

Personal Health Schema and Cancer Testing Behaviors

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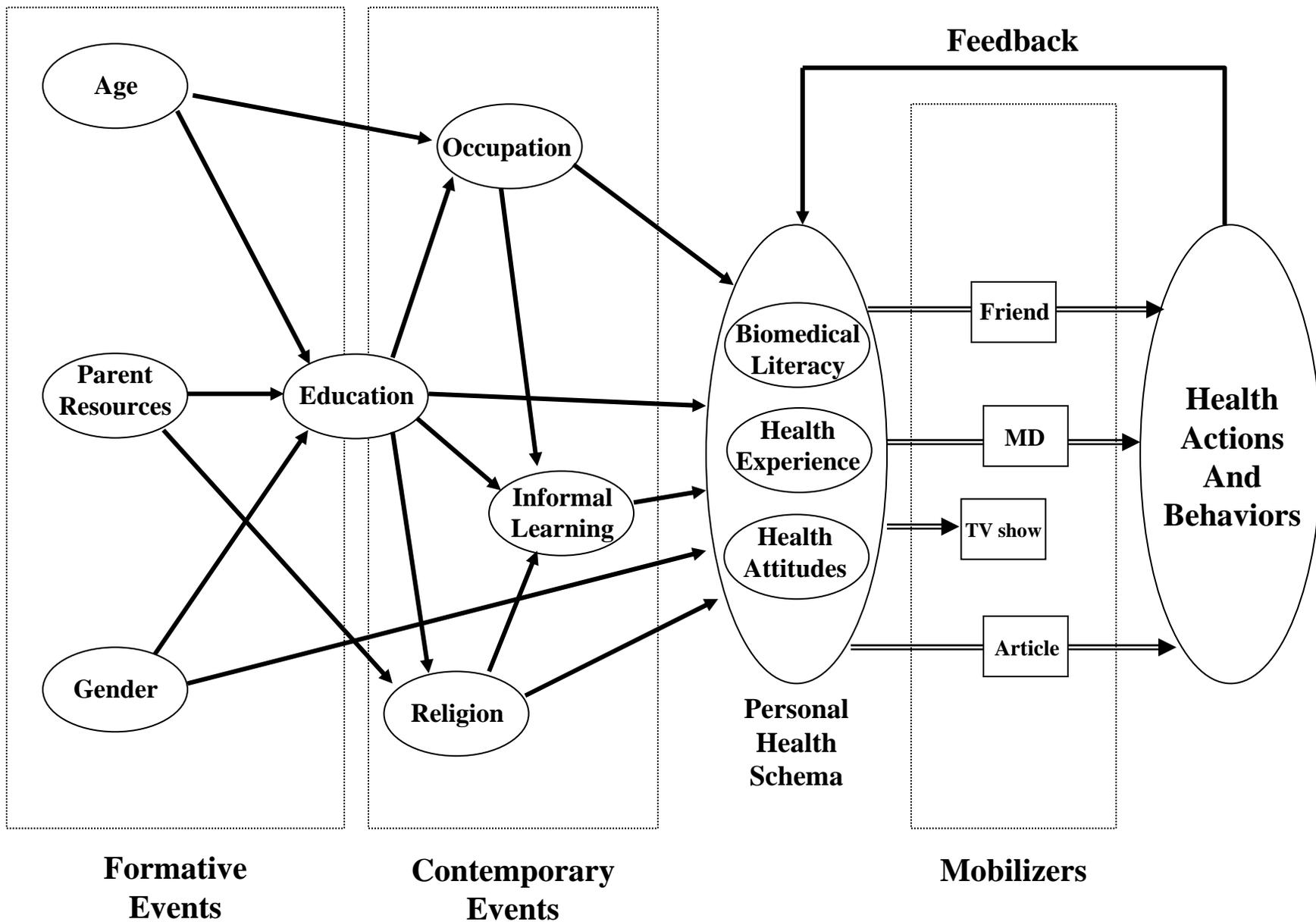
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In a recent book – Biomedical Communications – we described a model of biomedical communication that:

