



ECPS6006

Health Psychology

WEEK TWO: Social cognition models &
behaviour change

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Session outline



By the end of this session you should be able to:

- ▶ Explain the role of social cognition models in understanding and predicting health behaviour
- ▶ Critically consider the effectiveness of psychological theories of behaviour change
- ▶ Critically discuss the role and function of the Behaviour Change Wheel

Behaviour change & Health



- ▶ Many of the risk factors for disease and illness are behavioural
- ▶ Ability to change behaviour key to tackling many of the health issues in society today
- ▶ Behaviours that affect our health can be categorised into:
 - ▶ Health protective behaviours (exercise, good diet)
 - ▶ Health risk behaviours (alcohol abuse, smoking, unsafe sex)
- ▶ Need to understand **why** people **choose** to behave in ways that will harm their health

Defining health behaviour

“Health behaviour is that which is associated with an individual’s health status, regardless of current health or motivations” (Morrison & Bennett, 2006, p60)

Behavioural Pathogens

∨

Behavioural Immunogens
(Matarazzo, 1984)

Health risk behaviours

∨

Health protective/enhancing
behaviours

Health risk behaviours

- ▶ Unprotected sexual health
- ▶ Unhealthy diets and obesity
- ▶ Alcohol use
- ▶ Smoking
- ▶ Sedentary lifestyles

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Behavioural Pathogens
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Health risk behaviours

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- ▶ Smoking
- ▶ Sedentary lifestyles

Health protective behaviours

- ▶ Safe sex
- ▶ Healthy diet
- ▶ Exercise
- ▶ Health screening
- ▶ Immunisation behaviour

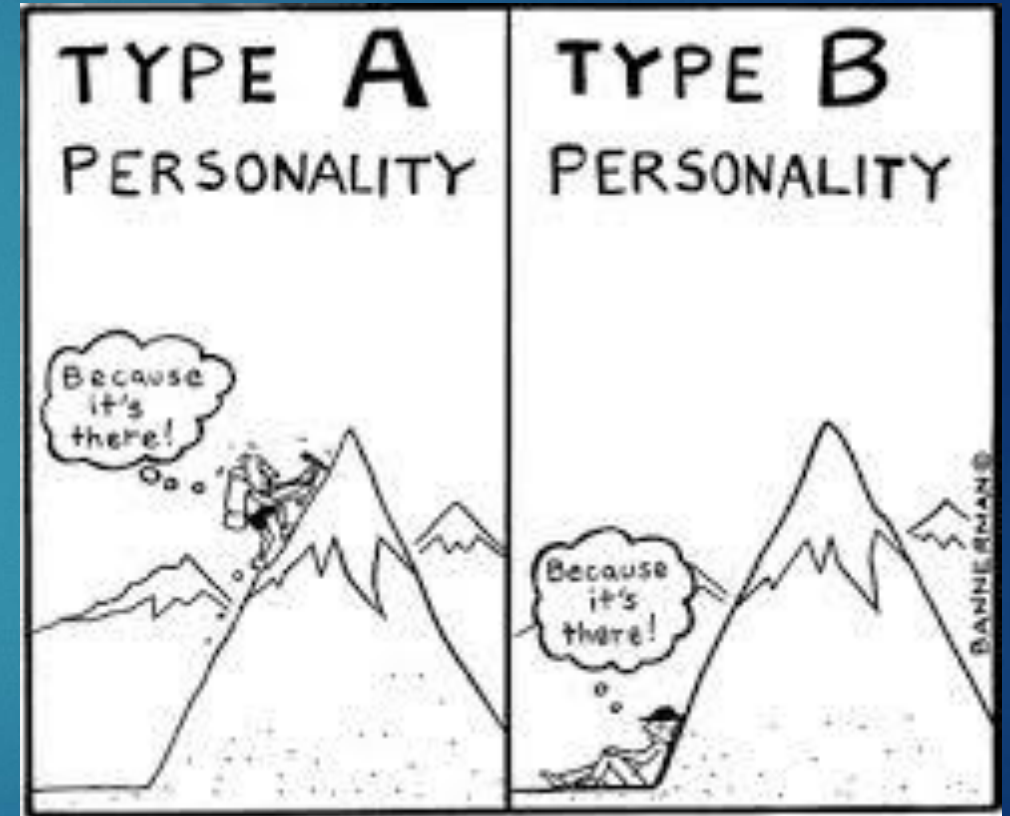
Personality & Health

- ▶ Many different personality dimensions have been proposed e.g.
- ▶ Eysenck's three-factor model: Extraversion, Neuroticism, Psychoticism
- ▶ Big Five (Costa & McCrae): OCEAN
- ▶ Locus of control (Rotter):
 - ▶ Health locus of control (Wallston et al., 1978) : internal/external/powerful others

Personality and Health

Type A associated with increased risk of CHD (Friedman and Rosenman, 1950)

