

Psychology, Health & Medicine

Lecture 5:

Predicting & Changing Health Behaviours: Social Cognition Models

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Module Aims

- Teach students how to apply the key concepts and theories of social cognition to understanding and improving health behaviours;
- Demonstrate the complex interaction between psychological, social and biological processes when attempting to understand health-related behaviour in humans; and
- Develop understanding of how to design and evaluate theory-based interventions in psychology designed to improve health and wellbeing.

Recap: module overview

Covered so far....

- Health & Wellbeing in 21st Century
 - Definitions
 - Determinants
- Quality of life
 - Physical and mental
- Research methods in health psychology
 - Intervention development
- Stress & Health
 - Biopsychosocial processes
 - Transactional/interactional models

Still to cover...

- Predicting and changing health behaviours
 - Social Cognition Models
- Illness beliefs and representations
 - Self-regulation model
 - Adherence to medication
- Chronic illness, death & dying
- Communication & decision making

Module Learning Outcomes

Learning Outcomes	Assessment Criteria <i>To achieve each outcome a student must demonstrate the ability to:</i>
1. Understand how theories of social cognition can be used to understand and influence specific health behaviours	Apply appropriate social psychological theories to understanding and influencing specific health behaviours.
2. Discuss how the biopsychosocial model informs our understanding of health behaviours and physical health problems	Use empirical evidence to evaluate the extent to which biological, psychological, and social factors underpin specific health behaviours/physical health problems.
3. Identify appropriate research design and associated issues in relation to intervention development	Develop an appropriate applied research proposal based upon appropriate theory and research design in response to a specific health behaviour.
4. The ability to present work suitable for an academic audience through appropriate media	Present work to required conventions using appropriate media.

Module Assessment

Assessment Component 1 – 50%

Two hour scenario-based open book exam: students will be provided with scenarios which they then have to answer questions about, using the core text for this module as the supporting open book.

Assessment Component 2 – 50%

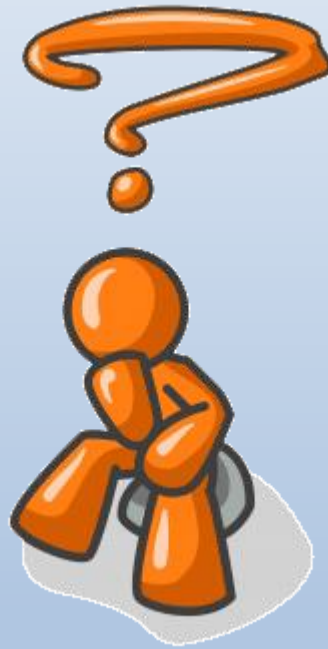
A 2,000 word applied project proposal to a hypothetical health-funding body will allow students to demonstrate their awareness of how to identify an appropriate mixed methods research design for an applied research question.

What is expected at Level 5?

At **Level 5** it is expected that the student will demonstrate the following qualities:

- More highly developed ability to complete a variety of written tasks effectively, including discursive essay, reports, and case study presentations.
- Be able to participate orally in a variety of different groups and settings in a confident and articulate fashion.
- Be able to use language with increasing complexity and sophistication.
- Be practised in hypothesis formation and knowledgeable about the means for testing hypotheses.
- Have the capacity to develop a major research interest evolving from the course and to prepare for an involvement with it.
- Be able to apply a range of theoretical models.
- Be able to synthesise theories, concepts and information in relatively novel ways.
- To have become more practised in critically appraising the competing claims of alternative primary and secondary sources.
- A growing ability to manage learning in a self-organised manner with a particular view to the importance of achieving desired outcomes within limited time periods.

Recap: How do our behaviours
influence our health?



Predicting and changing health behaviour

- What are some of the factors that can influence health behaviours?



