The impact of intrinsic motivation on satisfaction with extrinsic rewards in a nursing environment

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Abstract

Nurses in a hospital located in Southern US were surveyed to determine their perceptions of the reward structures existent in their hospital. Reward structures were divided into two categories: extrinsic and intrinsic. The cluster analysis procedure partitioned the sample into two clusters based on their level of satisfaction with the hospital's reward structure. The analysis of variance procedure comparing scale responses on comfort, challenge, financial reward, relation with coworkers, resource adequacy, and promotion suggest nurses with a high degree of intrinsic motivation are more satisfied with extrinsic rewards.

Keywords: Nursing, Motivation, Extrinsic and intrinsic rewards

Introduction

The shortage of nurses in the United States has a significant impact on the American healthcare system.[1–3] On the supply side one encounters a nurse population that is aging and nearing retirement. Also, declining enrollments in nursing programs together with obstacles that are limiting the admissions of qualified applicants to nursing schools due to lack of resources and shortage of faculty. Other issues include (a) difficulty in meeting the disparate work expectations and clinical and technical skills of a multigenerational workforce, (b) the poor image of nursing,[4,5] (c) competition from outside of the hospital environment which has siphoned nurses whose patient care skills are in great demand[6] i.e. other career opportunities, and (d) several decades ago, women did not have as many clear options for employment, nursing, teaching, and secretarial were prime employers. Today, women (one primary supplier of nurses) have a lot more choices for their career, and they are not as compelled to be nurses out of necessity. To recruit and retain nurses, the profession needs to be more compelling to a group of likely applicants than alternative professions.

On the demand side, despite the efficiencies imposed by managed care, the need for nurses is increasing. As the length of hospital stay is reduced, for example, the acuity level of patients increases; with increased acuity comes the need for more nursing care hours.[7] This also often requires a greater skill level and increases work stress. As a result of the downsizing associated with managed care and the lack of new entrants to the profession, fewer nurses are called upon to do more work.

According to Upenieks[6] nurses have felt physically exhausted and emotionally drained because of the increased patient load and the conditions under which they must work. Also, the present shortage is more acute as a result of nurses opting out of the nursing profession due to dissatisfaction with their roles in a clinical setting. It has been estimated that, by 2010, there will be a shortage of 729 000 registered nurses with a Bachelor of Science in Nursing (BSN). The estimate increases to 1 119 000 by 2020.[8] In a 2004 study, the Health Resources and Administration forecasts for a registered nurse shortage in 2020 will be between 400 000 and 1 000 000 nurses. This situation will increasingly worsen as more 'baby boomer' nurses retire and, in turn, more aging

'baby boomers' require care. Thus, by 2020, there will be 340 000 fewer nurses practicing than today.[9] In the March 2008 issue of Registered Nurse (RN), it was estimated that the United States is facing a shortage of approximately 150 000 nurses right now; in the next decade, more than 650 000 new nursing jobs will be created, and about 450 000 nurses will have retired.

Nurses generally enjoy their work. According to McNeese-Smith,[10] job satisfaction in nurses can be derived from patient care, environment, balanced work load, relations with coworkers, salary and benefits, professionalism, and career stage of nurse. Price and Mueller[11] suggest that receiving good pay increases job satisfaction, and as job satisfaction increases, individuals evidence greater intent to stay with the organization. Skills acquisition and maintenance, level of autonomy, level of responsibility, advanced practice role, ability to maintain their critical skills as well as ability to enhance those skills, and multiple practice roles considered to be important issues. Other issues include quality of organization infrastructure such as support for preceptoring role and education in information technology used to manage case loads. Hegney *et al.*[12] indicated that management's recognition plays an important role.

Leaving for reasons associated with job dissatisfaction was higher than for reasons associated with career advancement or with situational reasons.[13] Concerns about the quality of leadership in management, insufficient staff, time demands, and stressful work environment are experiences as obstacles in providing good nursing care.[14] A total of 39.2% of nurses sampled would *not* choose nursing again as a career; 54.3% have contemplated leaving the profession at some point in time.

