


***THE ROLE OF THEORY
IN UNDERSTANDING
PHYSICAL ACTIVITY
BEHAVIOR***



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Outline



The role of theory in understanding physical activity behavior I



Social cognitive theory



Theory of planned behavior



Health Belief Model



Transtheoretical Model of change



Ecological model

Basic Research

- Basic research in behavioural science and health psychology essential to understand:
 - *Psychological factors and self-regulation of behaviour*
 - *Mechanisms and processes responsible*
 - *Targets for intervention*
- Q: Why is theory approach important?

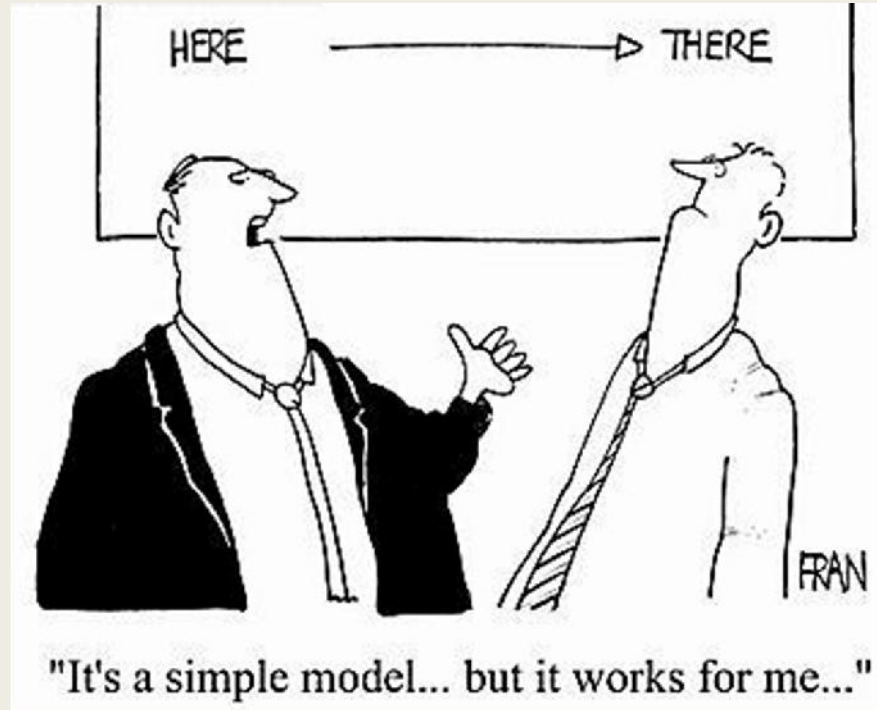


Assumption...

- The more we know about the factors underlying a decision to perform or not a given behaviour, the greater the probability is to influence that decision.

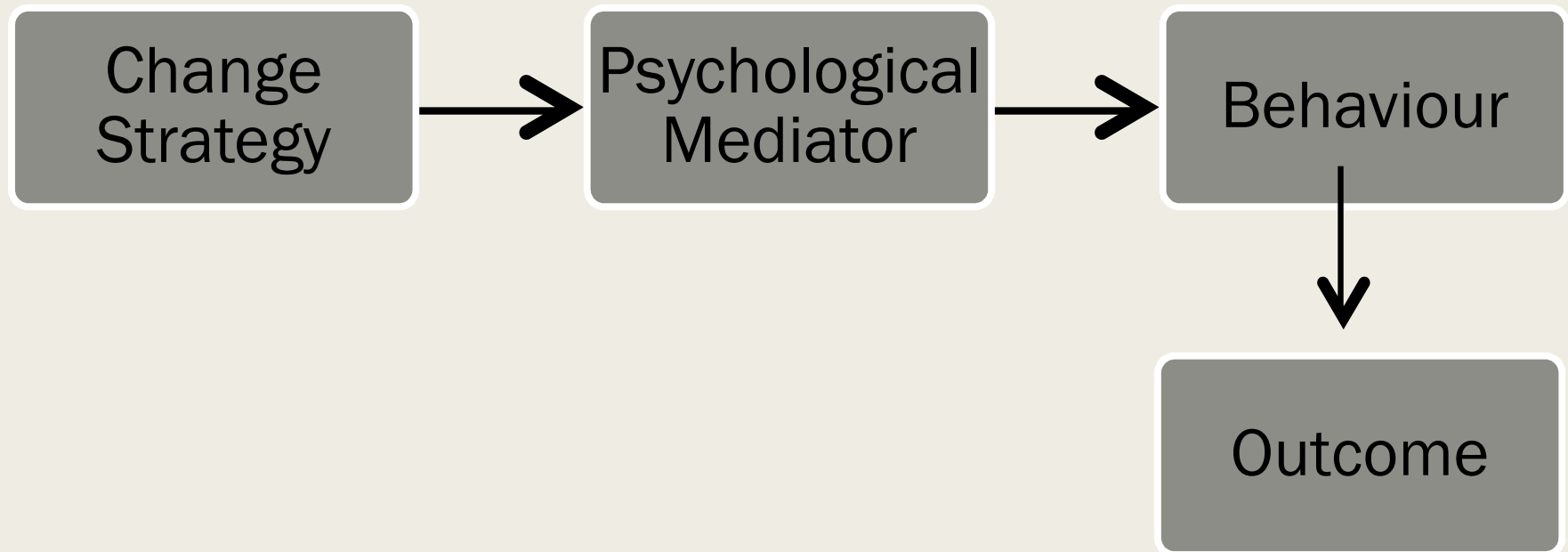


Why is theory important? Answering the 'what' and 'how' questions

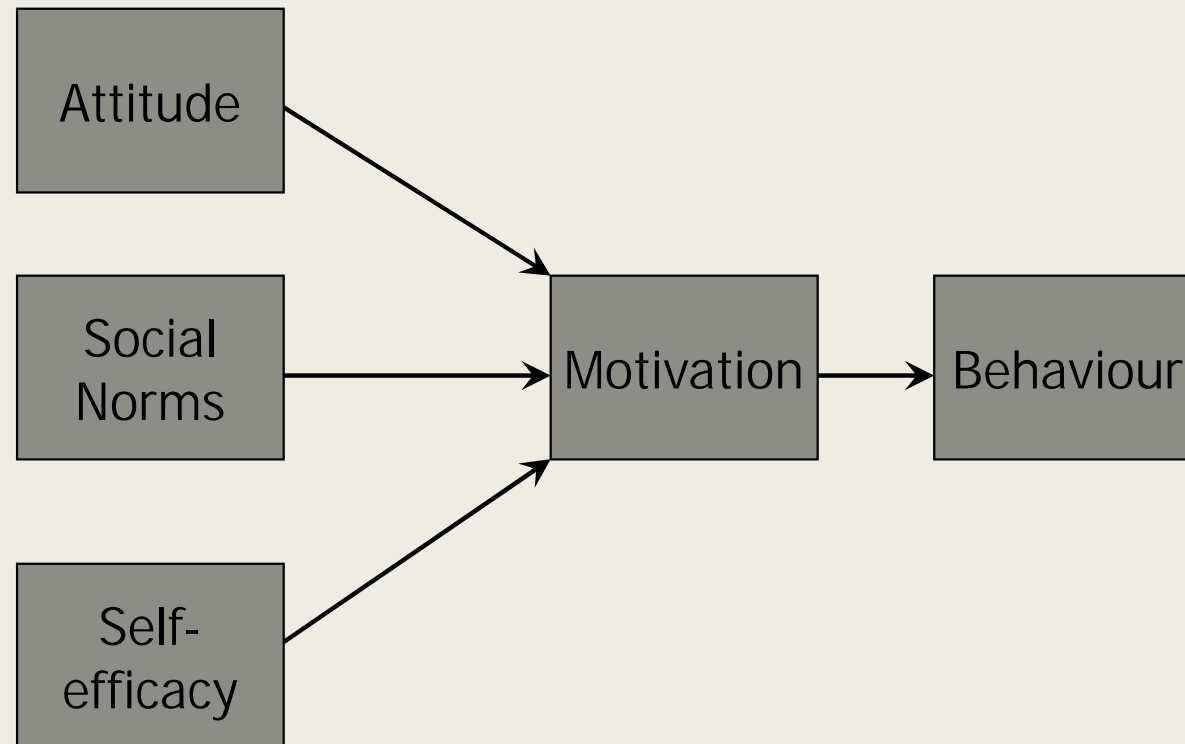


- Explanatory systems
 - *Personal and social factors ('what')*
 - *Mechanisms responsible ('how')*
 - *Targets for intervention*
- Pose questions/hypotheses
- Permits disconfirmation, rejection
- Avoids 'hit and hope' or 'variable fishing expeditions'

Fundamental Process Model of Health Behaviour Interventions



Boxes and Arrows!



Sources: Hagger et al. (2006) *Personality and Social Psychology Bulletin*
Hagger & Chatzisarantis (2009) *British Journal of Health Psychology*

Examples of Theories

Self-
efficacy/social
cognitive theory
(Bandura, 1963)

Health belief
model (Becker,
1974)

Protection
motivation theory
(Rogers, 1975)

Theory of
interpersonal
behavior (1977)

Theory of
reasoned action
(Fishbein & Ajzen,
1980)

Self-
determination
theory (Deci,
1980)

Transtheoretical
model (Prochaska
& DiClemente,
1982)

Personality
systems
interaction theory
(Kuhl, 1984)

Theory of planned
behavior (Ajzen,
1985)

Self-regulation
theory (Bagozzi,
1990)

Health action
process approach
(Schwarzer,
1992)

The I-change
model (De Vries
et al., 1998)

Reasoned action
approach
(Fishbein & Azjen,
2009)

Health behaviour theory	Attitude	Norm	Self-efficacy	Intention	Additional variables
Extended parallel process model	✓	✓	✓	✓	Threat appraisal
Information-motivation-behavioural skills model	✓	✓	✓	✓	Information; behavioural skills
Health action process approach	✓		✓	✓	Risk perception; action & coping planning; barriers; resources
Health belief model	✓		✓		Perceived susceptibility & severity; motivation; cues to act
Protection motivation theory	✓		✓	✓	Perceived vulnerability & severity; fear
Prototype-willingness model	✓	✓		✓	Prototype perceptions; willingness
Social cognitive theory	✓	✓	✓	✓	Impediments/barriers
Theory of reasoned action	✓	✓		✓	
Theory of planned behaviour	✓	✓	✓	✓	Actual control
Transtheoretical model	✓		✓		Processes of change

Bridge the gap between Theory and Practice...