- Type A characterised by achievement orientation, competitiveness, hostile....
- Type B relaxed, even tempered, amiable, philosophical.....
- Western Collaborative Group Study of over 3,000 men in US reported Type As 2X likely to develop CHD



<https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.simplypsychology.org%2Fpersonality-a.html&psig=AOvVaw1FlwZfMgvXRgwA4cQr2TY4&ust=1611596532322000&source=images&cd=vfe&ved=2ahUKEwj4fSHj7XuAhUX4oUKHUzbBTEQr4kDeGUIARCyAQ>

Personality and Health

- ▶ The early association between CHD and Type A may have reflected the nature of the measures used
 - ▶ Self report measure of chest pain (angina) rather than clinical measures such as mortality (Ragland and Brand, 1988; Myrtek, 2001).
- ▶ Subsequent studies exploring the link between hostility (dimension of Type A) also showed inconsistent results.
- ▶ Suls & Bunde (2005) suggested that at best a weak relationship, possibly explained by the correlation of hostility with anxiety and depression.

Personality and Health

Type C Personality and Cancer (Temoshok & Fox, 1984)

- ▶ Co-operative and appeasing
- ▶ Compliant and passive
- ▶ Stoic
- ▶ Unassertive and self sacrificing
- ▶ Inhibition of negative emotions

Research evidence suggests associated with higher incidence of cancer

Personality and Health

Type D Personality and CHD (Denollet et al., 1990s)

- ▶ “distressed” personality
- ▶ High levels of negative affectivity
- ▶ High levels of social inhibition

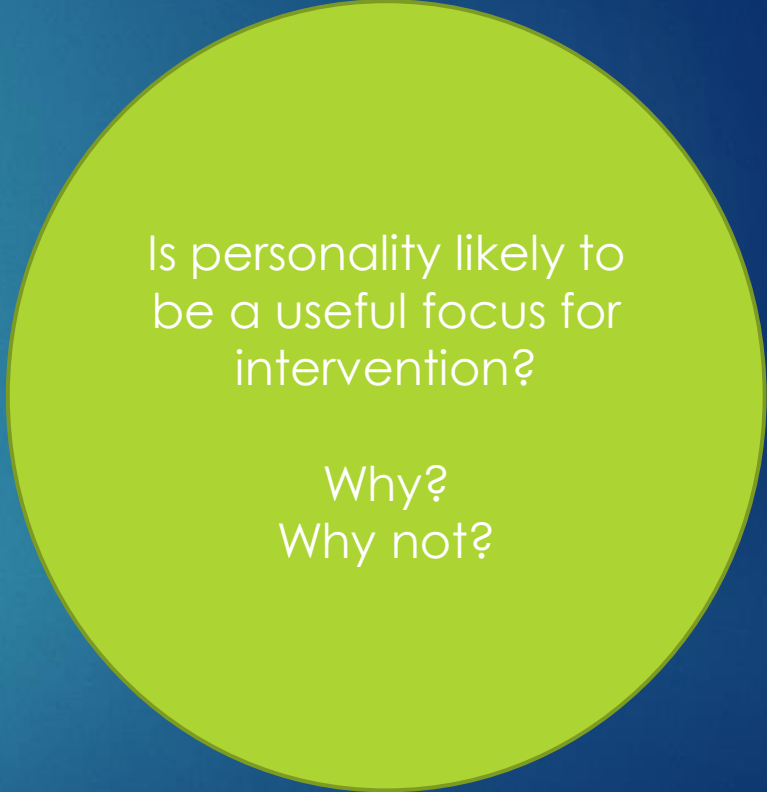
Research evidence suggests associated with increased mortality following a cardiac event

- may be due to physiological correlates: increased cardiovascular reactivity

Personality and Health

Conscientiousness and longevity

- ▶ Kern & Friedman (2008)- meta analysis of 20 studies revealed modest but significant correlation of 0.11 between the two variables
- ▶ Potentially mediated by health behaviour i.e., conscientious people are more likely to engage in beneficial health related behaviours (Bogg & Roberts, 2004).
 - ▶ Also linked to SES



Is personality likely to
be a useful focus for
intervention?

Why?
Why not?

Personality and Health

Problems with current state of research into personality and health (Marks et al. 2015).

- need to identify the key personality structures most associated with health
- need to identify personality variables that are associated with physiological health outcomes and not just self-reported illness
- need to explore whether interventions designed to change behaviour are more effective if they control for personality variables

Positive Psychology & health

- ▶ optimism
- ▶ life satisfaction
- ▶ hardiness (buffering effect?)
- ▶ self esteem
- ▶ sense of coherence (perceiving world as meaningful and manageable; linked with 30% reduction in mortality in large scale study; Surtes et al. 2003)



Critical question:
harm or good?