Predicting and changing health behaviour

- Biological factors
 - Genetics, gender, age
- Psychological factors
 - Cognitions, attitudes and beliefs
 - Emotions
 - Modelling, conditioning
- Social factors
 - Demographics, SES, employment
- Cultural factors
 - Healthcare systems, cultural norms

Predicting and changing health behaviour: recap

- Many of the risk factors for disease and illness are behavioural e.g.
 - eating behaviour
 - smoking
 - lack of exercise
- Ability to change behaviour key to tackling many of the health issues in society today

Predicting and changing health behaviour

- 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

Predicting and changing health behaviour

- Behaviour is determined by multiple factors that we can understand through the framework of the biopsychosocial model
- Role of individual differences also key

Theories of Health Behaviour

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

Theories of health behaviour

- Social cognition models are one of the most successful at explaining health behaviours (but not perfect!)
- Include interaction between:
 - Social factors (e.g. social norms)
 - Cognitive factors (e.g., attitudes and beliefs)
- Expectancy Value Principle:
 - Behaviour is likely to change (or stay the same!) if person expects certain outcomes, and values these outcomes as positive.

Social Cognition Models

- Provide an empirically supported framework for understanding how people make decisions in relation to their behaviours
- Identify key factors found to influence behaviour change
- Interventions can be targeted at any or all of these factors
- Need to consider generalisability and applicability to specific situations.

The Health Belief Model (Rosenstock, 1974)

