



# A Summary of Theoretical Models

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## A Summary of Theoretical Models:

A great deal of academic work underpins C4D strategy and planning. Indeed, there are several principal theories typically used to explain health behaviour change, including the Social Ecological Model, The Health Belief Model, the Theory of Reasoned Action/Planned Behaviour, Social Cognitive Theory and the Transtheoretical Model. Please find a very brief explanation of each of these models as well as links to further reading on theory.

At the core of most current C4D strategy and planning at UNICEF is the Social Ecological Model, though it is still valuable to understand the basics of other models and how they can and do contribute to C4D for polio eradication and public health.

### The Social Ecological Model<sup>1</sup>

The Social Ecological Model (SEM) is a theory-based framework for understanding the multifaceted and interactive effects of personal and environmental factors that determine behaviors, and for identifying behavioral and organizational leverage points and intermediaries for health promotion within organizations. There are five nested, hierarchical levels of the SEM: Individual, interpersonal, community, organizational, and policy/enabling environment (Figure 1). Table 1 provides a brief description of each of the SEM levels. The most effective approach to public health prevention and control uses a combination of interventions at all levels of the model.



Figure 1. The Social Ecological Model.

<sup>1</sup> [http://www.unicef.org/cbsc/files/Module\\_1\\_SEM-C4D.docx](http://www.unicef.org/cbsc/files/Module_1_SEM-C4D.docx)

Source: Adapted from the Centers for Disease Control and Prevention (CDC), The Social Ecological Model: A Framework for Prevention, <http://www.cdc.gov/violenceprevention/overview/social-ecologicalmodel.html> (retrieved April 21, 2014).

**Table 1. A Description of Social Ecological Model (SEM) Levels.**

<b>SEM Level</b>	<b>Description</b>
<b>Individual</b>	<ul style="list-style-type: none"> <li>Characteristics of an individual that influence behaviour change, including knowledge, attitudes, behavior, self-efficacy, developmental history, gender, age, religious identity, racial/ethnic identity, sexual orientation, economic status, financial resources, values, goals, expectations, literacy, stigma, and others.</li> </ul>
<b>Interpersonal</b>	<ul style="list-style-type: none"> <li>Formal (and informal) social networks and social support systems that can influence individual behaviours, including family, friends, peers, co-workers, religious networks, customs or traditions.</li> </ul>
<b>Community</b>	<ul style="list-style-type: none"> <li>Relationships among organizations, institutions, and informational networks within defined boundaries, including the built environment (e.g., parks), village associations, community leaders, businesses, and transportation.</li> </ul>
<b>Organizational</b>	<ul style="list-style-type: none"> <li>Organizations or social institutions with rules and regulations for operations that affect how, or how well, for example, MNCH services are provided to an individual or group.</li> </ul>
<b>Policy/Enabling Environment</b>	<ul style="list-style-type: none"> <li>Local, state, national and global laws and policies, including policies regarding the allocation of resources for maternal, newborn, and child health and access to healthcare services, restrictive policies (e.g., high fees or taxes for health services), or lack of policies that require childhood immunizations.</li> </ul>

## OTHER THEORETICAL MODELS

### The Health Belief Model:

First developed in the 1950s the Health Belief Model (HBM) is one of the most common and oldest models for explaining health behaviours. It was originally based on psychosocial studies aimed to understand why people did not take part in screenings and vaccinations.

Essentially, the Health Belief Model says that people will only take action based on:

- Perceived Susceptibility: They perceive themselves as susceptible to the condition
- Perceived Severity: That the medical, clinical and/or social consequences will be severe
- Perceived Effectiveness: That a course of action is available to reduce susceptibility or the severity of the condition
- Perceived Cost: The barriers are outweighed by the benefits.

To put it simply then, individuals evaluate a behaviour based on whether they see themselves as vulnerable, whether the consequences of not performing the behaviour are severe or not, whether the recommended behaviour will actually be an effective intervention against the condition, and lastly whether the benefits of the behaviour are greater than the inconvenience of performing it.