- Theory is when you know everything, but nothing works
- Practice is when everything works but no one knows why

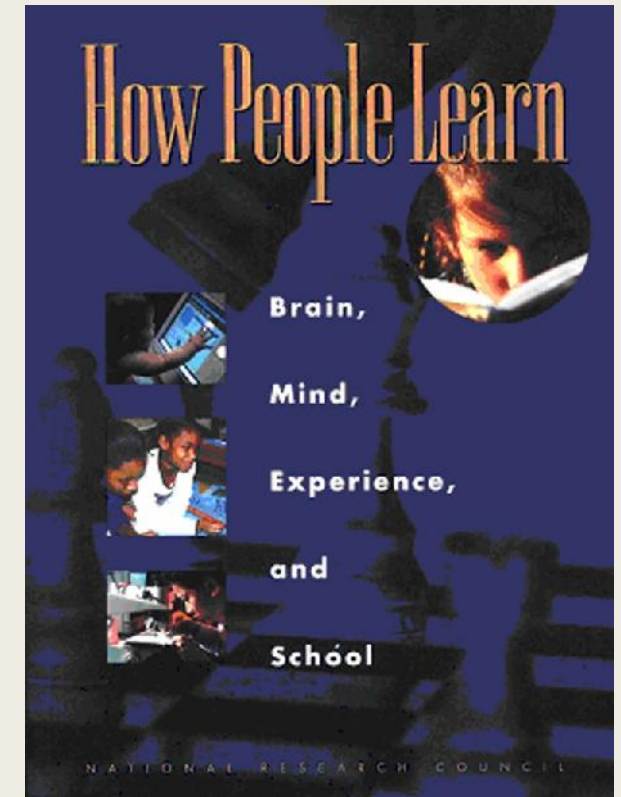


SOCIAL
COGNITIVE
THEORY (SCT)



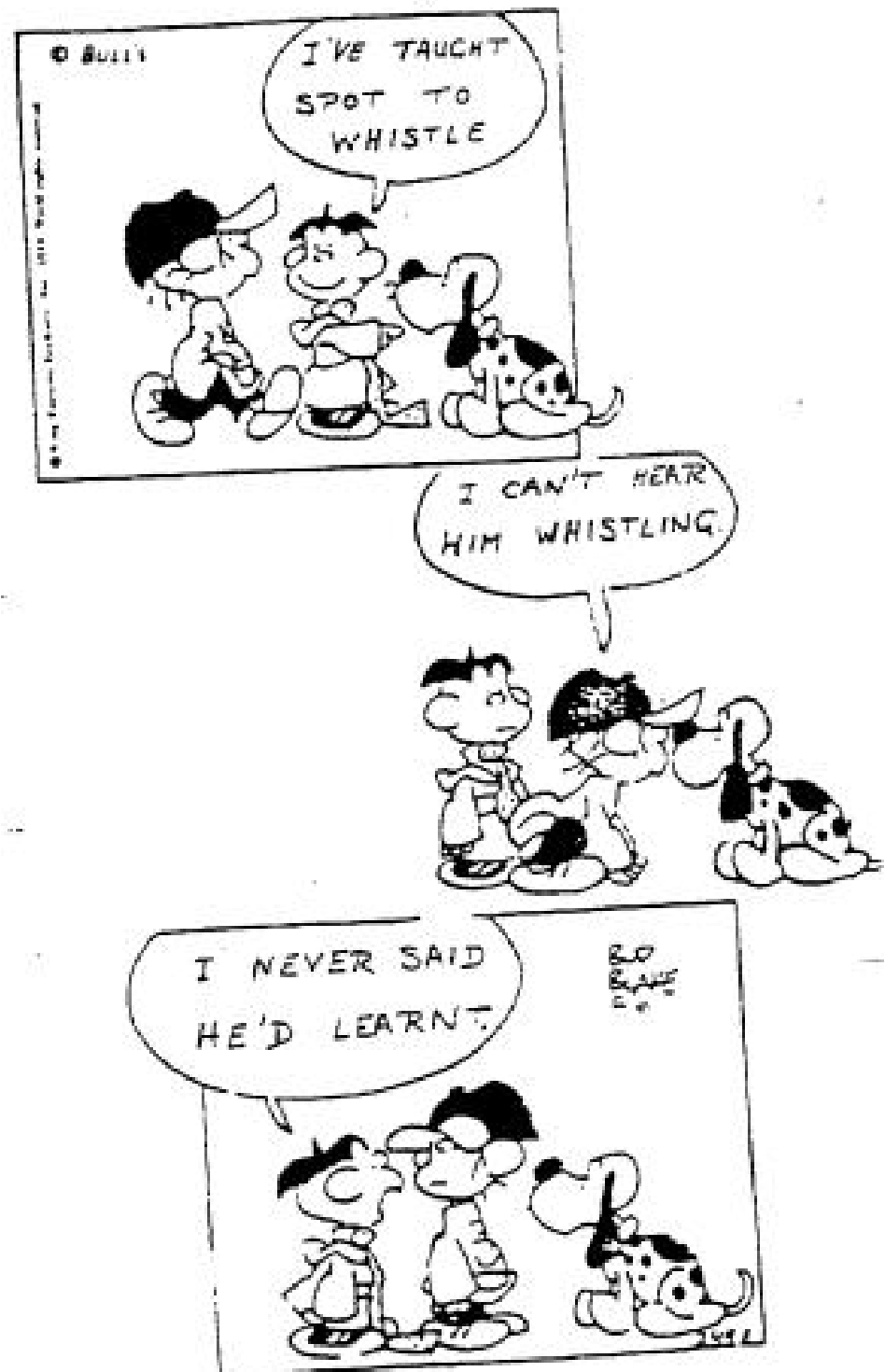
People learn...

- Directly from experience
- Imitation and modeling
 - *Imitation abilities present at birth*
 - *Abstract modeling*
- Observational learning
 - *Attention*
 - *Retention (remembering)*
 - *Production*
 - *Motivation*



Explains...

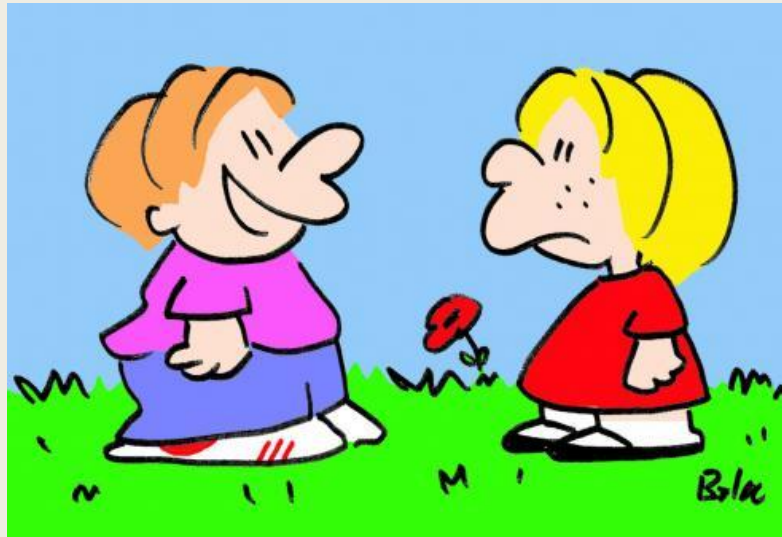
....how people acquire and maintain certain behavioral patterns, while also providing the basis for intervention strategies.



Behavior change depends on the factors:

- *environment*
- *people*
- *behaviour*

The three factors environment, people and behaviour are constantly influencing each other.



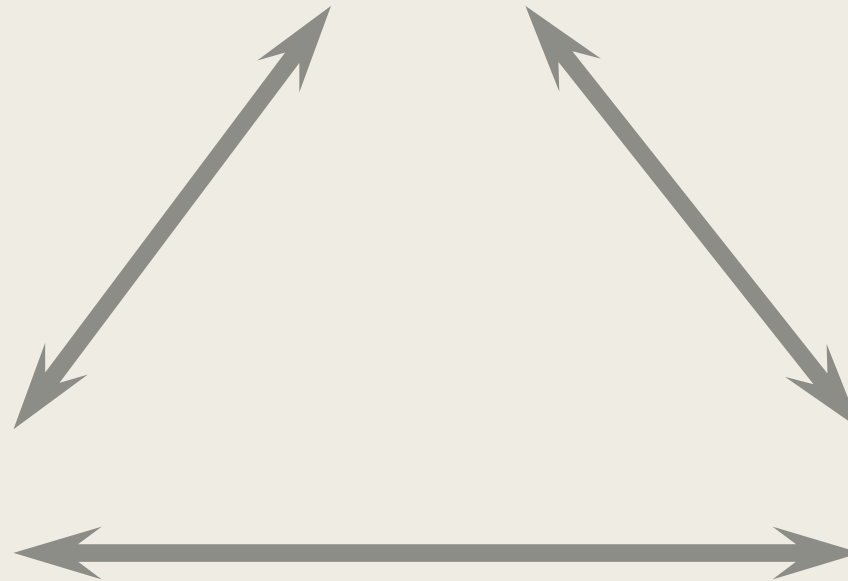
"The Principal suspended me — School is the only place in the world where you can get time off for *bad* behavior."

Behaviour is not simply the result of the environment and the person, just as the environment is not simply the result of the person and behaviour.

BEHAVIOR (Learning)

**PERSONAL
FACTORS**

ENVIRONMENT



all interact to influence how we evaluate, interpret, organize, and apply information

Environment



- Refers to the factors that can affect a person's behavior.
- There are social and physical environments.
 - Social environment include family members, friends and colleagues.
 - Physical environment is the size of a room, the ambient temperature or the availability of certain foods.
- Environment and *situation* provide the framework for understanding behavior (Parraga, 1990).
- The situation refers to the cognitive or mental representations of the environment that may affect a person's behavior.
- The situation is a person's perception of the place, time, physical features and activity (Glanz et al, 2002).

Concepts (of SCT)

To do

Environment: Factors physically external to the person



- Provide opportunities and social support

Situation: Perception of the environment



- Correct misperceptions and promote healthful forms

Behavioral capability: Knowledge and skill to perform a given behaviour



- Promote mastery learning through skills training

Expectations: Anticipatory outcomes of a behaviour






- Model positive outcomes of healthful behaviour







Concepts (of SCT)

To do

- **Expectancies**: The values that the person places on a given outcome, incentives  ■ Present outcomes of change that have functional meaning
- **Self-control**: Personal regulation of goal-directed behavior or performance  ■ Provide opportunities for self-monitoring, goal setting, problem solving, and self-reward
- **Observational learning**: Behavioral acquisition that occurs by watching the actions and outcomes of others' behavior  ■ Include credible role models of the targeted behaviour

Concepts (of SCT)

To do

- **Reinforcements:** Responses to a person's behaviour that increase or decrease the likelihood of reoccurrence  ■ Promote self-initiated rewards and incentives
- **Self-efficacy:** The person's confidence in performing a particular behaviour  ■ Approach behavioural change in small steps to ensure success
- **Emotional coping responses:** Strategies or tactics that are used by a person to deal with emotional stimuli  ■ Provide training in problem solving and stress management
- **Reciprocal determinism:** The dynamic interaction of the person, the behaviour and the environment in which the behaviour is performed  ■ Consider multiple avenues to behavioural change, including environmental, skill, and personal change.



Cognitive processes

- Bandura's social cognitive theory
 - *assumes that personality development, growth, and change are influenced by four distinctively human cognitive processes:*
 - highly developed ability
 - observational learning
 - purposeful behavior
 - self analysis

Bandura: much of human personality and behavior is shaped by our own thoughts and beliefs

ECOLOGICAL MODEL



Subway ticket machine

<https://www.youtube.com/watch?v=qaPNDbGKr7k>

Monty Python Silly Walk

<https://www.youtube.com/watch?v=By95MIAGTjE>

Piano stairs

<https://www.youtube.com/watch?v=2IXh2n0aPyw>

Compare ...



Leads to...



