

Social Ecological Model of Behavior Change

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The Social Ecological Model of Behavior Change provides a framework for the design and evaluation of behavior change interventions and considers social and physical settings as well as external factors that shape human agency. The primary assumption of the model is that the design of culturally acceptable interventions for behavior change should focus on the primary determinants of intentions to change behavior, which include beliefs and other psychological variables (i.e., attitudes, social norms, and self-efficacy).

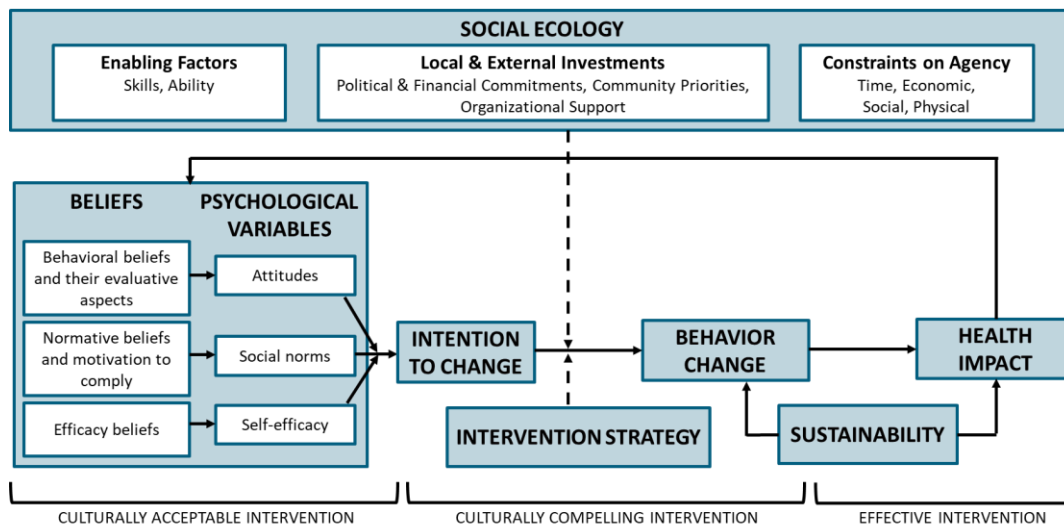
In order to translate intentions to an actual change in behavior it is important for interventions to be embedded in the social and cultural contexts in which they take place (social ecology). Finally, for behavior change interventions to be considered effective, evidence of health impact is required, which can be evaluated via objective measurement and cultural perceptions. A shift from intentions to behavior change demonstrates the transition of a culturally acceptable intervention to a culturally compelling intervention.

Developer

Catherine Panter-Brick, Sian E. Clarke, Heather Lomas, Margaret Pinder, and Steve W. Lindsay, 2006

Graphical Representation of Theory and Constructs

(Adapted from Panter-Brick et al., 2006)



Social Ecology – The individual, social, and cultural contexts in which the intervention takes place. Aspects of the social ecology may moderate or influence the intervention.

Beliefs

- **Behavioral Beliefs** – Beliefs about and evaluations of the possible outcomes of the behavior.
- **Normative Beliefs** – Beliefs about what others think one should do, and their motivation to comply with those wishes.
- **Efficacy Beliefs** – Beliefs about whether one has the skills and abilities to perform the behavior, even in the face of barriers.

Psychological Variables

- **Attitudes** – Convictions about how favorable the behavior is.
- **Social Norms** – Perceptions about what others do and what others think one should do.
- **Self-efficacy** – Confidence that one has the skills and abilities to perform the behavior, even in the face of barriers.

Intervention

- **Intervention Strategy** – The actual stimulus, or trigger, for change.
- **Culturally Acceptable Intervention** – Recognition that intentions to change are impacted by attitudes, perceived social norms, and/or notions of self-efficacy.
- **Culturally Compelling Intervention** – Engagement of local communities and nestled within social and ecological landscapes.

Health Impact and Sustainability Feedback Loop

- **Health Impact** – Function of behavior change evaluated through objective measurement and cultural perceptions. Proposed to feed into a feedback loop by which it moderates attitudes, social norms, and self-efficacy, and each of their underlying beliefs.

