autonomy - If therapists are to set activities which the participant is not yet ready to act upon, then they are likely to experience resistance from the participant. The participant may initially engage in the activity because they feel that they have to but are unlikely to continue in the long-term.

Relatedness - If participants feel pressured into performing exercises or activities that they do not feel ready for yet, then this is likely to make them feel less connected and cared for by the therapist.

Competence - By matching the therapeutic approach to the participant's stage of change, therapists can help participants to feel more competent with the tasks and activities that they are undertaking and build up their confidence before moving onto the next stage.

Possible challenges with using this strategy:

Valuing maintenance of the activities of daily living that they
currently do over behaviour change - they may need to engage in
physio exercises or other activities that will help them to maintain
their current level of functioning. In this case, assessing their
readiness for change refers to their readiness to engage with any
exercises or activities within the PrAISED intervention.

6. Actively engaging participants in goal setting

Actively engaging participants in goal setting refers to taking into consideration the participant's interests, values, routines, and preferences when setting goals, and ensuring that the goals which are set are agreed by the participant. In order to be motivationally supportive, the participant needs to feel confident that they understand what the options available to them are and that they are given adequate time to make a decision. If participants do not feel confident that they understand or feel pressured to make a decision on the spot, then they may agree to goals or activities which they do not really want to do.

How can this strategy be used in PrAISED?

Set the scene for active engagement in goal setting from day one
 -In their first interaction with participants, when explaining about
 the study, therapists can emphasise that the PrAISED programme
 aims to support the participant to do what they would like to do.
 By promoting and encouraging autonomy from the start,
 participants are more likely to take more responsibility during goal
 setting and actively engage with the process.

- Encourage input and suggestions from participants Therapists could ask participants whether there is anything in particular that they would like to focus on, or what time of day would suit them best for doing the exercises. As well as being involved in initially setting and reviewing goals, participants can also be involved in setting the activity at the appropriate level of challenge. This may involve therapists asking for participants input on how many repetitions they would feel comfortable doing, or whether they would like more weight added.
- Take into account the participant's other commitments Therapists can use other motivation strategies, such as taking time to understand participants, actively listening, and encouraging questions and feedback to identify and develop an understanding of the participant's current commitments. For example, if participants have completed a diary of their weekly routine (suggested as a way of taking time to understand participants) therapists could use this information to identify with the participant which days would be most appropriate for the exercise sessions.

Autonomy - participants are more likely to feel a sense of ownership over their goals and feel empowered within the activities that they undertake if they are actively involved in the goal setting process.

Relatedness - Participants are also more likely to feel a sense of connection with therapists if therapists show that they respect the participant's thoughts and opinions with regards to choosing the goals and activities.

Competence - If participants feel confident that they understand the goals which are set and feel that it is something that they can achieve, then they are more likely to actively endorse the goals and want to work towards them.

Possible challenges with using this strategy:

- Lacking the psychological capability to be able to make certain decisions themselves (e.g., assessing how many repetitions or what amount of weight to add) - it is important for therapists to use their professional judgement as to the participant's capability to make certain decisions.
- Actively involving participants in goal setting is more time
 consuming and may delay the participant from starting the
 exercises or activities remember that taking the time at the
 beginning to ensure that goals are set in a motivationally
 appropriate manner increases the likelihood that the participant
 will be willing to perform the exercises or activities unsupervised
 and continue long-term, thus increasing the overall amount of
 exercise/activity that the participant performs.

7. Ensuring goals are SMARTER

SMARTER

Specific refers to setting a clear and unambiguous goal which informs the individual what exactly it is they are aiming to achieve, why it is important, who is involved, where the behaviour or activity is going to take place, and any other specific requirements.

Measurable goals enable progress to be tracked and monitored so that the individual can identify when they have accomplished their goal (e.g., how many repetitions of an exercise to do).

Achievable refers to the behaviour or activity being something that the individual believes can be completed.

Relevant refers to the goal being worthwhile to the task or the person.

Time-based refers to the goal having a time limit or a set date in which it will be reviewed.

Evolving refers to goals changing as recovery occurs.

Relationship-centred refers to the importance of communication and rapport between practitioners and clients. [102]

Setting goals which are Specific, Measurable, Achievable, Relevant, and Time-based (SMARTER) is a key component of physiotherapy and occupational therapy practice. SMARTER goals can help to motivate individuals to achieve the things that they want to achieve. There are a few key points to consider in order to ensure that SMARTER goals are delivered in a way which promotes participants' optimal motivation.