Environment & PA

- Reliance on psychosocial models delayed research interest in environments & PA
- It seems obvious now that PA happens in “places”
- Development of ecological models and applications to PA in the mid 1990’s was a first critical step
- Early measurement efforts set the stage for progress in research on environments & behavior

Bauman et al., 2012

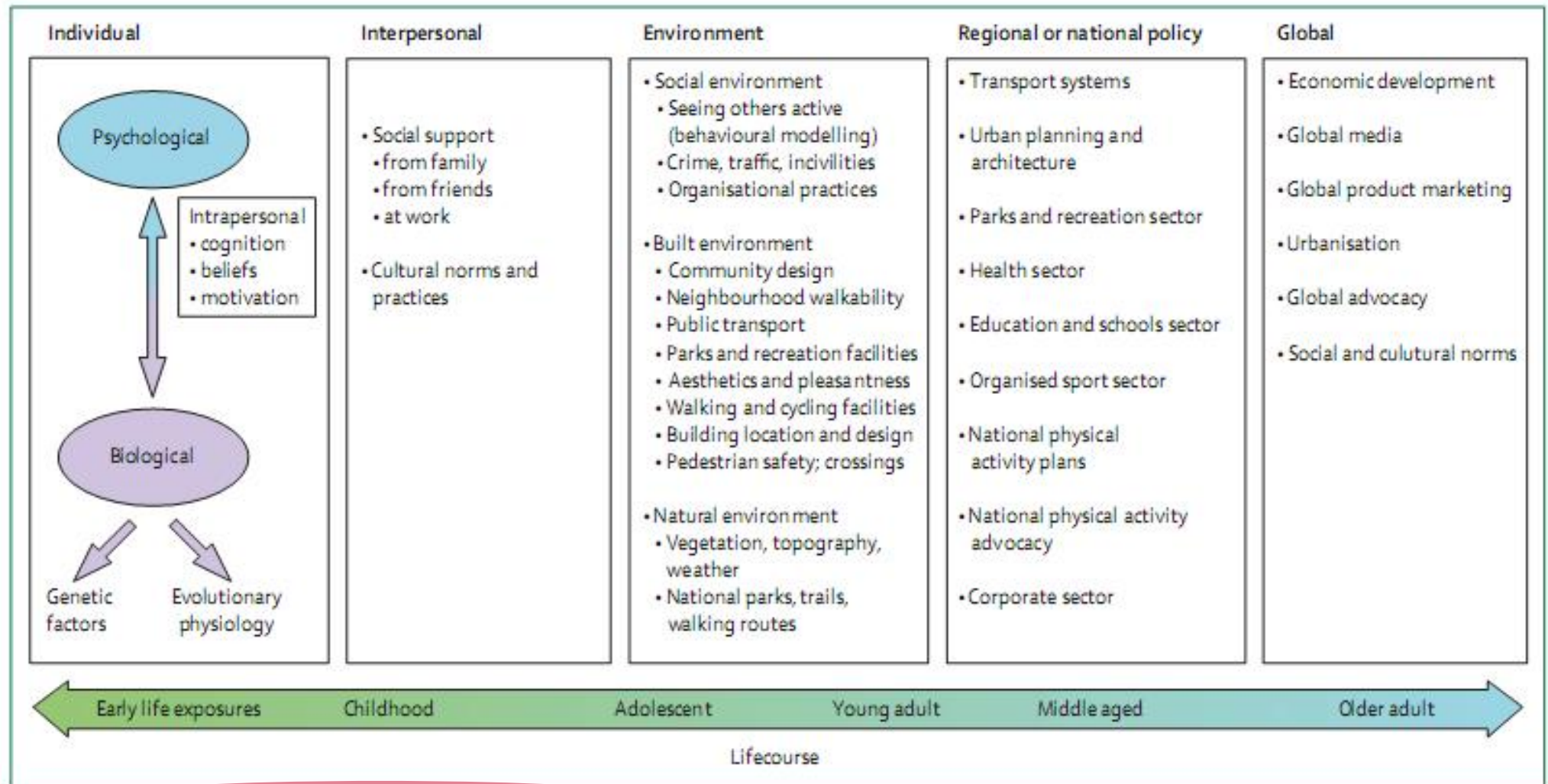
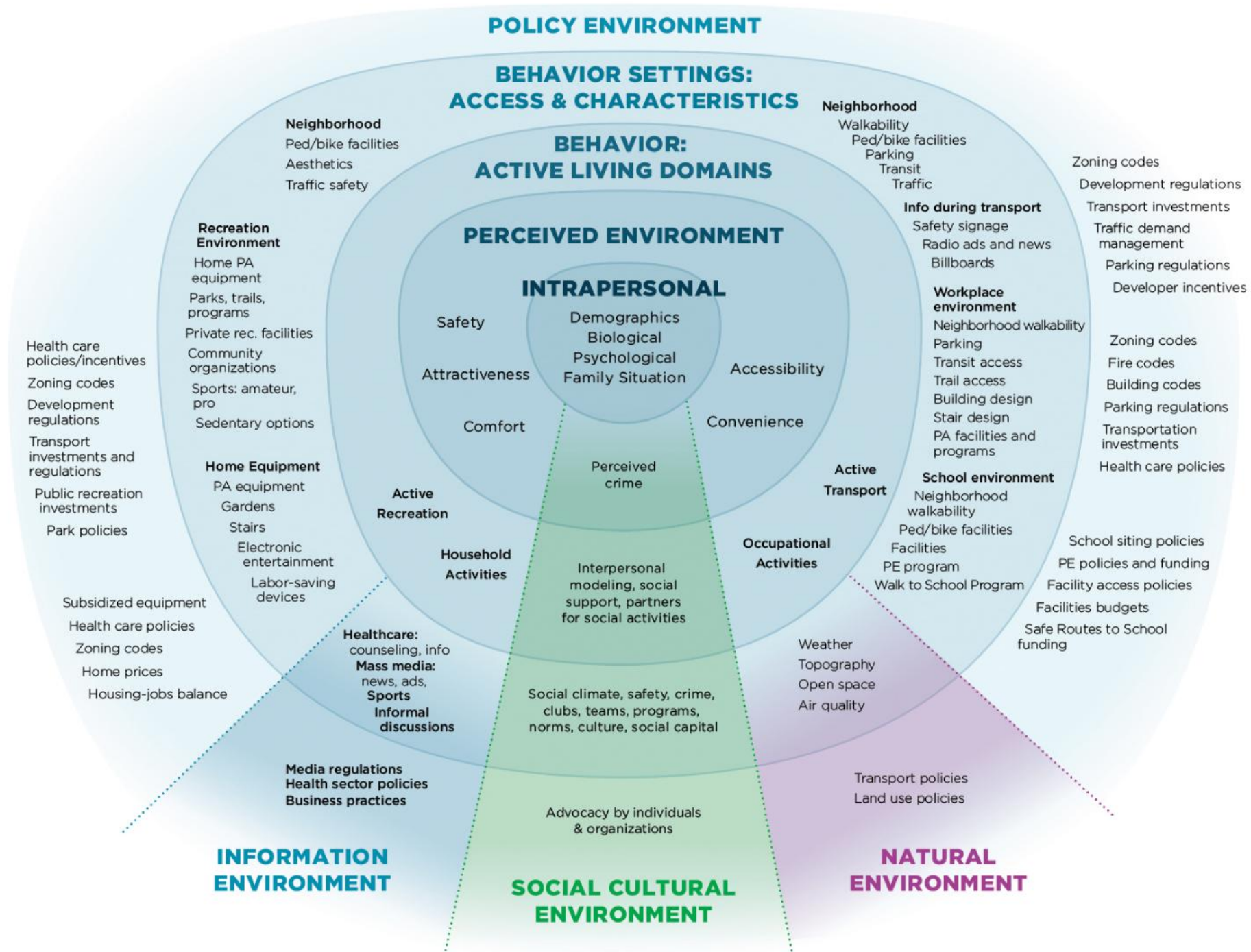


Figure 1: Adapted ecological model of the determinants of physical activity



Cooperation needed between

Physical activity researchers were developing interest in place

- Health promotion
- Health psychology
- Exercise science

Expertise in measuring environments was elsewhere

- City planning
- Geography
- Environmental psychology
- Parks & recreation

Ecological models are based on:

- Social cognitive theory, which explains behavior in terms of reciprocal relationships among the characteristics of a person, the person's behavior, and the environment in which the behavior is performed.
- Ecological models emphasize the role of the physical as well as the social environment.

Ecological models...

- ... help us to understand how people interact with the environments
- They can be used to develop effective multi-level approaches to improve health behaviours – Physical activity
- Motivation and skills cannot be effective to change behaviours if environment and policies make it difficult or impossible to choose healthy behaviours
- Environment and policies should make healthy choices convenient, attractive, and economical and then motivate and educate people

Critical examination

■ Strengths:

- Focus on multiple levels of influence which broadens the options for interventions
- Might help sustainability of effects
- Global Positioning Systems (GPS) are increasingly applied in activity studies

■ Weaknesses:

- Lack of specificity for the most important influences
- Lack of information about how the broader levels of influence operate or how variables interact across levels
- Difficult to manipulate experimentally

References

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- Sallis, J.F., Owen, N., & Fisher, E.B. (2008). Ecological models of health behavior. Pp. 465-486. In K. Glanz, B.K. Rimer, and K. Viswanath (Eds.), *Health Behavior and Health Education: Theory, Research, and Practice, 4th edition*. San Francisco: Jossey-Bass.
- Spittaels, H., Verloigne, M., Gidlow, C. et al. Measuring physical activity-related environmental factors: reliability and predictive validity of the European environmental questionnaire ALPHA. *Int J Behav Nutr Phys Act* 7, 48 (2010).
<https://doi.org/10.1186/1479-5868-7-48>

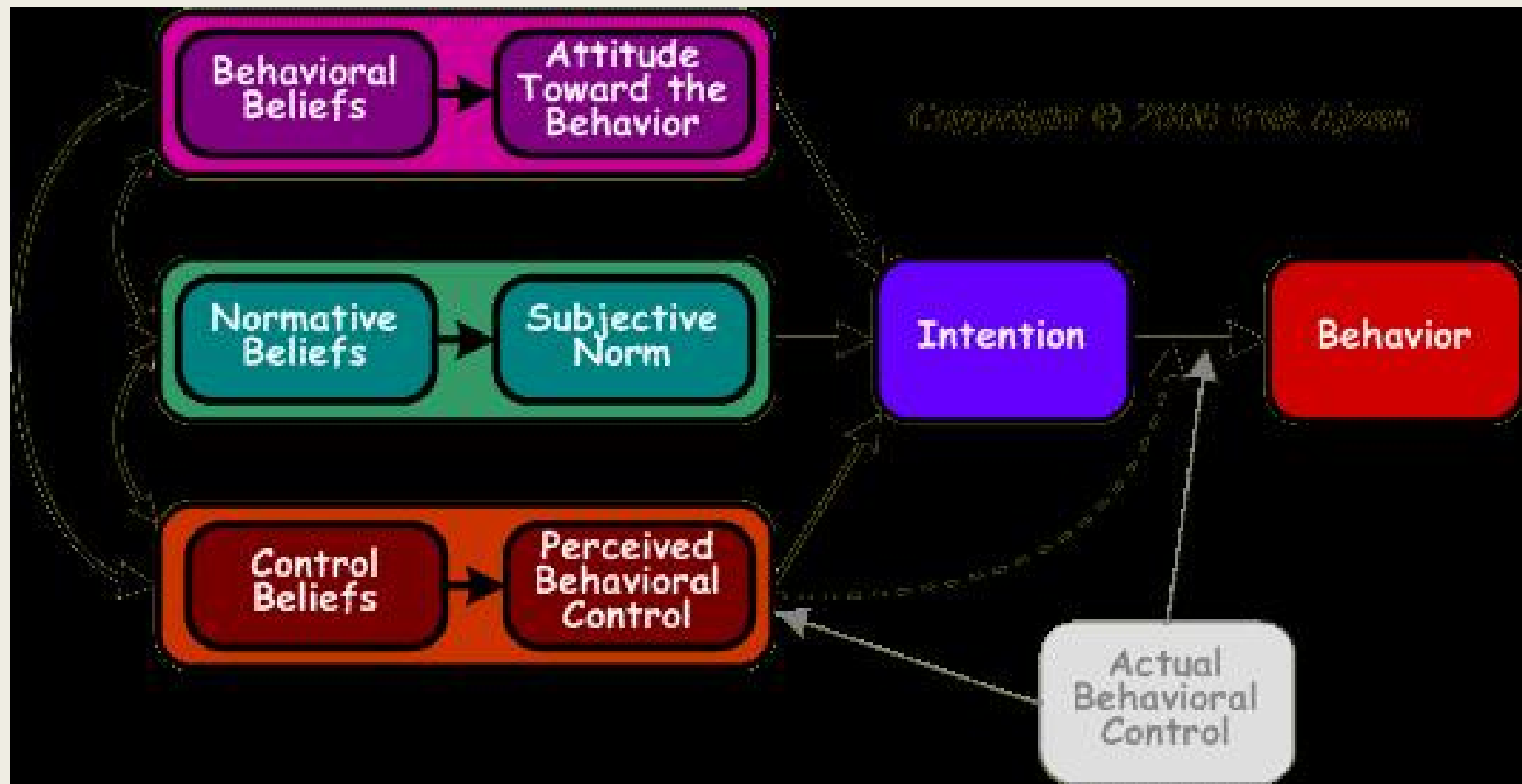
Theory of Planned Behavior

The attitude behavior relationships

- The adoption of a specific behaviour or habit (exercise, eating, smoking, or drinking behaviour) is often associated with positive attitudes towards the behaviour.

