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***Perceived Involvement in Decision-Making as a Predictor of
Decision Satisfaction in Older Adults***

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Abstract

Background: Currently, participatory decision-making between patients and clinicians is considered an important component of quality health care. Older adults are often portrayed as desiring a more passive, traditional role in care, though there is little evidence to support this view. Little information is available about the relationship between perceptions regarding involvement in decision-making and patient satisfaction in older adults.

Purpose: To investigate demographic and perceptions of shared decision-making factors contributing to patient satisfaction in older adults.

Methods A longitudinal survey design was implemented. The sample for this study included older enrollees in a managed care plan who returned baseline and 1-year questionnaires (n= 611) containing demographics, health status, perceived shared decision-making and ratings of patient satisfaction with decisions.

Results: Multiple regression was used to model the effects of age, gender, health status, education level, and perceived involvement decision making at baseline on decision satisfaction scores at 12 months. Findings indicated baseline level of perceived involvement in decision making was a statistically significant predictor ($p < .001$) of patient satisfaction at 12 months.

Conclusions: Perceived involvement in decisions may be one mechanism impacting decision satisfaction. Nurses are well-positioned for advocacy and leadership roles facilitating involvement in decision-making.

Key words: *Participatory decision-making, older adults, patient advocacy, health outcomes, satisfaction with decision-making*

Introduction

Current clinical practice encourages active patient participation in health care decision-making.¹⁻⁵ The shift from a traditional, paternalistic model to a participatory decision-making style promoting patient autonomy and self-determination resulted from ethical, legal, and social concerns raised in the patients' rights movement of the 1960s.⁶⁻⁸ This transition to a collaborative relationship between patient and physician was accompanied by significant technological advances in health care, the development of alternative treatment options eliciting differing risks and benefits, and the proliferation of healthcare information sources available to the general public. The combination of technologically advanced health care, multiple treatment options, and occasionally confusing and contradictory information has created complex and often stressful decision-making scenarios for patients. As a result, the decision-making dynamics of the clinical encounter may not, in some cases, be satisfactory for the patient. The challenges of participatory decision-making may be particularly salient for older adults.

Conceptually, patient perceived

involvement in decision-making may have a positive impact on satisfaction with healthcare decision-making. When patients are more satisfied with decision-making, they may be more likely to adhere to health promotion behaviors and treatment regimens. Subsequently, adherence may lead to more positive health outcomes.⁹ Therefore, the concepts in this study are related within a broader context of patient participation in decision-making and health outcomes.

Researchers reveal considerable variability in patient response to shared decision-making. Some investigators find that patients want to be informed about their health care options and take an active role in decision-making.¹⁰ Others describe indications that patients want to be informed but prefer that care and treatment decisions be made by clinicians.¹¹⁻¹⁴

Part of the variability in patient decision-making preferences and perceived involvement may be influenced by patients' age.¹⁵ Older people are less likely to seek an active role in health care decision-making and information gathering processes.¹⁶⁻¹⁷ The reluctance of older patients to seek more control in health care decision-

making may be a generational phenomenon related to previous life experiences with a more paternalistic view of the patient-clinician relationship. Preferences for decision-making styles may change as “baby boomers” age.

Much of the previous research on shared decision-making was designed with decision-making as the dependent variable, focusing on the demographic and medical characteristics of patients as they are related to the patient’s expressed preference for participation in the decision-making process. Few researchers have treated perceived involvement in decision-making as the independent variable and examined its impact on various aspects of the health care experience. Researchers have presented findings indicating that quality of life following diagnosis of a serious illness is enhanced when patients perceive they have had a voice in selecting treatment options.¹⁸⁻¹⁹ The results suggest that meeting a patient’s desired level of participation in the decision-making process may be associated with higher levels of decision satisfaction for patients.

An emerging goal of health care organizations and providers is

increasing patient satisfaction with specific treatment decisions. Although shared decision-making between clinicians and patients may empower patients and enhance satisfaction with the clinical encounter *generally*, there is limited empirical evidence documenting the more specific relationship between patients’ perceived participation and satisfaction with the decision-making process itself. The literature also lacks longitudinal studies that examine the predictive value of patient perceived involvement in decision-making on decision satisfaction over time, particularly in older adults. The approach used in this study was designed to address these issues. The purpose of this study was to examine the longitudinal relationships among demographic factors and perceptions of shared decision-making in a sample of Middle Western older adults.

Methods

A longitudinal panel, descriptive design was chosen for this study in order to address the predictive value of demographic and decision-making factors across time. The administrative data were derived from components of a larger survey conducted by a large

managed care organization in the Midwest that served an older population. The study was approved by the IRB of the organization. The survey collected information on demographics, perceived involvement in decision-making, and patient satisfaction with the decision-making process at baseline when the patient enrolled in the managed care plan and again 12 months later.