- Use SMARTER goals when developing, agreeing and reviewing the PrAISED exercise and activity plan with participants.
- Make the goal truly relevant to the individual Relevance of the goal to the person can help the individual feel that the goal is worthwhile. At the surface level, a goal could be considered relevant if it is something that the participant feels is worthwhile doing. Exploring this in a bit more depth, individuals are most likely to feel that a goal is worthwhile if it is aligned with their intrinsic interests, motivations and values (also referred to as goal self-concordance). Therapists can help to enhance the relevance of participants' goals by using other strategies, such as, taking time to understand participants, actively listening, encouraging questions and feedback, and actively engaging participants in goal setting, to identify what really matters to the individual.
- Make it achievable but challenging In order to be intrinsically motivating, goals need to be appropriately challenging. If a goal set is too easy then participants will lose interest. Whereas, if the goal is too difficult then the participant is likely to give up. Therapists can use other strategies such as taking time to get to know participants, actively listening, encouraging questions and feedback, offering choice and variety, and actively engaging participants in goal setting in order to identify and set goals at an appropriate level of challenge.

Competence - if an individual is clear on what it is that they are aiming to achieve and they believe that the goal is achievable then they are more likely to feel confident that they can succeed.

Autonomy - if the goal that the individual is trying to achieve is motivationally relevant and meaningful to them then they are more likely to feel a sense of autonomy. As a result the individual is more likely to perform the behaviour or activity because they want as opposed to feeling that they have to.

Relatedness - if the therapist takes time to set SMARTER goals with the participant in a way which is motivationally supportive (e.g., ensuring that the goal is relevant by linking it to the participant's interests and values) then the participant is more likely to feel connected and cared for by the therapist and adhere to the intervention in the long-term.

Possible challenges with using this strategy:

 Deteriorating cognitive or physical capabilities so SMARTER goals are no longer achievable the next day, or a week, or a month later -therapists may need to explain to participants that the goals are flexible and regularly adapt the goals to ensure that they are still achievable.

8. Identifying challenges and solutions

Although many people have good intentions of engaging and remaining in exercise or activity programmes, often other factors of everyday life end up getting in the way. Such obstacles to engagement and adherence need to be addressed in order for individuals to maintain their participation in the long-term. Rather than waiting for an obstacle or issue to arise then trying to deal with it, therapists may want to take some time with the participant to identify and discuss what challenges they may face when trying to put their goals into action and how these may be overcome.

- Ask participants whether they perceive there to be any possible challenges to achieving their goal (e.g., "Is there anything you can think of that might make it more difficult for you to accomplish your goal?", "What issues might we have to face?", or "What challenges could arise when...?"). For example, a participant's goal could be to go walking for 30 minutes, 3 times a week. When asked what challenges may arise, the participant might mention that because they only recently moved to the area they do not know any safe walking routes near their house. The therapist could then work with the participant to identify possible walking routes that they could take and walk it with them until the participant feel comfortable doing it on their own.
- Use questions to trigger participants' thoughts and ideas (e.g.,
 "What do you think you could do if you found that you got a bit
 lost when out on your walk?" The participant then may come up
 with ideas themselves, such as, only sticking to two potential
 walking routes and learning them well and/or always taking their
 mobile phone with them so that they can phone a relative if they
 get lost). By guiding the participant through the problem solving
 process, the therapist is increasing the likelihood that they will
 achieve their goals.
- Revise and reframe conflicting goals Sometimes the pursuit of one goal (e.g., "Looking after my grandchildren") can interfere with the pursuit of another goal (e.g., "Engaging in a regular exercise programme"). One approach to overcoming this is to help the participant find ways of aligning seemingly conflicting goals. For example, the above seemingly conflicting goals could be revised or reframed to be more congruent and complementary. The individual could combine both goals and engage in physically active tasks with her grandchildren, thus, looking after her grandchildren and engaging in regular exercise. Alternatively, she could acknowledge the importance of engaging in a regular

exercise programme in order to maintain a fitness level conducive to looking after her grandchildren. Reframing her way of thinking in relation to the goal so that it is congruent with looking after her grandchildren may help her to prioritise it.