- incorporates a life cycle perspective, seeking to understand the retained information, attitudes, and experiences of the pre-adult years
- recognizes cumulative experiences as an important influence on current attitudes and behaviors
- uses schema theory to understand short-term interactions between knowledge, experience, and current attitudes
- examines the linkage between a schema and subsequent behaviors

A general model of biomedical communication



A personal health schema is a construct that refers to the organization and structuring of:

- Knowledge: constructs, words, images. (a.k.a. health literacy)
- Personal health experiences: illnesses, treatments, outcomes.
- Indirect health experiences from television, newspapers, magazines, television, books, Web sites, movies, and friends.
- Existing attitudes toward health, illness, and health services.
- External realities: access to and quality of health services, transportation, and environmental quality.

Measurement of Personal Health Schema Using the HINTS Data:

Knowledge about Cancer -- Counts the number of things people mentioned as a means of reducing their chances of getting cancer (CK4).

Measurement of Personal Health Schema Using the HINTS Data:

Previous Health Experiences – characterizes the respondent's previous experiences with health care providers, including how often health care providers (HC4):

- (1) Listen carefully to you.
- (2) Explain things in a way you could understand.
- (3) Show respect for what you had to say.
- (4) Spend enough time with you.
- (5) Involve you in decisions about your health care as much as you wanted.

Measurement of Personal Health Schema Using the HINTS Data:

Health Attitudes were measured by TWO separate constructs:

Perceived personal risk of specific cancers sums:

- (1) How likely do you think it is that you will develop [type] cancer?
- (2) Compared to the average [man/woman] would you say you are more likely, less likely, or about as likely to get [type] cancer?
- (3) How often do you worry about getting [type] cancer?

Measurement of Personal Health Schema Using the HINTS Data:

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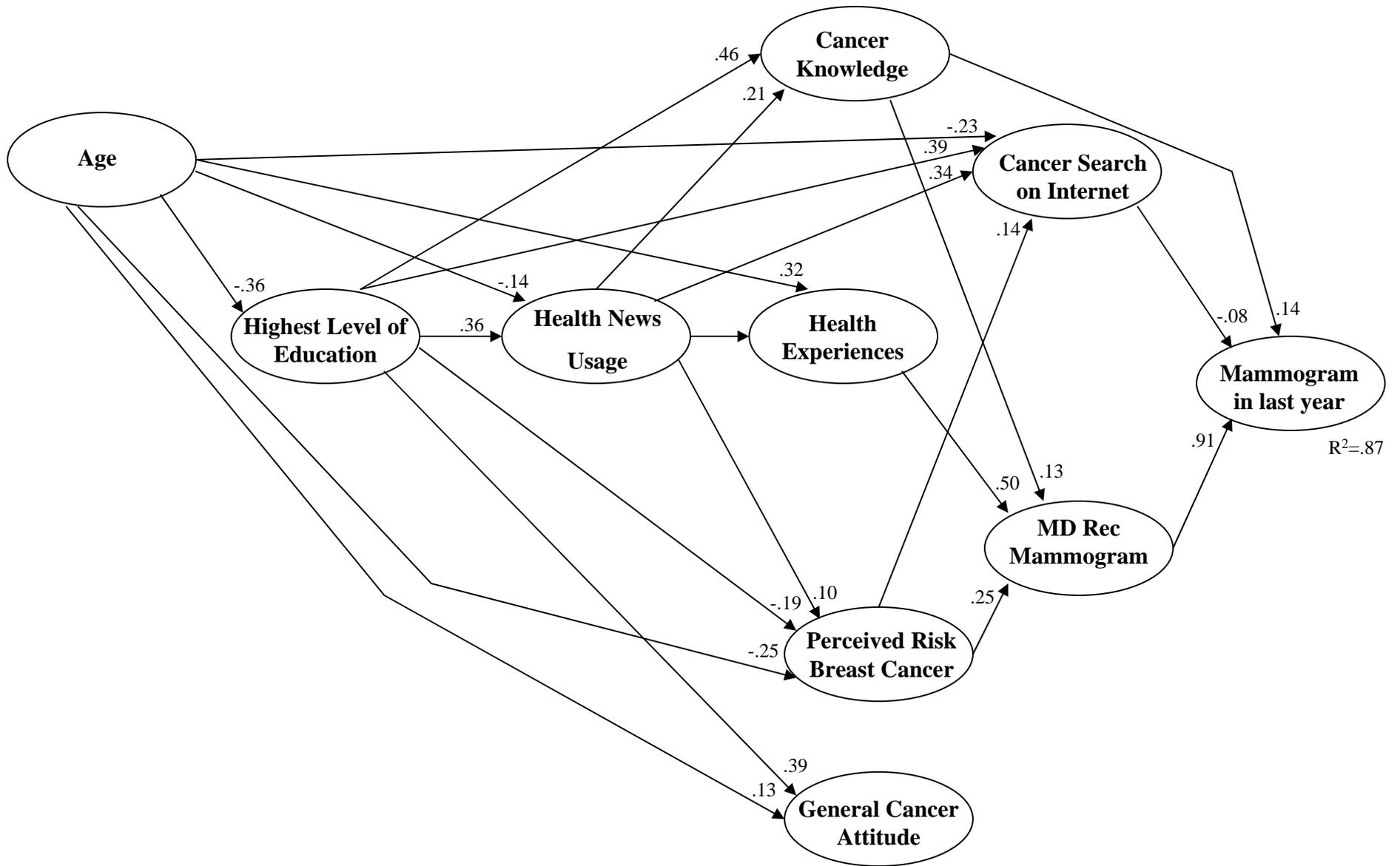
General attitudes about cancer combines (CK14):

