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# Predicting factors of nurses' intention to continue in nursing

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## *Abstract*

*Population aging increases pressure on the health care service in many countries, including Finland. At same time health care is facing a shortage of nurses due to the lack of new nurses entering the workforce, nurses leaving their profession and nurses retiring early (1). Managers are in a key role in developing workplaces to be attractive to new employees and in retaining their professional employees. The aim of this study was to examine how job satisfaction, organizational commitment, self-perceived health and nurse managers' leadership behavior relate to nurses' intention to continue in nursing.*

**Key terms:** intent to continue, nurse, leadership, job satisfaction, organizational commitment

## Introduction

Particularly in Europe the population is aging rapidly due to increasing life expectancy and declining birth rates. The aging population needs more hospital care, but at the same time there is an increasing shortage of nurses. An aging nursing workforce and shortage of nursing challenge the health care services' recruitment and retention strategies. Many studies have indicated the connection between leadership behavior, job satisfaction and organizational commitment (2, 3, 4) and have shown that job satisfaction and commitment are immediate antecedents of intention to leave the workplace and turnover (5). However, nurses' intention to leave the profession has been widely studied, but it is also important to recognize the factors affecting their intention to continue in nursing and to develop these in order to retain experience nurses in working life.

## Background of the study

To be able to provide public health care services it is essential to have enough nursing workforce. Therefore the ability to retain nursing professionals has become one of the key issues of health care leaders. The important predictor of retention is an intention to stay in an organization (6). Studies have shown positive relationship between job satisfaction and intent to stay (7, 8), and organizational commitment has been found to decrease willingness to leave organization (9). Nurses' dissatisfaction in turn has been found to be the major predictor of intent to leave (8, 10, 11).

The way nurse managers implement the leadership role can have a significant effect on nurses' job satisfaction and organizational commitment. The use of transformational leadership has been seen as a solution in developing sustainable health care reform (12), to increase employees' trust, confidence (10), satisfaction and organizational commitment (13, 14), and to enhance recruitment, retention and healthy work environ-

ment (15). Transformational leadership refers to the leader moving the follower beyond immediate self-interest through idealized influence, inspiration, intellectual stimulation, and individualized consideration as transactional leadership in turn refers to the exchange relationship between leader and follower to meet their own self-interests. (16.)

In a comparison study among 10 countries in Europe a significant association was found between low perceived work ability and intention to leave nursing (17). The Work Ability Index (WAI) covers the subjective estimation of present work ability compared with the lifetime best, subjective work ability in relation to both physical and mental demands of the work, number of diagnosed diseases, subjective estimation of work impairment due to disease, sickness absence during past year, own prognosis of work ability after 2 years and psychological resources (18).

## Objectives

The objectives of the study were to extract those elements of leadership behavior and other study variables in public health care environment which enable nurses of different ages to continue in their profession.

## Methods

In this study the relationship between the demographic and employment variables, nurse managers' leadership behavior, job satisfaction, organizational commitment, self-perceived health (work ability) and nurses' intent to continue in their profession was examined in a sample of different aged nurses. The study population consists of randomly selected (N = 937) full and part-time, permanently or temporarily employed, registered nurses working in a university hospital in Finland. A questionnaire was sent to the nurses in December 2006 and in January 2007. The response rate of the study was 54.4 % (n = 510). No statis-

tically significant differences were detected between respondents and non-respondents in terms of demographic data. All statistical analyses were carried out with SPSS 15.0.

Leadership behavior was measured using the Deep Leadership scale which is based on Bass's transformational and transactional leadership measurement. Deep leadership behavior is modeled on three dimensions: deep leadership, controlling/corrective leadership and passive leadership. The main dimension, deep leadership, is divided into four factors: 1) building trust and confidence, which are displayed e.g. when leader can put the needs of subordinates above his own needs, 2) inspirational motivation is displayed e.g. when goals are set high and the leader encourages his subordinates exceed their normal performance level to achieve the goals, 3) intellectual stimulation is displayed e.g. when the leader supports the innovativeness and creativity, new solutions and approaches to work and the leader can give and receive feedback, and 4) individualized consideration is displayed e.g. when the leader knows his/her subordinates personally and recognizes everyone's individual needs to grow and develop. (19.)

Job satisfaction was measured with a sixteen-item scale from the Job Diagnostic Survey adapted from Hackman and Oldham (20) providing measures of satisfaction with job security, peers and co-workers ("social" satisfaction), pay and other compensation (pay satisfaction), supervision and opportunity for personal growth and development on the job ("growth" satisfaction). Occupational commitment was measured with a three-component scale adapted from Allen and Meyer (21,22), where affective commitment refers to emotional attachment to the organization, continuance commitment to employee's recognition of the costs associated with leaving and normative commitment to a sense of obligation to the organization (22). Self-perceived health was measured with the three items from the Work Ability Index, WAI (18) concerning employees' physical and mental health capacities in relation to the current work and the capacity to continue working in the same profession for a period of two years. Nurses' intention to continue in nursing was gathered with the question: "I will continue working in

nursing as long as possible” modified from the scale by Armstrong-Stassen (23). The item was scored on a scale 1-5, with higher values indicating a greater likelihood of continuing (1 = totally disagree – 5 = totally agree).