The sample for this study included enrollees aged 50 and older who joined the managed care organization during its first year of operation and returned the baseline and 1-year follow-up questionnaires. The setting was predominantly rural, with some smaller cities included. All individuals who enrolled were asked to complete two waves of a mailed questionnaire. The response rate for baseline questionnaires was 95%. However, only 611 of the 1,191 initial respondents completed both baseline and 1-year follow-up questionnaires reflecting a total response rate of 48.7%.

The sample size was based on the number of subjects completing both rounds of the survey. This is the usual approach when working with administrative datasets. An alternative

would have been to use only the first round of the survey, but that would have yielded only cross-sectional data and we wanted to explore how the variables reacted over time. Power estimates indicated that a statistically significant R^2 with alpha equal to .05 was expected to occur more than 93% of the time when a statistically significant effect exists.²⁰ Questionnaires contained information on demographics, self-rated health status, perceived involvement in health care decision-making, and patient ratings of satisfaction with the decision-making process.

Perceived involvement in decision-making was conceptualized as the patient's perspective on his or her involvement in the management of healthcare decisions.²¹ The instrument used to measure perceived involvement in decision-making was the 13-item self-report Perceived Involvement in Care Scale (PICS).²¹ The PICS has been used in previous research and has a reported Cronbach's alpha of 0.73.²¹ It was originally tested in a sample of general medicine patients presenting with new symptoms or an exacerbation of previous symptoms. The PICS focuses on the exchange of information and control between patients and physicians,

and provides sound instrumentation for an assessment of the relationship between perceived decision-making involvement and decision satisfaction. The PICS has demonstrated high reliability and is worded appropriately for a sample of older adults. It is brief and easy to administer and score. Questions are answered "yes" (coded as 1) or "No" (coded as 0) and address specific areas of perceived involvement such as explanation of symptoms and treatment, encouraging questions from patients, and agreement between patient and physician about treatment. PICS scores have been found to be positively associated with patients' understanding of treatment, expected functional improvement, and satisfaction with physician and health care services.²¹ Scoring is done by summing individual items to derive a total scale score with higher scores indicating a stronger perceived involvement in the management of healthcare decisions.

Holmes-Rovner et al.²² defined patient satisfaction with healthcare decisions as the extent to which a decision is perceived by the patient as informed, consistent with his or her personal values, and is behaviorally implemented by the patient. In the

research reported here, patient satisfaction with decision-making was measured using the 6-item Patient Satisfaction with Decision Scale (SWD).²² The SWD has been used in previous research and has a reported Cronbach's alpha of 0.88. It was originally tested in a sample of women seeking information about menopause symptom management. It has also been found to be reliable and valid when used with elderly subjects, students, health employees and patients with respiratory and cardiac disorders.²² Likert scoring fields are used and patients are asked to express their level of agreement with six statements. Item scores are summed to acquire a scale score.

Results

The Cronbach's alpha for the PICS was .81 at baseline and .80 at 1 year. Since the SWD measure was only analyzed at the 12-month time period (which is conceptually appropriate), baseline to 1-year comparisons are not available for test-retest reliability for that scale.

The analyses included both descriptive and inferential statistics. First, descriptive statistics were calculated for the independent and

dependent variables. Correlation matrices were generated between all the major variables. The findings from this initial analysis guided the multivariate analyses. Multiple regression was used to test the research question regarding the relationship of age, gender, health status, education and perceived participation in decision-making (PICS) at baseline to satisfaction with decision-making (SWD) at 12 months. Multiple regression was chosen because this statistical method enables the researcher to postulate the relationship between a continuous dependent variable, independent variables and an error term; it also maximizes the longitudinal aspect of the data. The equation included baseline measures of age, gender, education level, general health status and PICS scores as the independent variables and the SWD

score at 12 months as the dependent variable.

Demographic characteristics of the sample are displayed in Table 1. The sample reflects a somewhat younger age than is typically associated with the Medicare population because spouses of primary beneficiaries could also enroll and were included in the data set. The mean age of study participants was 73.3 with a range of 50-100. The sample was predominantly White and most respondents considered their health good, very good or excellent. There were no significant differences between responders and non-responders on the second wave of the survey, with the exception of those with higher levels of education tended to complete the second round of the survey when compared with those with lower levels of education.

Table 1
Characteristics of the study sample

Demographics	
Mean age in years (s.d.)	73.28 (7.16)
Women (%)	59.0
High school graduate or above (%)	74.0
Race (% of sample)	
White	93.0
African American	1.0
Asian	0.5
Native American	2.0
Other	3.0
General Health (% of sample)	
Excellent	9.6
Very Good	35.5
Good	39.5
Fair	14.7
Poor	0.7

The study hypothesis was that baseline measures of perceived involvement in decision-making, age, gender, and health status predict subsequent patient satisfaction with their health care decisions (SWD) at a statistically significant level. The data were analyzed by multiple regression, using as regressors age, gender, education, general health status, and patient perceptions of involvement in decision-making. The dependent variable was patient satisfaction with health care decisions one year after enrollment in the managed care plan. The overall relationship was statistically significant ($F = 7.249, p < .001$) in

predicting long-term satisfaction with health care decisions (Table 2). The regression model was a rather poor fit (R^2 adjusted = .056), indicating the presence of other factors that account for variation in SWD. With other variables held constant, higher baseline levels of patient perceptions of involvement in the decision-making process were significantly related to the patient's satisfaction with their care and treatment decision at one year. Patients' more positive evaluation of their health status was also related to satisfaction with the health care decision. Further, there was a significant and negative correlation between age and perceived

involvement in decision-making. This finding may indicate that older people

perceive less involvement in health care decision-making.