Several models have been developed to explain and predict the relationship between attitude and behaviour.

- Remember: Understanding the determinants of behaviour is the first step in the development of successful interventions to change that behaviour.



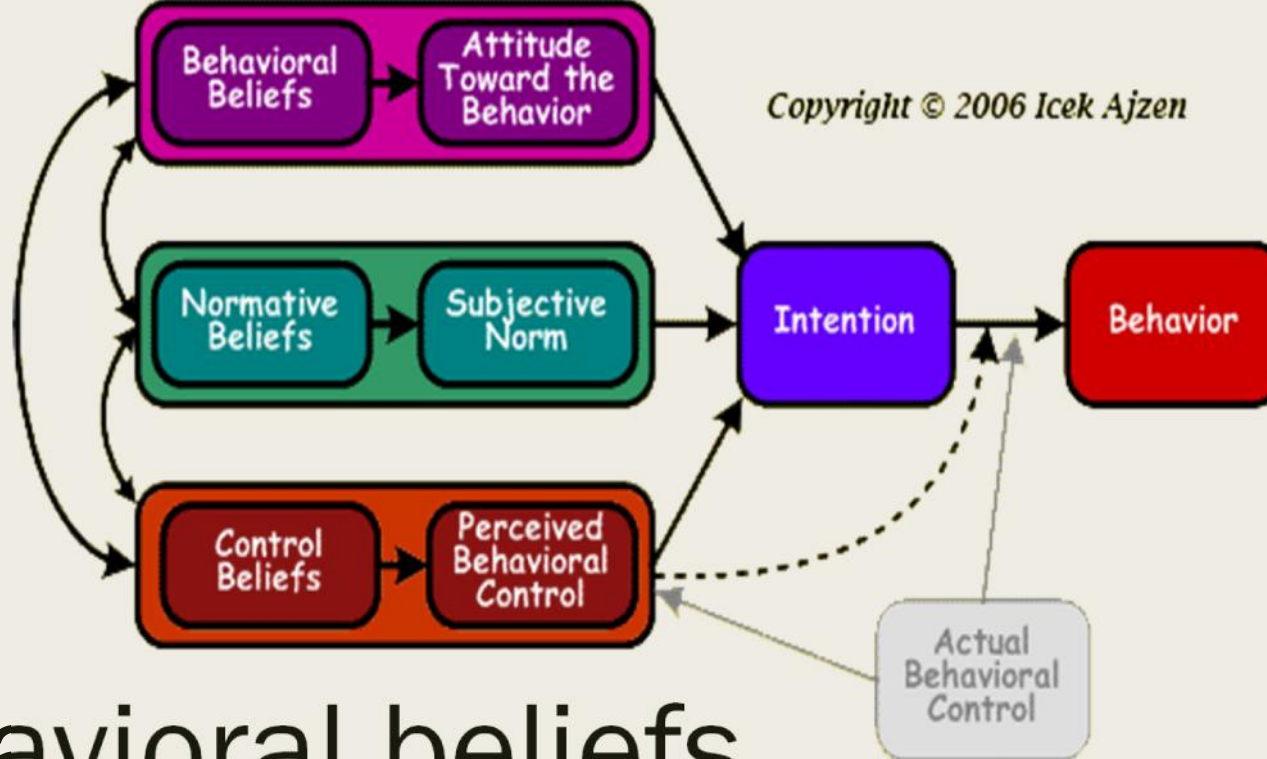
The main antecedent of behaviour is the subject's intention to perform the behaviour.

Intention is determined by a combination of three factors:

- (1) Attitude towards the behaviour (positive or negative predisposition towards a specific behaviour)
- (2) Subjective norms (the social pressure on the subject to perform the behaviour).
- (3) Perceived behavioural control expresses individual's beliefs about the ease or difficulty to perform a particular behaviour.

The act of regular participation in physical activity / sports is strengthened...

- *when* people hold positive attitudes,
- *when* they perceive their personal evaluation as favorable,
- *when* they think that important others would approve,
- *and when* they believe that the opportunities and resources will be available



Behavioral beliefs

- Behaviour is a function of beliefs related to the behaviour.
- Behavioural beliefs, affect the attitude towards the behaviour
- Normative beliefs indicate the social factor
- Control beliefs are related to the presence or absence of requisite resources or opportunities as they are perceived by the person.

Although a person may hold many behavioral beliefs with respect to any behavior, only a relatively small number are really accessible at a given moment.

Planned Behavior theory has shown that attitudes, intention, perceived behavioral control, and subjective norm play an important role in determining *people's* behavior.

TPB predicts successfully several behaviours...

- smoking
- exercise
- taking drugs
- eating fruits
- be in sports
- taking part in violent behaviors
- Exercise and health dieting
-

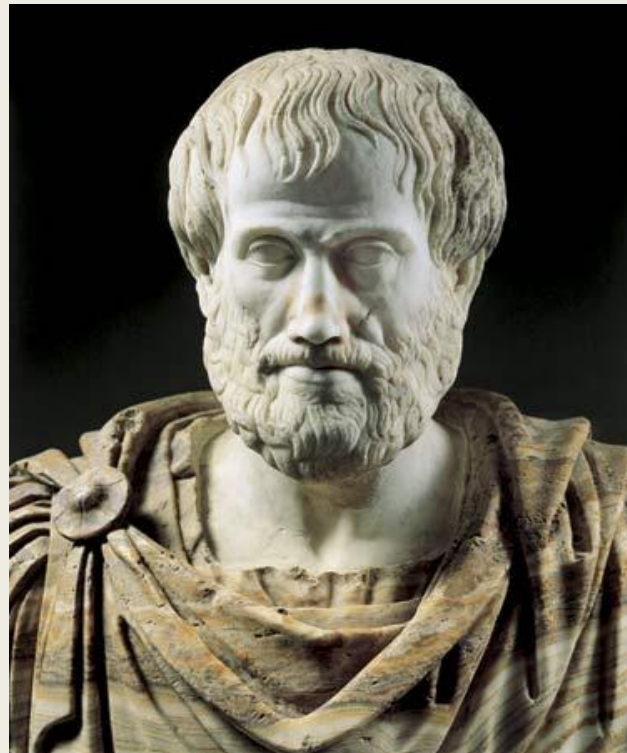
Models' extensions

- The model is open to further extension, as Ajzen says.
- Some additional variables are:
 - *Role identity* (Theodorakis, 1994)
 - *Past behavior* (Godin, Valois & Lepage, 1993; Higgins & Conner, 2003; Kosmidou & Theodorakis, 2007; Rhodes & Courneya, 2003)
 - *Habit* (Hu & Lanese, 1998)

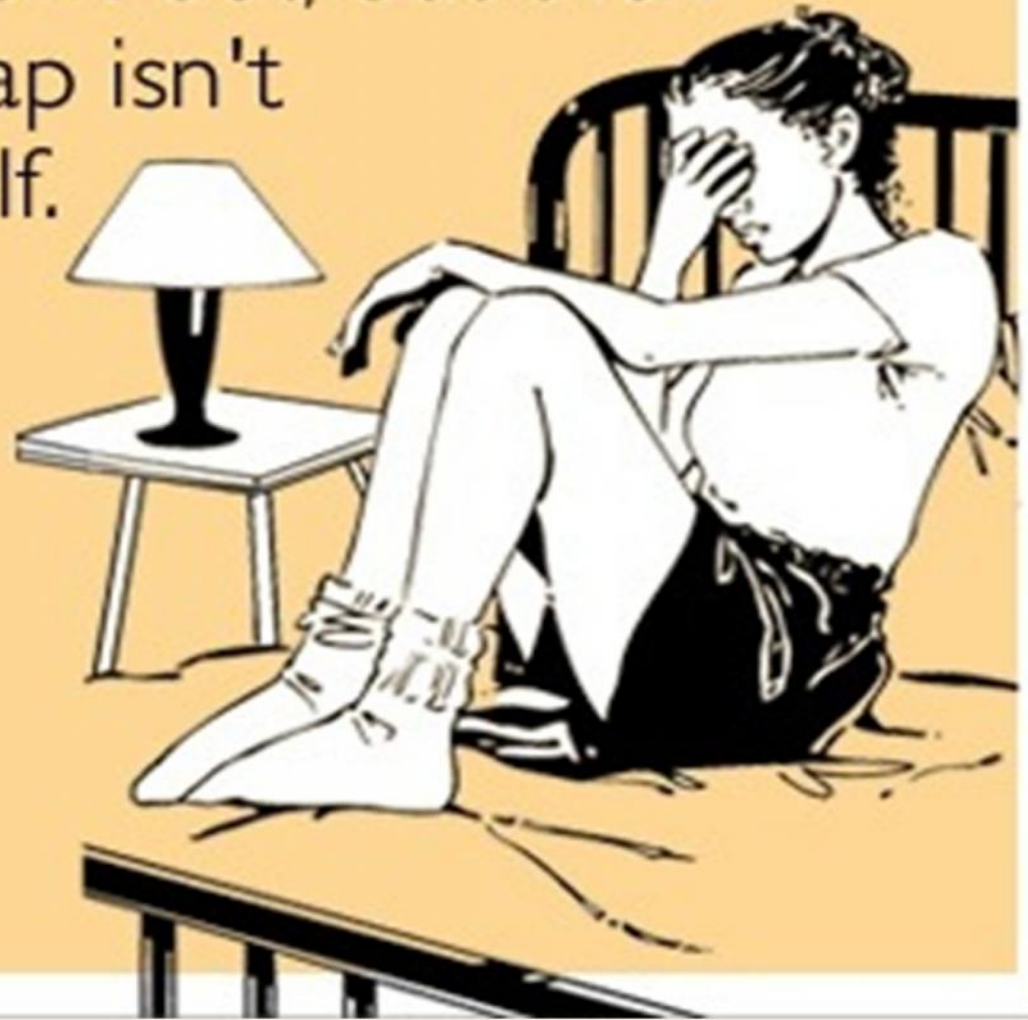
Adding an additional variable must be done with respect to the behavior, the target's group age, ethnicity, etc.