Given the state of the US healthcare system, it is very important try to understand what motivates nurses and keeps them more satisfied with their jobs. By increasing job satisfaction and factors that lead to greater satisfaction, nurse turnover can be reduced which will help reduce the nursing shortage. This study addresses this issue by exploring factors that impact job satisfaction as identified by Quinn and Staines[15] and applying to the context of intrinsic (internal) and extrinsic (external) rewards. This analysis makes a valuable contribution by allowing us to break nurses into clusters based on the nurses' primary motivating factors and exploring their levels of satisfaction. This works helps identify how different types of nurses can better be recruited and retained.

Intrinsic and extrinsic motivation

Hegney and McCarthy[16] indicated that lack of educational opportunity, unsupportive management, poor working relationships with other health professionals, and lack of a clear career path contribute to dissatisfaction. Also, lack of financial recognition, lack of collegial recognition, and too many non-nursing duties resulting in less quality time with the client generate dissatisfaction. For new graduates, the issue of pay became a significant area of dissatisfaction in the transition from student to registered nurse.[17] Another Australian study[18] compared nurses to four other occupation categories in a health facility. Results suggested that nurses reported less favorable outcomes on all but one organizational climate scale, were also found to have higher levels of stress, lower levels of morale, job satisfaction, and quality of work life than other groups. Results were generally less favorable for nurses working in a large regional hospital and mental treatment facility. Furthermore, total time in the job, weekly working hours, shift working, and the unit where employed increases burnout; however, emotional exhaustion decreases with age.[19] Fewer than half of the nurses reported that management is responsive to their concerns, provides opportunities for nurses to participate in decision making, and acknowledges nurses contribution to patient care as well as nurses participation in developing their own schedules is a contentious issue.[20] Staff nurses were only moderately empowered, and 24% perceived their work to have more efforts than rewards.[21] There was a positive correlation between lower levels of job satisfaction and intention to leave the profession.[22]

The preceding discussion suggests that nurses are influenced by two types of motivations: extrinsic and intrinsic. Brief and Aldag[23] define extrinsic and intrinsic motivations as

Intrinsic work motivation is a cognitive state reflecting the extent to which the worker attributes the force of his or her task behaviors to outcomes derived from the task per se; that is, from outcomes which are not mediated by a source external to the task-person situation. Such a state of motivation can be characterized as a self-fulfilling experience.

An extrinsic work outcome is an object or event received or experienced by a worker during or following the completion of a set of task behaviors which is self- or task-mediated in that the involvement of a source external to the task-person situation is not required for delivery to take place.

Intrinsic motivation is characterized by excitement, interest, happiness, self-determination, competence, curiosity, and high levels of task involvement.[24,25] Intrinsic motivation makes work fulfilling. It is a major reason for deciding to stay on a job and it

helps keep stress levels down.[26] For example, one study found that intrinsically motivated job seekers were attracted to pay plans that offer a high level of personal involvement.[27] In a study of German nurses, Bakker *et al.*[28] found that burnout was particularly prevalent among those nurses who put high intrinsic effort into their job. De Gieter *et al.*[29] found that nurses highly valued psychological rewards such as appreciation for their work by others, compliments by others, and contact with patients.

Extrinsically motivated individuals tend to have low concept attainment, problem solving and incidental learning abilities,[30] along with a high need for control and recognition, low levels of creativity, and a high money orientation.[24] Extrinsic motivation is about delayed gratification, downplaying the feelings of the moment in order to obtain some future extrinsic reward. Work leads to something that would feel better in the future, a salary increase or a promotion.[26] For example, extrinsically motivated individuals were attracted to pay plans that offer higher than average starting salaries.[27] In a study of German nurses, Bakker *et al.*[28] found that imbalance of high extrinsic effort spent (job demands) and low extrinsic rewards obtained are more highly associated with burnout syndrome. De Gieter *et al.*[29] found that nurses more often mention financial rewards spontaneously compared to non-financial and psychological reward.

Research methods and results

The reported research was part of a larger study designed to determine levels of motivation and job satisfaction among hospital nurses in a southwestern city with a population of approximately 100 000. Initially, two focus groups were conducted in order to understand the underlying motivational and job satisfaction factors. Results yielded a range of job satisfaction factors such as collegial co-workers, challenges of the job, comfort, as well as intrinsic and extrinsic satisfaction. Perusal of the literature demonstrated the availability of validated scales that encompass the factors identified by the focus groups. It was decided to employ a job satisfaction scale developed by Quinn and Staines[15] and a six-item intrinsic/extrinsic motivation scale developed by Cammann *et al.*[31] The survey instrument was pretested with 12 nurses. Based on the pretest results, minor adjustments were made to the survey. Pretest respondents were not included in the final survey administration.