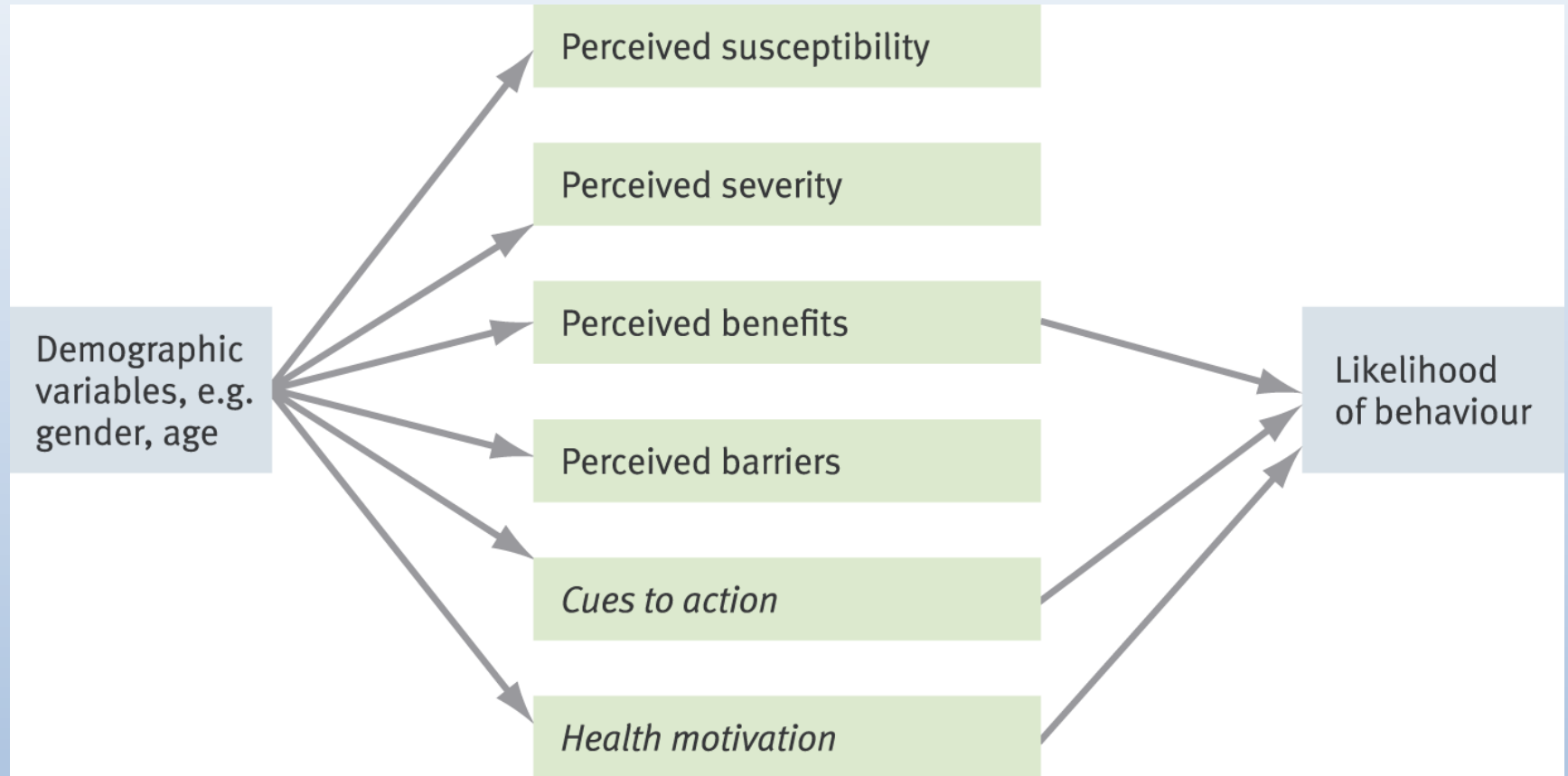


Figure 5.1 The health belief model (original, plus additions in italics)

The Health Belief Model

- How could we apply this model to understanding exercise behaviour?
- What hypotheses would you identify?
- How would you research this?



The Health Belief Model

Perception of threat:

- I believe that not exercising can lead to many serious illness and obesity: ***perceived severity***
- I believe that I do not exercise enough/am overweight: ***perceived susceptibility***

Behavioural evaluation:

- If I exercise more, my health will improve: ***perceived benefits (of change)***
- Changing my daily routine to fit in exercise when I also have a family/busy job will be difficult, and will be really expensive: ***perceived barriers (to change)***.

Cues to action

- That recent television programme on the health risks of obesity worried me (*external*)
- I am regularly feeling breathless on exertion, so maybe I should really think about getting more fit and exercising more: (*internal*)

Health motivation

- It is important to me to feel healthy

Theory of Planned Behaviour

- Why do some people attend routine screening whilst others choose not to?
- Why do some people exercise regularly why others do not?
- Why do some people take drugs are others do not