Aristotle

*“It is a long step from saying
to doing”*



I was going to work-out, but then
I realized....this nap isn't
going to take itself.

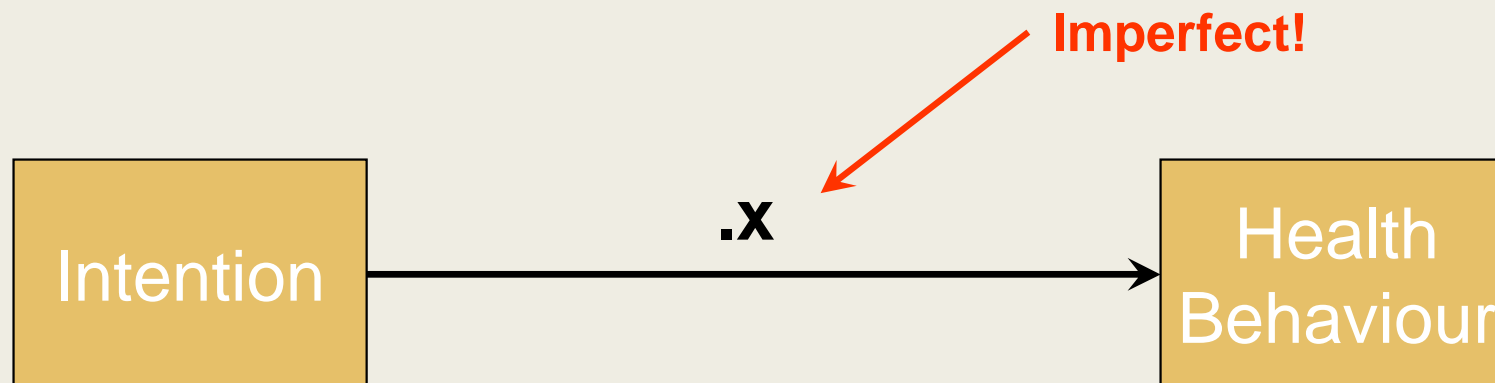


som^{ee}cards
user card

Intention-behaviour relations - motivation is not enough

- Motivation may be a necessary but not sufficient condition for behaviour
- Many people state an intention, motive or desire to participate in a health behaviour.... but fail miserably to do so!

→ Intention-behaviour (or action) 'gap'



Inclined Abstainers
Unsuccessful intenders

Behaviour

		Behaviour	
		Successful	Unsuccessful
Intention	Intender	Successful Intenders (42%)	Unsuccessful Intenders (36%)
	Non-intender	Successful Non-intenders (2%)	Unsuccessful Non-intenders (21%)

Source: Rhodes & de Bruin (2013)

Filling 'the gap'

Planning and implementation intentions

- Dual-phase models of action: *motivational* vs. *volitional*
- Gollwitzer et al. (1999) Implementation intentions: “Strong effects of simple plans”. Also known as “if-then” plans (Gollwitzer, 2015)
- Linking context/cue/prompt with the intended action
 - e.g. “*IF condition X arises THEN I will do behaviour Y*”
(prompts)
- This does not change intentions, but *strengthens* the intention-behaviour relationship

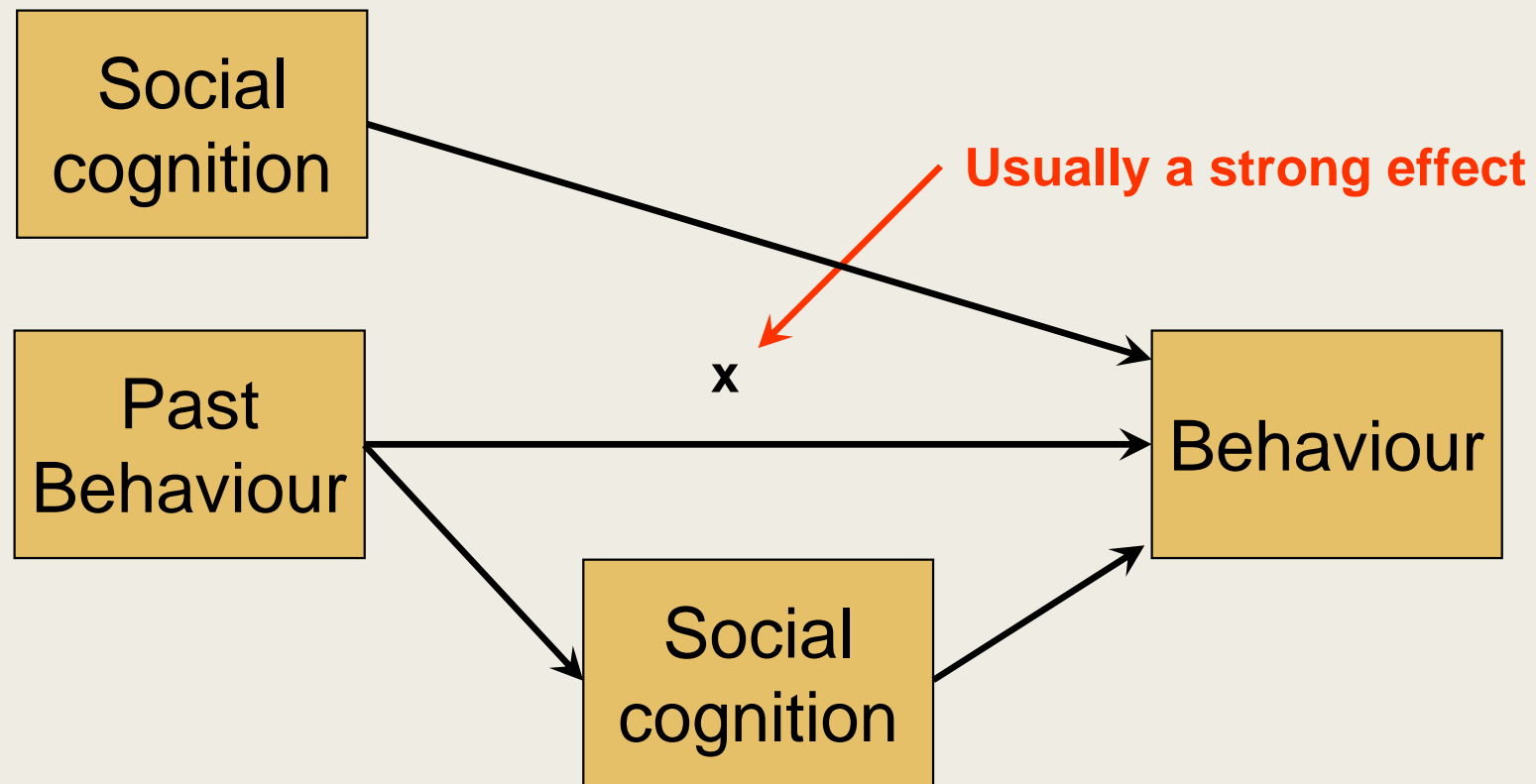
Bridging the Intention-Behaviour Gap

- **Activity: Creating Implementation Intentions (II)**

If _____(situation)
then I will _____(action)
to _____(your goal)

- **Cues to action:** environmental reminder to behave in a particular way i.e. create a reminder of your plan/II

Pervasive Effect of Past Behaviour



c.f. Oullette & Wood (1998)
Verplanken & Orbell (2003)
Gardner (2015)
Hagger, Rebar, Mullan, Lipp &
Chatzisarantis (2015)

Past Behaviour, Habit, and Explaining Behaviour Change

- What does the past-future behaviour effect represent?
 - Unmeasured variables
 - Habit as a 'construct'
 - Implicit effects that occur beyond an individual's awareness

Methods Used to Change Behavior in Theory-Based Interventions

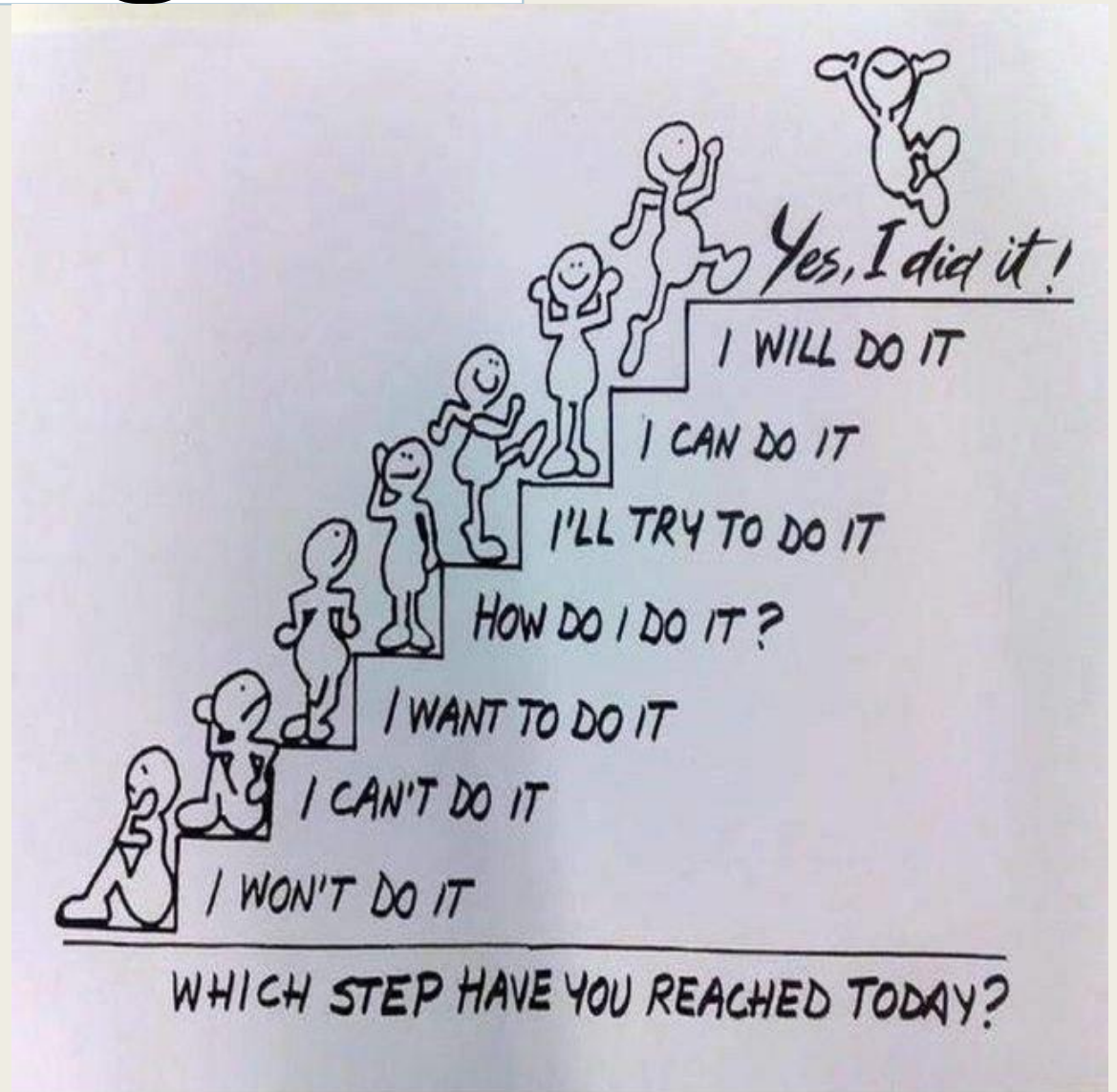
Behavior change method	Frequency
Information	47
Increasing skills	43
Persuasion	38
Planning	33
Social encouragement	20
Goal setting	19
Motivation	18
Self-monitoring	12

Source: Steinmetz et al. (2016). How effective are behavior change interventions based on the Theory of Planned Behavior? *Zeitschrift Fur Psychologie*.