The survey was conducted in two southwestern hospitals. The administrations of the two hospitals granted permission to distribute surveys randomly to 450 employees, provided the survey was completed after duty hours. A collection box was left onsite and prepaid envelopes were provided with the surveys. The current study focuses on the 150 nurses who responded to the survey.

In a continuous effort in studying the factors that impact the retention of nurses, one of the initial steps would be to measure the satisfaction level of nurses. For example, the rewards offered to nurses in the hospital. In this present study an attempt is made to study the reward structure of nurses in a hospital in the Southern United States. We have classified the reward structure into two categories, extrinsic reward and intrinsic reward. The study used the job satisfaction scale developed by Quinn and Staines.[15] The scale of intrinsic reward included the items such as: how satisfied with the chances to learn new things; how satisfied with the chances of accomplishment something worthwhile; and how satisfied the chances to do something that make them feel good about you as a person. The scale of extrinsic reward included items such as: how satisfied with the pay; how satisfied with the fringe benefits; and how satisfied with the job security. The items were measured on the scale of 1–7 (1 = very dissatisfied and 7 = very satisfied). The surveys were distributed in a hospital and 40 nurses completed the survey.

The data were analyzed using the cluster analysis procedure. The procedure identified two clusters as presented in Table 1.

The analysis identified two distinct groups and they are presented in Fig. 1. In the first cluster of nurses (72%) were more satisfied with the intrinsic reward than the second group of nurses (28%) who self-identified as mildly positive for intrinsic satisfaction, but very close to neutral, whereas the first group were highly satisfied with the intrinsic rewards of their career and workplace.

It is interesting to note that those nurses who were more satisfied with intrinsic rewards also reported more satisfaction with the extrinsic reward structure. The numbers where not as high, but still were in the very satisfied range. On the other hand, those that were only mildly satisfied with the intrinsic reward structure were highly dissatisfied with the extrinsic reward structure and opportunities.

Fig. 1 shows a cluster map of the nurses in each group. Each cluster loads cleanly in its own section distinct from the other cluster. Review of the cluster map shows that each cluster is homogeneous within clusters and heterogeneous between clusters. This is supported by the multivariate statistics (Wilks' lambda = 0.3014, $F = 42.88$, P-value < 0.0001), which emerge from the canonical discriminant analysis.

Table 1: Results of cluster analysis.

	Cluster 1 (intrinsic) satisfied with intrinsic and extrinsic rewards	Cluster 2 (extrinsic) less satisfied with intrinsic and dissatisfied with extrinsic rewards
Intrinsic mean	6.04	4.60
How satisfied with chances to learn new things		
How satisfied with chances of accomplishment of something worthwhile		
How satisfied with chances to do something that makes them feel good		
Extrinsic mean	5.36	2.55
How satisfied with pay		
How satisfied with fringe benefits		
How satisfied with job security		
Observation (%)	72	28

Notes: $n = 40$, scale: 1 = very strongly dissatisfied; 7 = very strongly satisfied. Wilks' lambda = 0.3014, $F = 42.88$, P-value < 0.0001.
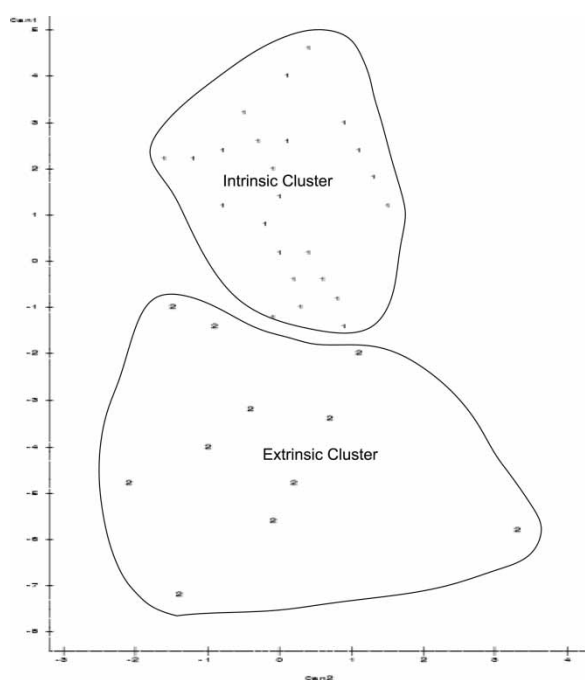

Figure 1: Cluster map.

