

## Section 4.2

# Cognitive Psychology Theories of Change

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# Cognitive psychology theories

- Focus on behavior of the individual
- Are helpful in identifying cognitions amenable to change
- Claim that interventions to influence cognitive characteristics can mediate/moderate behavior (Conner & Norman, 2005)
- In the study of KT, such theories have been used to inform:
  - research design
  - intervention development
  - evaluation of KT interventions



# Assumption of Cognitive Psychological Theories

Most cognitive psychological theories assume that individuals make decisions in a rational manner; following a systematic review of all available information

(Conner & Norman, 2005)



# Cognitive psychology theories influential in the field of KT

- Related to motivation
  - Social cognitive theory
  - Theory of planned behavior
- Related to action
  - Implementation intentions
  - Theory of operant conditioning
- Related to stages of change
  - Transtheoretical model of change
- Related to decision making
  - Cognitive continuum theory



## Theories related to motivation

- Claim that motivation determines and predicts behavior
- Social cognitive theory assumes incentives and expectations related to outcomes and self efficacy determine behavior (Bandura, 1977,1982; Azjen, 1991)
- Self efficacy is hypothesized to be influenced by 4 sources of information – performance accomplishment (most influential), vicarious experience, verbal persuasion and physiological feedback (Bandura, 1977, 1982)



## Theories related to motivation

- According to the theory of planned behavior *intention to engage* and *perceived control* over the behavior are determinants and predictors of behavior (Ajzen, 1991)
- Intention relates to attitudes, subjective norms and behavioral control



## Theories related to action

- Focus on individuals who are motivated to change
- The theory of implementation intentions relates to the behavioral logistics (when, where and how) that are necessary to achieve the intended goal (Gollwitzer, 1999)
- The theory of planned behavior suggests that planning and preparation will facilitate adoption of specific behavior



## Theories related to action

- According to operant conditioning theory, positive feedback will encourage repetition of the respective behavior, while negative feedback is likely to discourage certain behavior (Blackman, 1974)
- Interventions underpinned by operant conditioning theory may include feedback mechanisms to encourage or discourage behavior



# Theories related to stages of change

- The transtheoretical model of change comprises 5 stages:
  - Precontemplation – no plan to adopt in foreseeable future
  - Contemplation - intends to adopt within next 6-months
  - Preparation – intends to adopt within next month
  - Action – has been using behavior for the past 6-months
  - Maintenance – actively working to maintain the behavior
- It is claimed that an individual progresses through the stages over time (Prochaska & Velicer, 1997)



## Theories related to stages of change

- Strategies to enhance progression from precontemplation to contemplation include:
  - Continuing education; Educational outreach; Performance feedback
- Strategies to enhance progression to preparation and action stages include:
  - Provision of resources and support
- Strategies to promote progression from action to maintenance include:
  - Reminders and prompts; Provision of appropriate equipment



# Theories related to decision making

- The cognitive continuum theory claims that the cognitive mode for decision making exists on a continuum – analysis and intuition are at opposite poles on the continuum
- Characteristics of the individual decision determine the point on the continuum that is adopted

(Hammond, 1980, 1981; Hamm, 1988)



## Theories related to decision making

- Six modes of healthcare decision making have been identified, based on cognitive mode (intuition – analysis) and the structure of the task (potential for manipulation, visibility of the process, time required) (Hamm, 1988)
- Cognitive continuum theory can help explain and justify health professionals' decisions



# Limitation of Cognitive Psychology Theories

- Such theories do not:
  - consider external factors
  - take into account the social construction of knowledge



## Evidence for cognitive psychology theories

- There is some evidence for the value of the theory of planned behavior in guiding development of interventions to influence behavior (Perkins et al., 2007; Eccles et al., 2007)
- An expanding body of evidence suggests operant conditioning is useful in predicting health professionals' behavior (Eccles et al., 2007; Bonetti et al., 2007)
- There is limited evidence to support stages of change (Bonetti et al., 1994; Weinstein, 1998) and the cognitive continuum theories (Lauri et al., 2001; Hamm, 1989)



## Future research

- We recommend that future research be programmatic; undertaken systematically and incrementally to test theory-based interventions and their theoretical assumptions
- Research methodology and interventions should be reported in detail to enable replication studies and fidelity to the intervention



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