Why is this strategy important for motivating PrAISED participants?

This strategy can be used to identify potential problems that may arise before they occur, and deal with lapse and relapses, thus, increasing the likelihood that participants will adhere to the programme and continue long-term.

Competence - Identifying how to deal with possible challenges before they arise will help to increase participants' feelings of competence and self-efficacy.

Autonomy - By encouraging participants to identify possible challenges and potential solutions the therapist is supporting participants' feelings of autonomy and control.

Relatedness - The therapist taking the time to talk through any potential issues with the participant will show that they care about them and want to help them achieve their goals, thus strengthening a sense of connection.

Possible challenges with using this strategy:

Discussing possible obstacles could feel a bit overwhelming and demotivating.

- Avoid negative terms such as 'obstacles' or 'barriers' try to use slightly more positive language, e.g., 'possible challenges' which sounds less daunting.
- When a possible challenge is identified, therapists can take the time to come up with a potential solution that the participant is happy with before moving onto the next challenge.
- At the goal setting stage, it may be best to focus only on identifying and solving a few possible challenges. Other potential challenges can be discussed in subsequent visits.

Teaching and instructing

9. Providing clear instructions and rationale

When teaching and instructing participants, therapists may explain what do to, how to do it, and why to do it. In order to maximise the likelihood that the participant will listen and take on board the information, it is important to provide clear instructions and rationale for the behaviour in a way which is meaningful for the participant. Clear instructions refers to explaining what the participant is being asked to do in a way which is understandable for them. Providing a rationale means explaining why what is being suggested to, or asked of, the participant is important and worthwhile doing. To be meaningful, the rationale needs to be conveyed in a way which communicates the personal relevance and importance of the information to the participant.

- Identify participants' communication preferences and needs Everyone's learning style and preferred method of communication
 is different. Use other strategies, such as, taking time to
 understand participants, actively listening, and encouraging
 questions and feedback, to identify individuals' communication
 preferences.
- Ensure the content of explanations is understandable to the participant - Therapists may want to consider: How much information the participant is able to take in at one time? Are they using any technical language or terminology that the participant may not be familiar with?
- Use a variety of techniques to help make instructions as clear and meaningful as possible - For example, therapists could physically demonstrate exercises, highlight a few key teaching points (e.g., "Aim to have your knees directly over your toes when bending. Keeping your toes and knees aligned helps to ensure that the exercise is safe"), point out which specific muscles it is that the

- participant is aiming to work, use items in the house to signify direction (e.g., "take a step closer to the fridge"), explain how an exercise might physically feel when doing it, and provide pictures and/or written instructions of the exercises tailored to the individual.
- Explain why the information being conveyed is important For example, a physiotherapist may instruct a participant to "do 10 sitto-stands". To make this instruction more motivationally supportive the therapist could follow the instruction with an explanation of why this exercise is important (e.g., "Sit-to-stands are great because they really work the leg muscles.")
- Provide meaningful rationales For example, to make the instruction meaningful the physio could link the explanation to the interests and needs of the individual (e.g., "Stronger leg muscles will help you to keep more stable when walking around the shops on your own and less likely to fall. Doing the sit-to-stands will help you to keep doing the shopping which you enjoy"). Linking the explanation to the goals and interests of the participant will help the individual to see the personal value of the information given or suggested behaviour for themselves. In order to make an instruction, or the provision of guidance or advice more meaningful, therapists could consider whether the explanation links to the participant's goals, or to something that they have previously mentioned regarding their problems, wishes, and interests?

Autonomy - Providing rationale which is meaningful and appropriate will help participants understand why a particular behaviour is important and worthwhile doing. Even if participants don't always find exercise pleasant, they will really value understanding more about what they are doing and why they are doing it, which will help them to engage more wilfully of their own accord.

competence - Understanding what they are doing and, more specifically how to do it, will help participants to feel competent performing the behaviours.

Relatedness - By taking the time to provide meaningful and appropriate explanations, therapists are demonstrating to participants that they care and have thought through what it is that they are asking/suggesting/advising, thus promoting feelings of connectedness.