Positive Psychology & health

- ▶ Are positive characteristics inversely related to anxiety and depression?
 - ▶ Konttinen et al. (2008) – strong negative correlations of above .5 – 0.6 between sense of coherence and depression and anxiety
- ▶ Boehm & Kubansky (2012)
 - ▶ Strong evidence for association between psychological wellbeing and cardiovascular health
 - ▶ BUT note strong correlations between health behaviours and psychological wellbeing
 - ▶ Changes to psychological wellbeing independent of risk factors do not have a direct effect on cardiovascular health

Positive Psychology & health

More harm than good?:

- Directs attention away from reducing health risk behaviours
- ▶ Associated with the view that individuals are largely responsible for their own health
- ▶ “Fighting Spirit” - no empirical evidence that associated with better prognosis or outcomes (Coyne & Tennen, 2010).
 - ▶ Stigma, self-blame and sense of failure

Other psychosocial correlates

- ▶ Social norms
- ▶ Attitudes
- ▶ Risk perception
- ▶ Motivation
- ▶ Self efficacy

Underpin many health
psychology theories and
models

More conducive to
intervention?
Why?
Why not?

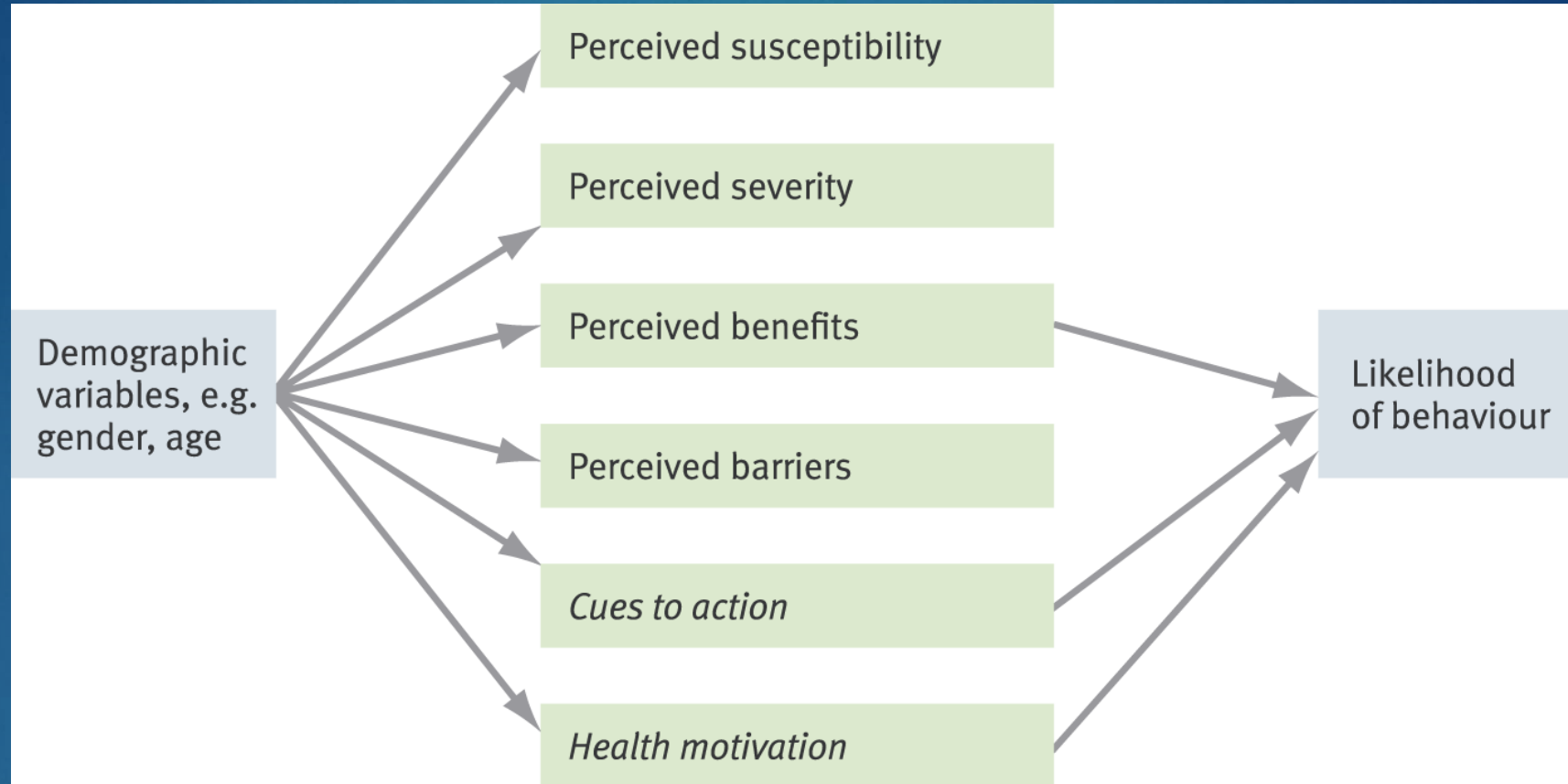


Coffee Break

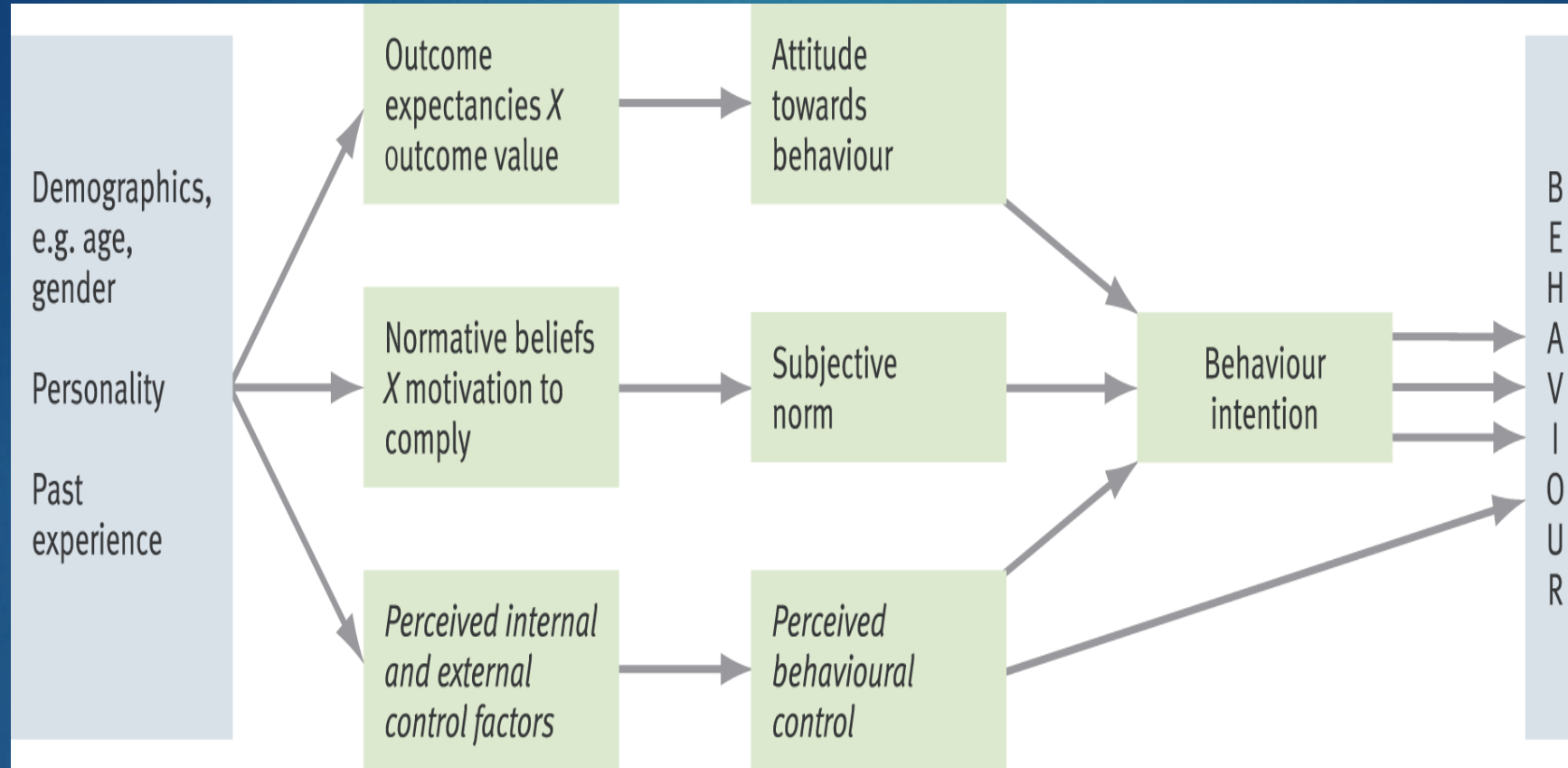
Theories of Health Behaviour

- ▶ Social Cognition Models
 - ▶ Health Belief Model (Rosenstock, 1966)
 - ▶ Theory of Planned Behaviour (Ajzen, 1985, 1991)
- ▶ Stage theories
 - ▶ Transtheoretical Model (Prochaska & DiClemente, 1984)
- ▶ Models of motivation
 - ▶ Protection motivation theory (Rogers, 1975)
 - ▶ PRIME theory (West, 2006)

The Health Belief Model (Rosenstock, 1974)



The Theory of Planned Behaviour (Ajzen, 1985, 1991)



Evaluation of TRA/TPB

- ▶ Attitudes and social norms strongly predictive of intention to engage in behaviour
 - ▶ (e.g., Conner & Sparks, 1996, $r=.67$)
- ▶ Relationship between intention and actually engaging in behaviour can be lower
 - ▶ (e.g., Conner & Sparks, 1996 $r= .50$ to $.60$)
 - ▶ Variation across studies/measures used.
- ▶ Intentions do not always predict behaviour
 - ▶ Competing intentions
 - ▶ Implementation Intentions (Gollwitzer, 1993)

