Epi 246

Interpersonal Behavioral Theories:Social Cognitive Theory, Information, Motivation and Behavioral Skills Model and Models of Patient-Provider Communication

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Outline of Today's Lecture

I. Applications from Lecture 1 Theories -TPB

II. Social Cognitive Theory (SCT)

II. Information-Motivation-Behavioral skills model (IMB)

IV. Patient-Provider Communication, Functions of Communication, and Motivational Interviewing

TPB in Action-Focus Group Guide

Qualitative Application of the Theory of Planned Behavior to Understand Beverage Consumption Behaviors among Adults Zoellner et al, 2012

Despite strong scientific data indicating associations among sugar-sweetened beverages (SSB) and numerous adverse health outcomes, little is known about culturally specific beliefs and potential individual-level behavioral strategies to reduce SSB intake. The primary objective of this formative study targeting adults residing in rural southwest Virginia was to apply the Theory of Planned Behavior to investigate culturally specific attitudes, subjective norms, and perceived behavioral control constructs related to the consumption of SSB, water, and artificially sweetened beverages. Using a homogenous sampling strategy, eight focus groups were conducted with 54 adult participants who exceeded recommendations of 1 cup of SSB/day. An experienced moderator and co- moderator utilized a semi-structured script, **grounded in the Theory of Planned Behavior**, to execute the focus group. Across all beverages, the most notable themes included taste,, availability/ convenience, habit/addiction, and cost. Health consequences associated with beverages and water-quality issues also surfaced, as well as normative beliefs, including the influence of doctors and peers. The identified themes and subthemes provide critical insight into understanding culturally relevant context and beliefs associated with beverage consumption behaviors and helps inform the development and evaluation of future intervention efforts targeting SSB consumption in the health disparate region of southwest Virginia.

TPB in Action- Focus Group Guide

Opening Questions, Nonspecific Beverages	
	To get us started, I want you to take a look of the paper in front of you. I would like you to look through the pictures of the different beverages and circle the beverages YOU most commonly drink. You can also add any beverages that are not shown on the paper. Also, please take some time to write down any feelings, thoughts, or draw any pictures that come to mind when thinking of these drinks.
Attitude	Tell me about the feelings or thoughts that you associated with the drinks you consume most often.
Subjective norms	Tell me why it is or is not important that you drink the same amount or type of drinks as your friends and family.
Perceived behavioral control	If you wanted to change the drinks you consume most, tell me what would make that hard or easy.
Sugar-Sweetened Beverage—Specific Questions	
	Now, we are going to turn our focus to only the drinks that have added sugar, or sugar-sweetened beverages. This includes regular sodas; energy or sport drinks; juice drinks such as Sunny Delight,[a] lemonade, punch, and Kool-Aid[b]; and sweet tea or coffee with sugar. This does NOT include diet drinks or any drinks sweetened with artificial sweeteners.
Attitude	Let's start with soda, tell me about the good things associated with drinking soda.
	Tell me about the bad things associated with drinking soda.
	Now let's move on to energy or sport drinks. Tell me about the good things associated with drinking energy or sport drinks.
	Tell me about the bad things associated with drinking energy or sport drinks.
	How about juice drinks like lemonade, Sunny Delight, Capri Sun,[b] Kool-Aid. Tell me about the good things associated with drinking these juice drinks.
	Tell me about the bad things associated with drinking these juice drinks.
	And finally, how about coffee and/or tea with added table sugar (not sweetener packets). Tell me about the good things associated with drinking coffee and/or tea with added sugar.
	Tell me about the bad things associated with coffee and/or tea with added table sugar.
Subjective norms	Health professionals recommend that people drink 1 cup or less of sugar-sweetened beverages per day [SHOW PARTICPANTS BEVERAGE MODELS]. Tell me how you feel about this recommendation.
	What would it take for someone to convince you and/or your family and friends that it is important to drink 1 cup or less of sugar-sweetened beverages per day?
Behavioral intention	I want you to tell me about your intentions to meet the drink recommendation of 1 cup or less of sugar-sweetened beverages per day in the next month.
Implementation intentions	If you intend to limit, what would your plan look like? When, where, and what drinks would you limit? (If you already meet the recommendation, talk about your plans to continue to meet this recommendation?)
Perceived behavioral control	What makes it easy to drink 1 cup or less of sugar-sweetened beverages per day?
	What makes it hard drink 1 cup or less of sugar-sweetened beverages per day?
	What would you and/or your family and friends need to help meet this recommendation?

Figure 1. Sample focus group questions[c] grounded in the Theory of Planned Behavior. [a]Sunny Delight Beverages Co. [b]Kraft Foods, Inc. [c]Illustrated questions are meant to be representative of the focus script; they do not represent all the sections or questions within each section.