References

- Ajzen, I. (1988). Attitudes, personality, and behavior. Bristol: Open university Press.
- Theodorakis, Y. (1994). Planned behavior, attitude strength, role identity, and the prediction of exercise behavior. *The Sport Psychologist*, 8, 149-165.
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Trans-theoretical Model of Change



Prochaska & DiClemente (1983)

- “...individuals go through a logical series of decision changes on the way to adopting a new behavior”
- Each unhealthy behavior can not be turned to a healthy one, automatically.
- But...
- ...Through stages

Core Constructs:

- **Stages of Change:** temporal dimension
- **Processes of Change:** covert and overt activities people use to progress through the stages
- **Decisional Balance:** weighing pros and cons of changing
- **Self-Efficacy**

Behavior change takes time

Basic Assumptions of the TTM

1. No single theory can account for all the complexities of behavior change
2. Behavior change is an ongoing process that unfolds over time and through a sequence of stages.
3. Stages of change may be stable or open to change.

Basic Assumptions of the TTM

4. Without planned interventions, populations remain stuck in the early stages.
5. Most at risk populations are not prepared for action. They must be prepared by stages.
(Education & Income)
6. Intervention programs must be appropriately matched to each person's stage of change
(Stage Matching)

Basic Assumptions of the TTM

7. Chronic behavioral patterns are under some combination of biological, social, and self-control. Most stage match programs are designed to enhance self-control.



6 Phases of the TTM

- Precontemplation
- Contemplation
- Preparation
- Action
- Maintenance
- Termination



Precontemplation



- No intention to take action in the foreseeable future (usually defined as the next 6 months)
- Lack of awareness
- Often due to ignorance, avoidance, rationalization (defense mechanisms), etc.
 - *Influence of education, social class, etc., on this?*
- Weakness of action orientation when dealing with these people?
 - *Lack of motivation, victim blaming issues?*

Contemplation



“What fits your busy schedule better, exercising one hour a day or being dead 24 hours a day?”

- Intent to change within the next 6 months
- Aware of pros and cons of making the change
 - *Informed Decision Making*
 - *Ambivalence may result in stagnation in this stage*

Ambivalence – can't decide what you want to do



Preparation



- People intend to take action within the next month
- Presence of a plan for action is key here
 - *Behavioral Intent* – one of the main goals
- These people should be the targets of action-oriented programs
- Most help needed from health educator

Action

- Have made specific overt modifications of behavior within the past 6 months
- For purpose of this model only sufficient action accounts
 - *Eg. Smoking reduction does not count, only total abstinence*
- Least help needed from health educator



Maintenance



- Most efforts are being expended to prevent relapse; not much new change is taking place
 - *Self Efficacy (Success increases S.E.)*
 - *Relapse prevention plans crucial at this point*
- How long this stage last depends on the behavior being changed
 - *Eg. Exercise vs. Smoking*
 - *Short term change and expected outcomes vs. long term with less specific expectations*

Termination

- Applies mostly to certain types of behavior
- No temptation to relapse and 100% self efficacy
- This is a goal for addiction type programs



Processes of Change: Experiential

1. Consciousness Raising [Increasing Awareness]
 - *I recall information people had given me on how to start exercising.*
2. Dramatic Relief [Emotional Arousal]
 - *I react emotionally to warnings about sedentary behavior.*
3. Environmental Reevaluation [Social Reappraisal]
 - *I consider the view that smoking can be advantageous to the people around me.*
4. Social Liberation [Environmental Opportunities]
 - *I find society changing in ways that make it easier for the exercisers.*
5. Self Reevaluation [Self Reappraisal]
 - *My low fitness level makes me feel disappointed in myself.*

Processes of Change: Behavioral

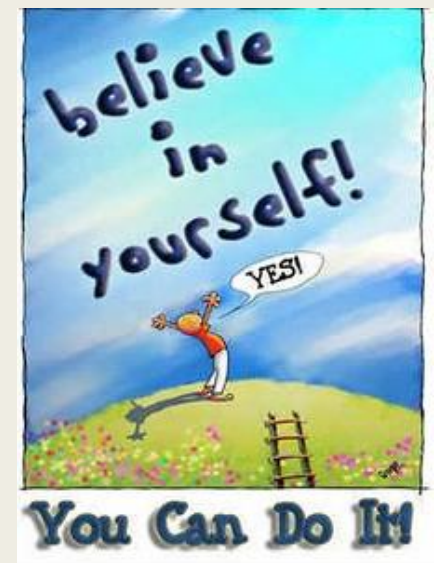
1. Stimulus Control [Re-Engineering]
 - *I use the stairs everywhere I go.*
2. Helping Relationships [Supporting]
 - *I have someone who listens to me when I need to talk about exercise.*
3. Counter Conditioning [Substituting]
 - *I find that watching the news while cycling is a good substitute for lying in the sofa.*
4. Reinforcement Management [Rewarding]
 - *I reward myself when I do my recommended daily exercise.*
5. Self liberation [Committing]
 - *I make commitments to exercise every day in blocks of 10 min.*

Stages of Change in Which Change Processes Are Most Emphasized

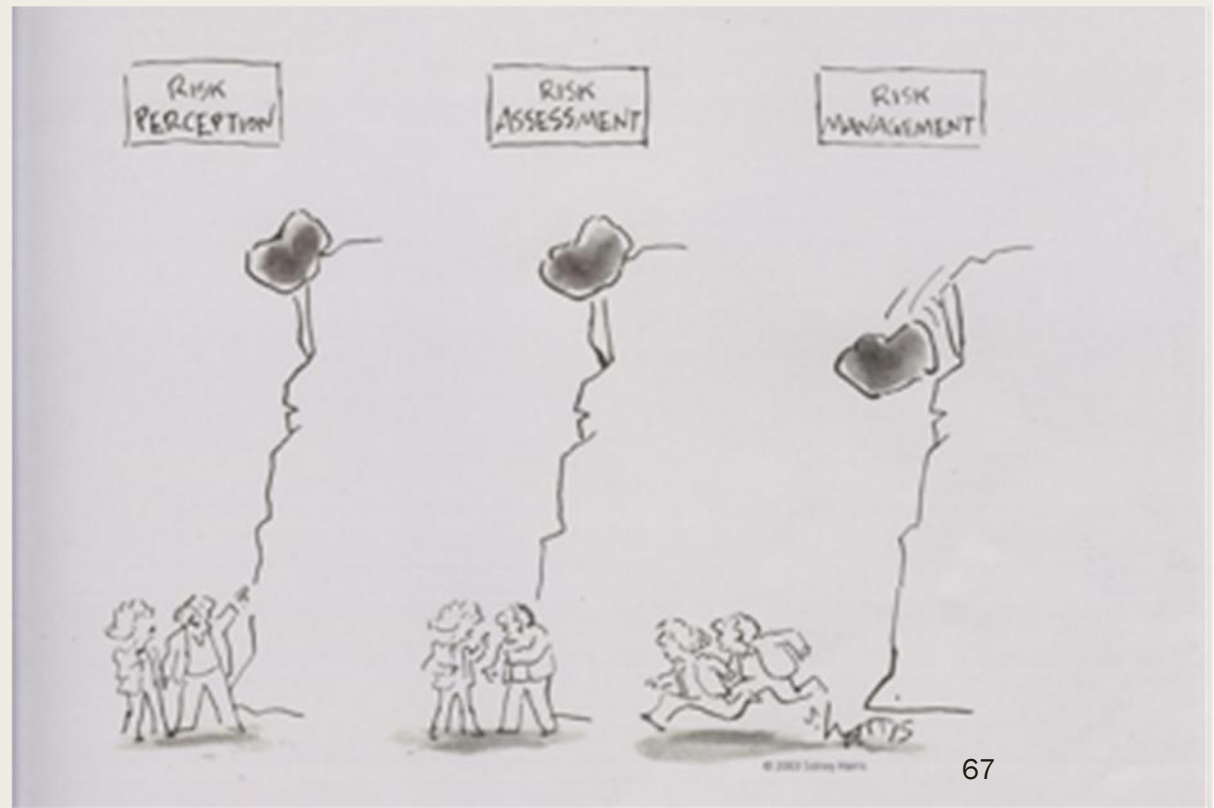
Stages of Change				
Precontemplation	Contemplation	Preparation	Action	Maintenance
Consciousness Raising				
Dramatic relief				
Environmental reevaluation				
	Self-reevaluation			
		Self-liberation		
			Reinforcement Management	
			Helping relationships	
			Counterconditioning	
			Stimulus Control	

Self-Efficacy

- **Confidence**: situation-specific confidence people have that they can cope with high-risk situations without relapsing to their unhealthy or high-risk habits
- **Temptation**: the intensity of urges to engage in a specific habit when in the midst of difficult situations, including:
 - *Negative affect or emotional distress*
 - *Positive social occasions*



Health Belief Model (HBM)



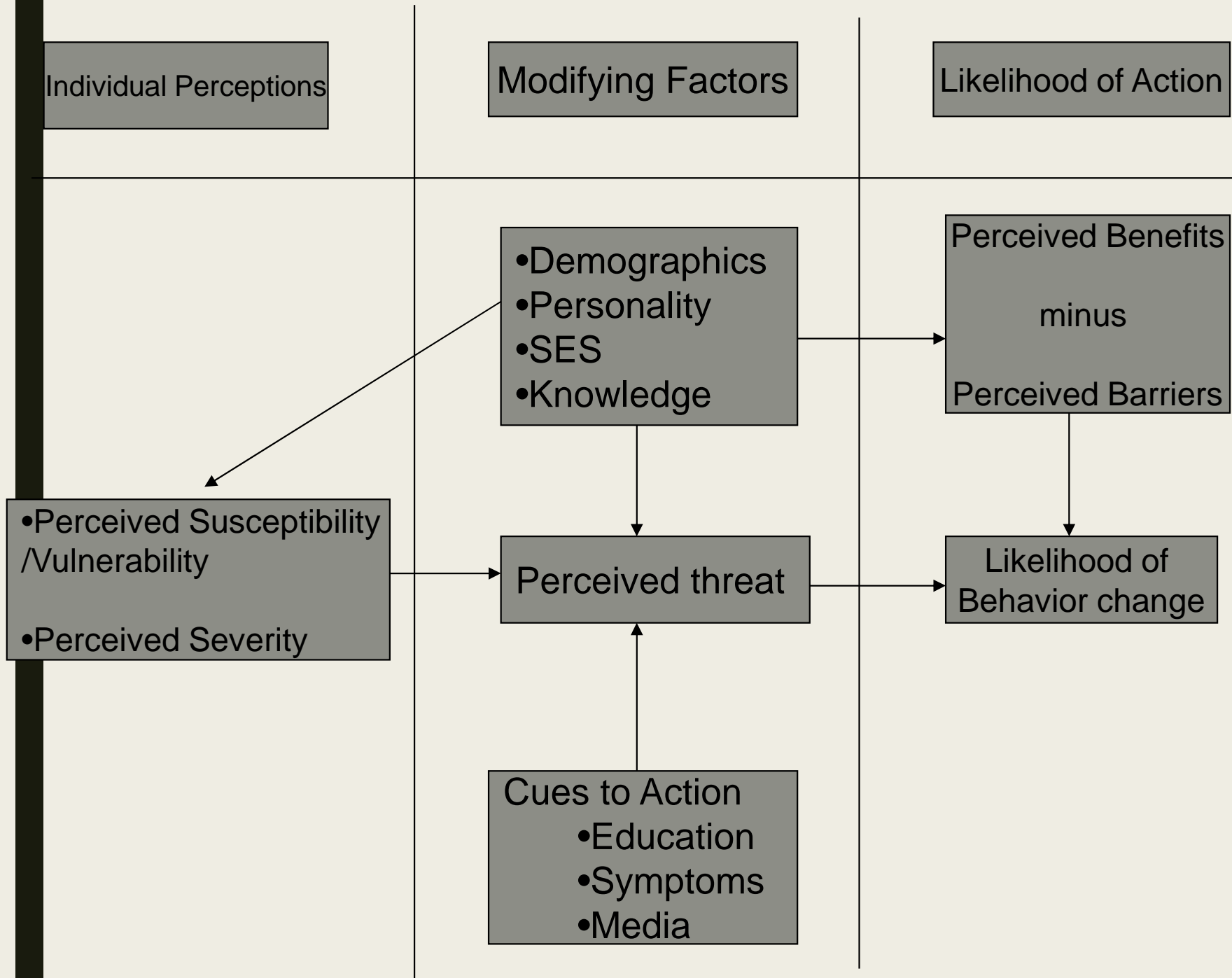
Health Belief Model



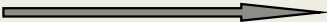



■ Based on these assumptions:

