Health Literacy

Behavioural change

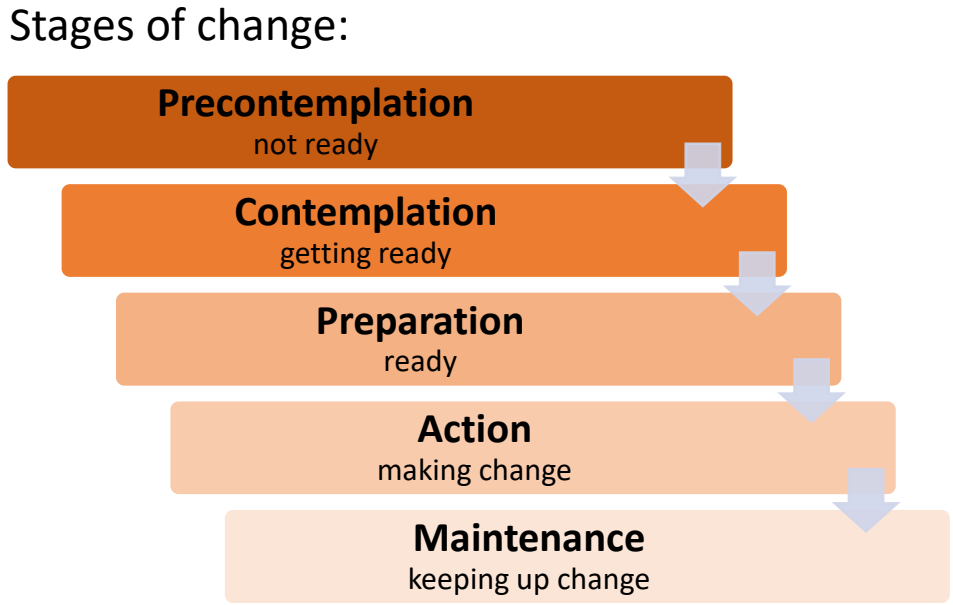
Learning outcomes

You are able to:

- explain how behaviour can be changed by the Transtheoretical model,the Com-B-model and the model of Behavioural lenses
- name determinants that influence behaviour
- mention interventions how tot change behaviour with the help of the Behavioural lenses

I. Transtheoretical model of behaviour change

- Transtheoretical model of behaviour change is developed by Prochaska and DiClemente's 1984.
- It describes different stages that individuals go through when behaviour change is required.



[Prochaska & Velicer, 1997]

Understanding stages of change

Understanding what stage of change the patient is in with regards to behaviour change is useful as it can help you tailor your intervention to suit that particular stage.

General principles:

1) Assess the individual's readiness for behaviour change
2) Use motivational interviewing to enhance change
3) Influence their autonomous or intrinsic motivation
4) Elicit 'change talk' and reflect patients commitment
5) Offer support and guidance in self-management techniques

[Prochaska & Velicer, 1997]

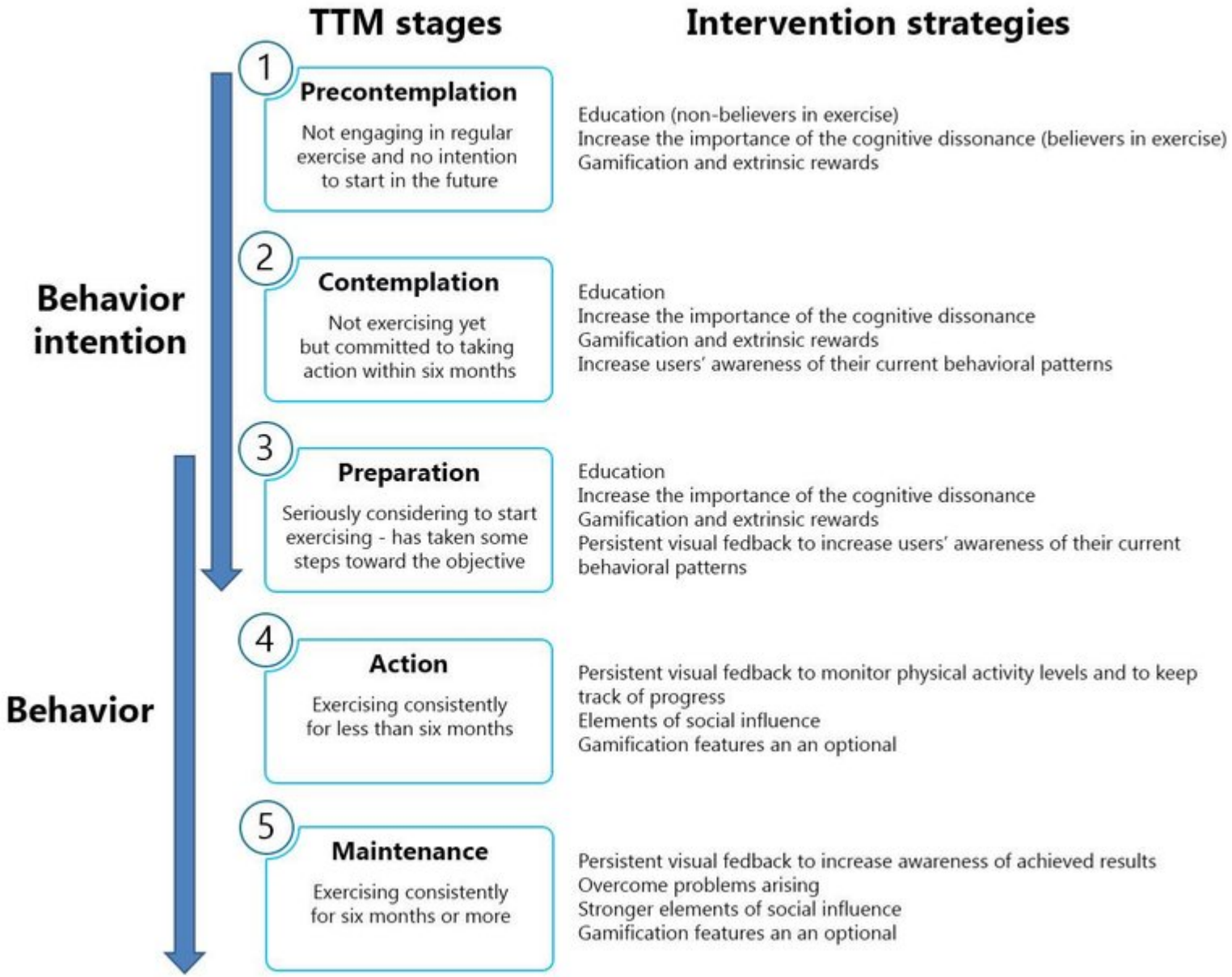


Image 1. Transtheoretical model for designing technologies supporting an active lifestyle [Ferron & Massa 2013].