Recently the concept of self-efficacy was added to the theoretical construct. Self-efficacy, as we will see, is a fundamental concept for many of the theoretical models examined here. First introduced by the Canadian psychologist Albert Bandura (1977), self-efficacy essentially considers the individual's confidence in their ability to perform a specific action (Janz et al, 2002; Redding, 2000: 183; Siegel and Lotenberg, 2007: 512). Self-efficacy and HBM's perception considerations, combine to determine the probability of an individual performing the desired action.

Cues to Action, as they are termed in HBM are activities, events or strategies that can encourage one to perform the given behaviour. They are essentially motivating factors of encouragement. When perceptions of susceptibility and severity are high, cues to action need not be severe, but when perceptions are low, intensive cues to action are more important to motivate action (Redding et al, 2000: 182).

Practically applied, each of the four main constructs of the HBM model can help to mould campaigns. For example, determining people's perceptions helps highlight where campaign focus can be placed and responding to why people are susceptible, the severe consequences of inaction and the effectiveness and ease of a proposed action can provide the basic pillars of a campaign. Factoring in strategies to improve self-efficacy and formulating cues for action to encourage individuals to take action are critical to HBM approaches. As HBM is largely considered a cognitively based theory, it has been criticized for not taking into account the emotional influence of individuals, in particular fear (Glanz et al. 2008: 62).

C4D approaches take HBM concepts of susceptibility to formulate strong behavioural objectives. Knowing what people think and feel about a particular action are at the core of C4D practice, while ensuring the behaviour is effective, achievable and at low cost are central tenets to a C4D plan.

Relevant/Foundational Papers on HBM:

Becker MH. The health belief model and personal health behaviour. *Health Education Monographs*. 1974;2:324-473. Human Kinetics Publishing; 1988: 125-54.

Glanz, K, Rimer, BK and Viswanath K. 2008. *Health behaviour and health education: theory, research, and practice* (4th ed). John Wiley & Sons Inc. San Francisco.

Hochbaum, GM. 1958. Public participation in medical screening programs: A sociopsychological study. *Public Health Service Publication No. 572*. Washington, DC,: US Government Printing Office.

Janz, NK, Champion, VL & Strecher VJ. 2002. The health belief model. In K. Glantz, BK Rimer and FM Lewis (Eds), *Health Behaviour and health education: Theory, research and practice*. San Francisco: Josey-Bass.

Kirscht JP. The health belief model and illness behaviour. *Health Education Quarterly*. 1974;11:1-47.

Rosenstock IM. The health belief model and preventative health behaviour. *Health Education Monographs*. 1974;2:354-86.

### **The Theory of Reasoned Action/Planned Behaviour**

The Theory of Reasoned Action (TRA), and its extension, Theory of Planned Behaviour (TPB), attempts to explain why even if individuals hold a particular behaviour to be important, they still follow societal expectations and what's considered acceptable among people closest to them.

TRA argues that an individual's *attitudes*, their beliefs and values about the outcome of a particular behaviour and *subjective norms* or the belief about what the people close to them think about the behaviour can predict behavioural outcomes (Paek et al, 2008: 9). Put another way, the intention to

perform a behaviour is strongly related to whether we do it or not (Redding et al, 2000: 183). TPB modified the model by adding the idea of self-efficacy to the equation through the concept of *perceived behavioural control*, essentially an individual's feelings about their ability to perform the behaviour (Paek et al, 2008: 9).

Therefore the likelihood an individual will engage in recommended behaviours will depend on whether they are convinced it will prevent risk, whether they feel confident in performing the behaviour and the degree to which the benefits are perceived to outweigh the cost (Redding et al, 2000: 183).