- People desire to avoid illness or get well
- People feel that a negative health condition (i.e., HIV) can be avoided
- People believe that he/she can successfully take a recommended health action
- People believe that a specific health action that is available to him or her will prevent illness, so people have a positive expectation that by taking a recommended action, he/she will avoid a negative health condition (i.e., exercise will be effective at preventing CHD).

Health Belief Model

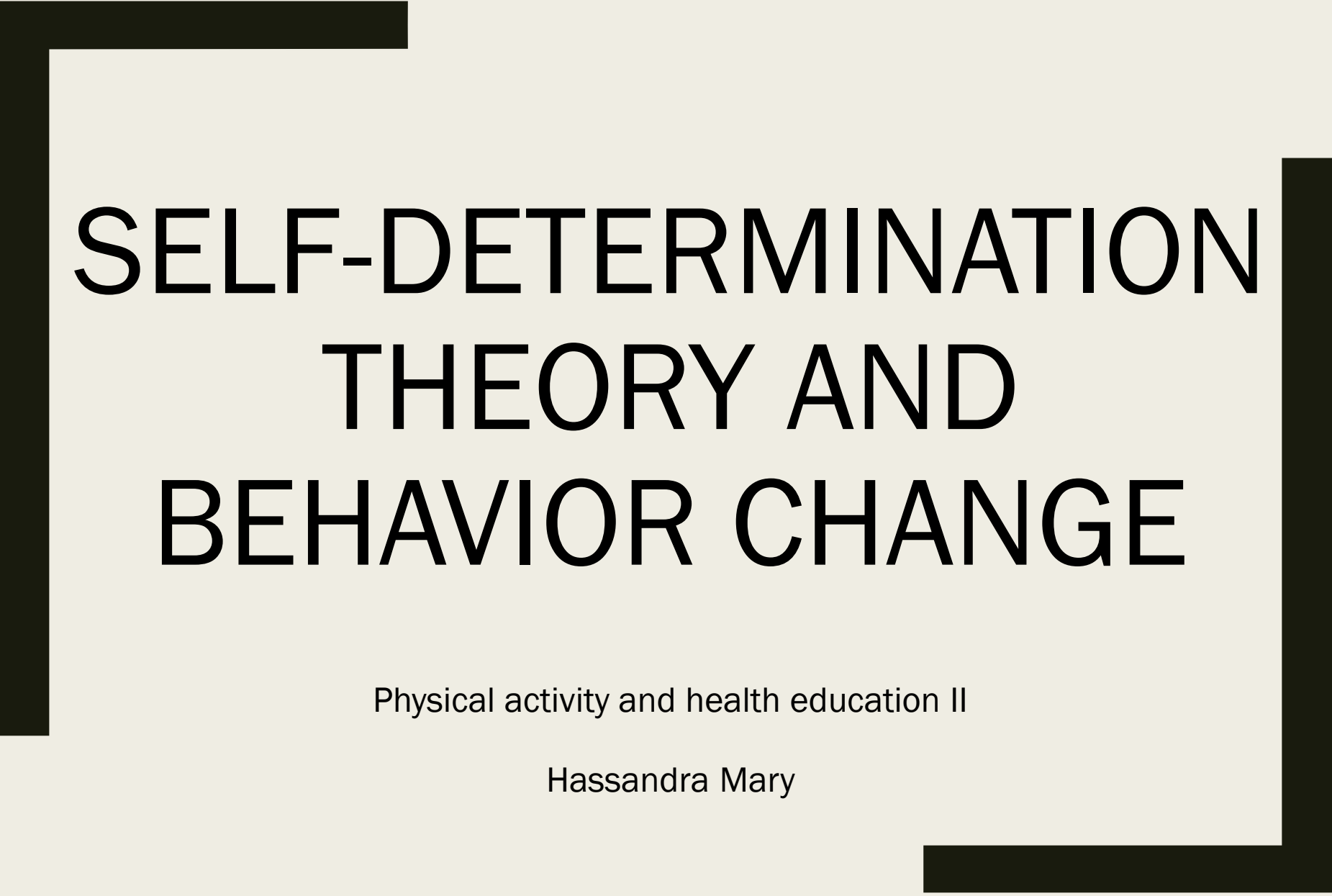


Components of HBM To do

- Perceived Susceptibility: One's belief regarding the chance of getting a condition  "how likely do you think you are to have *this health issue*?"
- Perceived Severity: one's belief of how serious a condition and its sequelae are  "how serious a problem do you believe *this health issue* is?"
- Perceived Benefits: one's belief in the efficacy of the advised action to reduce risk or seriousness of impact  "how well does the recommended behavior reduce the risk(s) associated with *this health issue*?"
- Perceived Barriers: one's belief about the tangible and psychological costs of the advised action  "what are the potential negative aspects of doing this recommended behavior?"

A close-up photograph of a white ceramic coffee cup filled with a light brown beverage, likely coffee with a tea bag. The cup sits on a matching white saucer. A silver spoon is visible on the saucer. The background is a dark, textured wooden surface. A semi-transparent white rectangular box is overlaid on the center of the image, containing the text "THANK YOU! BRAKE...".

**THANK YOU!
BRAKE...**

A thick black L-shaped frame surrounds the text. The top horizontal bar is on the left, the left vertical bar is on the left, and the bottom horizontal bar is on the right.

SELF-DETERMINATION THEORY AND BEHAVIOR CHANGE

Physical activity and health education II

Hassandra Mary



Self-Determination Theory

- Optimal human functioning can occur only if the psychological needs of autonomy, competence, and relatedness are met
- Proposed by E. L. Deci and R. M. Ryan

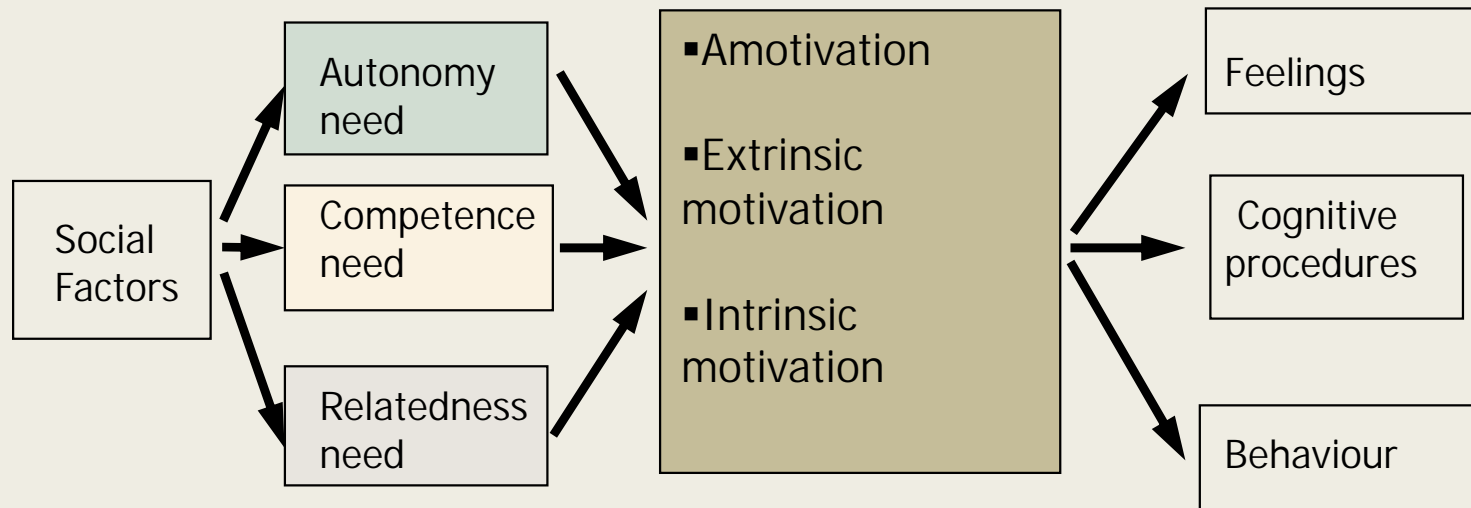


Basic needs

- **Autonomy** —need to determine, control, and organize one's own behavior and goals
- **Competence** —need to effectively learn and master challenging tasks
- **Relatedness** —need to feel attached to others

Self-Determination Theory

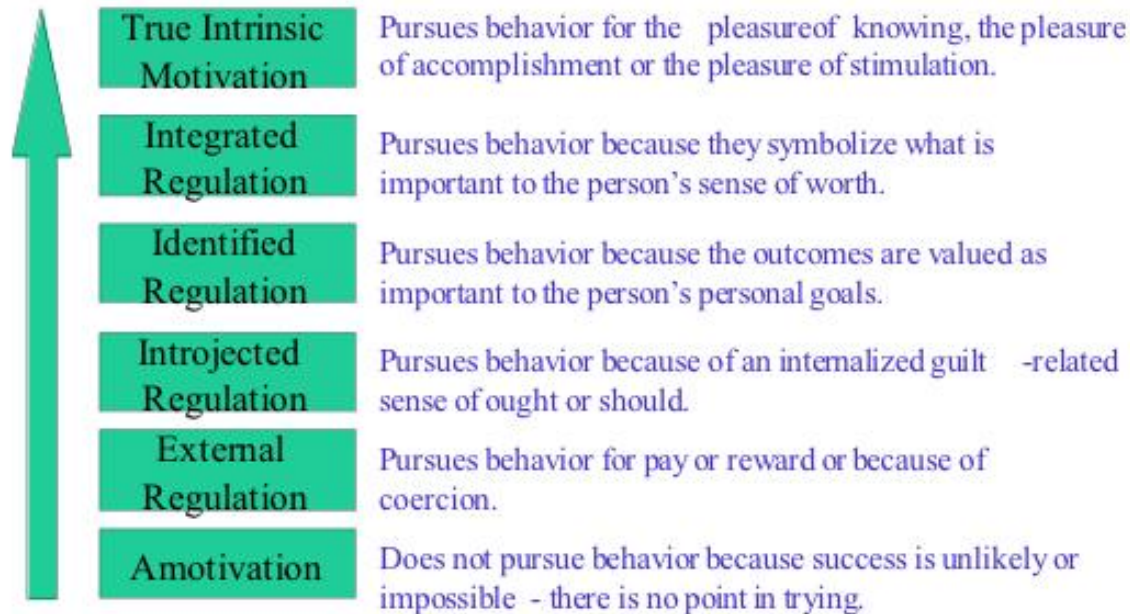
(Deci & Ryan, 1985, 2002)