Possible challenges with using this strategy:

Having to repeat instructions and explanations on a regular basis can be challenging. Be creative with prompts to help the participant to remember what exercises to do, when to do them, how to do them, and why to do them:

- Tailor the exercise sheet, e.g., by noting down the number of repetitions the participant has agreed to do and asking the participant what they would call the exercise and writing that down on the sheet.
- Encourage them to note down a few key teaching points
- Include a note or picture of the activity/goal which the exercise will help the participant to achieve.

10. Giving meaningful praise and constructive feedback

Providing feedback and praise is an important part of teaching/instructing/guiding participants. It is not the quantity of praise offered which is important, but the quality. If effectively delivered, feedback and praise can help participants to gauge how they are getting on, whether they are doing something correctly, how they can improve, and whether what they are doing is worthwhile. To be delivered effectively, feedback and praise need to be meaningful and constructive. Praise is meaningful if it directly relates to the behaviour, activity or goal which has been successfully performed. Constructive feedback conveys specific information about what was accomplished and how and why it was effective. Such information can help participants to recognise and understand what went well (or not) and how they can progress.

- Reduce the use of empty praise It is common when teaching for individuals to provide empty praise such as 'good' and 'well done'. This type of praise does not provide the individual with information as to what it was that they did well. This may leave the participant wondering, what was it that they got right? Was it the whole behaviour or just specific bits of it that they got right?Or what was it that made whatever it was that they got right effective?
- Make praise meaningful by relating it directly to specific goal, action or outcome Rather than just saying "well done", which gives the participant little information to go by, a therapist could instead say "well done with those sit-to-stands, you had great control in the legs there as you went down. I could really see you putting in a lot of effort!" After hearing this, the participant knows what it is that they have achieved (i.e. that they got the level of control as they went down right) and what behaviour to repeat in the future.

- Provide praise and feedback which focuses on individual effort and improvement - Praising effort and improvement can help to contribute towards an individual's belief that they can get better at things if they try. Such a belief can increase participants' willingness to continue to apply effort and persevere through challenges. Rather than highlighting errors in a directive manner, phrase feedback in a positive way as suggestions for improvement.
- Make feedback constructive by explaining specifically what was accomplished and how the participant can improve - Constructive feedback gives participants the information that they need in order to progress. It goes beyond highlighting what went well (or not) by helping the individual to recognise and identify for themselves how they can progress.

Competence - Giving meaningful praise and constructive feedback will help participants to recognise what they are achieving and support participants' sense of accomplishment.

Autonomy - Meaningful praise will help participants link their performance on a task or activity to their personal goals and aims. This helps participants to value the information given and to feel ownership over wanting to improve. Constructive feedback can help a participant to know what they can do in order to improve and progress towards their goals.

Relatedness – If delivered in a positive way, meaningful praise and constructive feedback can show participants that the therapist cares and is invested in helping them to improve and achieve their goals, thus fostering a sense of connection.

Possible challenges with using this strategy:

 Providing too much empty praise, which has little or no value with regards to motivating individuals - instead help the participant to be able to judge for themselves whether they have successfully performed the exercise, so they are more self-reliant in the future.

11. Encouraging questions and feedback

Encouraging participants to ask questions and provide feedback on their interests, problems or preferences is crucial for motivation. By asking questions, participants can ensure that they know what it is they are doing, how to do it, and why they are doing it. Receiving feedback will help therapists to effectively tailor the intervention to suit the participant's interests, needs and preferences.

- Encourage questions from day one Towards the start of the intervention (assessment visits), therapists can explain to participants that they welcome questions and that, at any point, the participant can let them know if they have any questions or concerns. The therapist can also reiterate this, on other occasions during the intervention period, to remind participants.
- Ask directly if participants have any questions in relation to specific exercises/activities - Participants may want to ask for clarification on what it is that they are supposed to be doing or how to do it. They may want to know more about the purpose or rationale behind certain exercises or activities. It may be that they are curious as to what, if any, additional support or local groups are available to them. Directly inviting questions gives participants an opportunity to ask such questions.

- Invite general feedback Therapists can encourage general feedback in terms of an individual's participation within PrAISED (e.g., how the participant is getting on, what they are enjoying, not enjoying, whether there is anything that is proving particularly challenging etc.)
- Invite specific feedback Specific feedback can be sought in relation to particular exercises or activities (e.g., whether an activity would be of interest to them, how they feel when doing a particular exercise, whether there was anything that they felt uncomfortable with when doing an exercise or activity, whether they feel that the exercise/activity was appropriately challenging for them etc.).
- Follow up on a previously discussed goal or problem Therapists can invite feedback in relation to a particular goal or problem.
- Encourage the use of non-verbal feedback For some participants, therapists may find it useful to encourage the use of non-verbal feedback (e.g., thumbs up/down, nodding, or some other signal decided by the individual themselves). Non-verbal feedback can be used by participants to signal their preferences, such as whether they are happy with something or not or would like to stop.