TPB in Action- Intervention Content

Effect of a Guideline-Based Multicomponent Intervention on Use of Physical Restraints in Nursing Homes A Randomized Controlled Trial –Kopke et al, JAMA 2012

Intervention

A multicomponent intervention was developed based on the guideline, an exploration of best practices, and current research findings. To analyze best-practice strategies, we interviewed head nurses of nursing homes that had few physical restraints in our previous study. The underlying theory of the intervention was the theory of planned behavior, which has been proven useful to explain health professionals' intentions and behavior. Based on earlier work on guideline implementation the intervention aimed to address the 3 main components of the model: **attitudes, subjective norms, and perceived behavioral control.**

TPB in Action- Intervention Content

eTable 2. Components of the intervention

Intervention	Description	Basis of rationale
Declaration	• Declaration confirming the nursing home's dedication to the intervention's objectives, i.e. the avoidance of physical restraints signed by head nurses and/or directors of each nursing home	• Proven strategy in previous studies [2;3]
Structured 90-minute information program for all nursing staff	• Definition of physical restraints • Desired and unwanted effects of physical restraints • Legal aspects of physical restraint use • Guideline development and recommendations • Nurses' subjective attitudes and experiences • Alternative approaches focusing on physical restraints avoidance as most important alternative	• Cochrane review [4] • Theory of planned behavior [5;6] • Acknowledging perceived barriers, current practice culture, concerns, and emotional responses of nursing staff by using different educational strategies, e.g. working with case vignettes and small group work [7;8] • Structured and easy to understand education on guideline content and background [9;10]
External structured 1-day intensive training workshop for nominated key nurses from different nursing homes	• Advanced version of 90-min program • In-depth work with the guideline • Exchange and discussion between key nurses from different nursing homes • Group presentation and discussion of individual barriers and facilitators of physical restraints reduction • Individual discussion of nursing homes' prevalence data • Individual discussion of results of nurses' knowledge and self efficacy assessment after information program for nursing staff • Development, presentation and documentation of nursing home specific agendas of physical restraints reduction	• Key nurses to support reduction of physical restraints [11-13] • All aspects referred to in the above box
Structured support for key nurses	• Key nurses received diaries to document activities and problems of daily intervention's implementation • In the first three months of the intervention, project staff contacted key nurses monthly via telephone or in person to discuss important issues and offer advice	• Key nurses to support reduction of physical restraints [11-13]
Practice guideline	• Provision of one printed version of the guideline for each key nurse and for the nursing home's head nurse	• Guideline implementation recommendations [9;10]

TPB in Action- Intervention Content

Effect of a Guideline-Based Multicomponent Intervention on Use of Physical Restraints in Nursing Homes A Randomized Controlled Trial –Kopke et al, JAMA 2012

RESULTS At baseline, 30.6% of control group residents had physical restraints vs 31.5% of intervention group residents. At 6 months, rates were 29.1% vs 22.6%, respectively, a difference of 6.5% (95% CI, 0.6% to 12.4%; cluster-adjusted odds ratio, 0.71; 95% CI, 0.52 to 0.97; *P*=.03). All physical restraint measures were used less frequently in the intervention group. Rates were stable from 3 to 6 months.

Learning Objectives

1. Understand components of Social Cognitive Theory

2. Understand components of Information-Motivation-Behavioral skills model

3. Understand models of Health Communication and how functions relevant to health communication relate to diverse theories

4. Understand examples of applying components of the presented theories to health-related behaviors and health communication strategies in intervention development

II. Theories and Models Related to Interpersonal Behavior and Behavior Change

- **Interpersonal health behavior theories** such as Social Cognitive Theory fall within social influences on health, yet are delineated from social support and social networks.

- Can be in family, friends, peers in intimate and/or informal settings or in more formal settings, such as clinical settings for patient-provider communication, communication among clinicians in clinics and hospitals, teachers and students in variety of settings – takes into account proximate environment, but not structural/systems factors.

- For patient-provider communication specifically, there are many theories that relate to specific functional components of communication (e.g. patient activation, shared decision making, communication competence).