PRECONTEMPLATION
No thinking about changing their behavior or the potential benefits

Precontemplation:

- ❑ There is no intention to change the behaviour, because they are not aware.
- ❑ They don't go to treatment, they just lower pressure and drop out.
- ❑ Create a link, increase the level of contradiction so that reasons for concern emerge.
- ❑ Avoid resistance, unsolicited information and requests for premature changes

[Ferron & Massa 2013].

CONTEMPLATION
Thinking about behavior change but not yet acting on intention

Contemplation:

- ❑ They recognize that there is a problem and think seriously about being able to change.
- ❑ They have not yet committed to taking action.
- ❑ They can remain trapped for a long time, making the ambivalence chronic.
- ❑ They are more open to receiving information.

[Ferron & Massa 2013].

PREPARATION
Ready to change behavior but not yet acting on intention

Preparation:

- ❑ There is intention and the plan of action begins.
- ❑ Commit to making a change.

[Ferron & Massa 2013].

ACTION
Beginning steps towards adapting the behavior but with high risk of relapse

Action:

- They modify behaviour or environment with the intention of overcoming their problems.
- Requires a considerable investment of time, energy and increased external recognition

[Ferron & Massa 2013].

MAINTENANCE
Maintaining the behavior risk of relapse remains

Maintenance:

- ❑ They work to avoid relapse and consolidate the successes achieved during the action
- ❑ Considered as a continuation of change
- ❑ It implies sustaining the effort to continue the habits that have been modified

[Ferron & Massa 2013].

Image 2. The relapse

The relapse:

- Returns to previous behaviour and previous stages.
- Not considered a failure
- It is part of the normal process of change, learning
- Every relapse is not the same.

[Ferron & Massa 2013].

What helps change?	The subject is based on their own decisions	Decision balance (pros/cons)
		Self-efficacy balance (temptation/confidence)
	The tailor-made suit for each person and stage	Motivational interviewing
	Interpersonal relationship	

[Prochaska & Velicer, 1997]

What does not help the change?

Closed Questions. Instead, use open questions and reflective listening, it helps reflection.

Confrontation. You can create resistance.

Expert trap. Do not provide answers and solutions when the patient doesn't ask for it.

Labelling. They stigmatize and provoke resistance

Premature targeting. We must respect the order of concerns

Guilt. It is irrelevant and deserves reflection.

[Prochaska & Velicer, 1997]

BC-Interventions: The behaviour change wheel

- A new method for characterising and designing behaviour change interventions
- Behaviour change interventions can be defined as coordinated sets of activities designed to change specified behaviour patterns.
- Three components of the COM-B model **(capability, opportunity, and motivation):** the skills necessary to perform the behaviour

[Michie et al. 2011]

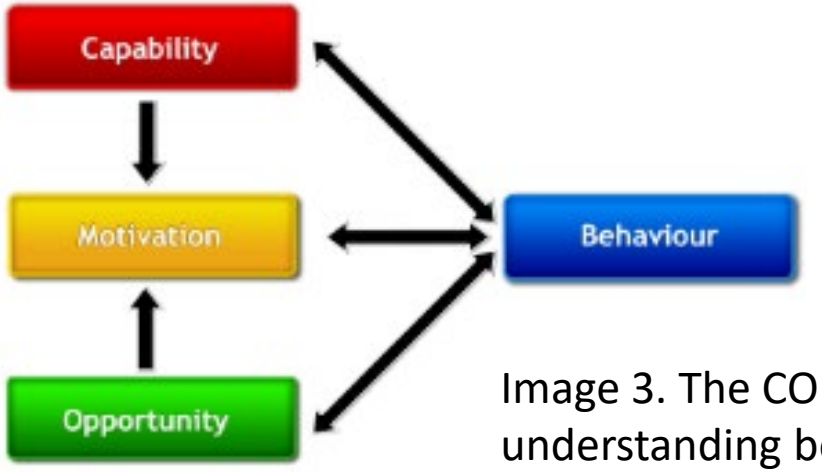


Image 3. The COM-B system - a framework for understanding behaviour [Michie et al. 2011]

The behaviour change wheel

- A new method for characterising and designing behaviour change interventions
- The framework links policy categories and intervention functions

[Michie et al. 2011]

