

Position Papers

Health Psychology: Past, Present and Future

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Has health psychology come of age? In what direction is it moving? My response to these questions reflects 49 years of health research and the current focus of our NIA funded Center for the Study of Health Beliefs and Behavior. The center's goal is to develop interventions to improve quality of care for chronic illness. Framing our work around quality of care has raised the following questions:

- 1) Are we conducting applied research that translates existent behavioral theory and findings into the clinical setting?
- 2) Are intervention studies, or clinical trials, applied studies while descriptive modeling is basic, "causal" analysis?
- 3) Are we too focused on individual psychology when using concepts and findings from self management of chronic conditions in designing intervention trials?
- 4) Are psychologists equipped to assist patients in implementing behavioral changes for chronic illness management?

I believe that a qualified "No" is the answer to these questions.

A succinct overview of our prior research illustrates the source for these answers. Our health research began in two areas: 1) translation of utility theory, the Health Belief Model (HBM), to seeking inoculation during the 1957 influenza epidemic; and 2) communication studies that translated the learned fear model to the adoption of protective behaviors; e.g., tetanus inoculations, smoking cessation, etc. These were followed by studies on preparation for noxious medical examinations. Our approach in the fear and preparation studies was experimental; participants were randomly assigned to communications with specific and varied contents.

A look back clarifies what we learned and failed to learn from these studies. First, the HBM study showed that direct questions on illness perception, e.g., "How likely do you think it is that you will get the flu?" do not tap the perceptual beliefs that shape behavior. Instead these beliefs were exposed by questions that tapped the concrete cues that elicit risk perceptions. Second, we learned that fear and the cognitions involving perceptions of risk were processed as two parallel, largely independent, interacting systems. Third, we learned that protective action required both the perception of threat and an action plan to convert the perception to action. Action plans had participants specify when, where and how they would take the initial steps toward self protection. Once formed plans were executed automatically.

What didn't we learn? First, we knew nothing about the substance of the perception or representation of risk: our advantage was that we were aware of what we didn't know. Second, although we knew that many factors biased verbal reports of risk resulting in their lack of correlation with risk reducing behaviors, we did not fully appreciate the source for the dissociation. Our studies suggested that the pathway from the underlying cognitive/ affective mechanisms to verbal estimates of risk was different from the pathway to the perceptions of threat that stimulate action. Verbal responses did not predict action because the questions did not elicit the perceptual cues that activated the schemata underlying both perceived risk and risk reducing behaviors. Third, we did not appreciate the magnitude of the gap between our findings and clinical application. Only the findings on preparation were widely adopted in practice settings because their conceptualization and implementation were simple.

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Howard Leventhal's Common Sense Self-Regulation Model has been amongst the most influential theoretical approaches in health psychology. He is member of the editorial board of the *Journal of Health Psychology* and he was associate editor of *Health Psychology* and co-editor of *Psychology & Health* and the *International Review of Health Psychology*. He gave a keynote address to the EHPS in 2001.

In the 1980s we began to address the most clearly recognized area of our ignorance by examining how patients interpreted symptoms and constructed the "Common-Sense Models" (CSM) that underlie both perceived risk and action for risk reduction. Information from practitioners, friends, family, and mass media feed into the interpretive processes that create the representations that are identified by their labels and symptoms, time-lines, perceived causes and consequences, and perceptions of control. Each facet of the representation is both concrete or perceptual and abstract or propositional. Moreover each level can influence the selection of procedures for threat control and provide targets for evaluating outcomes; e.g., hypertensive patients evaluated medication by observed symptom reduction although the symptoms were unrelated to blood pressure and stopped taking medication if it did not remove symptoms. Patients also develop representations of treatment; treatments have names, perceived causal routes of action, expectations regarding efficacy, time-frames for action, and consequences (side effects). Action plans, specific times and places for implementing treatment, link both the representations of illness and treatments to performance.