Social Cognitive Theory (formerly Social Learning Theory)

- SCT is a learning theory used in many settings
- *Used to explain behavior*: we learn from experience, observation, and symbolic communication >> we apply this learning to shape the environment we are in, as well as respond to it, and become adaptable to changes in it
- *Used for health behavior change interventions:*

  -- Patient-provider communication re cancer pain, HIV prevention programs, self-management for diabetes patients, contraceptive/condom use, adult education programs focused on community health problems, action planning/health coaching, breast-feeding continuation, preventive oral health

Social Cognitive Theory

Concept	Definition	Application
Reciprocal Determinism	Behavior changes result from interaction between person and environment; change is bi-directional	Involve the individual and relevant others; work to change the environment/influence attitudes
Behavioral Capability	Knowledge and skills to influence behavior	Provide information and training about action
Expectations	Beliefs about likely results of action	Model positive outcomes of behavior
Self-Efficacy	Confidence in ability to take action and persist in action	Point out strengths; use persuasion and encouragement; approach behavior change in small but specific steps
Observational Learning	Beliefs based on observing others like self and/or physical results	Show others' experience; identify credible role models to emulate
Reinforcement	Responses to a person's behaviour that increase or decrease the chances of recurrence	Provide praise; encourage self-reward; decrease possibility of negative responses that deter positive changes

Social Cognitive Theory Self-Efficacy Applications

Concept for Promoting Self-Efficacy	Application
Mastery Experience	Enable person to succeed in increasingly challenging performance Patient activation
Social Modeling	Showing that others like them can do it
Improving Emotional and Physical States	Improve context in which new behaviors are undertaken
Verbal Persuasion	Encouragement>> boost confidence

Glanz K, Rimer, B, Viswanath, Health Behavior and Health Education 2009

CASE STUDY: Application of SCT to a Tailored Intervention Focusing on Patient Activation for Cancer Pain Control