Some have argued that as the majority of TRA research focuses on the prediction of behavioural intention, rather than on the behaviour itself that its uses are limited. This is particularly true as the theoretical correlation between intention and behaviour has been described as, "not impressive" (Redding et al, 2000:183).

In C4D, practitioners must consider attitudes and the influence of the most important people in any given context, whether Key Opinion Leaders, family members, or co-workers. Early market research in communities and country contexts will help to reveal existing attitudes, beliefs and values and inform the design of a more effective behavioural intervention. But an intent to perform a behaviour is only a first step, and getting people from intention to action is a critical and difficult hurdle to overcome.

Relevant/Foundational Papers on TRA and TPB:

Ajzen, I. (1985). From intentions to actions: A theory of planned behaviour. In J. Kuhl & J. Beckman (Eds.), *Action-control: From cognition to behaviour* (pp. 11-39). Heidelberg: Springer.

Ajzen I, Driver BL. 1991. Prediction of leisure participation from behavioural, normative, and control beliefs: an application of the theory of planned behaviour. *Leisure Science* 13:185-204.

Ajzen I, Fishbein M. 1980. *Understanding Attitudes and Predicting Social Behaviour*. Englewood Cliffs, NJ: Prentice-Hall; 1980.

Fishbein M, Ajzen I. *Belief, Attitude, Intention, and Behaviour: An Introduction to Theory and Research*. Reading, MA: Addison-Wesley; 1975.

Gottlieb, N. H., Gingiss, P. L., & Weinstein, R. P. (1992). Attitudes, subjective norms and models of use for smokeless tobacco among college athletes - implications for prevention and cessation programming. *Health Education Research*, 7(3), 359-368.

Montaño DE, Kasprzyk D, Taplin SH. The theory of reasoned action and theory of planned behaviour. In: Glantz K, Lewis FM, Rimer BK, eds. *Health Behaviour and Health Education: Theory, Research, and Practice*. 2nd ed. San Francisco, CA: Jossey-Bass, Inc; 1997: 85-112.

### **Social Cognitive Theory**

Social Cognitive Theory (SCT) has its roots in Social Learning Theory (see Miller and Dollard, 1941), which essentially states that people learn not only from their own experience but from observing the actions of others. SCT argues that behaviour is determined by interactions between behaviour, the individual and the environment (Bandura, 1986). It emphasizes the cognitive; what people think about behaviour. Behaviour is dynamic, influenced by simultaneous interactions between the environment (external factors like family and friends as well as the physical environment) and situation (a person's perception of their environment). This tripartite relationship (Behaviour-Individual-Environment) is called reciprocal determinism, meaning that changes in one factor will affect the other two and how a given behaviour is seen. "Behaviour is not simply a product of the

environment and the person, and environment is not simply a product of the person and behaviour” (Rimer and Glantz, 2005: 20).

Psychologist Albert Bandura, the father of Social Cognitive Theory, emphasized human thought processes in his work. He said that people consider their capacities in terms of personal characteristics, emotional arousal/coping, behavioural capacity, self-efficacy, expectation, expectancies, self-regulation, observational/experiential learning, and reinforcement. A person’s perceptions of the environment, called *situations*, can both facilitate and deter behaviour.

The possibility of someone changing their behaviour, according to SCT is based on 1) Self-Efficacy; 2) Goals and 3) Outcome expectancies. With self-efficacy in place people can change their behaviours and get beyond obstacles. Without it, they lack motivation and a belief that they can get past the challenges to perform a given change in behaviour (Rimer and Glantz, 2005: 20).

Bandura felt that self-efficacy was the most important aspect of SCT (Rimer and Glantz, 2005: 21). His self-efficacy hypothesis is seminal and as stated, has been adopted in some form by most models and theoretical constructs since. It basically asserts that a person’s belief they can perform a given behaviour is directly related to whether they will do it. The opposite is also true and those with low self-efficacy will be more affected by situational and environmental temptations (Redding et al, 2000: 187).