Critical Evaluation of The TPB

Original model does not include direct recognition of:

- ❑ Moral norms
- ❑ Anticipatory regret
- ❑ Self-identity
- ❑ Implementation intentions
- ❑ self-efficacy beliefs vs. perceived behavioural control beliefs

Critical Evaluation of Social Cognition Models

- ▶ Social cognition models assume we are always rational decision-makers
- ▶ Do we always deliberately and consciously weigh up the “pros” and “cons” of a given behaviour?
 - ▶ What about behavioural choices that have become routine or automatic?
 - ▶ How easy it is change attitudes/beliefs underpinning such behaviours?
- ▶ Are our attitudes and beliefs about e.g., social norms fixed and stable?
 - ▶ May explain variability in predictive value of models

Critical Evaluation of The TPB

- ▶ Time to retire the Theory of Planned Behaviour?

Sniehotta, Pesseau & Araujo-Soares (2014): critique

- ▶ Limited predictive validity

- ▶ Intention behaviour gap and “inclined abstainers”

- ▶ Behaviour change interventions based on TPB not strongly supported

- ▶ Experimental tests of TPB rare and not supportive of theory's assumptions

- ▶ Excludes unconscious influences on behaviour

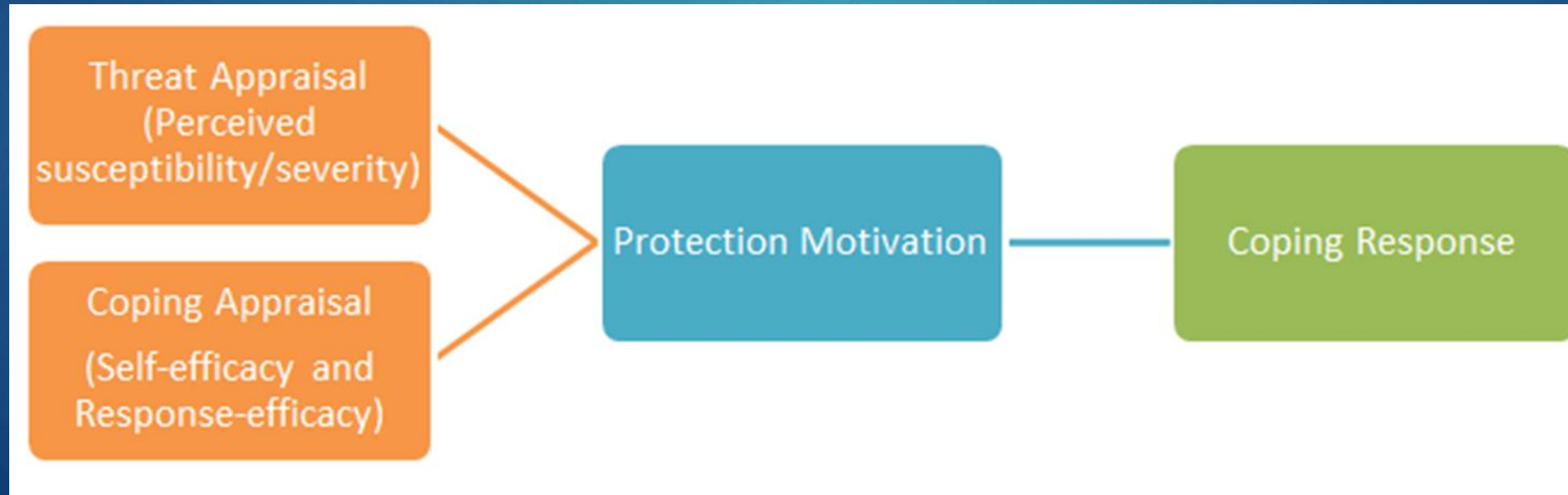
Critical Evaluation of The TPB

- ▶ Time to retire the Theory of Planned Behaviour?
Azjen response (2014) – TPB alive and well!
- ▶ Arguments are misguided and based on a poor understanding of TPB
- ▶ TPB predicts links between intentions and attitudes, subjective norm and PBC well
 - ▶ Link between intentions and actual behaviour are complex due to events occurring between intention and actual behaviour being carried out
 - ▶ Additional variables e.g. anticipated affect (guilt, regret, pleasure) can improve prediction of intentions-behaviour
- ▶ TPB does not assume people always behave in a rational manner – beliefs may be irrational or biased.
- ▶ TPB not a theory of “behaviour change” but a theory explaining intentions and behaviour

Protection Motivation Theory Rogers (1975; 1983)

A model of the cognitive processes that occur in response to messages designed to instil fear

Behaviour is the result of decision-making based on an evaluation of expected consequences of a behaviour and the value of those consequences