Relatedness - By showing an interest in the participant's thoughts and experiences during the PrAISED intervention and how their experiences might be improved, the therapist is demonstrating that they care about and respect the participant.

Competence - During the exercises and activities, feedback from participants may help therapists to effectively tailor the intervention. For example, feedback from a participant regarding how exercise difficulty may help therapists to set the exercise at an appropriate level, to ensure that they are not over- or under-challenged, supporting participants' feelings of competence.

Autonomy - Encouraging participants to share their thoughts, ideas and concerns is an effective way to help them feel a sense of input and freewill in their engagement within PrAISED. The more that the exercises and activities are appropriately tailored to the individual's capabilities, interests and preferences, and the more that the participant feels in control of, and understands, what they are doing, how and why, then the more likely it is that they will want to engage and continue with the programme.

Possible challenges with using this strategy:

 Being reluctant to speak up about the intervention - With time, it is likely that the participant will become more willing to open up and express their thoughts and preferences. Therapists may need to pay close attention to non-verbal cues (e.g., participant's facial and body language) to determine if the participant is comfortable, clear on what they are doing, and/or enjoying themselves or not.

12. Offering choice and variety which is realistic and relevant

There are many opportunities for instructors to offer choice and variety within the PrAISED intervention. Participants can be given choices about what types of exercises and activities they do, when they do them, how long for, whether they do them alone or with a companion, and what prompts they use as reminders of when and how to do the exercises/activities. Variety helps to keep workouts fun, interesting and stimulating. For example, each session could include a variety of exercises and activities in and outside the home environment. Choice and variety can be very motivating if delivered in a way which is realistic and relevant for the participant.

- Be realistic Ensure that the choices and variety offered are something that the participant is physically and psychologically capable of doing (e.g., there is no point offering for a participant to increase the number of repetitions to 10 if they are struggling to do 5), and there is the social and environmental opportunity for the choice or variety to be undertaken (e.g., in order to give participants the choice of going for a walk along a canal with a friend [which would provide them with variety], they will need to either live by a canal or have appropriate transport available to get them to it and have a friend who is available and willing).
- Relate choice and variety to the participant's interests, values or goals - For example, if the participant loves music, then therapists could ask the participant to choose what music they do the physio exercises to. To help participants recognise the relevance of choice, therapists could *provide a rationale* which links to the participant's interests or goals (e.g., "You previously mentioned that you would like to do some more walking outside. Where would you prefer to walk - along the canal or in the park?")
- Be creative For example, if a participant is an avid football fan maybe they would like to do the physio exercises wearing their team's kit and incorporate a football into some of the exercises. If a participant loves fashion and her goal is to be able to independently take the bus to the shops, then one of the activities that she could do in her own time is create a collage of her favourite fashion pictures from magazines. This task would stimulate the brain, work the arm muscles (from cutting and sticking), and most importantly strengthen intrinsic interest to pursue the goal.
- Phrase choice in a positive way when teaching exercises or activities, therapists often provide participants with options (e.g., putting their hand on a table to steady themselves or reducing the number of repetitions). When providing such options avoid phrases with negative connotations, such as, 'if you are struggling then...' or 'if you are having difficulty then you can...' This may

- make some individuals feel less competent or that they are failing. Instead use more positive phrases, such as, 'If you feel that you would like a bit of extra support...', 'If you would prefer a slightly easier option today...', or 'If you would feel more comfortable then we could try...'
- Convey choice as a challenge Phrase choice in a way which encourages participants to challenge themselves and take the more difficult option, whilst feeling that they are in control of their own workout (e.g., "There are a couple of options based on how you are feeling today. If you feel that you would like a bit of support then you can lightly touch the chair in front to help guide yourself. If you're feeling good today and up for a challenge, try not to use your hands. It's your choice, so go with what feels best for you").

Autonomy - Choices help participants to feel a sense of autonomy and freewill as they provide an opportunity for participants to shape the PrAISED programme to fit their own needs.

