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Nurses' working motivation sources and related factors: A questionnaire survey[1]

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Abstract
Background: Motivation is an important issue for personnel management in health care settings, as it is related to both performance and intention to quit. *Objectives*: The study was aimed to determine nurses' working motivation sources and related factors in hospitals. *Design*: Descriptive study. *Settings*: A state university hospital and a public hospital in Turkey. *Participants*: Two hundred and two nurses were randomly selected from each department in a university and in a public hospital. *Methods*: Data were collected using a socio-demographic questionnaire and the Motivation Sources Inventory and were analyzed using descriptive and inferential statistics. *Results*: Among five motivation sources, internal self-concept-based motivation was the highest and intrinsic process motivation was the lowest in nurses. There was a significant relation between scores of some motivation sources and managerial experience, income level, satisfaction from the unit, staff roles, and perception of work stress. *Conclusions*: Intrinsic process motivation, instrumental motivation, and external self-concept-based motivation sources may be improved to increase nurses' total motivation.

Keywords: Motivation; Nurse; Hospital; Demography; Motivation sources

Introduction

Motivation is complex and multidimensional, and clearer defnitions for motivation are needed (Vilma and Egle, 2007). Many contemporary authors have attempted to define it. For example, Grafham et al. (2004) referred to motivation as a psychological process that gives direction to behavior, Be'gat et al. (2005) defined motivation as an internal drive that is present to satisfy unmet needs, and McLean and Anema (2004) described motivation as a will to achieve.

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Leonard et al. (1999) proposed an integrative model of motivation built on research efforts in the field (Figure 1).

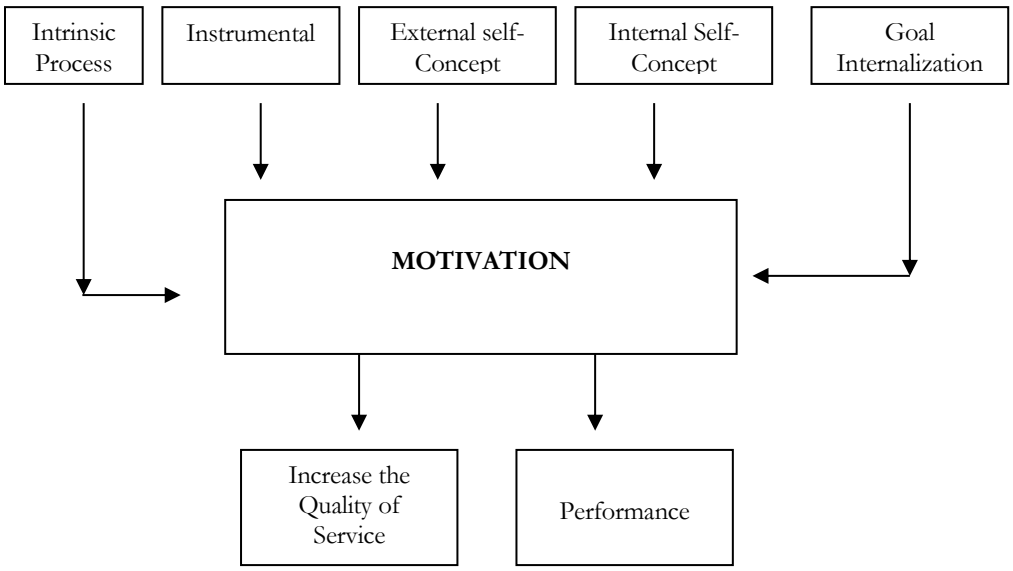

Figure 1: Integrative model of motivation

Their model integrated several theorists' perspectives, identifying five sources of motivation: intrinsic process, instrumental, external and internal self-concept, and goal internalization. With intrinsic process motivation, the work itself acts as the incentive, as workers enjoy what they are doing. With instrumental motivation, rewards, such as pay, promotion, and bonuses, motivate the individual. With self-concept-external motivation, a person's reputation or the way he or she is perceived by others is the motivating factor. With self-concept-internal motivation, the attainment of the ideal self serves as the motivation for behavior. With goal internalization, persons are motivated to work toward the goal of the collective (Barbuto, 2000).