Table 2
Regression analysis of the effects of perceived shared decision-making, health status, age, gender and education on Patient Satisfaction with Decision Scores (dependent variable) (n = 611)

	Unstandardized Coefficients β	Std. Error	Standardized Coefficients β	<i>t</i>	Sig.
(Constant)	23.661	1.578		14.997	.000**
PICS Baseline	.153	.048	.127	3.188	.002*
Health Status	-.713	.169	-.169	-4.208	.000**
Age	.002	.019	.054	1.351	.177
Education Level	.123	.096	.052	1.279	.202
Gender	.001	.295	.000	.005	.996
R ²	.056				
F for change in R ²	7.249**				

Dependent variable: SWD

* $p < .005$; ** $p < .001$

Limitations. The current study has several limitations. The variables are based on self-report. Further, while the longitudinal design of the study strengthened many aspects of the study, it also meant that attrition had to be considered. Attrition and incomplete questionnaires reduced the sample by approximately 600 participants. A mail survey response rate of 50% is good, though it would have been optimal to employ a systematic reminder system. While statistical power was still adequate, a larger sample size would lead to greater generalizability of the findings. In addition, the sample was derived from a fairly homogeneous

population in the Midwest; the findings may not hold true in other populations. Also, confounding variables such as number of visits, involvement of family members, type of decisions made and mental status variations could not be accounted for in this secondary analysis of the data set.

Discussion

Perceived involvement in decision-making is an important component of decision satisfaction from the patients' point of view in this sample of adults age 50 and older. The mutual exchange of information is an important contributor to satisfaction with health care

decisions. The results also indicate that as age increases in the adult population, patients are less likely to perceive an exchange of information with health care providers. The results indicate that age is inversely related to perceived involvement in decision-making at a statistically significant level.

Conceptually, this decreased level of perceived involvement may place older patients at risk for decreased adherence to prevention and treatment regimens which may result in less optimal health outcomes.⁹

There are several possible explanations for the lower perceived involvement in decision-making among older respondents. Barriers to participatory decision-making in the elderly may include adherence to traditional social norms that support a passive patient role, sensory and cognitive changes that may interfere with decision-making, and potential ageism on the part of the health care team. For example, it has been shown that physicians spend less time with older patients when compared with younger patients,²³ which may also be true with other members of the health care team as well. Further research should assess if perceived involvement

in decision-making is a product of age cohort differences in the norms that govern the patient-clinician encounter or a result of the physical effects of the aging process that may reduce patients' energy levels and ability to participate in the decision-making process.

The implications of our research are consistent with the literature, that regardless of the causes, older adults may be at risk for exchanging limited information about health related issues, and they may also be less likely to give providers information that may be pertinent to making good health care decisions.²⁴ Clinicians are at risk for making ill-informed decisions that may lead to side effects or other untoward consequences that could be prevented if patients shared information more freely.²⁵ Clinicians may need to spend more time and effort with older patients explaining procedures or treatment plans. Equally important is the implication that clinicians need to take more time to listen to geriatric patients as they explain their health concerns and personal treatment preferences. Clinicians and researchers may also consider developing targeted interventions designed to increase perceived involvement in health care

decision-making among elderly patients. The goal would be to ultimately increase patient participation and involvement in prevention and treatment strategies that could subsequently improve health outcomes.⁹

It is also important to assess and address potential communication difficulties such as impaired hearing or vision when sharing information with geriatric patients in addition to spending more time explaining health conditions and treatments to patients. Information exchange may be enhanced by using multiple modalities such as videos, audio tapes and written information. Working closely with family members and other caregivers to encourage adequate exchange of information and optimal participation in decision-making is also a key role for clinicians. Additionally, clinicians can reinforce with patients the health benefits that can be derived when patients fully share information related to their health conditions.

Perception of involvement in decision-making warrants further research, particularly in the geriatric population. Interventions for increasing participation, or perhaps more optimally, matching the level of participation with the preference for participation may be a mechanism for increasing patient satisfaction with health care decisions. Satisfaction with decisions as well as the converse, regret, are important aspects of ethical patient-focused care. These issues will continue to be of interest and concern, particularly as health care decisions become more complex due to increased information and technology. Further research is also needed to explore the relationship between satisfaction with decision-making, adherence to treatment regimens and health outcomes in the elderly. Nurses and others on the health care team are well-positioned to play an advocacy role for older patients in facilitating decision-making from the patient's perspective.

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