## Results

The majority of the 510 respondents were female (82.9 %). The mean age was 41.5 years. Age was categorized into three age groups: under 35-year-olds (n = 146), 35-44-year-olds (n = 153) and 45-years and older (n = 211). Of the respondents 384 were permanently employed whereas 120 were temporarily employed. The nurses had an average of 14.4 years of work experience in the nursing profession. Tenure was divided into four categories: 0-4 years, 5-10 years, 11-18 years and 19-36 years of work experience. Respondents’ educational background was recoded into two groups: college level registered nurse education (9.5 %) and bachelor’s degree in nursing (90.5 %). Nurses’ monthly gross income was 2145 Euros. Several demographic variables were entered into the model. The final model contains only the statistically significant variables. All non-significant variables such as marital status, professional education and number of dependents in the household as well as the non-significant dimensions of job satisfaction, organizational commitment and deep leadership scales were excluded. Table 1 shows the number of respondents, mean scores, standard deviations and Cronbach’s alphas for the scales used and Table 2 the correlations among independent variables.

**Table 1.** Number of respondents, means, standard deviations and Cronbach's alphas for variables included in the multinomial logistic regression analysis.

Variables	n	Mean	sd.	Cronbach alphas	Scale
<i>Deep leadership</i>					
Inspirational motivation	507	3.23	1.05	0.916	1-5
Intellectual stimulation	506	3.42	0.93	0.888	1-5
<i>Organizational commitment</i>					
Affective commitment	496	3.05	0.83	0.829	1-5
Continuance commitment	497	3.11	1.07	0.717	1-5
<i>Job Satisfaction</i>					
Pay satisfaction	504	1.93	0.87	0.697	1-5
Growth satisfaction	497	3.70	0.64	0.760	1-5
<i>WAI</i>					
Self-perceived health	501	4.19	0.76	0.824	1-5

**Table 2.** Correlations among independent variables.

Determinant	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Employment	1									
2. Age	-.413**	1								
3. Self-perceived health	.156**	-.312**	1							
4. Tenure	-.556**	.689**	-.269**	1						
5. Pay sat	.076	.002	.065	.007	1					
6. Growth sat	.022	.064	.179**	.045	.172**	1				
7. AOC	-.085	.147*	.110**	.144**	.187**	.527**	1			
8. COC	-.173**	.170**	-.249**	.136**	-.063	-.039	.147**	1		
9. IM	.019	.101*	.114*	.051	.138**	.335**	.285**	-.037	1	
10. IS	-.016	.102*	.118**	.044	.102*	.331**	.300**	-.029	.842**	1

\* p=0.10, 2-tailed, \*\*p=0.05, 2-tailed

As Table 3 shows, of the total sample, 53.4 % of nurses had the intention to continue in nursing, 18.5 % had no opinion and 28.1 % had no intention to continue. I used a multinomial logistic model to look at the differences among those three groups of nurses. The results of the multinomial logistic model are presented in Table 4. In the model R-squared estimates were 0.31 (Nagelkerke  $R^2 = 0.311$ ).

**Table 3.** Descriptive summary of categorical variables.

	Intent to continue (n=222)	No opinion (n=77)	No intent to continue (n=177)	Number of nurses 476
Number of nurses	53.4 %	18.5 %	28.1 %	
Experience (years)				
< 5	55.2 %	24.1 %	20.7 %	87
5-10	49.6 %	22.8 %	27.6 %	127
11-18	57.4 %	17.4 %	25.2 %	115
19-36	54.5 %	12.7 %	32.8 %	165 (n=494)
Gender				
Male	51.8 %	16.5 %	31.7 %	85
Female	54 %	18.5 %	27.5 %	417 (n=502)
Age				
<35	50.3 %	23.8 %	25.9 %	143
35-44	50.7 %	18 %	31.3 %	150
>45	57.9 %	14.4 %	27.8 %	209 (n=502)
Education				
College level	59.6 %	21.3 %	19.1 %	47
Bachelor's degree	53.4 %	17.4 %	29.2 %	438 (n=485)

The first pair comparison “no intent to continue” vs. “intent to continue” showed that age, self-perceived health, tenure, pay and growth satisfaction as well as affective and continuance commitment were related to nurses’ intention to continue in nursing. Under 35-year-old nurses were almost three times and 35-44-year-old nurses over two times more likely to leave nursing than nurses over 45 years old. A one-point increase on the 5-point self perceived health scale almost doubled the likelihood of continuing in nursing (OR = .587, CI = 1.18-2.45). Pay and growth satisfaction, as well as affective and continuance



commitment had a similar effect. Tenure instead increased the odds of intentions to leave nursing (OR = 1.51, CI = 1.05 - 2.16).