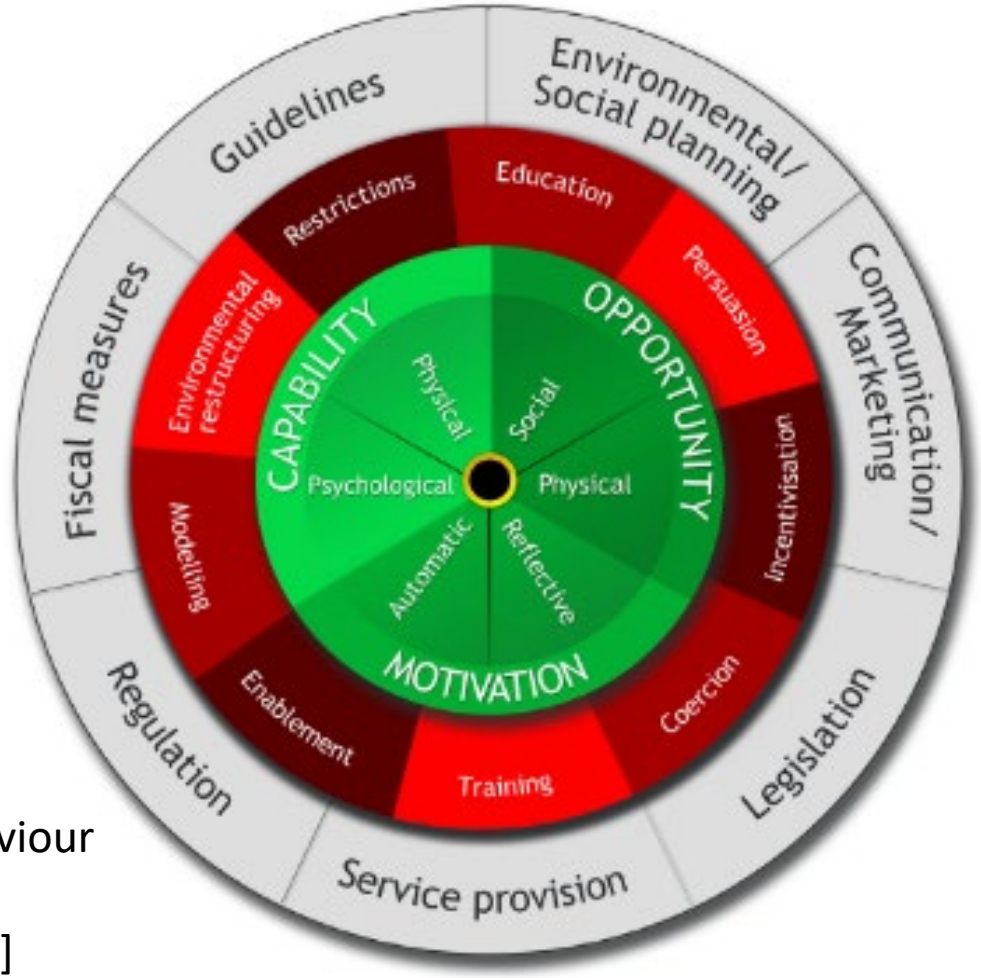


Image 4. The behaviour change wheel.
[Michie et al. 2011]

Changing Behaviour: The behavioural lenses

The lenses invite health professionals and clients to consider different sets of determinants that play a role in changing behaviour:

1) Habits and impulses
2) Knowing and believing
3) Seeing and realizing
4) Wanting and being able to
5) Doing and persisting (sustaining behaviour change).

[Hermsen, 2019; Van Essen et al. 2016]

Image 5. The behaviour lenses approach. [Hermsen, 2019]

Behavioural change and limited health literacy

Health professionals can support their clients with limited HL in working with the behavioural lenses.

Lens 1: habits and impulses. Use plain language together with clients when looking for their habits and possibilities for behaviour change.

Lens 2: knowing and believing. Use pictures, plain language and teach back.

Lens 3: seeing and realizing. Use feedback and teach back. Perhaps use digital supporting apps.

Lens 4: wanting and being able to. Motivating the client - look which strategies helps to reduce barriers.

Lens 5: doing and persisting. Look for intrinsic and extrinsic strategies for motivating the client.

[Hermsen, 2019; Van Essen et al. 2016]

Casus

- Carl, aged 57, single and unemployed for eighteen months
- Former order picker in warehouse, unemployed for eighteen months now. Many shifts: limited social network built up
- Little motivation to go out, especially since the death of his dog
- Important activities: once a week playing darts in the local pub; twice a week eating at his sister's house

Referral physiotherapy

- Goal: physical fitness to reduce step to labour market
- Carl has gained 20 kilos over the past two years
- He tires easily and is short of breath
- Smokes a packet of tobacco every 3 days
- He says he came mainly because the doctor required it.

What interventions would you make?

Behavioural lens 1: Habits and impulses (1)

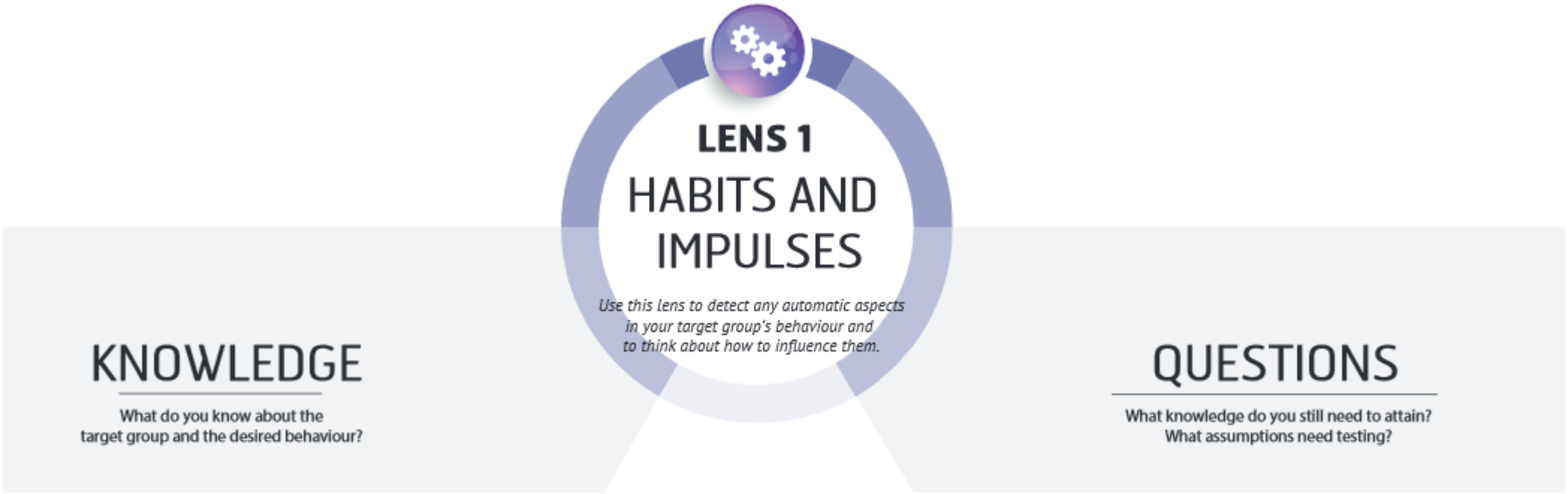


Image 6. Behaviour lens 1 – habits and impulses. [Hermsen, 2019]

Behavioural lens 1: Habits and impulses (2)

A large part of our behaviour is automatic. We don't think about it.