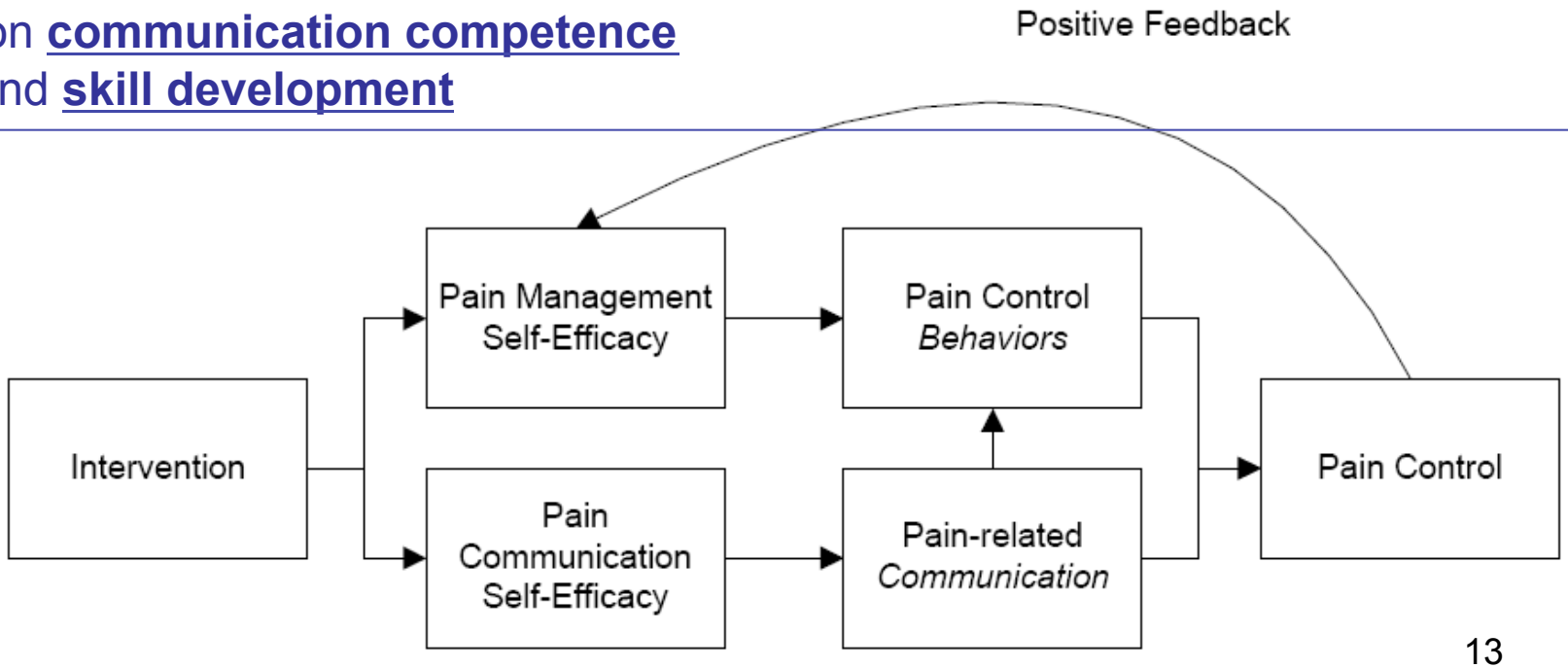
Conceptual Model – Ca-HELP

-Began with interest in patient activation

specific for **participatory decision making about cancer pain management**

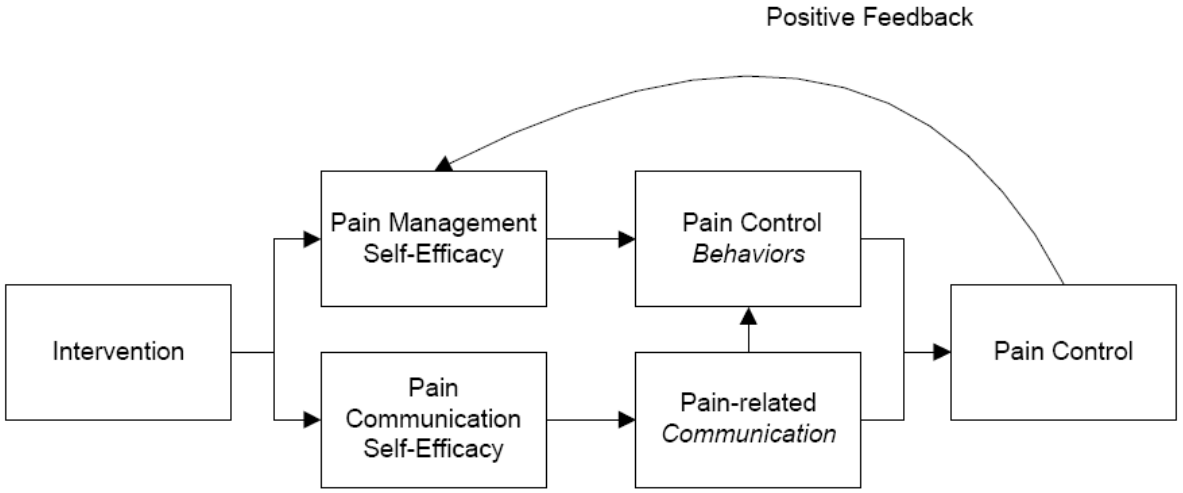
- Informed by SCT to frame the tailored education intervention

Focus on **communication competence** and **skill development**



Street et al 2010; Kravitz RL et al, 2009

Example: Application of SCT to a Tailored Coaching Intervention Focusing for Cancer Pain Control



<u>Premise:</u> Identifying behavioral mediators of cancer pain severity may lead to more effective coaching interventions for improving cancer pain control.

<u>Results:</u> Among cancer patients enrolled in a randomized coaching trial, post-intervention pain control communication self-efficacy was sig. higher, as was short-term reductions in pain related impairment, but not pain severity.

Results suggest importance of social context around pain management and of clinicians receptivity and skills to solve problems brought up by patients.

Street et al 2010; Kravitz RL et al, 2009

CA-HELP Application of Social Cognitive Theory

Concept	Specific Focus	Application*
Reciprocal Determinism	Behavior changes result from interaction between person and environment; change is bi-directional	**Patient activation can change the communication environment and thus change the provider's behavior and also patient's pain control self-efficacy**
Behavioral Capability	Knowledge and skills to influence behavior	**Increase capacity to talk about pain-knowledge and skills AND adaptability**
Expectations	Beliefs about likely results of action	**Increase ways to see positive outcomes of behavior (knowledge/overcome barriers)**
Self-Efficacy	**Both for communication about pain and ability to manage the pain effectively**	**Lay health educators with coaching model: practice skills, older population**
Observational Learning	Beliefs based on observing others like self	**Show others' experience; identify credible role models to emulate**
Reinforcement	Responses to a person's behavior that increase or decrease the chances of recurrence	**Lay health educators with coaching model: Portray how they want to communicate to reinforce the communication skills**

*Using the ACT-PREP Paradigm: ASSESS,CORRECT,TEACH,PLAN,REHEARSE,PORTRAY

Social Cognitive Theory Self-Efficacy Applications

Concept for Promoting Self-Efficacy	Application
Mastery Experience	Enable person to succeed in increasingly challenging performance Patient activation
Social Modeling	Showing that others like them can do it
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Glanz K, Rimer, B, Viswanath, Health Behavior and Health Education 2009

