

WHAT IS THE EXTENDED PARALLEL PROCESSING MODEL?

The Extended Parallel Processing Model (also widely known as Threat Management or Fear Management) describes how rational considerations (efficacy beliefs) and emotional reactions (fear of a health threat) combine to determine behavioral decisions. The degree to which a person feels threatened by a health issue determines his or her motivation to act, while one's confidence to effectively reduce or prevent the threat determines the action itself.

There are four key variables in the EPPM model, two related to beliefs about the threat and two related to beliefs about efficacy. In the case of HIV/AIDS, the questions you would ask someone to measure these beliefs might be as follows:

- **Threat variables:**
 - *Perceived severity*—How serious are the consequences if you became infected with HIV?
 - *Perceived susceptibility*—How likely is it that you might contract HIV?
- **Efficacy variables:**
 - *Response efficacy*—How effective is a proposed solution, such as abstinence or condom use, at preventing HIV infection?
 - *Self-efficacy*—How confident are you that you could successfully practice the proposed solution?

The EPPM predicts that fear of a health risk such as HIV/AIDS can cause either adaptive, self-protective actions or maladaptive, self-defeating actions. When perceptions of a threat are strong and perceived levels of efficacy are high, the model predicts self-protective behavior. When perceptions of a threat are strong, but perceived levels of efficacy are low, the model predicts maladaptive denial or rejection of protective behaviors. By asking questions like the ones above, people in an intended audience can be classified as having either high or low levels of perceived efficacy and either high or low levels of perceived threat.

The chart below shows how EPPM can be used to identify four distinct audience segments with different combinations of efficacy and threat beliefs. Each segment will respond differently to a particular health issue and, so, would need to be addressed with different health message strategies that increase threat perceptions or increase efficacy beliefs.

EPPM AUDIENCE SEGMENTS AND STRATEGIES

	High Efficacy Belief in effectiveness of solutions and confidence to practice them	Low Efficacy Doubts about effectiveness of solutions and about one's ability to practice them
High Threat Belief that the threat is harmful and that one is at-risk	Danger Control People take protective action to avoid or reduce the threat. <i>Strategy: Provide calls to action</i>	Fear Control People are too afraid to act, just try to reduce their fear and feel better. <i>Strategy: Educate about solutions</i>
Low Threat Belief that the threat is trivial and that one is not at-risk	Lesser Amount of Danger Control People know what to do but are not really motivated to do much. <i>Strategy: Educate about risk</i>	No Response People don't feel at risk and don't know what to do about it anyway. <i>Strategy: Educate about risk and about solutions</i>

WHEN SHOULD EPPM BE USED?

EPPM is useful in SBCC campaigns when a health issue poses a real or perceived threat to personal health. For example, EPPM may be more useful in HIV or malaria campaigns where there is a more obvious and immediate disease threat and less useful in a child nutrition campaigns where the threat of malnutrition is less immediately obvious or is longer

term. Communication campaigns using the EPPM framework can help audiences develop realistic risk perceptions and provide realistic and actionable information about how to reduce risk.

It is important to keep in mind that it is the combination of perceived risk and perceived efficacy that causes risk reduction behavior. Fear messages alone without efficacy messages can result in maladaptive Fear Control, rather than protective Danger Control. For example, SBCC campaigns that show the risk and potential negative outcomes of HIV infection should also show individuals how to access services for counseling and testing, what antiretroviral drugs are available, and how to prevent infection if they are HIV negative.

WHAT SHOULD IMPLEMENTERS KNOW?

SBCC programs that use EPPM emphasize efficacy variables rather than the threat variables and provide just enough threat messaging to create motivation to act. If individuals perceive the threat to be higher than their perceived ability to do something about it, then behavior change is unlikely to occur. Thus, it is important to balance messages that encourage individuals to accurately assess their level of risk with messages that empower them to overcome or avoid that risk.

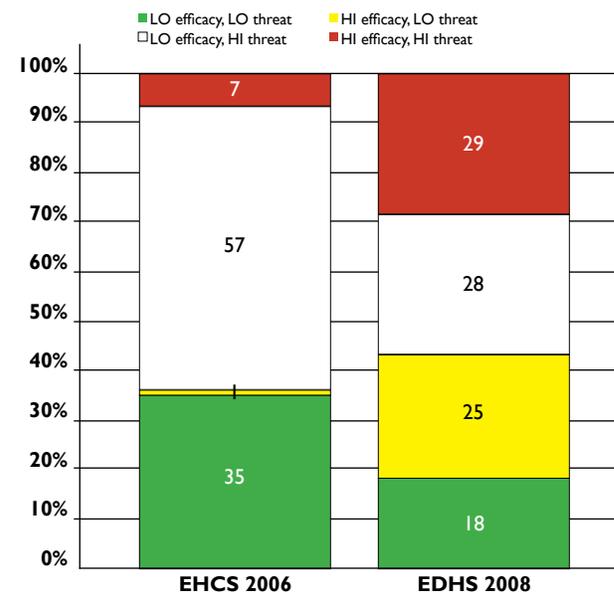
CASE STUDY: Avian Influenza (AI) in Egypt

The Communication for Healthy Living (CHL) project in Egypt took place from 2003-2010. The project's overall goals were to improve health outcomes for a variety of health areas, and to strengthen capacity for health communication programming. When avian influenza (H5N1) reached Egypt in 2006, the CHL project mobilized to implement a national AI communication strategy. This strategy was aimed at containing the spread of disease among animals and from animals to humans by motivating people who raised birds as pets or as a food source to cage their birds safely and to rapidly seek care if symptoms of infection occurred. The EPPM model was used to develop a risk and efficacy behavior change message strategy.

Data from the 2006 Egypt Health Communication Survey (EHCS) and the 2008 Egypt Demographic and Health Survey (EDHS) showed that while individuals' perceived threat posed by avian flu remained high over time, perceived efficacy to deal with the threat increased substantially. As seen in the graph above, the proportion of people in the Low Threat-Low Efficacy category (green) dropped from 35% to 18%, while the proportion of people in the High Threat-High Efficacy (red) category increased from 7% to 29%. This indicates not only an increase in individuals' knowledge of how to protect themselves from avian flu, but also an increase in confidence of their ability to do so. People with better recall of program messages had significantly greater knowledge of actions they could take to protect against avian flu, and were also significantly more likely to be caging birds outside and away from household inhabitants (household risk containment).

The avian flu outbreak in Egypt resulted in a case fatality rate of only 38%, while the global rate was about 60%. It was concluded by the CDC and other partners that this vastly reduced fatality rate was due to safer poultry handling by households and the large number of infected children who were brought in for care early and received prompt treatment.

Change in perceptions of threat and efficacy* among those with birds, 2006-2008



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