Continuum

- Not motivated
 - No regulation
- Extrinsically motivated
 - *Controlled motivation*
 - External regulation
 - Introjected regulation
 - *Autonomous motivation*
 - Identified regulation
 - Integrated regulation
- Intrinsically motivated
 - Intrinsic regulation

Self-Determination Theory



EXAMPLE: How to make overweight children exercise

- To increase feelings of autonomy in overweight children, exercise programs could be delivered in an autonomy-supportive manner by
 1. *providing choices,*
 2. *supporting the child's initiatives,*
 3. *avoiding use of external rewards,*
 4. *offering relevant information and rationale for changing behavior,*
 5. *making a decisional balance and*
 6. *using autonomy supportive language, while minimizing pressure and control.*

Source:

<http://informahealthcare.com/doi/abs/10.3109/17477166.2011.583660>

How to make overweight children exercise

- Perceived competence in physical activities could be increased by:
 1. *offering activities tailored to the capabilities of the overweight child,*
 2. *helping the children set realistic goals,*
 3. *learning the children self-management skills,*
 4. *providing the children with appropriate feedback and*
 5. *organizing separate exercise sessions for overweight children.*

How to make overweight children exercise

- Feelings of relatedness in overweight children might increase by
 1. *adopting an empathic approach,*
 2. *showing interest in the child's well-being and problems,*
 3. *showing enjoyment and enthusiasm,*
 4. *knowing the names of the children,*
 5. *talking to the children as equals,*
 6. *offering group sessions and talks,*
 7. *encouraging club participation and having a sports partner and encouraging parental support.*

SDT
Controlled
vs.
autonomous
motivation

Self-determination theory is a theory of human motivation that has demonstrated efficacy in predicting motivated behavior in multiple contexts and populations, and for a variety of behaviors (Deci & Ryan, 1985, 2000; Ryan & Deci, 2017).

Self-determination theory emphasizes the importance of the *kind of motivation that drives* people's behavior, alongside considerations of *how much they are motivated*.

Central to the theory is the distinction between self-determined or autonomous, and non-self-determined or controlled forms of motivation (Deci & Ryan, 2000; Ryan & Deci, 2017).

25 motivation and behaviour change techniques (MBCTs) targeting mainly MOTIVATION



A classification system of the techniques that comprise self-determination theory interventions, with satisfaction of psychological needs as an organizing principle.



Each technique is aligned with the most closely-related psychological need satisfaction construct (autonomy, competence, or relatedness).



Mainly helpful for one-to-one sessions.

*CONCEPTUAL DEFINITIONS
OF THE THREE
PSYCHOLOGICAL NEEDS
FROM SELF-DETERMINATION
THEORY*

Autonomy

The psychological need to experience self-direction and personal endorsement in the initiation and regulation of one's behavior.

The hallmarks of autonomy need satisfaction are volitional action and wholehearted self-endorsement (i.e., personal ownership) of that action.



Competence

- The psychological need to be effective in one's interactions with the environment, and it reflects the desire to extend one's capacities and skills and, in doing so, to seek out optimal challenges, take them on, and exert effort and strategic thinking until personal growth is experienced.

Relatedness

The psychological need to establish close emotional bonds and attachments with other people, and it reflects the desire to be emotionally connected to and interpersonally involved in warm relationships.

The hallmarks of relatedness need satisfaction are feeling socially connected and being actively engaged in both the giving and receiving of care and benevolence to the significant people in one's life.

*CLASSIFICATION OF
MOTIVATION AND
BEHAVIOR CHANGE
TECHNIQUES*



Autonomy- Supportive Techniques

Central concept in SDT and reflects experiencing activities or actions as self-referenced, choiceful, and fully endorsed by the genuine self, and out of a sense of volition and responsibility (ownership).

Although implicit in several other theories, autonomy's explicitness is unique to SDT where it has a very specific meaning, and it is not synonymous with 'independence'.

Autonomy-Support Techniques

MBCT1. Elicit perspectives on condition or behaviour

- Encourage exploration and sharing of perspectives on current behaviour (e.g., causes, perpetuating factors etc.).
- Allows exploration of behaviour in more depth (self-knowledge), which can inform the program and personal choices.

MBCT2. Prompt identification of sources of pressure for behaviour change

- Prompt identification of possible sources of external (or partially internalized) pressures and expectations, and explore how they may relate to client's desired goals and outcomes.
- Explores locus of causality and potential sources of external / introjected regulation and its consequences.

Autonomy-Support Techniques

MBCT 3. Adopt non-controlling, informational language

- Use informational, non-judgmental language that conveys freedom of choice, collaboration, and possibility (avoiding constraining, directive, or guilt-inducing language). For example, use "might" or "could" instead of "should" and "must".
- Avoids being a source of pressure or creating internal pressure, countering external locus of causality for actions.

MBCT 4. Explore life aspirations and values

- Prompt identification and listing of important life aspirations, values, and/or long-term interests and explore how changes in behavior (or maintaining the status quo) could be linked to them.
- Explores integrity and internal coherence between aspirations, values, and goals/behaviours, which can sustain autonomous regulation.

Autonomy-Support Techniques

MBCT 5. Provide a meaningful rationale

- Offer and explore with client a rationale for behavior change that is tailored, explanatory, and personally meaningful or valuable (note: not necessarily health-related).
- Highlights and reinforces motives/reasons that could form the basis of autonomous motivation

MBCT 6. Provide choice

- Provide opportunities to make choices from a collaboratively-devised menu of options for behaviour change (including the decision not to change, delay change, select focus/intensity of change). This can include a default option if the options are found to be meaningless, overwhelming, or indistinguishable.
- Promotes personal input and ownership over behaviour change and responsibility through choice.

Autonomy-Support Techniques

MBCT 7. Facilitate autonomous goals or outcomes

- Prompt setting of personal goals and standards for success, including the timing or pace for certain outcomes (avoiding arbitrary deadlines, compulsory/obligatory conditions, “all or nothing” benchmarks, etc.).
- Promotes involvement with, and responsibility for, goals relevant to preferences, priorities, and context.

MBCT 8. Explore intrinsic rewards

- Prompt identification by the person of aspects of the new target behaviour that could be fun and enjoyable, experienced as positive challenges, opportunities for learning or personal expression, and/or are associated with skill development, all of which provide experiential / immediate positive reinforcement.
- Supports autonomous action via intrinsic motivation.

Autonomy-Support Techniques

MBCT 9. Encourage the person to be supportive towards others with a similar condition

- Encourage the person to take an expert role on his own condition, assisting others in dealing with similar challenges and obstacles.
- Increases personal involvement, responsibility, and confidence through the development of an “expert” identity.

Relatedness- supportive techniques

Experience of being accepted, respected, and cared for as a person, unconditionally (i.e. irrespective of behaviour change outcomes), in a context of a positive and warm interpersonal climate.

Within current health behaviour change theories and models, relatedness is very specific to SDT but, given common influences and orientation/aims, some overlap with MI techniques and other person-centered approaches is to be expected.

Relatedness-supportive techniques

MBCT 10. Acknowledge and respect perspectives

- Provide statements of empathy and acknowledgment of the person's perspective, conflicts/ambivalence, and internal frame of reference (concerning the target behaviour, treatment, or other related matters).
- Indicates respect for the person's attitudes, thoughts and perceptions, which creates an accepting and open personal environment.

MBCT 11. Acknowledge feelings

- Provide statements that express responsiveness to distress and negative affect (fear, confusion, etc.) and also to the expression of positive feelings.
- Indicates attention to others' feelings and fosters a warm and positive social environment.

Relatedness-supportive techniques

MBCT 12. Encourage asking of questions

- Directly prompt the person to pose questions regarding their behaviour change.
- Creates open, collaborative relation; promotes trust.

MBCT 13. Show unconditional regard

- Express positive support regardless of success or failure (avoiding negative, judgmental, or confrontational language) with a warm approach and language.
- Reinforces unconditional respect, care and support and promotes warm social environment.

Relatedness-supportive techniques

MBCT 14. Take interest in the person

- Provide statements of interest and curiosity about the person's thoughts and perceptions, personal history and background, social context, life events, etc.
- Displays involvement, indicates to the person that their experiences and input are valued.

MBCT 15. Use attentive, reflective listening

- Be attentive to what the person is saying (e.g. stay silent to allow the person to complete sentences), and use reflections and summaries when appropriate (directed at affect or content).
- Creates open, collaborative relation; promotes trust

Relatedness-supportive techniques

MBCT 16. Ask permission to provide information or give advice

- Prompt permission to provide new information, guidance or advice.
- Displays respect for the person.

MBCT 17. Show availability

- Offer the person the option to contact in the event of difficulties or questions (offering an appropriate venue and means for doing so) and provide statements of interest in progress.
- Shows care and personal involvement.

Competence - supportive techniques

Experience of mastery of behaviors and related goals and challenges, in the context of a (perceived) safe and structured environment. Competence is not specific to SDT and overlap is to be expected with other theories and constructs.

The option of including competence, despite its relative non-specificity to SDT, is related to the essentiality and potential inter-dependence of all three needs in SDT.

Competence -supportive techniques

MBCT 18. Address barriers and obstacles

- Prompt identification of likely barriers to behaviour change, based on previous attempts, and explore how to overcome them (e.g. what may have worked in the past).
- Increases confidence and reinforces existing skills.

MBCT 19. Clarify expectations

- Prompt statements of expectations from behaviour change (e.g. identify a clear goal or learning objective), both its experiential elements (process) as well as outcomes.
- Provides structure and minimizes future failure (and perceived incompetence).

Competence -supportive techniques

MBCT 20. Assist in setting optimal challenge

- Assist in identification of realistic goals that are meaningful and challenging but achievable.
- Provides structure and minimizes future failure (and perceived incompetence)

MBCT 21. Offer concrete, clear, and relevant feedback

- Provide relevant, tailored, non-evaluative informational feedback on goal/behavioural progress. This can include specific, process-focused praise.
- Provides structuring information to guide future behaviour.

Competence -supportive techniques

MBCT 22. Help develop a clear and concrete plan of action

- Provide summary of action plan to work toward a behavioral goal.
- Provides structure, increases confidence, and minimizes future failure (and perceived incompetence).

MBCT 23. Promote self-monitoring

- Prompt monitoring of progress, skill level, or performance. Offer options for monitoring tools/means and for metrics for success, including steps in the direction of behaviour change.
- Provides structuring information that reinforces success and self-awareness.

Competence -supportive techniques

MBCT 24. Explore sources of support from others

- Prompt identification of potential sources of support for behaviour change (if available and if this is relevant), and/or acknowledge challenges in recruiting adequate support.
- Provides the means for feeling supported and more effective.

MBCT 25. Explore means to manage or cope with pressure

- Provide information on how to manage and limit the effects of pressure (whether perceived as external or internal) on goal setting and pursuit and/or psychological well-being.
- Increase confidence to deal with a major potential barrier as a source of controlling motivation.

THANK YOU

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