Competence - Participants may feel more competent and confident that they can complete the exercise and/or activities when the therapist provides options which are challenging but achievable for them.

Relatedness - The provision of realistic and relevant choices and variety also help the participants to feel that the therapist cares about the quality of their experience within PrAISED and what they will achieve from it. This is an important precursor of feeling connected to the therapist.

Possible challenges with using this strategy:

 Feeling overwhelmed by the amount of choice and unsure what to do - Try to narrow the focus down, step by step, with the participant only choosing from a few options at each stage. For example, when trying to identify what activities a participant would like to do, the therapist could ask what activities they currently like to do, what activities they have done in the past, if there are any activities that they have a particular interest in trying.



D. Maintenance

The maintenance component consists of promoting intrinsic motivation, habit formation and tapering support provided by the PrAISED therapists.

Core principle(s):

- 12. Participants are more likely to engage with the programme and continue in the long-term if the reasons are more *intrinsic*. The therapists must identify the reasons why the participant is engaging with the activities/tasks and over time try to maintain/ promote intrinsic reasons.
- 13. Participants are more likely to perform the exercises/activities in the long-term if they get into a *habitual* routine of doing them.
- 14. Support must be *tapered* with the therapist increasing the extent to which the participant is responsible for doing the exercises/activities.

Intrinsic motivators

Research [27, 28] has shown that the type or quality of motivation is more important in predicting successful outcomes than the amount of motivation. By the quality of motivation we are referring to the reasons underpinning the individual's motivation. There are a range of different reasons why an individual may engage in an activity. Some of the reasons underpinning engagement may be more autonomous or *intrinsic* (e.g., for the enjoyment and fun of the activity or because of the valued benefits) whereas other reasons may be more controlled or extrinsic (e.g., performing an activity to please a partner or to avoid punishment).

Figure 3 demonstrates some theoretical reasons underlying engagement.

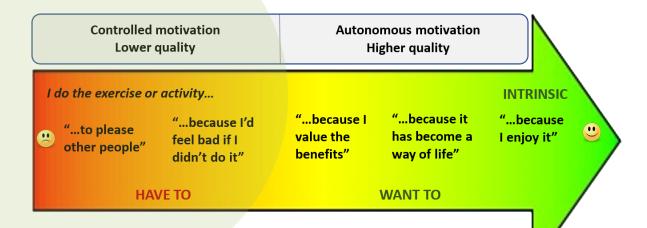


Figure 3: theoretical reasons underlying engagement.

These different reasons have important implications for individuals' well-being and continued engagement. Activities which are performed for more autonomous or intrinsic reasons are more likely to be performed because the individual wants to do them. Performing exercise programmes because they want to, has been found to be associated with older adults' feelings of vitality [31], well-being [32], and initiation and persistence [33]. Whereas activities performed for more controlled or extrinsic reasons are more likely to be carried out because the individual feels that they have to do them. When an individual feels pressured into doing an activity then they are more likely to disengage and drop out in the long-term [37].

Just because someone has a high quantity (a lot) of motivation, doesn't mean that they necessarily have a high *quality* of motivation. For example, therapists could have an individual who appears to be keen and working hard at the exercises during a visit. But when we look under the surface and consider why they are highly motivated we see that it is because their partner wants them to do it and they would feel like they were letting them down if they didn't. Although this type of motivation is highly effective at promoting effort and engagement in the short-term, such controlled motives are unlikely to support persistence in the long-term. It can take time and a few intervention sessions to fully understand the type of motivation a participant has.

What to do...

- Once the programme is established and you have built a rapport with the participant, use Figure 3 to identify what the motivating factors might be
- Consider promoting the intrinsic (want to) reasons with the participant through techniques in the motivational strategies grid (page 91)

How to encourage maintenance

Helping participants continue, or maintain, the activities and exercises once the study has finished is a core aspect of the PrAISED programme and should be facilitated from the very start.

The intention that the activities and exercises are continued must be *clearly explained* to the participants and encouraged throughout, across each element of the programme. Talking about maintenance to the participants and their family or caregivers is the best place to start and should also focus on the reasons or explanations. For example, an individual may be regularly and consistently doing a series of strengthening exercises to help control their knee pain so they can continue to do the gardening pain free; the clear link between continuing to do the exercises and continuing to do pain-free gardening needs to be made explicit.