Other important concepts include Observational *Learning* – modelling positive outcomes of healthy behaviour using credible role models; Ensuring behavioural *capability* by making certain that the knowledge and skills to perform a behaviour have been shared; Providing *reinforcement* for the behaviour – self-reinforcement being the ultimate goal; *Expectations* – the outcomes a person anticipates as a result of the behaviour and lastly; *Expectancies* or incentives – the values a person places on given outcomes (Siegel & Lotenberg, 2007: 513).

One critique levied against social cognitive theory is that it assumes that changes in situation and environment will change behaviour, when there are many examples of behaviour not changing just because their environment does. Others have taken a biological track arguing for the influences of emotion that can be determined by biology and evolution. What one does in a fit of anger or jealousy, for example, may not be consistent with one’s normal behaviour.

In the case of C4D, SCT theory offers much to be considered. The importance and influence of environment, personal situation and the person’s individual attitude toward a given behaviour are central to C4D approaches. Bandura’s contribution of self-efficacy is an important detail in our work. Applying this theory practically could mean that behavioural strategies should adjust the person’s environment to support the behaviour, considering for example changes to product, place and price. Adopting other strategies could also be useful, like ensuring there are appropriate opportunities for observational learning and modelling appropriate behaviours in the community, while introducing small, achievable changes to gradually increase self-efficacy (Ibid; see also marketing section).

Table 3. Social Cognitive Theory Constructs (Taken from Redding et al, 2000: 184)

<b>Constructs</b>	<b>Description</b>
Environmental	Factors outside the person
Situation	One’s perception of the environment
Behavioural Capability	One’s knowledge and skills to perform a behaviour
Expectations	One’s anticipation of the outcomes of a behaviour

Expectancies	How good or bad one evaluates the outcomes to be
Self-control	Regulation of one's own behaviour
Observational Learning	Acquiring a new behaviour by watching someone else perform it and observing the outcomes—a.k.a. modelling
Reinforcements	Responses to a person's behaviour that affect how likely it is that the behaviour will reoccur
Self-efficacy	One's confidence in one's own ability to perform a behaviour
Emotional Coping	Responses Strategies used by someone to deal with emotionally challenging thoughts, events, or experiences
Reciprocal Determinism	Dynamic interaction of the person, the behaviour, and his/her environment

#### Relevant/Foundational Papers on Social Cognitive Theory:

Bandura A. 1977. Self-efficacy: toward a unifying theory of behaviour change. *Psychological Review*. 1977;84:191-215.

Bandura A. 1986. *Social Foundations of Thought and Action: A Social Cognitive Theory*. Englewood Cliffs, N.J.: Prentice-Hall.

Bandura, A. (1994). Social cognitive theory of mass communication. In J. B. D. Zillmann (Ed.), *Media effects: Advances in theory and research* (pp. 121-153). Hillsdale, NJ: Lawrence Erlbaum.

Bandura, A. (1997). *Self-Efficacy: The Exercise of Control*. New York: W.H. Freeman.

Perry C, Baranowski T, Parcel G. 1990. How individual's, environments, and health interact: Social Learning Theory. In: Glanz K, Lewis FM, Rimer BK, eds. *Health Behaviour and Health Education: Theory, Research, and Practice*. San Francisco: Jossey-Bass; 1990: 161-86.

Strecher VJ, DeVellis BM, Becker MH, Rosenstock IM. The role of self-efficacy in achieving health behaviour change. *Health Education Quarterly*. 1986;13:73-91.

#### **Transtheoretical Model of Stages of Change**

The Transtheoretical Model (TTM) was first developed by James Prochaska with colleagues beginning in 1977. It is based the central idea that change occurs in stages and that strategies to change behaviour should be catered appropriately to match the stage the individual is determined to be in. Its stage-based model will be somewhat familiar for C4D practitioners, offering similar constructs to the HICDARM circuit. TTM's main point that behaviour doesn't change all at once, but rather incrementally is a critical framework from which to examine behaviour change. And people don't necessarily pass through TTM stages in order, in fact they can enter and exit the stages at any time, often repeating steps before moving forward again toward long-term change.