Motivation is an important issue for personnel management in health care settings (Janssen et al., 1999), as it is related to both performance (Levy-Leboyer, 1988) and intention to quit (Tzeng, 2002; Yildiz, 2009). It is recommended that (Toode, 2011) further research should be carried out about nurses' work motivation and the factors affecting it. The present study was devised to determine nurses' motivation sources and related factors in public hospitals.

Methods

Nursing staff of a state university hospital and a public hospital in Konya (Turkey) were included in the descriptive study with permission of institutions (IRB). The sample size was calculated with a formula to determine the expected total motivation score (134±25) (Ozturk, 2002)

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within 5 points of deviation and with a 95% confidence level and a power of 0.80 (n=198). Participants were selected using the unweighted random sample method based on units, and 202 nurses voluntarily participated.

Two forms were used to obtain data. A questionnaire was used to investigate socio-demographic features and working conditions. The Turkish version (Ozturk, 2002) of the Motivation Sources Inventory (MSI) developed by Barbuto and Scholl (1998) was used to measure the relative weight of motivation sources. This inventory consists of 5 subscales and 30 items and tested for validity and reliability (Cronbach's alpha: 0.84).

Data were summarized as mean and standard deviation. In univariate analysis, t test and one-way ANOVA (with Tukey HSD) tests were used to compare more than two means with a normal distribution. Kruskal-Wallis H (with Bonferroni adjusted U test) and Mann-Whitney U tests were used for not normally distributed data. In multivariate analysis, a two-way ANOVA test was used when the number of independent variables was few; logistic regression analysis was used when the number was high by transforming scores into dummy variables according the median value. Relationship was evaluated by Spearman correlation coefficient among scores of motivation sources. P-value was considered significant when lower than 0.05.

Results

Mean age was 31±6 years and mean working experience was 10±7 years among nurses. Forty-five of them (22%) were male, and 131 (65%) were married; 50% had a technical school diploma, 39% had graduated from college, and only 11% had earned a bachelor's degree. The total motivation score of nurses was 128±30 according to the MSI.

Internal self-concept-based motivation and goal internalization motivation were the highest contributors to working motivation, according to the MSI, whereas intrinsic process motivation was the lowest contributor (Table 1; Figure 2).

Table 1. Nurses' motivations: Summary of data results (n=202)

Motivation Source	Mean±SD	Ratio	Coefficient (α)
Intrinsic Process	16,7±8,7	0,131	0,60
Instrumental	23,7±8,1	0,186	0,65
External Self-concept-based	25,1±8,1	0,197	0,71
Internal Self-concept-based	34,6±7,4	0,271	0,83
Goal Internalization	27,4±7,6	0,215	0,65
Motivation Sources Inventory Total	127,7±26,8	-	0,81

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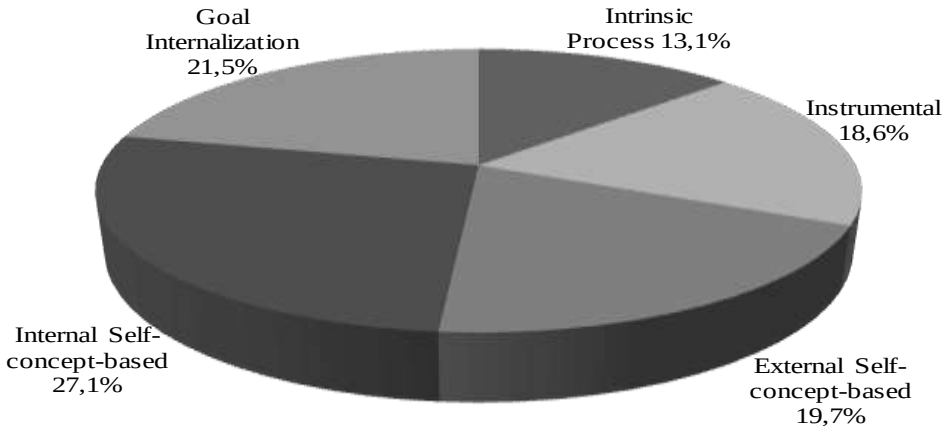

Figure 2. Nurses' ratio analysis of motivation sources

Tables 2 and 3 show motivation source scores according to socio-demographic and working condition variables and a comparison of the results obtained with univariate analysis. Intrinsic process, internal self-concept-based, and goal internalization motivation scores were related to very few of the independent variables, while instrumental and external self-concept-based motivation scores were related to many more.