This behaviour can consist of reflex impulses, plus our (well-worn) habits

Use this lens to detect any automatic aspects in your client's/target group's behaviour and to think about how to influence them:

- What elements in the current behaviour of your client/ target group are habitual or impulse behaviours?
- At what point and in what context does this behaviour occur?
- What triggers the impulsive behaviour? What circumstances evoke the habitual behaviour?
- What are the benefits of the current habit or impulse?

[Hermsen, 2019]

Behaviour varies in the extent to which it is consciously controlled or automatically triggered by stimuli from the environment.

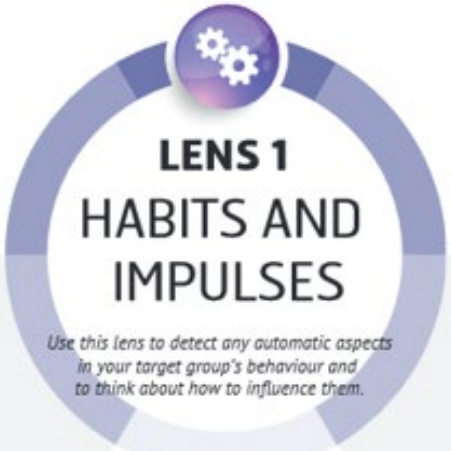


Image 6. Lens 1

Opportunities

'Nudging', Using existing habits, establishing routines

Threats

Maladaptive behaviour patterns, stimuli leading to unwanted behaviour

'Nudging', Using existing habits, establishing routines

Image 7: Nudging

Image 8: establisch new routines – p.e. eating fruit

Image 9: unwanted behaviour, but don‘t forbid - establisch new routines

Behavioural lens 2: Knowing and believing (1)

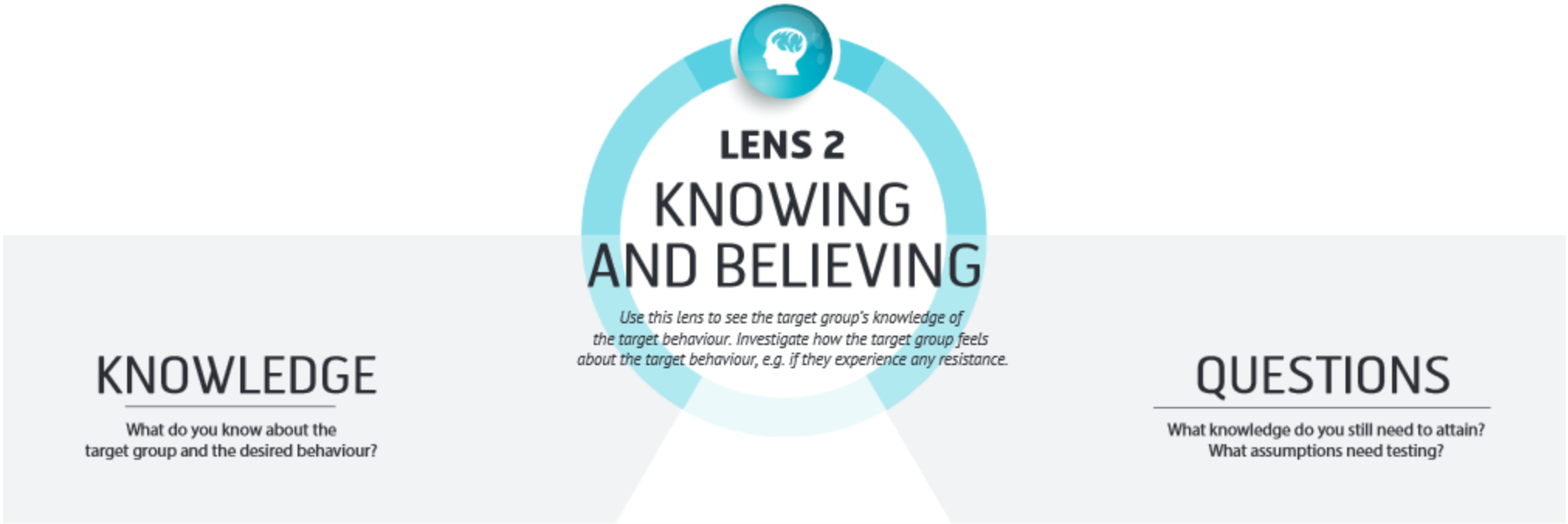


Image 10. Behaviour lens 2 – Knowing and believing. [Hermsen, 2019]

We have the ability to control target behavior. Here the knowledge about and attitude toward the target behavior is an essential first step

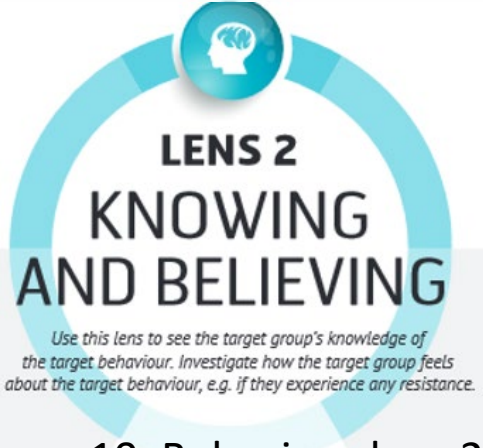


Image 10. Behaviour lens 2

Opportunities

Education, broadening the frame of mind (e.g. regarding disease perceptions)

Threats

Nocebo, health literacy, with holding information

Education, broadening the frame of mind (e.g. regarding disease perceptions)