Protection Motivation Theory



Milne, Sheeran & Orbell (2000) Meta-analysis

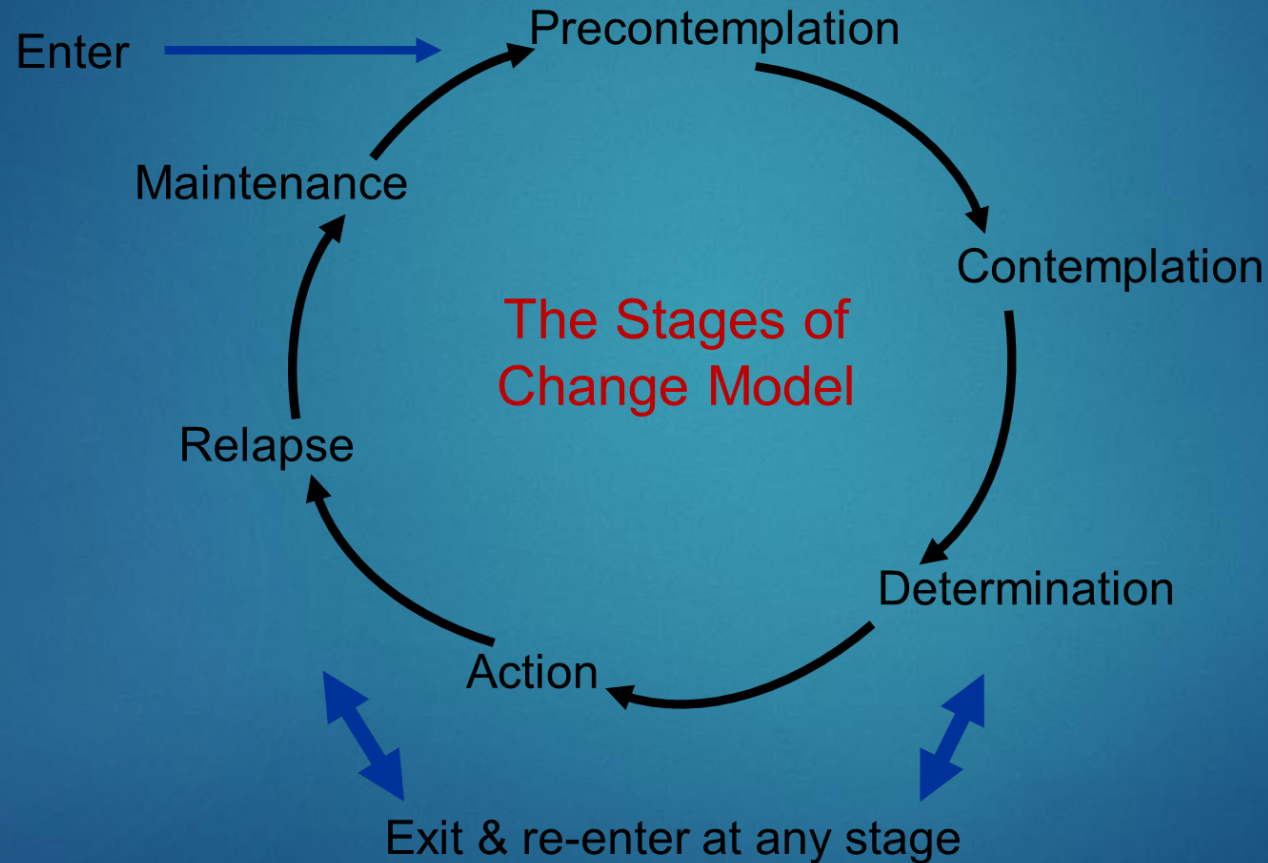
- ▶ Useful in aiding understanding of the arguments that should be contained in persuasive communications designed to produce belief change and subsequent changes in intentions and, perhaps, behaviour.
- ▶ Experimental PMT studies have demonstrated that information can be manipulated so as to successfully change beliefs.
- ▶ Role within public-health intervention programs: Smoking cessation, obesity.
- ▶ COVID-19 – could this model be useful in explaining face-covering behaviour?

Stages theories of behaviour change

- ▶ Stage theories assume that different factors are important at different stages
- ▶ Certain factors influence the individual's ability to move from one stage to the next, and these will vary from one stage to another
- ▶ Not a continuum but qualitatively different stages
- ▶ Stage theories include:
 - ▶ Transtheoretical Model (Prochaska & DiClemente, 1983)
 - ▶ Precaution adoption process model (Weinstein & Sandman, 1992)
 - ▶ Health Action Process Approach (Schwarzer, 1992)

Transtheoretical Model (Prochaska and DiClemente, 1984)

<https://www.youtube.com/watch?v=ayjXMix-nMw>



Critique of Transtheoretical Model

West (2005)

- ▶ the model is flawed even in its most basic tenet, the concept of the 'stage'.
- ▶ approach to classifying individuals assumes that individuals typically make coherent and stable plans.
- ▶ stage definitions represent a mixture of different types of construct that do not fit together coherently
- ▶ Focuses on conscious decision-making and planning processes and draws attention away from what are known to be important underpinnings of human motivation – does not take into account motives or “want”