It illustrates a clear difference between the nurses more in tune to the intrinsic rewards and those with lower intrinsic scores. The striking difference is in how a relatively small difference (1.44 points) on the intrinsic motivation scale can have such a large impact on the satisfaction levels with the intrinsic rewards (2.81 points, nearly double the difference).

The review of Table 2 indicates that in general, the nurses in cluster two reported significantly more agreement (P-value < 0.05) with scales on *challenge, financial reward, relation with coworkers, resource adequacy, and promotion* than cluster one. These findings indicate that the nurses in Cluster 2 are significantly less satisfied with financial rewards, followed by the promotion opportunities. The *comfort* scale did not provide significant difference between two clusters. The nurses in both groups viewed comfort similarly, although this scale does not rates highly by both groups.

Conclusions and discussion

The results show that nurses have different levels of satisfaction with the intrinsic rewards of nursing. A small difference in intrinsic reward scales translated into much lager dissatisfaction with extrinsic rewards. In fact, weak satisfaction in this area led to strong dissatisfaction with the extrinsic factors. This weakness in intrinsic satisfaction was most noticeable in the areas of financial rewards, specifically pay, job security and fringe benefits. These factors were negative for the extrinsic cluster. This suggests that by finding ways to improve intrinsic motivation, or to appeal to it, hospitals may not have to invest so much in financial resources, such as pay, to keep nurses satisfied and on the job.

The group with lower intrinsic motivation was also less likely to be satisfied with the promotion policies and practices at the organization. This group is likely motivated by more external rewards, such as the pay and prestige that comes with a promotion and less motivated by the satisfaction of caring for a patient. There were also significant difference in perceptions of the challenge of their work, resources, and even coworker relationships. Finding and appealing to these motivating factors can impact multiple facets of job satisfaction. Interestingly,

Table 2: Results of ANOVA procedure.

Scale	Cluster 1 (intrinsic) mean	Cluster 2 (extrinsic) mean	P-value
Comfort	2.70	2.53	0.2422
Seven items ($\alpha = 0.7338$)			
For example my work schedule is good			
I have enough time to get job done			
Physical surroundings are pleasant			
Challenge	3.33	2.89	0.0037
Six items ($\alpha = 0.8186$)			
For example			
Have opportunity to develop own special ability			
I can see the results of my work			
The problems I am expected to solve are challenging			
Financial reward	2.98	1.87	0.0001
Three items ($\alpha = 0.6898$)			
For example			
The pay is good			
The job security is good			
Fringe benefits are good			
Relation with coworkers	3.39	3.03	0.0271
Three items ($\alpha = 0.6901$)			
For example			
People I work with are friendly			
Plenty of chances to make friends			
Resource adequacy	3.39	3.00	0.0138
Thirteen items ($\alpha = 0.9011$)			
For example			
Have enough information to get job done			
Enough supplies to get job done			
Supervisor is competent			
Supervisor is helpful in getting job done			
Supervisor is successful in getting job done			
Responsibilities are clearly defined			
Coworkers are competent			
Coworkers are helpful in getting job done			
Promotion	2.76	2.07	0.0039
Three items ($\alpha = 0.8411$)			
For example			
Promotions are handled fairly			
Chances of promotion are good			
Employer is concerned about giving everyone a chance to get ahead			

Scale: 1 = not at all true; 2 = a little true; 3 = somewhat true; 4 = very true.

there was no significant difference between comfort levels. Neither group had noticeably high scores on questions such as good work schedule, time to get things done, and pleasant surroundings.

Fortunately, about three-fourth (72%) of the nurses were highly motivated by intrinsic rewards, whereas a smaller number seemed to be less motivated by these factors. However, this is still about one-fourth of the nurse population which is a significant number to consider and be aware of. Employers should think of ways to expand and deepen the appeal to these factors if they wish to increase job satisfaction and reduce turnover.

Dollar for dollar, nurses with high intrinsic motivation are more likely to be happy with the current reward structure for financial compensation. Future research should explore how employers can better appeal to the internal motivating factors of the rest of the nurses.

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