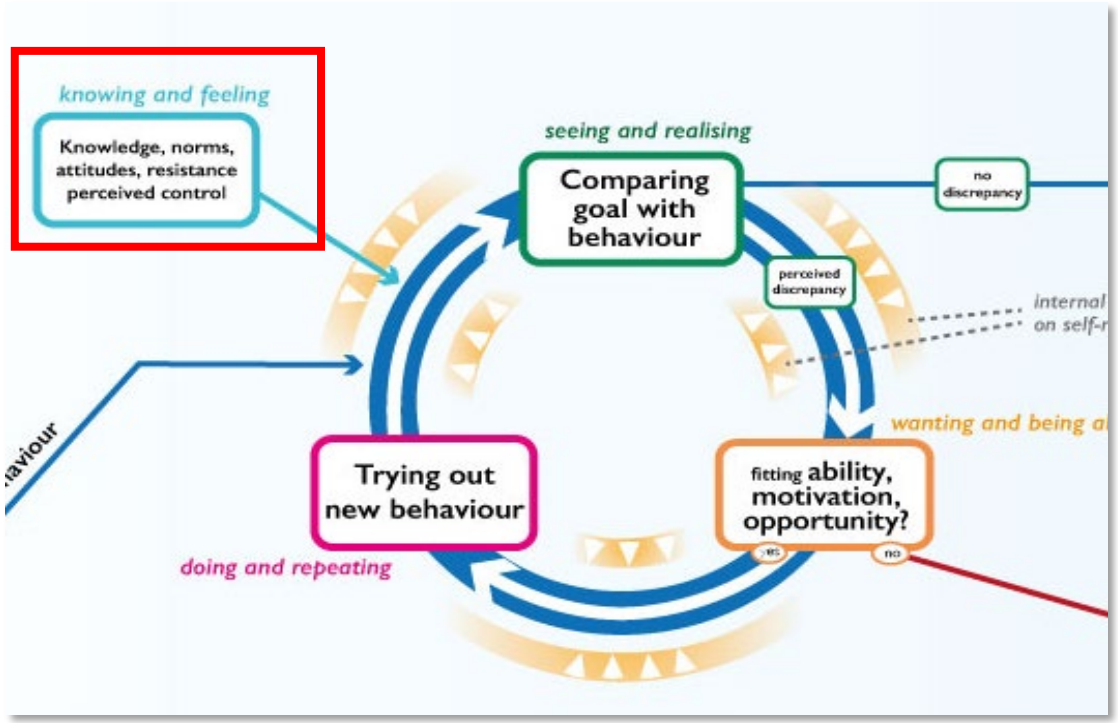


Image 11. The behavioural lenses approach [Hermsen, 2019]

Image 12. Seed a plant

Behavioural lens 2: Knowing and believing (2)

Use this lens to see the client's/ target group's knowledge of the target behaviour. Investigate how the client feels about the target behaviour, e.g. if he/she experience any resistance.

- What does the client/ target group know and feel about the target behaviour? Do they have sufficient knowledge?
- How are their attitudes and evaluations?
- Does the target group/client feel resistance towards the behaviour?
- (If so, is it active resistance, aimed at the feeling of perceived control (reactance: 'nobody tells me what to do'); resistance to the content of the message (scepsis: 'What do they know?'). Or is it passive resistance towards change due to indifference (inertia: 'whatever')?)
- How does the target group's/clients social environment react to the target behaviour? What are the social norms? Do the opinion of society and the social norms of the target behaviour fit the goal? Why do or don't they?
- What is the effect on the target group/client?

[Hermsen, 2019]

Behavioural lens 3: Seeing and realizing (1)

Image 13. Behaviour lens 3 – Seeing and realizing. [Hermsen, 2019]

Comparing current behaviour with the desired goal. The lens is about objectively understanding one's own behaviour and its consequences.

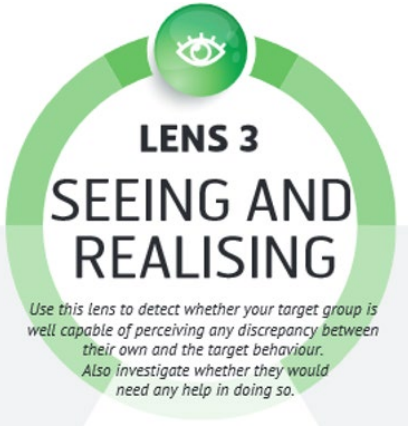


Image 13. Behaviour lens 3

Opportunities

Technology makes movement easily objectifiable

Threats

Biases (!) Adverse feedback

Technology makes movement easily objectifiable

Image 14. smart watch

Behavioural lens 3: Seeing and realizing (2)

Target groups/clients are not always good at perceiving their own behaviour. They can be affected by all sorts of mechanisms that distort their perception, making them see their own behaviour as much more positive (‘I haven’t drunk much tonight’) or more negative (‘I really suck at that’) than is realistic.

- Use this lens to detect whether your target group/client is well capable of perceiving any discrepancy between their own and the target behaviour.
- Also investigate whether they would need any help in doing so.

[Hermsen, 2019]

Behavioural lens 3: Seeing and realizing (3)

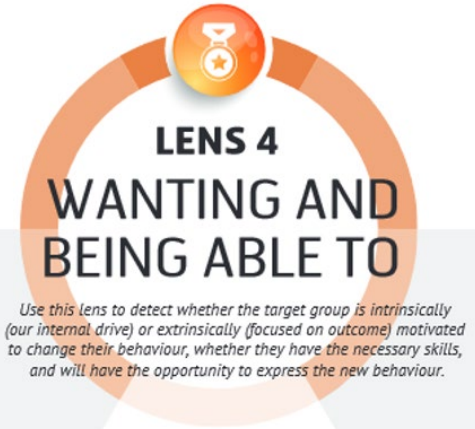
- What excuses or pretexts does the target group use to rationalise a perceived discrepancy between the desired behaviour and the goal?
- Does perceiving the target behaviour lead to tension regarding self-image or someone's different social roles?
- Does the target group have sufficient information available about their own existing behaviour and the target behaviour? Is the information relevant and accessible? How could this be improved?
- Does the target group compare achievements, behaviour, beliefs and / or attitudes to others? Who are these others, and what is the effect?
- Does the target group use other people's behaviour as an excuse for their own?
- How accurate/factual is the target group in perceiving their own behaviour?
- Can the target group/pt. still correctly assess their own behaviour in the presence of others?
- How does feedback affect performance? Can the target group accept this feedback?