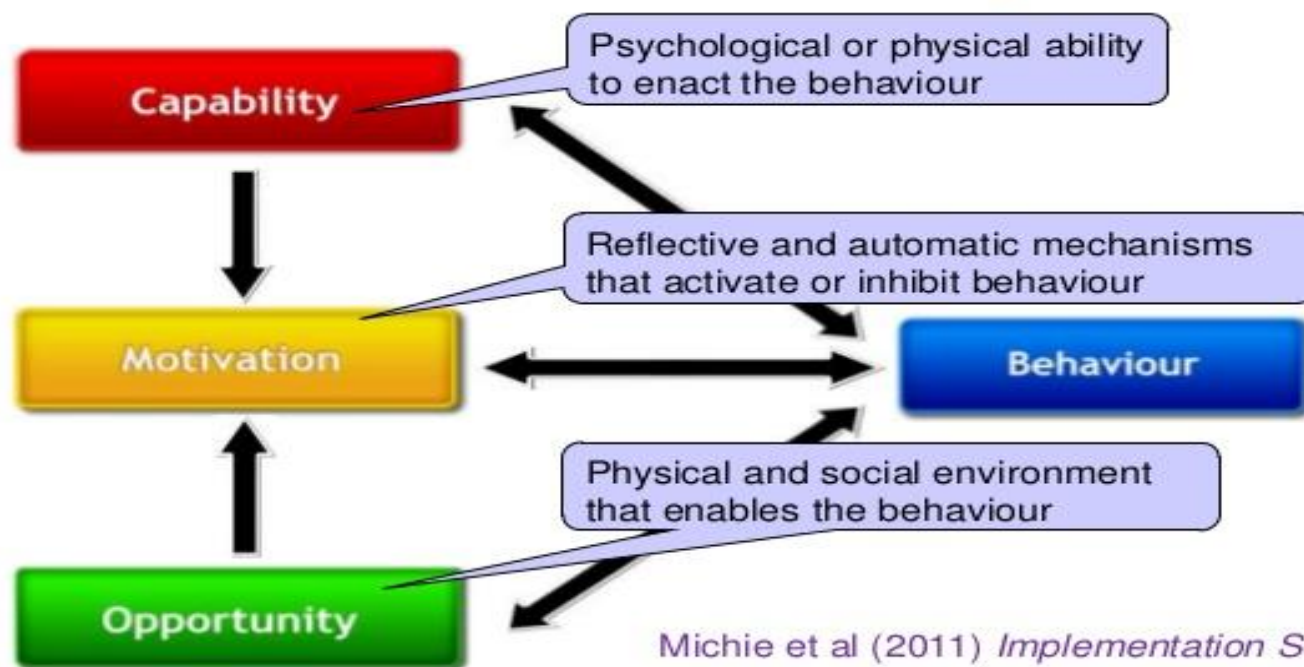
PRIME theory (West & Brown)

- ▶ A general theory of how motivation drives our behaviour
- ▶ Human motivational system has five interacting systems
 - ▶ Plans
 - ▶ Responses
 - ▶ Impulses and Inhibitions
 - ▶ Motives
 - ▶ Evaluations

“At every moment we act in pursuit of what we want most or need at that moment”

The COM-B Model

The COM-B system: Behaviour occurs as an interaction between three necessary conditions