Sustainability – Sustainability of the link between the behavior change and health impact. This also feeds into the feedback loop.

Application to the Precision Paradigm: Alignment of Theory Constructs with Mechanisms of Action Taxonomy

Mechanisms of Action (MoA), derived from theories of behavior, are the processes through which specific intervention techniques are expected to affect behavior. Interventions grounded in Social Ecological Model of Behavior Change might include techniques to achieve specific changes in behavior by acting through any of these MoAs.

Aspects of constructs in the **Social Ecological Model of Behavior Change** correspond to the [Mechanisms of Action taxonomy](#) as follows:

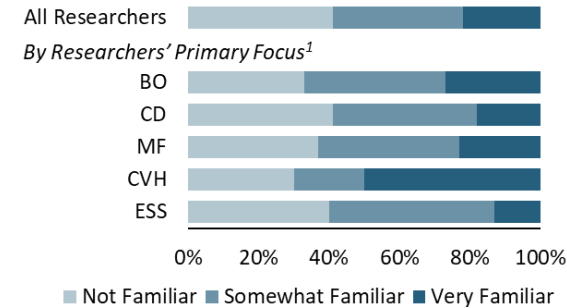
Theory Construct	Corresponding Mechanism(s) of Action
Behavioral Beliefs	Beliefs about Consequences
Normative Beliefs	Subjective Norms Social Influences Motivation
Efficacy Beliefs	Beliefs about Capabilities
Attitudes	Attitude towards the Behavior
Social Norms	Subjective Norms Social Influences
Self-efficacy	Beliefs about Capabilities
Intention to Change	Intention

NOTE: Aspects of the graphical representation of this theory also correspond to other components of the [Precision Paradigm](#):

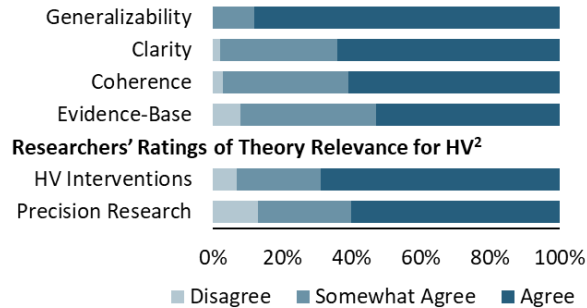
- *Social ecology* is part of the [context](#) and acts as a moderator
- *Health impact* is an example of an [outcome](#) and also acts as a moderator through a feedback loop
- *Intervention strategy* includes the [intervention techniques](#) and [methods of delivery](#)

Key Results from Intervention Researcher Survey

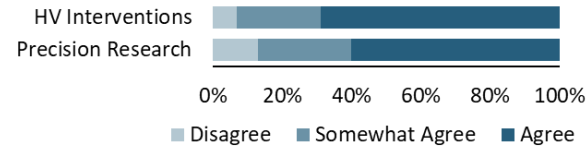
Researchers' Familiarity with the Theory



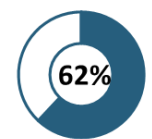
Researchers' Ratings of Theory Quality²



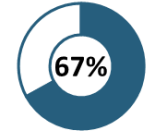
Researchers' Ratings of Theory Relevance for HV²



High Quality³



High Relevance⁴



¹Intervention researchers' primary or secondary area of research; BO=Birth Outcomes; CD=Child Development; MF=Maternal Psychosocial Functioning; CVH=Cardiovascular Health; ESS=Family Economic Self-Sufficiency

²Of those who indicated they were familiar with the theory. Those answering 'Not Sure' to the quality and relevance items were excluded from the denominator.

³Percent of researchers answering agree/somewhat agree to all four quality items.

⁴Percent of researchers answering agree/somewhat agree to both relevance items.

Methods for the intervention researcher survey can be found [here](#).

Theory Citations

Panter-Brick, C., Clarke, S. E., Lomas, H., Pinder, M., & Lindsay, S. W. (2006). Culturally compelling strategies for behaviour change: A social ecology model and case study in malaria prevention. *Social Science & Medicine*, 62, 2810-2825. <https://doi.org/10.1016/j.socscimed.2005.10.009>