The Theory of Reasoned Action/Planned Behaviour

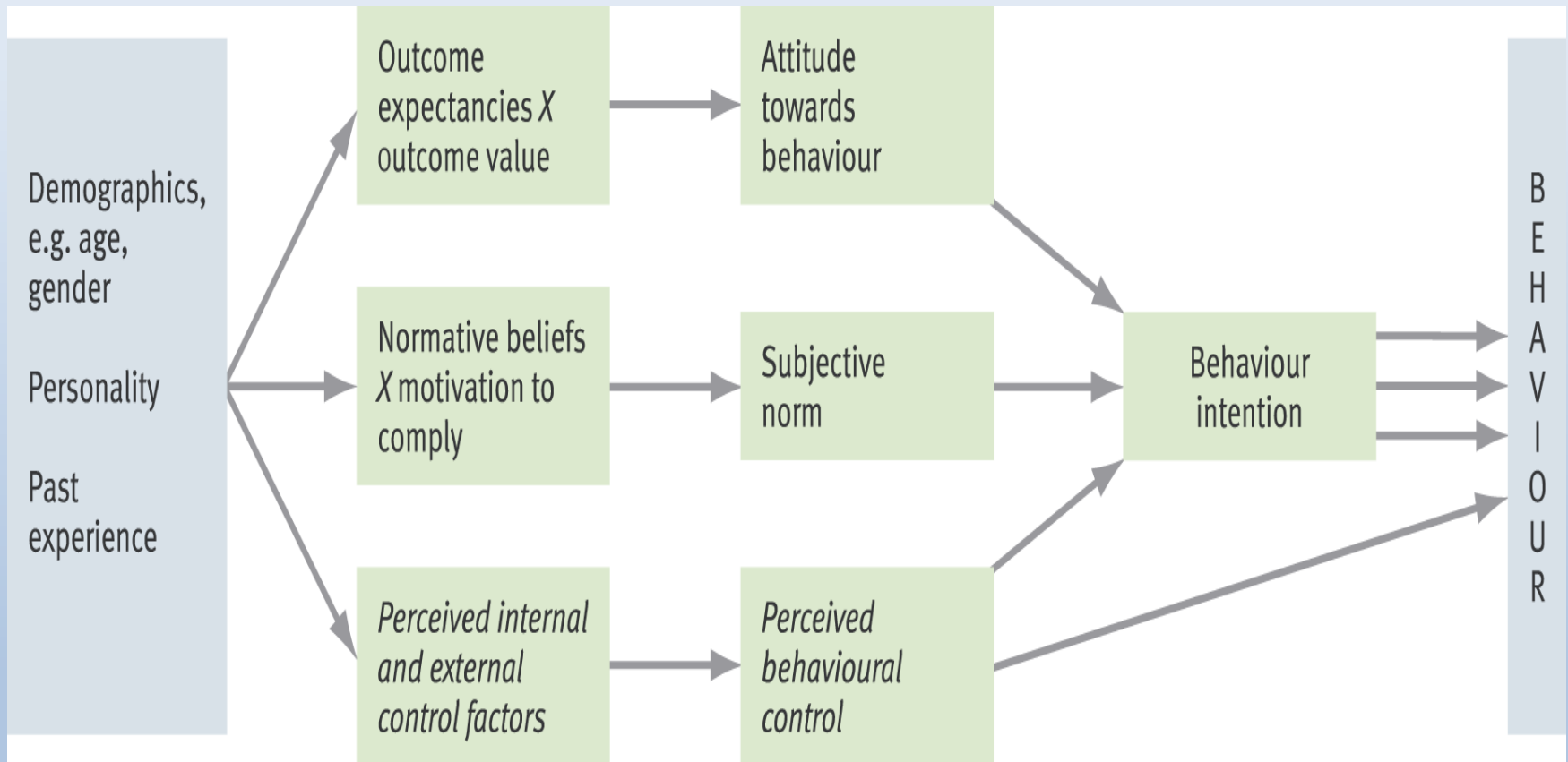


Figure 5.2 The theory of reasoned action and the theory of planned behaviour (TPB additions in italics)

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.

Interventions using TPB

- What interventions could be designed using TPB?
- What behaviour?
- What construct?
- How measure its effectiveness?

The intention-behaviour gap

- Intentions do not always predict behaviour
- Why?
- What processes mediate the relationship between intentions and behaviour?



The intention-behaviour gap

- Intentions do not always predict behaviour
- Competing intentions?
 - I intend to not drink excessively
 - I intend to look cool and fit in with my peers
 - I intend to go out and have the best time
- Implementation Intentions (Gollwitzer, 1993)

The intention-behaviour gap

- Intentions do not always predict behaviour
- Implementation Intentions (Gollwitzer, 1993)
 - People are more likely to engage in an intended behaviour if they identify specific plans to enact that behaviour (where/when/how)
 - e.g., Orbell et al. (1997) women encouraged to identify a plan to conduct BSE were more likely to later report having performed BSE.

TPB & Healthy Eating



Critical Evaluation of The TPB

'Moral norms' – it has been recognised that some intentions and behaviours may be partially motivated by moral norms, not just social norms.

Anticipatory regret – it has been shown that anticipating that regret would result if a certain behavioural decision was made/not made influences both future behavioural intentions and behaviour.

Self-identity – how one perceives and labels oneself may influence intention above and beyond the effect of core TPB variables.

Implementation intention (II) – forming an II is thought to be part of the process involved in turning an intention into action, i.e. filling the intention-behaviour gap highlighted by limitations in behavioural prediction by TPB studies.

self-efficacy beliefs vs. perceived behavioural control beliefs compared in relation to the use of legal and illegal drugs and found that self-efficacy beliefs were more strongly associated with behaviour than were perceived behavioural control beliefs.

Critical evaluation

- 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

- Time to retire the Theory of Planned Behaviour?
Sniehotta, Presseau & 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

- 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)

- Developed as a framework for understanding fear appeals
- Extended to include general persuasive communication
- Strong focus on cognitive processes that mediate behaviour change

Protection Motivation Theory

Janis (1967): Fear will

- Motivate an individual to find ways to reduce the danger (facilitation)
- Lead to a critical evaluation of recommended advice (interference)
- Interference more likely to prevent behaviour change if fear appeals are extreme

Protection Motivation Theory



Protection Motivation Theory

- Milne, Sheeran & Orbell (2000) Meta-analysis
 - Threat- and coping-appraisal components of PMT were useful in the prediction of health-related intentions.
 - Better at predicting concurrent behaviour than future behaviour.
 - The coping-appraisal component of the model was found to have greater predictive validity than was the threat-appraisal component

Protection Motivation Theory

Milne, Sheeran & Orbell (2000) Meta-analysis

- The model is still useful 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?