Table 2. Nurses' mean scores of motivation sources according to socio-demographic features

Variables		n	Intrinsic Process	Instru-mental	External concept	Internal concept	Goal Inter-nalization	Total
Place of growth	City	119	17,8	24,6	26,2	34,9	28,0	131,4
	Metropol	83	15,2*	22,6	23,7*	34,3	26,7	122,4*
Gender	Male	45	18,4	25,6	25,4	33,7	27,4	130,4
	Female	157	16,3	23,2	25,1	34,9	27,5	127,0
Age (years)	29 and below	91	17,8	24,6	26,4	35,2	28,0	132,0
	30 and over	111	15,9	23,1	24,2	34,2	27,0	124,3*
Graduation	Tech. school	101	17,4	24,9	25,8	35,4	28,2	131,8
	College	101	16,1	22,6*	24,5	33,9	26,6	123,6*
Marriage experience	No	59	16,6	23,4	24,5	34,0	27,1	125,6
	Yes	143	16,8	23,9	25,4	34,9	27,6	128,6
Parenthood	No	82	16,8	23,6	24,8	34,4	26,8	126,4
	Yes	120	16,7	23,9	25,4	34,8	27,9	128,6
Hospital	University	125	17,0	23,1	25,6	34,5	26,7	126,8
	Public	77	16,4	24,8	24,5	34,9	28,6	129,3
Working experience	0-9 years	101	18,3	25,1	26,7	35,6	27,9	133,6
	10 yrs and over	101	15,2*	22,4*	23,6**	33,7	26,9	121,9**
Experience	0-4 years	108	17,6	24,9	26,1	34,9	28,2	131,7

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in Hospital	5 yrs and over	94	15,7	22,5*	24,1	34,3	26,6	123,2*
Income in month	799 $ and lower	91	18,1	24,5	27,1	34,9	27,9	132,5
	800 $ and over	111	15,6*	23,1	23,6**	34,5	27,0	123,9*
Spending allowance [a]	No	53	15,5	24,8	23,7	33,8	27,2	124,9
	Yes	149	17,2	23,4	25,7	34,9	27,5	128,7
Smoking	No	102	15,6	22,6	25,2	34,9	27,0	125,3
	Yes	100	17,9	25,0	25,1	34,4	27,9	130,2

[a] Some female participants are not allowed to spend their own salaries because male members of the family are in control of family's all income.

*P<0.05; **P<0.01

Table 3. Nurses' mean scores of motivation sources according to working conditions

Variables		n	Intrinsic Process	Instru-mental	External concept	Internal concept	Goal Inter-nalization	Total
Job decision	Family	69	17,5	23,5	24,7	34,1	26,6	126,4
	Self	68	16,0	23,4	23,8	34,2	27,8	125,2
	Employment Security	65	16,6	24,5	27,1	35,7	28,0	131,8
Unit	Internal	81	17,6	22,4	24,5	33,7	27,7	125,8
	Surgical	121	16,2	24,7*	25,6	35,3	27,3	129,0
Unit decision	Self	59	16,0	23,7	24,2	35,5	28,4	127,8
	Management	143	17,0	23,8	25,6	34,3	27,0	127,7
Managerial Experience	No	159	17,4	25,0	25,8	34,9	27,7	130,9
	Yes	43	14,2*	19,2**	22,7*	33,8	26,3	116,1**
Current role	Clinical nurse	146	16,8	24,5	25,4	35,2	28,1	130,0
	Unit leader	40	17,3	23,4	26,5	34,5	26,9	128,6
	Supervisor	16	14,9	18,1*	19,7*	29,7*	22,8*	105,1**
Working hours	45≤ hours	72	18,1	25,7	26,7	35,3	27,8	133,6
	40-44 hours	130	16,0	22,7*	24,3*	34,3	27,2	124,5*
Watching duty	No	83	16,3	21,8	24,5	34,1	26,5	123,2
	Yes	119	17,0	25,2**	25,6	35,0	28,1	130,9*
Shift	Night/Day	104	16,3	22,2	24,3	33,9	26,7	123,4
	Rotation	98	17,2	25,4**	26,1	35,4	28,2	132,3*
Unit satisfaction	Yes	129	16,4	22,8	24,2	34,2	27,3	125,0
	No	73	17,2	25,4*	26,9*	35,4	27,6	132,5
Perception of working load	Normal	133	16,1	23,1	24,2	33,8	27,0	124,2
	High	69	18,0	24,9	27,0*	36,3*	28,3	134,5**
Perception of working stress	Normal	55	17,0	22,4	23,3	32,7	25,5	120,9
	High	147	16,6	24,3	25,9*	35,4*	28,1*	130,3*
Employment Security	Yes	149	16,0	22,9	24,9	34,6	27,6	126,0
	No	53	18,7	26,2**	25,9	34,7	27,0	132,6