Example: Theory-Based Interventions for Contraception

Cochrane Review, 2013

Table 3. Theoretical basis

Study	Theory or model	Principles or constructs
Barnet 2009	Transtheoretical model; motivational interviewing; social cognitive theory (parenting curriculum from Black 2006)	stage of change, intentions, behavior; risk, motivation, change
Berenson 2012	Health belief model	cues, perceived risk, impact (consequences), benefits of action
Black 2006	Social cognitive theory	skills, cultural norms, goal-setting, self-efficacy, modeling, family support and mentoring relationships
Boyer 2005	Information Motivation Behavioral Skills Model	knowledge, attitudes, skills (communication and condom use), risks, decisions
Cowan 2010	Social learning theory Program for out-of-school youth reportedly based on stages of change model	School curriculum from Ross 2007; societal norms, self-belief, risk, skill development, social support
Coyle 2001	Social cognitive theory, social influence theory; models of school change	knowledge, self-efficacy, communicate, perceived risks and barriers, perceived peer norms; school organization, staff development, school environment, parent education
Coyle 2006	Social cognitive theory, theory of reasoned action, and theory of planned behavior	knowledge, attitudes, norms, self-efficacy, sense of vulnerability, risk, skills
Floyd 2007	Motivational interviewing; Transtheoretical model	client-centered, decisional balance, readiness to change, goal statements and change plans, personalized feedback, problem-solving, commitment to change
Ingersoll 2005	Motivational interviewing	risk behavior; exercises (decisional balance, development of goal statements and change plans); feedback using "elicit-provide-elicit strategy."
Kirby 2010	Motivational interviewing	careful and nonjudgmental listening, summarizing, expressing empathy; perceived advantages and disadvantages of behavior change, behavioral expectancies, perceived barriers, reinforcement

Cochrane Review, 2013

Example:Theory-Based Interventions for Contraception

In looking at interventions to impact contraceptive use (N=17):

Preventing pregnancy- two studies:
Theory-based group was less likely than the comparison group to have a second birth or to report a pregnancy -SCT

Contraceptive use (non-condom)- 12 studies: Six showed some effect. Theory-based groups more likely to: consistently use oral contraceptives, hormonal contraceptives or dual methods. HBM, SCT, and motivational interviewing used (MI).

Condom use-11 studies: theory-based group had favorable results in 5 of 11 trials. More consistent/last condom use. SCT, SCT plus another theory, and HBM.

2 of 4 with motivational interviewing had good results

Cochrane Review, 2013

Social Cognitive Theory

SCT goes beyond individual factors in health behavior change to include environmental and social factors, and thus goes beyond 'mechanistic' views of human behavior. Widely applicable and linkable with communication theories.

However, critiques focus on:

(1) implication that 'social environment' enables free choice and self-efficacy to be fulfilled; and

(2) view that broader socio-ecological models may better represent the *multi-dimensional* nature of environments

Burke et al, 2009

III. Information-Motivation-Behavioral skills (IMB) Model

Premise: Combining information, motivation, and skills creates capacity for health behavior change. Framed around skills within social settings and peer/intimate contacts. Applied in HIV and increasingly in diabetes care and other skill-based illness management settings.

- INFORMATION- directly relevant to prevention and applicable in social settings
- MOTIVATION- individual motivation for behavior and social motivation (as when social supports/validation) anticipated
- BEHAVIORAL SKILLS/self-efficacy re specific prevention skills