Stages theories of health 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

Stages theories of health behaviour change

- Stage theories of health behaviour change have been the focus of huge research interest over recent years
- Stage theories include:
 - Transtheoretical Model (Prochaska & DiClemente, 1983)
 - Precaution adoption process model (Weinstein & Sandman, 1992)
 - Health Action Process Approach (Schwarzer, 1992)

Transtheoretical Model (TTM)

Transtheoretical Stage of Change	Stage of a Facilitation Intervention
Precontemplation Contemplation	Stage 1: Practice recruitment and readiness assessment
Preparation	Stage 2: Kickoff meeting and start-up activities Stage 3: Practice assessment and goal setting
Action	Stage 4: Active improvement efforts
Maintenance	Stage 5: Holding the gains Stage 6: Completion and maintenance

Trantheoretical Model (TTM)

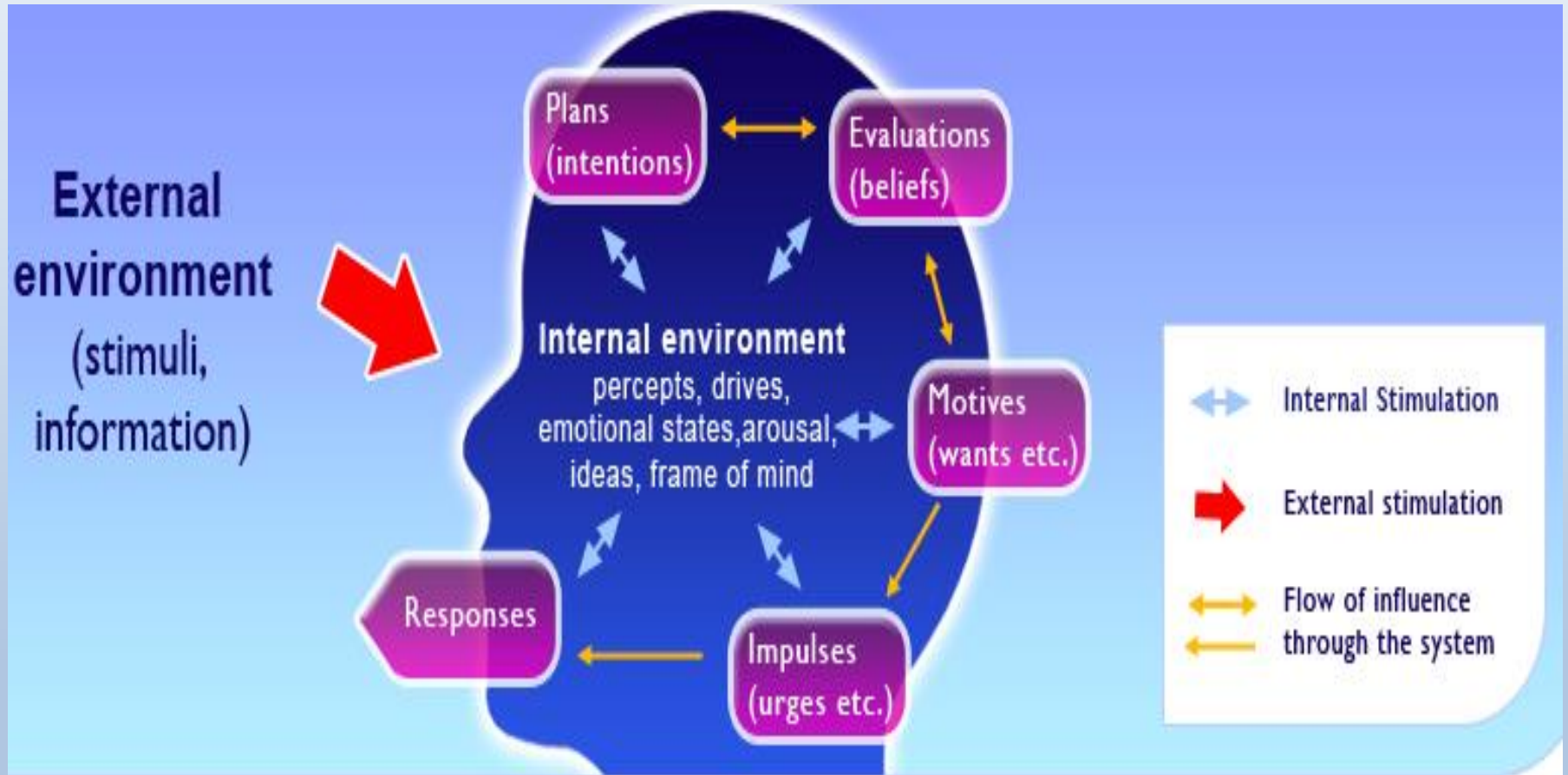
West (2005)