Goal setting is a motivational strategy that is also relevant for encouraging participation in the long-term. The goals that are set as part of the PrAISED programme need to be relevant, achievable, and meaningful for the individual. The relationship between the activities and exercises done by the participant in working towards that goal needs to be made clear.

Gradually reducing the amount of support from the therapists, or tapering, can promote maintenance and continuation of the activities and exercises. *Tapering* should gradually place the responsibility for completing the programme onto the individual or caregiver. This gradually builds autonomy for doing the exercise and activities, which is an essential part of forming a habit. It is important that the challenges to the participant completing the exercise and activity programme by themselves (or with their caregiver or family member) are identified and addressed during the time that the RSWs and therapists are intensively seeing the participant. The suggested structure for the PrAISED programme incorporates tapering.

Tapering should encourage the participant to build the PrAISED programme into their daily or weekly routines. The therapists should support this, using the weekly planner to identify times where the programme can be completed. A consistent order, time, place or associated task for the activities and exercises should be encouraged. *Habit formation* can take a long time [42] and some individuals might not like the thought of adding to their routine or may find it difficult to stick to a routine. Again, it is important that challenges specific to that individual and their situation are explored and understood by the therapists.

There are a number of points to consider that may help establish a maintainable habit, which are presented in table format (page 130).

What to do...

- Use the motivational guide and strategies table (page 91)
- Follow the PrAISED programme structure to taper the therapist sessions (Figure 1)
- Consider potential challenges that are specific to that participant and their PrAISED programme
- Write a summary or final letter to the participant at the end of their PrAISED programme reiterating the goals and actions they are to continue with following the study
- Refer to the maintenance grid (page 130) for further suggestions if the participant:
 - is struggling to maintain the activities established in the intervention
 - does not like routines
 - does not have any intrinsic motivating factors

Maintenance table

Description	How to do
Description	How to do
Tapering	
Reduced time	Explain why reducing the number of sessions
with therapists	 Schedule in a number of sessions with gradually longer time intervals between them
	 Spend time in the session talking about or reviewing what the participant has done themselves
	 Follow the suggested PrAISED session structure (see Figure 1 for details)
More	• Explain why it would be beneficial for the participant to take more responsibility
responsibility for	for doing the PrAISED exercises and activities
the participant	 Identify component(s) the participant can take ownership of (e.g., when to do the exercises)
Graded changes	Determine if the participant feels confident completing the exercises and/or
	activities independently before progressing
	Try to make many consistent or small changes, rather than fewer large changes
	 Progression of exercises and activities may not be appropriate during tapering
	and should only be done if directed by the participant or their goal attainment
Agreement to	Agree the session plan with the participant and any family/caregivers involved
changes	Revisit and adapt the goals, session plan and PrAISED exercises and activities
l l l l l l l l l l l l l l l l l l l	frequently with the participant and caregiver to review progress
Available	Make sure the participant has all information (e.g., pictures of exercises) and
information	equipment (e.g., weights) in an accessible format and location to feel confident
and equipment Positive and	 completing the exercises and activities independently Use language to reinforce that the tapering of the supervised sessions is positive
supportive language	(e.g., you are doing so well with this exercise you don't need to be supervised to do it")
	Use inclusive rather than controlling language (Table 8)
Habit formation	
Plan and build into	Use the weekly planner to identify times in which the participant can do the
daily schedule	exercises and activities
	Consider compensatory techniques to aid daily planning (e.g., white board with
	day's events on, timers or alarms to prompt)
	If events/situations change, review and revise the schedule accordingly
Regular and	Encourage participants to do the exercises/activities on a regular basis
repeated	 Prompt that the same exercises and activities are done in the same order each time.
	Explain why it is beneficial to create a habitual routine of exercise
Identify and	Identify challenges with forming a habit (e.g., do they not have a set weekly
address barriers	routine, are they reliant on someone who does not have a set weekly routine)
	Problem solve around challenges (e.g., if they do not like or have a weekly
	routine, can you link the exercises to a daily task such as having breakfast?)
Who and how	Consider how the participant is being supported, and by whom, to do the
gaining support	exercise or activities
Daning Sapport	 Explore other methods of support (e.g., attending a walking group rather than walking by themselves)
	Walking by themselves/



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