[Hermsen, 2019]

Behavioural lens 4: Wanting and being able to (1)

Image 15. Behaviour lens 4 – Wanting and being able to. [Hermsen, 2019]

Motivation and skills to change behaviour. Looking ahead to barriers and obstacles



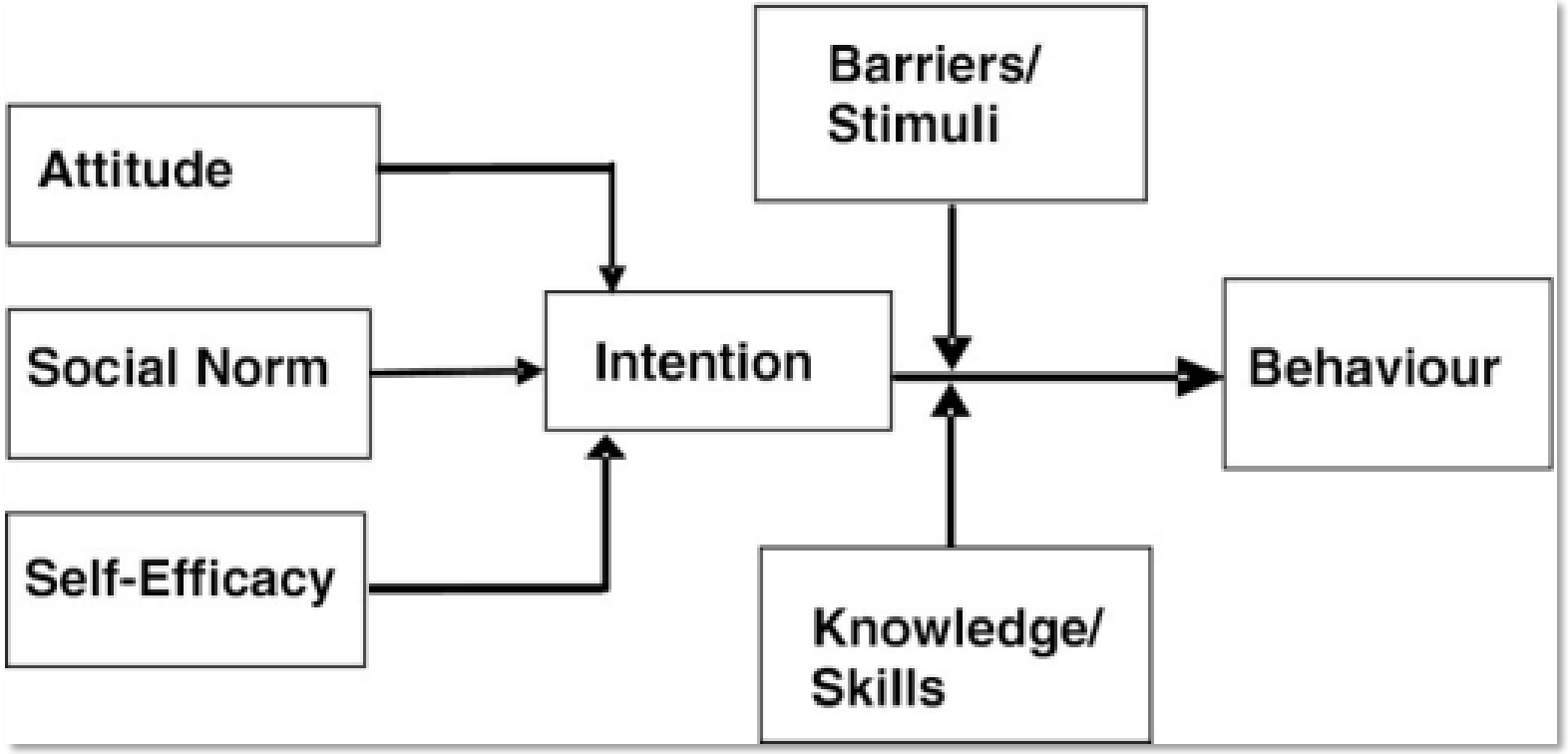
Opportunities

Identity, belonging, self-efficacy, coping plan.

Threats

'Intention-behavior gap'

Immage 15. Behaviour lens 4.



[de Vries, 1988]

Behavioural lens 4: Wanting and being able to (2)

- Behaviour change is only possible when people have both genuine motivation, the necessary skills, and the opportunity to perform the desired behavior.

- Use this lens to detect whether the target group is intrinsically (our internal drive) or extrinsically (focused on outcome) motivated to change their behaviour, whether they have the necessary skills, and will have the opportunity to express the new behavior.

[Hermsen, 2019]

Behavioural lens 4: Wanting and being able to (3)

- How motivated is the target group to change their behaviour?
- Is the motivation based on:
  - Making free choices (intrinsic; autonomy)?
  - Maintaining relationships and group membership (intrinsic; relatedness)?
  - Being capable, skillful (intrinsic; competence)?
  - Being sensitive to rewards or threats of negative consequences (extrinsic)?
- To what extent does the target group have the skills to carry out the target behaviour?
  - What are these skills?
  - Would it be necessary to learn new skills?
  - Or would it be advisable to make the target behaviour more achievable?
- Is there frustration because the tasks are too boring, too easy, or too hard?
- Is there frustration because the tasks take too much time or lack challenge?
- Does the target group have the opportunity to display the desired behaviour?
- What circumstances, barriers, or obstacles prevent them from carrying out the target behaviour?