- 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)

- PRIME theory is an attempt to acknowledge the importance of emotions in health-behaviour decision-making by incorporating
 - Motivation
 - Emotions
 - Impulses
 - Cognitions

PRIME Theory



PRIME Theory

- <https://www.youtube.com/watch?v=68Pisr8Bc2Q>

PRIME Theory

Brown et al. (2012)

- pilot study of smoking cessation website ('StopAdvisor') based on PRIME theory
- 204 adult daily smokers willing to make a serious quit attempt were included. All participants received support from 'StopAdvisor', which recommends a structured quit plan and a variety of evidence-based behaviour change techniques for smoking cessation.

PRIME Theory

- Primary outcome was self-report of at least 1 month of continuous abstinence collected at 2 months postenrolment
- Usage was indexed by log-ins and page views.
- Satisfaction was assessed by ratings of helpfulness, personal relevance, likelihood of recommendation and future use
- Outcomes according to socio-economic status were assessed.

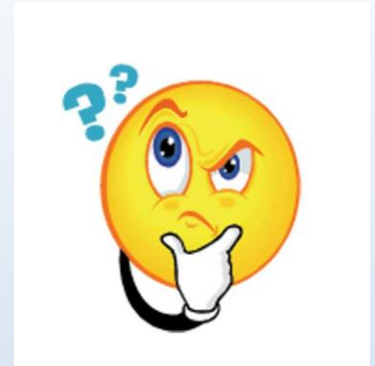
PRIME Theory

- At 8 weeks post-enrolment, 19.6% (40/204) of participants were abstinent according to the primary outcome criteria (95% C.I.= 14.1% to 25.1%).
- Respondents rated the website positively on each of the four satisfaction ratings (range=66.7% to 75.3%).

PRIME Theory

“Conclusions: The systematic application of theory, evidence, web-design expertise, and user-testing has resulted in a website that shows sufficiently promising efficacy and usability to warrant evaluation in a RCT. The website appears to be similarly effective and acceptable to users across the social spectrum”

Your task



- Discuss and identify which factors within each of the health behaviour models you have learned about appear to tap into the same construct
- Do any appear to be unique to a particular model?

Integration between models

- Considerable overlap between constructs exists across models
- Researchers are starting to explore more integrated models of health behaviour – requires strong empirical testing

Your task



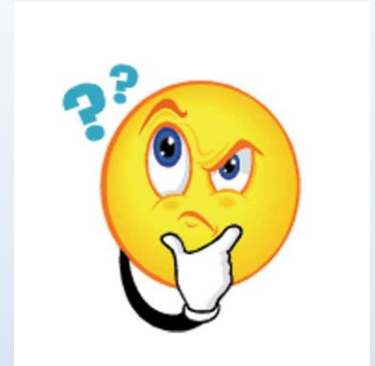
- If you wanted to help a friend stop binge-drinking how you use these models?
- What four elements do you think would be most useful to focus upon?
- How would you incorporate this into a behaviour change intervention?

(Activity 5.4, page 115, Ch 5 of core text)

Conclusions: theories of behaviour change

- Different models have different strengths and weaknesses
- Strong empirical evidence for TPB and HBM but also limitations (see references on Moodle)
- Newer models attempt to integrate motivation processes with social cognition models

Your task



- How you would demonstrate which model is the most effective for encouraging behaviour change in a specific context?
- What factors would you need to consider?

Conclusions: theories of behaviour change

- Need to understand the beliefs and reasons underpinning each individual's behaviour to know how best to encourage behaviour change
- In clinical practice it may be best to “mix and match” the most appropriate elements of different models to enable effective behaviour change
- Interventions focused upon these models need to be able to demonstrate the active component of that intervention to demonstrate empirical evidence for its effectiveness