As the desire to create and disseminate procedures for enhancing quality of care was a primary objective for our center we asked whether we could create and test interventions to improve health outcomes by combining what we had learned about the self management process with what others have found in studies of self efficacy and cognitive behavioral therapy. Answering "Yes" would define our task as the translation of existent theory and method into the practice setting; a task of implementation. The medical members of our team argued against that approach, stating that many patients do not adhere to prescribed behaviors that are well within their competence. Although patients believe they are competent, they do not adhere as they fail to see a rationale for doing so. Second, the senior clinician of our team has used the CSM in her practice to address problems of treatment adherence, emotional distress and depression, and encouraging family members to assist chronically ill patients with their daily activities. She and clinicians like her listen to patients' complaints and observe their behaviors to fulfill two tasks: 1) to select tests for differential diagnosis of disease; and 2) to detect the clues useful for inferring the representations of disease and treatment that underlie patients self management. The clues they attend to are the heuristics or "rules of thumb" used for assigning meaning to aches and pains, rashes, tremors, falls, dizziness, memory lapses, moles, lumps, etc. When a patient presents with chest pain, the physician who is expert in the evaluation of common sense thinking knows that location has activated the patient's underlying schema and expectations of cardiovascular disease. The practitioner can anticipate other symptoms and fears of lack of control, and perceptions of cause, e.g., stress. The evaluation of the model is the first step toward intervention. The clinician has three tasks: diagnosis and prescribing treatment, identifying the underlying schema, and supportive listening. The three legs of clinical practice, followed by appropriate sharing of the diagnosis of the medical and common-sense model, provide the platform for behavioral interventions.

By assessing patients' common-sense representations the clinician brings psychological concepts from the laboratory to the clinical setting, and by identifying new rules of thumb for our dictionary of heuristics and showing us how to use this information when communicating with patients brings new concepts from the clinic to the laboratory. The act of inferring patients' representations, which are only partly conscious and not fully understood provides an opportunity for the study of social perception and theory of mind. Translation is now bi-directional.

The bi-directional paradigm revised our view of clinical trials. They are no longer applied tests of the efficacy of existent procedures but experimental tests of causal hypotheses. Experimental trials are the best way to understand how information processed in the dyadic setting can lead to agreement on illness, treatment, and

behavioral changes that improve medical outcomes. As patients may present varied physical complaints for the same disease at different points during the encounter, a flexible coding system is needed to validate the implementation of model components in response to these complaints. The clinician's response must mesh with the flow of the encounter rather than follow a rigid sequence defined by behavioral concepts imported from the laboratory.

The bi-directional paradigm concurs with the Bayesian statisticians who argue that clinicians, psychological and biological scientists must be full partners in the design and evaluation of trials. But what is the role of the psychologist in treatment? We suggested that the physician is at the heart of the intervention; she establishes the mutual understanding for self management, may expand the dyad to the triad of physician, patient, and family member. This mutual understanding is a platform for the acquisition of valid representations and skills for expert self and self and family management; for some patients it may be enough. Nurses and nutritionists will provide additional counseling when needed and psychologists will conduct cognitive behavioral therapy for the few patients who are severely depressed. These additions create a stepwise program that can improve disease management if patients understand the relationship among the components. For example, patients need to understand that the CBT for depression accompanying severe physical illness is an integral part of illness management as the two are linked, disease having a negative impact on function and mood and the latter two a negative impact on disease. In the absence of an integrated framework and an integrated treatment team, changing one side of the equation may have no effect on the other.

The bi-directional paradigm that we are developing for our quality care initiative differs from the view of many psychologists who suggest that translation is from the psychological laboratory to the clinic. They complain about lack of funding for social research (Markus, 2004) and the failure of NIH divisions to fund behavioral studies (Kraut, 2004). The results of the working group trial on diabetes prevention (2002) can support their belief in the need for behavioral research. It showed that changing life style was more effective than drugs in reducing the percentage of individuals who transitioned from pre diabetic to diabetic state in comparison to usual care controls (58% vs. 32%). Using evidence from the trial poses risk however, as the behavioral interventions it brought from laboratory to clinic were very complex, costly and not replicable in clinical settings. Physicians, fully aware of these findings and believing that less can be more, prefer to prescribe drugs. The resistance to funding and the prescribing of behavioral changes reflects a fundamental problem with current behavioral research and interventions; they are based on translation from the laboratory to the clinic, lack the conceptual content related to the dynamics of patient behavior, and are far too complicated and expensive to improve quality care. Effective translation requires a bi-directional model that introduces and integrates concepts from clinic and laboratory.

References

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