[Hermsen, 2019]

Behavioural lens 5: Doing and persisting (1)

Image 16. Behaviour lens 5 – Doing and persisting. [Hermsen, 2019]

Provides insight into the extent to which the desired behaviour is actually implemented and - most importantly - sustained.

Image 16. Behavioural lens 5

Opportunuties

Implementation intentions, social support

Threats

Dealing with obstacles, relapse

Causes of relapse

Self-regulation: new pattern of behaviour is not fully automatic yet:

- Expecting succes to quickly
- Giving up too soon
- not every individual is equally skilled in self-regulation

self-efficacy:

- positive association between cons and relapse in physical activity
- people with higher self-efficacy had a lower risk of experiencing a relapse

[Roordink et al., 2021]

Image 2. The relaps

Behavioural lens 5: Doing and persisting (2)

To achieve the desired new behaviour requires trying and sticking to achievable steps.

Use this lens to see how easy and appealing it is to try out, to repeat and to keep drawing attention to the new behaviour (for example, more frequent use of public transport).

[Hermsen, 2019]

Behavioural lens 5: Doing and persisting (3)

- Is there competing behaviour? If so, how? How important or appealing is the competing behaviour compared to the desired behaviour?
- How can you ensure that the target behaviour is an ongoing focus and commitment? Are there any circumstances that hinder repeatedly performing the desired behaviour or make it more difficult?
- Are there any external stimuli (impulses) that divert from the target behaviour?
- Is the target behaviour part of a common task or goal?
- Who, or what group, could you involve or is already involved? In what way?
- Can the target group rely on practical, social, or emotional support? If so, how?

[Hermsen, 2019]

Summery - Frameworks for Behaviour Change

- Changing behaviour change needs to look at different levels:
  - individual,
  - organizational,
  - community,
  - and population levels,
  - and any intervention delivered at one level can impact on other levels.
- The most effective interventions are those that target several levels simultaneously and consistently [NICE, 2014]
- There are a variety of types of methods for effective behaviour change interventions and recommendations for practice at population, community, and individual levels.

[NICE, 2014; Abraham & Michie, 2008]

Aspects for Behaviour Change

1. Knowledge and outcome expectancies (improving people's knowledge about the health consequences of their behaviours),
2. Personal relevance (drawing people's attention to what health behaviour change would mean for them),
3. Positive affective attitudes (promoting positive feelings about behaviour change),
4. Descriptive norms (increasing the visibility of positive health behaviours in the social environment),
5. Subjective norms (improving social approval of positive health behaviours),
6. Personal and moral norms (promoting personal commitments to behaviour change),
7. Self-efficacy (increasing people's belief in their ability to change their behaviours),
8. Intention/goal setting and the formation of concrete plans (helping people set goals and form plans on how to achieve them)
9. Behavioural contracts (facilitating that people share their plans and goals with others),
10. Social relationships (drawing attention to the social influences on health behaviours), and
11. Relapse prevention (helping people develop skills to cope with difficult situations).

[NICE, 2014; Abraham & Michie, 2008]

References

Image 1. Ferron, M. & Massa, P., 2013. Transtheoretical model for designing technologies supporting an active lifestyle []. Paper presented at the Proceedings of the Biannual Conference of the Italian Chapter of SIGCHI. https://dl.acm.org/doi/10.1145/2499149.2499158

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Image 3. Michie et al. 2011. The COM-B system - a framework for understanding behavior. https://implementationscience.biomedcentral.com/articles/10.1186/1748-5908-6-42?report=reader

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Image 16. Hermsen, 2019. Behaviour lens 5 – Doing and persisting. https://osf.io/yhq8d

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Health Literacy

Strategies and techniques to support training, exercises and self-management

Learning outcomes

You are able to:

- describe strategies to teach clients different exercise types (verbal, images, videos,...)
- support client's self-management
- check client's comprehension of provided information using different techniques

As health profesionals, PT's have a role in education and training patients.

- Physiotherapy expertice - Health condition knowledge
  - Health promotion strategies
  - Specific rehabilitation exercises

- Leadership and mangement – Self management

[World Physiotherapie 2021;
World Confedaration of Physical Therapy, 2011]

As health profesionals, PT have a role in education and training patients.

Physiotherapy expertice - Health condition knowledge

- Contents:
  - Diagnosis
  - Pathophysiology
  - Natural course
  - Symptoms
  - Treatments
  - Risk factors
  - Psychosocial aspects

[World Physiotherapie 2021;
World Confedaration of Physical Therapy, 2011]

As health profesionals, PT have a role in education and training patients.

Health promotion strategies

- Contents:
  - Exercise
  - Nutrition
  - Avoidance of unhealthy behaviours
  - Lifestyle behaviour
  - Cognitive training

[World Physiotherapie 2021;
World Confedaration of Physical Therapy, 2011]

As health profesionals, PT have a role in education and training patients.

Specific rehabilitation exercises

- Contents:
  - Technique
  - Load
  - Repetitions
  - Duration
  - …

[World Physiotherapie 2021;
World Confedaration of Physical Therapy, 2011]

As health profesionals, PT have a role in education and training patients.

- **Self-managment**
- Contents:
    - Symptoms control
    - Symptoms management
    - Stress control
    - Mental health education

[World Physiotherapie 2021;
World Confedaration of Physical Therapy, 2011]

Strategies and techniques for exercises and training

Face-to-face sessions: Individual or in groups

Written and visual materials:

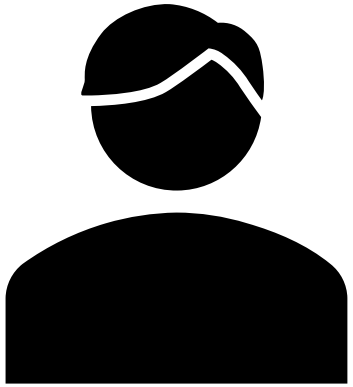
- Manuals
- Booklets
- Videos
- Presentations
- Flipcharts
- Patient books
- Web-based discussion forums (digital HL)

Communication and materials must be adequate to the patient's HL level!

Checking comprehension

Teach-back method: Ask patients to explain health information in their own words or to demonstrate the correct use of performance of an exercise, device or task.