*P<0.05; **P<0.01

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Variables that were significantly related to motivation sources in the univariate analysis were included in the multivariate analysis to determine stronger relations. The number of these variables was so high that a two-way ANOVA could not be performed for some of the sources. To overcome this problem, motivation source scores were divided into two dummy variables (low and high according to median score). Finally, a logistic regression analysis was performed by using these dummy variables.

Intrinsic process (p=0.030) and instrumental (p=0.001) motivation scores were lower in nurses who had managerial experience. External self-concept-based motivation scores were lower in nurses with higher income (p=0.036) and nurses who were more satisfied with their unit (p=0.024). Internal self-concept-based motivation score was lower among managerial staff (p=0.011) but higher in nurses who perceived occupational stress as being high (p=0.034). Managerial staff also had lower scores in goal internalization motivation (p=0.024). Total motivation score was higher in nurses who perceived their stress levels as high (p=0.002). No relations were observed between other variables and motivation sources.

The most significant correlation between scores of sources of motivation, between Internal self-concept with the goal internalization (rs = 0.53, p <0.001) and External self-concept with instrumental (r = 0.40, p <0.001) (Table 4).

Table 4. Correlations between scores of motivation sources (intrinsic process, instrumental, external and internal self-concept, and goal internalization) (r_s).

	Goal internalization	Internal self-concept	External self-concept	Instrumental
Intrinsic process	0,195**	0,006	0,378**	0,368**
Instrumental	0,271**	0,154*	0,400***	
External self-concept	0,312**	0,334**		
Internal self-concept	0,526***			

* Correlation is significant at the 0.05 level
** Correlation is significant at the 0.01 level
*** Correlation is significant at the 0.001 level

Discussion

The participants were nurses serving in universities or public hospitals. They were young, with moderate working experience, and a low level of education. The nurses' total motivation score was around what was expected. The relations between independent variables and motivation sources are discussed below.

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Internal self-concept-based motivation was judged the most important motivation source for nurses (Table 1). Nurses are educated to manage diagnosis and treatment in a swift and sensitive way, which may facilitate the internalization of professional standards. Their drive to maintain these standards while completing work tasks without making mistakes during critical processes may explain the great importance of internal self-concept-based motivation for nurses. The internal self-concept based motivation score was higher among nurses who perceived working stress as high and lower among managerial staff. Dealing with the stress derived from nursing practice, which arises from hard work and the great responsibility placed on their shoulders, may have increased internal self-concept-based motivation scores, as this stress, hard work, and responsibility is a challenge for which nurses are prepared. The low score of internal self-concept-based motivation among nurses who play a managerial role instead of engaging in nursing practice may be explained by their occupying a position that is unrelated to their education or professional standards. Ozturk (2002) supported the idea that internal self-concept-based motivation is the most important motivation source. Because self-concept-internal motivation is based on personal challenge and self-authorship, organizational policies and procedures will not affect these individuals' motivation (Barbuto et al., 2001). Therefore, the high scores associated with this motivation source are optimistic. However, Kilic and Kekelik (2012) didn't supported the idea that internal self-concept-based motivation is the most important motivation source. Analyzing the factors that influence motivation shows us that firstly provide economic benefits such as salary and working capital are seen to be more motivating factors. Salary, which will be held in the revolving fund and other rights improvements, will positively affect the motivation of health workers and contribute to more efficient operation. Lambrou et al.., (2010)'s study showed that motivation was influenced by both financial and non-financial incentives. The main motivating factors for the health workers in this public hospital sample were appreciation by managers and colleagues, a stable job/income and training.

Goal internalization motivation is the second most important source of motivation in nurses (Table 1).