  **Emphasis on communication and negotiation skills.

J Fisher et al 2003

Information-Motivation-Behavioral skills (IMB) Model

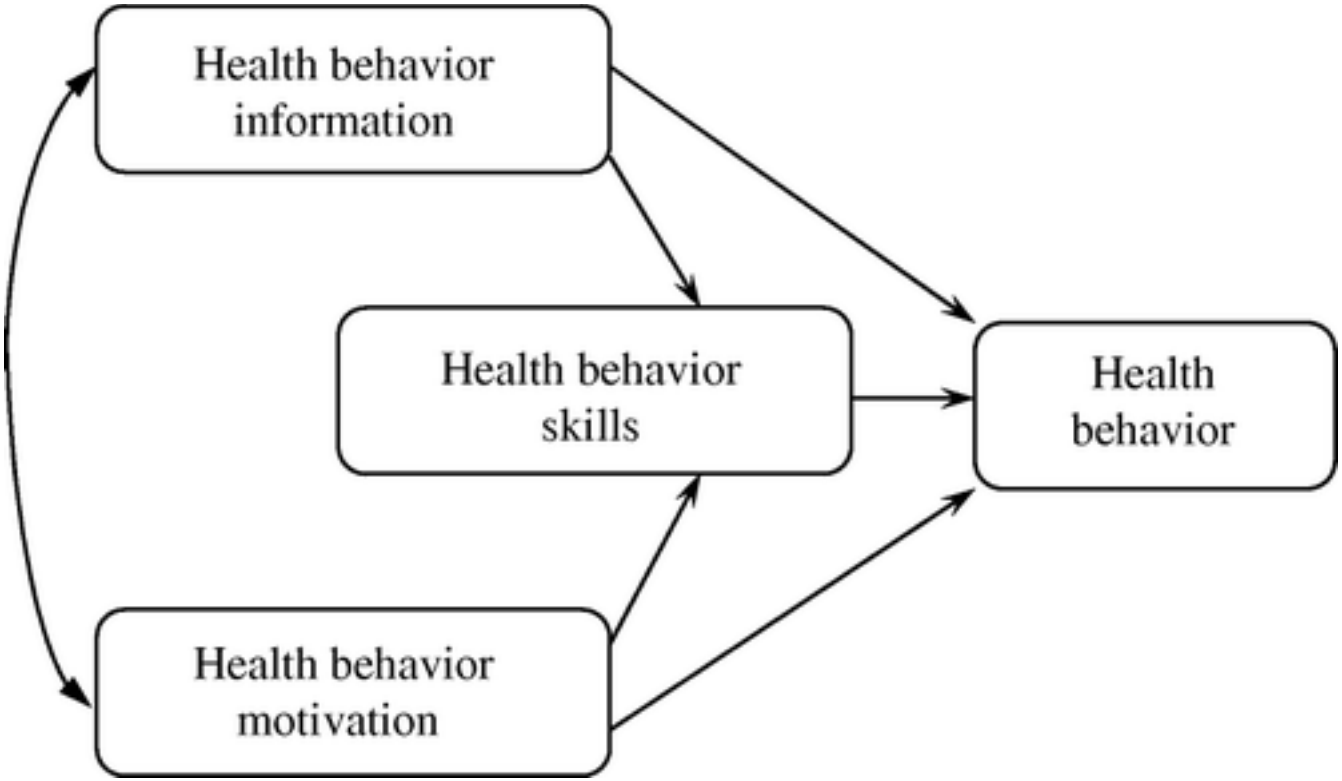


Figure 1. Information–motivation–behavioral skills model of health behaviors (J.D. Fisher & Fisher, 1992; W.A. Fisher et al., 2003, 2009).

J Fisher et al 2003

Case Study: Male Motivator Project Malawi

IMB-based intervention developed and delivered by Save the Children based on awareness that men are not coming to discussions about family planning with understanding of methods, pros and cons, and communication skills.

First application of IMB-model to males re contraceptive involvement with peer educators

Examined model components

Communication within couples was shown to be the only significant predictor of contraceptive uptake