Michie et al (2011) *Implementation Science*

Slide courtesy of Dr. Susan Michie

The Behaviour Change Wheel

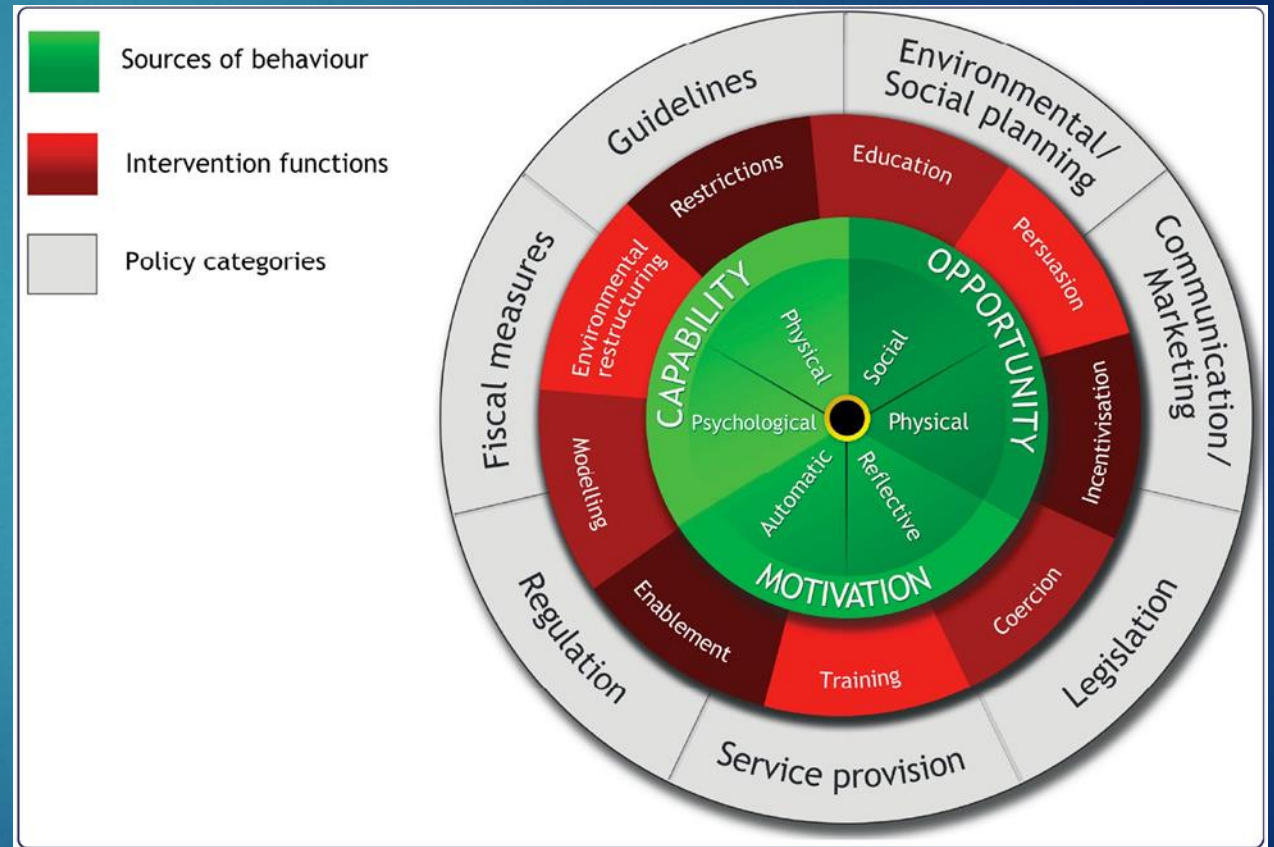
- ▶ Developed from a systematic lit review that identified 19 frameworks of behaviour change
- ▶ The review identified that none of these existing frameworks were comprehensive, tending to focus on specific factors such as attitudes, or societal factors.
- ▶ BCW attempts to integrate and synthesise the common features of existing frameworks into a broad model of behaviour.

Michie S, Atkins L, West R. (2014) The Behaviour Change Wheel: A Guide to Designing Interventions. London: Silverback Publishing.
www.behaviourchangewheel.com

<http://www.behaviourchangewheel.com/>

The Behaviour Change Wheel

- ▶ The COM-B model lies at the core of the BCW
- ▶ Identifies different intervention strategies that can be applied to any of those components of the COM-B
- ▶ Provides general intervention strategies/categories that can be linked to



Behaviour Change Wheel

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

Michie, S., Van Stralen, M. M., & West, R. (2011). The behaviour change wheel: a new method for characterising and designing behaviour change interventions. *Implementation science*, 6(1), 42.

COM-B Exercise

Session Summary

- ▶ Engaging in health protective behaviours and reducing health risk behaviours are associated with better health
- ▶ Psychological variables associated with individuals health behaviour choices but more difficult to show direct link with physiological health outcomes.
- ▶ Behaviour is not the only factor associated with disease
 - ▶ Environmental factors
 - ▶ biological and genetic factors
- ▶ Psychological models can provide a useful framework for understanding how to intervene to improve health outcomes

Conclusions

- ▶ Difficult to determine whether psychological variables are associated with health directly or indirectly, or design issues
- ▶ Important to understand which psychosocial variables are correlated with health-relevant physiological variables and not just health behaviours
- ▶ Need to design studies that enable the effectiveness of interventions based on modifying psychological variables on not only health behaviours but on prognosis and health outcomes for those living with disease

Conclusions

- ▶ Changing behaviour is a key aim for policy makers, healthcare providers, and academics, but successful behaviour change is a difficult challenge
- ▶ Wide range of models offering explanations of behaviour change
- ▶ The Behaviour Change Wheel provides a framework to help those designing interventions to consider all potential options linked to the COM-B model and identify the most promising strategy
- ▶ Importance of ensuring behaviour change interventions are theory-based and implemented within a strong development and evaluation framework

Readings for this session

- ▶ Boehm, J. K., & Kubzansky, L. D. (2012). The heart's content: the association between positive psychological well-being and cardiovascular health. *Psychological bulletin*, 138(4), 655.
- ▶ Coyne, J. C., Stefanek, M., & Palmer, S. C. (2007). Psychotherapy and survival in cancer: The conflict between hope and evidence. *Psychological bulletin*, 133(3), 367.
- ▶ Myrtek, M. (2001). Meta-analyses of prospective studies on coronary heart disease, type A personality, and hostility. *International journal of cardiology*, 79(2-3), 245-251.
- ▶ Sloan, Richard P. Virtue and vice in health and illness: the idea that wouldn't die. *The Lancet* 377.9769 (2011): 896-897.