The respected nature of health service and the sense of duty coming from necessary teamwork may ease goal internalization for nurses. The low ratio between goal internalization motivation and total motivation among nurses with managerial duties may be explained by the low contribution of nurses in achieving managerial goals and the fact that the hierarchical management structure is the focus rather than teamwork. Sense of achievement was found to be the most important prime motivator among nurses (Ozturk et al., 2006), which supports the current study's result that goal internalization is an important motivation source. Because of the more direct

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relation between goal internalization and performance (Ozturk, 2002), human resource managers should focus their attention on how to improve goal internalization. On the other hand, Hakmal et al., (2012) supports the current study's result which says that goal internalization is an important motivation source. Factors such as "appreciation at work, to participate in decisions and using initiative and take care of employees, fair disciplinary procedures, get new skills, to adopt corporate vision, do your job with great care, adequacy information and experience for the job" have had highly positive effect on nurses' motivation.

External self-concept-based motivation is the third most important motivation source (Figure 1). Respect is proportional to education level and title in Turkish society. The participants had no title and their education level was low that they receive medium respect from society and the rest of the health care team. Nurses likely perceive their reputation in society similarly. Therefore, external self-concept-based motivation was not rated as high. The contribution of external self-concept-based motivation is higher in nurses with low income. Nurses who started working recently and who work temporarily are paid low wages in general. Yet the positive effects of escaping unemployment and having a job that society, and more specifically their family, respects may increase the contribution of self-concept-based motivation to nurses' total motivation. Similarly, nurses without job guarantee were found to be more motivated (Özdemir, 2004). Other studies (Dieleman et al., 2003; Vilma and Egle, 2007) showed that the main motivating factors for health workers are appreciation by managers and colleagues and community gains rather than money (Mathauer and Imhoff, 2006). In a parallel way, the higher proportion of external self-concept-based motivation in nurses who are less satisfied with their unit may be caused by their continuing search for respect in society and management, which they could not find in their unit.

Instrumental motivation is a weak source of motivation for nurses (Table 1). This situation may be related to low salaries. Moreover, the possibility of changing material conditions positively is low for nurses in Turkey, which limits their expectations of the future. Instrumental motivation is a lesser motivator in nurses who had managerial experience. A probable cause for this may be the inability to satisfy material expectations, which are elevated because of managerial experience.

Intrinsic process is the weakest motivation source for nurses (Table 1). Intrinsic work motivation proved to be primarily determined by elements of the job that make the work challenging and worthwhile, such as skill variety and autonomy among nurses (Janssen et al., 1999). Nursing applications are less funny, attractive, and fascinating than other jobs because they require commitment and self-sacrifice. Still intrinsic attraction is found to be the most important factor while deciding to choose nursing as one's profession (McCabe et al., 2005). This high intrinsic motivation may diminish over time because of nurses' lack of autonomy. In other words, despite

acquiring multidisciplinary competencies, nurses do not have the opportunity to apply them in full value in the context of nursing practice because of the requisite hierarchical obedience to a physician (Vilma and Egle, 2007). So the weak effect of intrinsic process motivation is expected. Intrinsic process motivation scores were lower in nurses who had managerial experience. Participants with less intrinsic motivation may have looked for the fascination they could not find in nursing applications in managerial work, which may be the cause for this relation. Or nurses who had managerial experience are struggling to find the excitement in nursing applications they found earlier. Ozturk (2002), too, found the lowest ranked motivation source to be intrinsic process. To improve intrinsic work motivation among nurses, attention must be focused on the work content (Janssen et al., 1999).

As a conclusion, among motivation sources for nurses, internal self-concept-based motivation has the highest ratio (to the total), and intrinsic process motivation has the lowest. Intrinsic process motivation might be improved with greater variety in tasks, more autonomy, and more feedback. It can be because of the ones who live in metropolis cities, have a higher income and education level and have administrative experiences, and positions of responsibility increases, low scores on sources of motivation leading the high expectations. For this reason identifing and taking in to consideration expectations of the management staff can be may be helpful. The reasons that provide nurses harder working ambiance in the current time can be researched and the motivation offensive reasons can be improved. Total quality management is also considering the participation of people in management can increase motivation. Evaluating wages, , teamwork, guard system, the stres resources in environment at regular intervals by the management can contribute to employee satisfaction. Besides intrinsic process motivation, instrumental and external self-concept-based motivation sources may be improved to increase nurses' total motivation.

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