Shattuck D et al, AJPH 2011

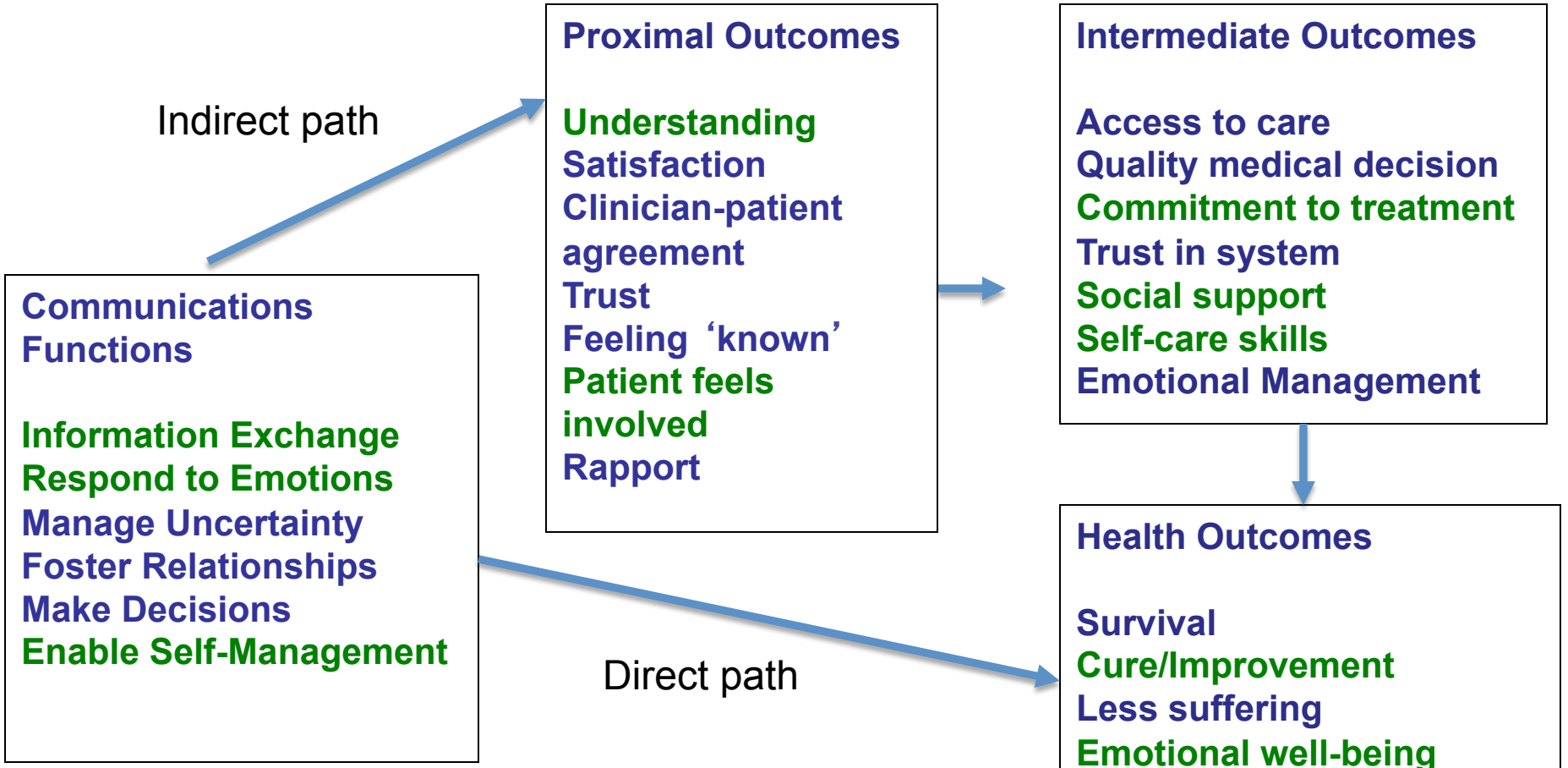
IV. Health Communication in the Context of Patient-Provider Communication

- ‘Good communication’ improves health outcomes, but there is no single theory to what good communication looks like
- Focus on the functions/pathways that could improve health via improved health communication, with particular focus on patient-providers communication
- ‘Patient-centered’ approach/paradigm

Health Communication in the Context of Patient-Provider Communication

Direct and indirect pathways from communication to health outcomes. Adapted from Fig.11.1 from Glanz, Rimmer, Viswanath, 2008

Health Communication in the Context of Patient-Provider Communication for Diabetes SMS



Possible direct and indirect pathways from health communication to health outcomes using ATSM Diabetes Self-Management Program. Schillinger et al. 2007. 2009. Ratanawongsa et al 2012.

Examples of Models and Measures of Patient Centered Communication

Communication Functions	Theoretical Constructs
Decision-Making	
"How are decisions made? What factors are most important?"	Social norms, attitudes, behaviors, self-efficacy
Team Care Decisions and Uncertainty about Decisions	
"When is input from teams sought and when do independent decisions get made?"	Communication in health care teams and related decisions around uncertainty