- (1) It seems like almost everything causes cancer.
- (2) There's not much people can do to lower their chances of getting cancer.
- (3) There are so many different recommendations about preventing cancer, it's hard to know which ones to follow.

Outcome Measures

- (1) Having a mammogram in the last year (women over 40)
- (2) Having a PSA test in the last year (men over 50)
- (3) Having a colonoscopy in the last ten years or a flex sig in the last five years (women and men over 50)

Structural equation modeling was used to test each of the three models, using LISREL 8.54.



Total Effects of Selected Factors on Having Test for Breast Cancer

Factor	Effect
Age	.04
Highest level of education	.12
Use of health news	.19
Personal Health Schema	
Cancer knowledge	.26
Experiences with health care	.46
Perceptions of personal risk	.21
General attitudes about cancer	.00
Mobilizers	
Web search for cancer information	-.08
Doctor recommendation	.91
R²=.87	

Total Effects of Selected Factors on Having Test for Prostate Cancer

Factor	Effect
Age	.35
Highest level of education	.51
Use of health news	.26
Personal Health Schema	
Cancer knowledge	.24
Experiences with health care	.41
Perceptions of personal risk	.18
General attitudes about cancer	.00
Mobilizers	
Web search for cancer information	.00
R²=.65	

Total Effects of Selected Factors on Having Test for Colon Cancer

Factor	Effect
Age	.17
Gender (female)	-.08
Highest level of education	.39
Use of health news	.31
Personal Health Schema	
Cancer knowledge	.22
Experiences with health care	.18
Perceptions of personal risk	.17
General attitudes about cancer	.00
Mobilizers	
Web search for cancer information	.52
R²=.45	

Directions for Future Research

In future analyses we will examine:

- an expanded version of health experiences including such factors as the number of physician visits weighted by the quality of the visits
- health behaviors and outcomes such as smoking, BMI, and exercise
- current health status
- An enhanced version of cancer knowledge

We would recommend that future versions of the HINTS include the measurement of:

- biomedical literacy
- attitudes about cancer clinical trials
- family history/experiences with cancer

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