- Use of open-ended questions.
- Frame the query as a “test” of the provider versus a “test” of the patient.
- Minimize any feelings of shame or embarrassment.
- Use of plain language.



Self-management

Self-management is a client's ability to deal with physical, psychological, and social consequences of a condition/disability and associated lifestyle adjustments, in coherence with the social environment.

[KNGF/ VvoCM, 2022]

Self-management support

Self-management support is the systematic provision of education and support interventions to clients (and possibly their family and social network) so that clients can cope with the consequences of their illness/ condition in daily life (physical, mental and social area).

[KNGF/ VvoCM, 2022]

Factors that can influence self-management

- Health literacy
- Perception of the disease, condition or injury
- Expectations of the therapy
- Motivation
- Behavior related to physical activity
- Social support and guidance
- Environmental factors
- Factors specific to a disease or condition
- Coping

[KNGF/ VvoCM, 2022]

5 A’s to support self-management

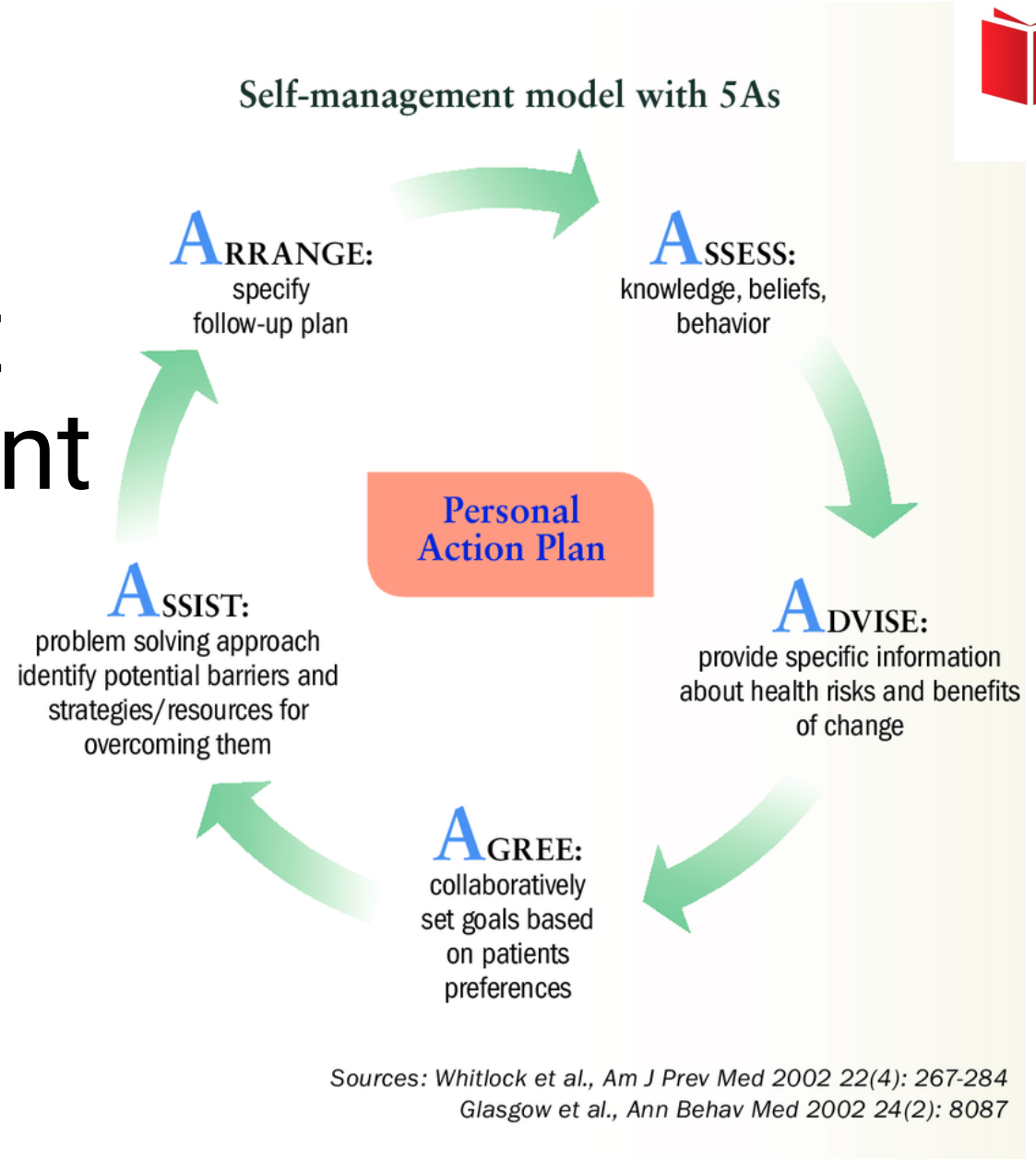


Image 3. Five A‘s to support self-mangement. Picture by Pan American Health Organization 2013, p. 31

Image 4. Health Plan

Help patients break down goals into manageable steps. Have patients pick one specific step they are likely to do. Steps should be small and realistic to do over a short time (e.g., 1 week).

Fill out an action plan form. Use a form to outline exactly what the patient will do.

After making the action plan

Assess confidence

Identify barriers

Make a copy of the action plan

Questionnaire/Self-reflection

Enabling self-management- I apply strategies adjusted to clients' level of health literacy to enable self-management
32. I assess barriers and facilitators related to therapy compliance (e.g. illness believes, shame, level of education, influence of the family, taboos, cultural influences etc.)
33. I involve the client in formulating personalized goals and action plans
34. I use the influence of the social context in a beneficial way
35. I check whether the follow up – plans for the subsequent sessions are understood and accepted

References

Image 1. Five A's to support self-mangement. Picture Pan American Health Organization (2013, p. 31). Innovative care for chronic conditions: organizing and delivering high quality care for chronic noncommunicable diseases in the Americas. In: PAHO Washington, DC.

Image 2. Health Plan designed by by rawpixel, free license by freepik

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