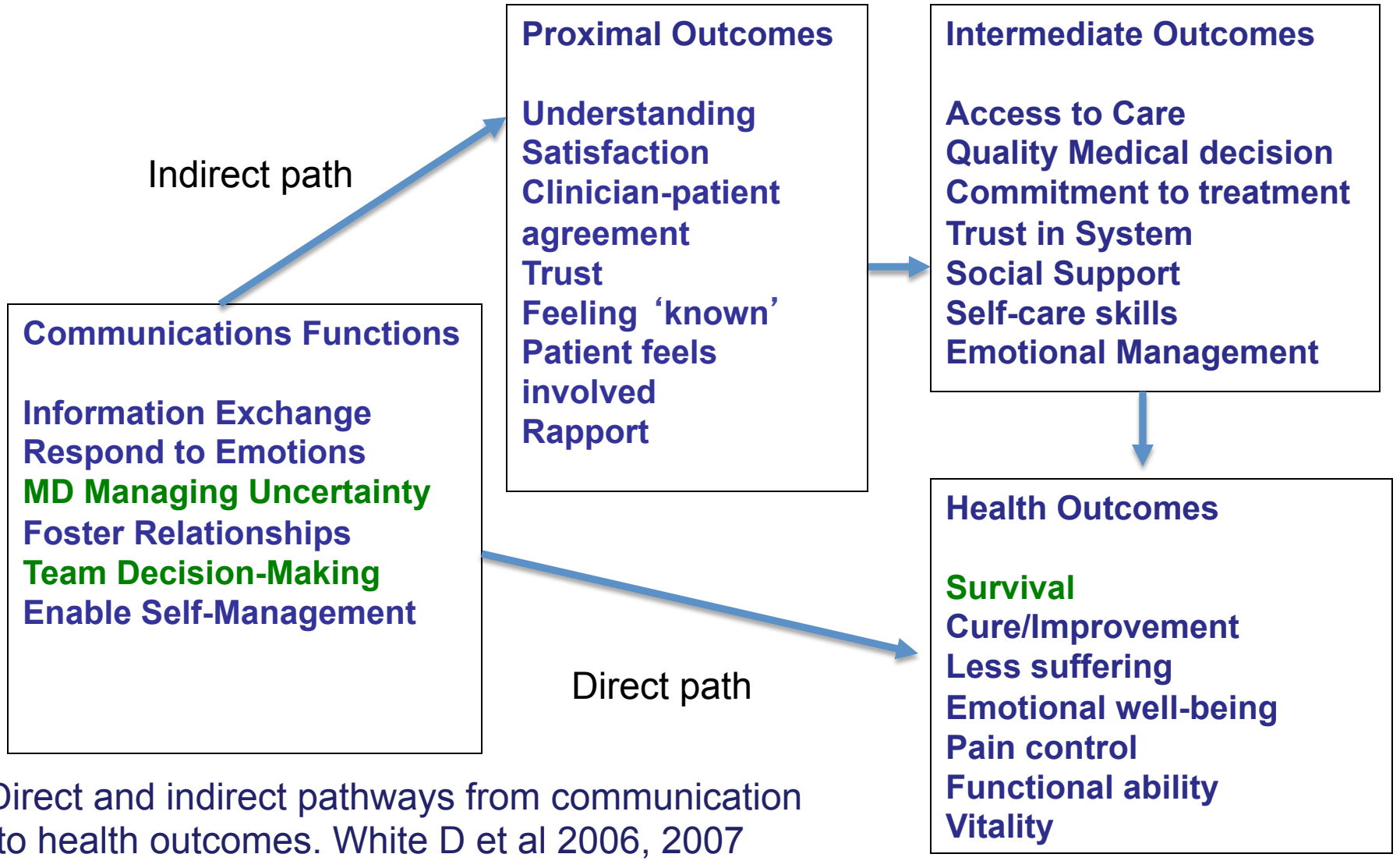
Health Communication in the Context of Interpersonal Communication in the ICU

- Decision-making in ICU when no surrogates- Unexplored area, began with descriptive epidemiology linked to descriptive communication and behavioral processes of decision-making
- Included elements of HBM, TPB, SCT

  self-efficacy to make decisions, influence of peers/ others in the hospital, relationship to guidelines and cues to action re legal concerns
- Led to larger studies, ethical review project, current policy work on task force for the Am Thoracic Society

White D, et al 2006. White D et al, 2007. Annals Int Med 2007.147:34-40.

Health Communication in the Context of Interpersonal Communication in ICU



Direct and indirect pathways from communication to health outcomes. White D et al 2006, 2007

'Moderators' of Clinician-Patient Communication Outcomes

Age Personality Education Race Gender Language Family Structure	Health Literacy Self-efficacy Emotions Perceived Risk Social Distance Clinician Attitudes Representations of Illness Patient Preferences
Cultural Values Type of Disease	Family Functioning Social Support Access to Care Disease Progression

What about Motivational Interviewing?

Motivational interviewing is a collaborative, person-centered form of guiding to elicit and strengthen motivation for change"

- Often described as a model or theory, but is more of a successful counseling approach in search of a theory
- Effective in reducing 'maladaptive' behaviors, primarily alcohol and substance abuse, but also in promoting 'adaptive' behaviors (diet, med. adherence)
- Evidence reviews suggest fidelity important
- Not based on Transtheoretical Model, which is intended to provide a comprehensive conceptual model of how and why changes occur (stages). The implicit underlying theory of MI is only now being explicated, and is not intended to be a comprehensive theory of change. -Miller W and Rollnick 2009

What about Motivational Interviewing?

- “Resistance” and motivation occur in an interpersonal context.
- The assumption here is that people truly do have wisdom about themselves and have good reasons for doing what they have been doing.
- MI is about evoking that which is already present, not installing what is missing.
- **The curious paradox is that when I accept myself just as I am, then I can change. —CARL R. ROGERS**

- Miller, William R.; Rollnick, Stephen. Motivational Interviewing, Third Edition: Helping People Change (Applications of Motivational Interviewing). Guilford Publications. 2012