Cognitive Abilities and Coping Strategies in Chronic Health Conditions: A Pilot Study

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Purpose and Specific Aims

Purpose: to promote adaptation and health in persons with chronic health conditions

Specific aims:

- To determine whether or not there is a relationship between cognitive abilities and coping and adaptation processing used by persons dealing with chronic health conditions
- To determine the specific cognitive abilities that relate to given patterns of coping and adaptation processing in a sample of persons dealing with chronic health conditions

Significance and Background

Significance: The number of persons who live their lives adjusting to chronic health conditions makes work in this area important. Chronic conditions range from sensory changes in the elderly, juvenile diabetes, and recovering from cancer at any age, among others; approximately 50% of the US population has one or more chronic illness (Institute of Medicine, 1991)

A key gap in the literature is a focused definition and measurement of the major variables of cognitive abilities and coping. Although both are widely studied, few studies have a strong theoretical basis for conceptual and empirical definitions. Relating specific theory-based concepts and measurement of cognition and coping is a real need identified by leading authors in psychology and nursing. Understanding of these variables and their relationship can provide the basis for planning and testing cognitive nursing interventions to promote adaptation to chronic health conditions.

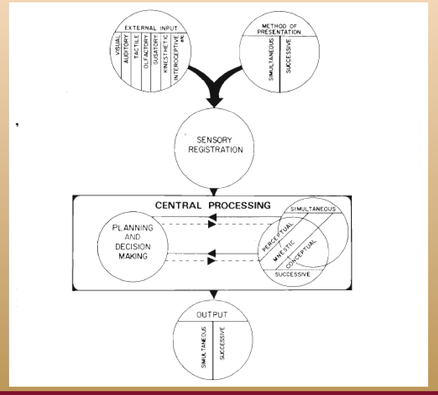
The background for this study includes the established belief that human cognitive abilities throughout the life span are the key resource whereby people process and handle their world

Method

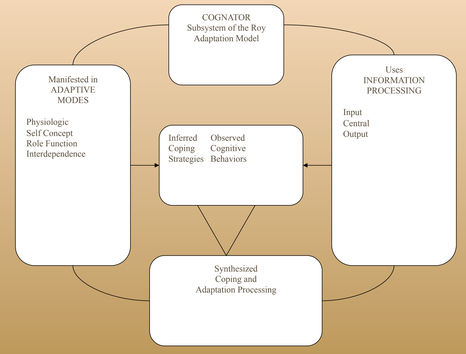
To explore the relationship between cognitive abilities and adaptive strategies used to cope with chronic health conditions,

- A correlational design is used in which 34 persons with chronic sensory and motor difficulties are tested for cognitive performance and for adaptation processing
- Specific data analyses will address each of the research questions

Cognitive Abilities Framework



Middle Range Theory of Coping and Adaptation Processing



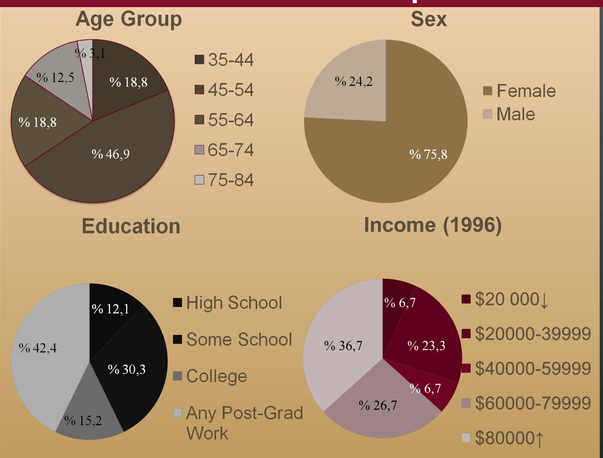
Measurements

Theoretical Cognitive Functions	Empirical Definitions – Measurement tools
Simultaneous Processing – brain processes information at same time	Figure Copying Memory for Designs
Successive Processing – brain works to put things in order	Free recall Strings
Planning – brain thinks and carries out ideas	Trail-making A Trail-making B

Coping and Adaptation Processing Conceptual Definition	47 item Likert Scale with 5 Subscales
The patterning of innate and acquired ways of taking in, handling, and responding to a changing environment in daily situations and in critical periods that direct behavior toward survival, growth, reproduction, mastery, and transcendence.	• Resourceful and focused • Physical and fixed • Alert Processing • Systematic processing • Knowing and relating

Results

Characteristics of Sample



Correlation Table

	CAPS	Cog Ab.	Simultaneous	Succecive	Planning	Age
CAPS	1	-.190	.128	-.097	-.292	-.321
Cog Ab.	-.190	1	-.146	263	.908**	.228
Simultaneous	.128	-.146	1	.084	-.338	-.264
Succecive	-.097	263	.o84	1	.038	-.267
Planning	-.292	.908**	-338	.038	1	.385*
Age	-.321	.228	-.264	-.267	.385*	1

**Correlation is significant at the 0.01 level
*Correlation is significant at the 0.05 level

- There is a statistically significant releation between planning and cognitive ability
- There is a statistically significant relation between planning and age.

Limitations

- Convenience sample
- Small sample size
- Missing data
- PI trained 2 new investigators

Discussion and Implications

This Pilot Study did not show a relationship between cognitive abilities and coping and adaptation processing. The limitations may be too great. A second consideration is the measurement tools. The strongest relationships involved the Planning cognitive function and the measurements used are well established and widely used in the field. It may be necessary to re-examine ways to measure simultaneous and successive processing.

Secondly, the coping and adaptation scale may need revision. Item Response Theory has been suggested as a way to condense and strengthen this tool.

Decisions about further research and implications for practice will depend on dealing with limitations and measurement issues.

Lastly, the data can be examined on a case by case basis relating the differences in either cognitive abilities or coping to clinical data.

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