As its name suggests, the Transtheoretical Model integrates many social psychology and behaviour change theories and principles including SCT (changes), TRA(benefits/costs, HBM (benefits/barriers), as well as adopting Bandura's concept of self-efficacy, and elements of media effects theory (Russel

et al, 2000: 188-189).

TTM looks at behaviour change through four different but complimentary constructs: stages of change, process of change, decisional balance, and self-efficacy.

### Stages of Change

Stages of change describe the process through which people pass as they work toward long-lasting behaviour change. Normally illustrated as a spiral, it highlights how even if people return to previous stages, they collect valuable information and skills that inform their overall progression along the way.

- Precontemplation – No intention of taking action within next 6 months
- Contemplation – Intends to take action within next 6 months
- Preparation – Intends to take action within the next 30 days and has taken some steps in this direction
- Action – Has changed overt behaviour for less than 6 months
- Maintenance – Has changed overt behaviour for more than 6 months

### Processes of Change

The processes of change describe the cognitive, emotional, behavioural, and interpersonal strategies and techniques that individuals and/or change agents (therapists, counsellors) use to change problem behaviours (Russel et al, 2000: 188).

- Consciousness Raising – Learning new facts, ideas and tips that support healthy behaviour change
- Dramatic Relief – experiencing negative emotions (fear, anxiety, worry) that go along with unhealthy behavioural risks
- Self-reevaluation – Realizing that behavioural change is an important part of one's identity as a person
- Environmental reevaluation – Realizing the negative impact of unhealthy behaviour or the positive impact of healthy behaviour on proximate social and physical environment
- Self-Liberation – Make a commitment to change
- Helping Relationships – Seeking and using social support for the healthy behaviour change
- Counterconditioning – Substituting healthier alternative behaviours and cognition for the unhealthy behaviours
- Reinforcement Management – Increasing rewards for positive behavioural change and decreasing rewards of unhealthy behaviour
- Stimulus control- removing reminders or cues to engage in unhealthy behaviour – adding cues to engage in healthy behaviour
- Social Liberation – Realizing that the social norms are changing in the direction of support the healthy behavioural change

### Decisional Balance

Decisional Balance, or the pros and cons of behaviour change, are simply the decision-making components of the TTM and explain the reasons for changing or not. The tallying of pros and cons help people come to a decision about whether to move from one stage of change to another.

- Pros – Benefits of Changing
- Cons – The cons of changing



### Self-Efficacy

Taking a cue from Bandura, self-efficacy relates to a person's belief that they can effectively complete a task or adopt a behaviour. With adequate incentives and skills, self-efficacy can be changed.

- Confidence – that one can engage in healthy behaviours across challenging situations
- Temptation- to engage in unhealthy behaviour across challenging situations

### In practice

So by taking part in the decisional balance, an individual decides that the pros of performing a particular behaviour outweigh the cons. The self-confidence, or self-efficacy that they can actually perform the behaviour then will overcome perceived temptations in their respective environments and this is when they enter the Processes of Change.

C4D has come to adopt many of the principles of the Transtheoretical Model. The notion of HICDARM, of audience segmentation and many of the tools used in the rapid situational analysis steps are similar in approach to TTM. Targeted interventions that are appropriate and realistic to the target populations and their individual, cultural, environmental and economic situations.

### Relevant/Foundational Papers on TTM:

Prochaska, J. O., & DiClemente, C. C. (1983). Stages and processes of self-change of smoking - toward an integrative model of change. *Journal of Consulting and Clinical Psychology*, 51, 390-395.