The second pair comparison “no opinion” vs. “intent to continue” showed that growth satisfaction (OR = .494, CI = .301 - .813), affective commitment (OR = .656, CI = .441 - .975) and perceived inspirational motivation in leadership (OR = .612, CI = .387 - .968) all increased the odds of intent to continue in nursing. High perceived intellectual stimulation (OR = 2.09, CI = 1.23 – 3.57) in head nurses’ leadership behavior doubled the odds risk of belonging into the “no opinion” group instead of the “intent to continue” group. Permanent employment (OR = 2.21, CI = 1.06 – 4.60) had a similar effect.

In the third pair comparison “no opinion” vs. “no intent to continue” self-perceived health, continuance commitment, inspirational motivation, intellectual stimulation and tenure were statistically significant variables. A one-point increase in self-perceived health scale (OR = 1.61, CI = 1.05 – 2.47) increased the odds 1.6 times of belonging to the “no opinion” group instead of the “no intent to continue” group. Continuance commitment (OR = 1.44, CI = 1.07 – 1.94) and intellectual stimulation (OR = 1.95, CI = 1.1 – 3.46) had a similar effect. Instead inspirational motivation (OR = .520, CI = .316 - .856) and long work experience increased the odds of intent to leave nursing.

## Discussion

The results of the multinomial logistic regression analysis showed that the specific measures of job satisfaction namely satisfaction with pay and opportunities for personal growth and development on the job (growth satisfaction) were both statistically significant predictors of nurses’ intent to continue in nursing. Earlier studies have shown a similar positive relationship between job satisfaction and intent to stay (7, 8). Dissatisfaction in turn has been identified to be the most important reason why nurses leave their job (8, 10, 11). The findings of this study also indicate that good self-perceived health, older age, shorter work

**Table 4.** Multinomial logistic regression.

Indicator	"No intent to continue" vs. "Intent to continue"			"No opinion" vs. "Intent to continue"			"No opinion" vs "No intent to continue"		
	OR	95 %	CI	OR	95 %	CI	OR	95 %	CI
Permanent employment	1.34	.649	2.77	<b>2.21**</b>	1.06	4.60	1.65	.710	3.83
Age (< 35)	<b>2.68*</b>	1.10	6.52	.494**	.301	.813	.649	.243	1.73
Age (35-44)	<b>2.32*</b>	1.21	4.45	.656*	.441	.975	.622	.286	1.35
Self perceived health	<b>.587**</b>	.407	.844	.946	.630	1.42	<b>1.61**</b>	1.05	2.47
Tenure	<b>1.51*</b>	1.05	2.16	.781	.545	1.12	<b>.519***</b>	.344	.785
Pay Satisfaction	<b>.573***</b>	.419	.783	.759	.551	1.04	1.33	.906	1.94
Growth Satisfaction	<b>.492**</b>	.308	.786	<b>.494**</b>	.301	.813	1.00	.597	1.69
AOC	<b>.474***</b>	.326	.690	<b>.656*</b>	.441	.975	1.38	.891	2.15
COC	<b>.573***</b>	.445	.738	.826	.629	1.08	<b>1.44**</b>	1.07	1.94
IM	1.18	.767	1.80	<b>.612*</b>	.387	.968	<b>.520**</b>	.316	.856
IS	1.07	.663	1.74	<b>2.09**</b>	1.23	3.57	<b>1.95*</b>	1.10	3.46

\*p<.05, \*\*p<.01, \*\*\*p<.001

experience (tenure) and affective and continuance commitment were the strongest predictors of nurses' intent to continue. Results concerning the statistically significant dimensions of transformational leadership, inspirational motivation and intellectual stimulation, were rather complicated. Perceived inspirational motivation in head nurses' leadership behavior increased the risk of belonging into the uncertain group; those nurses were not sure if they wanted to continue or not. Perceived intellectual stimulation in turn increased certainty; those nurses either intended to continue or they did not intend to continue.

## Conclusion

Intent to stay is defined as an important predictor of retention and intention to leave as an important predictor of actual turnover. On the basis of this study 53.4 % of nurses intend to continue in nursing and 28.1 % do not. It is also worth noting the group of nurses with no opinion so far (18.1 %). Improving retention includes supporting and enabling nurses' work ability e.g. developing the occupational health care system to be more proactive, offering development and training opportunities for nurses of all ages and developing remuneration policies. Leaders and managers in health care services are facing a challenging task in reforming recruitment and retention strategies in order to attract the new nurses and improve retention of present nurses.

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