Prochaska, J. O., DiClemente, C. C., & Norcross, J. C. (1992). In search of how people change: Applications to addictive behaviours. *American Psychologist*, 47, 1102-1114.

Prochaska, J. O., & Norcross, J. C. (2001). Stages of change. *Psychotherapy*, 38, 443-448.

Prochaska, J. O., & Velicer, W. F. (1997). The transtheoretical model of health behaviour change. *American Journal of Health Promotion*, 97(12), 38-48.

Prochaska, J. O., Velicer, W. F., Rossi, J. S., Goldstein, M. G., Marcus, B. H., Rakowski, W., et al. (1994). Stages of change and decisional balance for 12 problem behaviours. *Health Psychology*, 13 (1), 39-46.

Prochaska JO, Redding CA, Evers K. The transtheoretical model and stages of change. In: Glantz K, Lewis FM, Rimer BK, eds. *Health Behaviour and Health Education: Theory, Research, and Practice*. 2nd ed. San Francisco, CA: Jossey-Bass, Inc. 1997:60-84.

Velicer WF, Prochaska JO, Fava JL, Norman GJ, Redding CA. Smoking and stress: applications of the Transtheoretical Model of Behaviour Change. *Homeostasis*. 1998;38: 216-33.

### Other relevant Models:

#### **Diffusion of Innovations:**

Classic diffusion theory divides members of a population into five categories based on their rate of adoption: Innovators, Early Adopters, Early Majority, Late Majority, and Laggards. (Siegel & Lotenberg, 2007: 514)

Innovation is considered an idea, practice or object that is perceived as new by an individual,

organization or community. Diffusion is considered the process by which an innovation is communicated through certain channels over time among members of a social system (Rogers, 1995). Diffusion of Innovations theory then looks at what happens when a behavioural “solution” (*innovation*) is introduced to a population over *time*, through certain *channels* among the members of a *social system*.

See: Rogers, EM (1995). *Diffusions of Innovations (4<sup>th</sup> ed)*. New York: Free Press

### **Precaution Adoption Model**

The Precaution Adoption Model (PAPM) uses a seven-step model to go from the stage of lack of awareness to adoption and maintenance of a behaviour. PAPM emphasizes the importance of people becoming aware and then engaged in a particular issue and action and though similar in some ways to the Transtheoretical Model, it differs in that it proposes that individuals must go through each stage.

“In the first stage of the PAPM, an individual may be completely unaware of a hazard. The person may subsequently become aware of the issue but remain unengaged by it (Stage 2). Next, the person faces a decision about acting (Stage 3); may decide not to act (Stage 4), or may decide to act (Stage 5). The stages of action (Stage 6) and maintenance (Stage 7) follow.” (Rimer and Glanz, 2005: 18).

PAPM approaches can be particularly useful in dealing with new and emerging health risks and newly discovered prevention behaviours.

See: Weinstein ND. 1988. The precaution adoption process. *Health Psychology*. 1988;7(4):355-86.

### **Media Effects**

Media Effects Theory, unsurprisingly looks at what not only how media can influence the knowledge and attitudes of people but also how people can affect the media itself. The argument is that as consumers of media are actively seeking information, that their own interests can shape the content itself. Media Effects theorists will examine what factors affect the likelihood that a person will be exposed to a message and what effects do increased (or decreased) exposure have on the audience. There are several different ways media exposure can impact people differently.

These include immediate learning (people learn directly from the message), delayed learning (the impact of the message is not processed until sometime after it has been conveyed), generalized learning (in addition to the message itself, people are persuaded about concepts related to the message), social diffusion (messages stimulate discussion among social groups, thereby affecting beliefs), and institutional diffusion (messages instigate a response from public institutions that reinforces the message’s impact on the target audience). (Rimer and Glanz, 2005: 30 citing, Freimuth et al)

See: *Media effects: Advances in theory and research* (2009). Ed Bryant, J and Oliver, MB. New York. Routledge/ Taylor & Francis ]