Predictors of Job Satisfaction in Remote Hospital Nursing

Chaboyer, W.
Williams, G.
Corkill, W.
Creamer, J.

Abstract

This research examined the relationship between the content of work, the work environment and job satisfaction among nurses working in a teaching hospital located in a remote area of Central Australia. Using the results of recent meta-analyses of job satisfaction, a conceptual framework was developed that predicted that work content (variety, autonomy, task identity and feedback) and work environment (ward facilities, collaboration with medical staff, cohesion amongst nurses, staffing, pooling and respected by others) would influence job satisfaction. A descriptive survey of 135 nurses employed in a 170 bed hospital was undertaken. Strongest predictors of job satisfaction were job variety, feedback and collaboration with medical staff. Other moderate correlates were cohesion amongst nurses and task identity. This study demonstrated that feedback from colleagues and supervisors should never be trivialised as a strategy to improve job satisfaction. Furthermore, the need to be considered as part of the health care team by the medical profession can be influenced by proactive workplace strategies and policies.

Introduction

Internationally, many structural and cultural forces have impacted on nursing practice. The movement of nursing education from the hospital to the university, an explosion of technology with unprecedented access to information, and finally, the economic and political imperatives including shortened length of stay, have all influenced the development of the nursing profession. These forces do not only have the capacity to transform the nature of the work carried out by nurses but may also impact on the satisfaction nurses gain from their chosen profession. The purpose of this research was to identify the determinants of job satisfaction in a group of nurses working in a 170 bed remote teaching hospital in Central Australia which services a catchment area of approximately one million square kilometers and 45 thousand people. An understanding of what makes nurses satisfied with their work may allow managers to positively influence nursing turnover and indirectly result in recruitment and retention cost savings (Kramer & Schmalenberg, 1991; Wells, 1990). In addition, identifying the influencing factors of job satisfaction in a variety of cultures and at different times will allow a more comprehensive understanding of this phenomenon.

Job Satisfaction

There has been a large amount of research done on nurses' job satisfaction however the bulk of the research has been completed in North America. It is only recently that studies from places such as Australasia (Adamson, Kenny & Wilson-Barnett, 1995; Nelson & Fells, 1989; Pearson & Chong, 1997; Yamashita, 1995) and the Middle East (Misener, Haddock, Gleaton & Ajamieh, 1996) have begun to appear in the literature. The following review of the factors that have been recognised as influencing job satisfaction provides a basis for the development of the conceptual framework used in this study.

Early work by McCloskey (1974) identified that safety, social and psychological rewards were related to job satisfaction. A more recent study of job satisfaction in 221 hospital nurses identified that benefits, participation in decision making, possibility of promotion within the organisation, routineness of work, salary and communication, defined as the amount of information received from the organisation, were positively correlated

with job satisfaction (Cavanagh, 1992). Negative correlates in this same study included education, opportunity for advancement outside the organisation, social integration, defined as the number of work friends, and justice, defined as the distribution of salary and benefits. Another study of 330 Critical Care nurses has identified personal and work related variables that are related to job satisfaction (Stechmiller & Yarandi, 1993). Personal variables include education, tenure, family demands, job expectations, meaningfulness of work, responsibility for work outcomes, knowledge of work results, commitment to career, health difficulties and psychological hardiness. Work related variables include workload, feedback, skill variety, task identity, task significance, autonomy, supervision, dealing with others at work, opportunity for advancement, pay, support from others at work and job security.

Two recent meta-analyses of nurses' job satisfaction have yielded similar predictors of job satisfaction (Blegan, 1993; Irvine & Evans, 1995). Irvine and Evans' work identified that routinisation, autonomy, role identity, role conflict, supervisory relations, leadership, stress, advancement opportunity, participation and feedback have moderately strong correlations with job satisfaction. In Blegan's meta-analysis, stress and commitment were the two variables that correlated the strongest with job satisfaction. Moderate correlations were found for communication with supervisor, autonomy, recognition, routinisation, and communication with peers (Blegan, 1993). In summary, a variety of contextual and personal variables appear related to job satisfaction.

Conceptual Framework

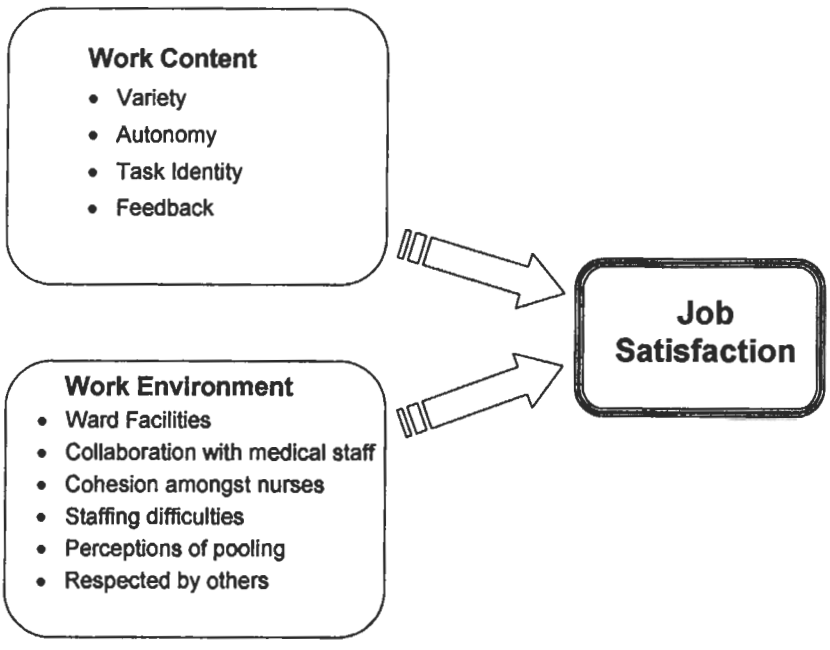
The conceptual framework for this study developed from a review of the literature on job satisfaction and on a previous study carried out by the principle researcher (Chaboyer, 1998). It draws heavily on the meta-analytic results of Irvine and Evans (1995). These researchers concluded that work content and work environment variables were more important than individual or economic variables in predicting job satisfaction. The study described in this paper was devised to investigate only the work content and environmental factors related to job satisfaction. For the purpose of this research, work content was operationalised as the characteristics of the job. Content variables measured in the study included the four job characteristic scales developed by Sims, Szilagyi and Keller in 1976 (Job Variety, Job Autonomy, Feedback and Task Identity). The definitions for the scales, Variety, Autonomy and Feedback, were straightforward whereas Sims, Szilagyi and Keller defined Task Identity as "The degree to which employees do an entire or whole piece of work and can clearly identify the result of their effort" (1976, p. 197).

Work Environment was operationalised as the context within which work takes place and included staffing and social interactions. Environmental variables included three scales developed by Adams and Bond in 1995 (Ward Facilities, Collaboration with Medical Staff, Cohesion Amongst Nurses), and three scales recently developed and tested by the principle investigator (Staffing Difficulties, Perceptions of Pooling and Respected by Others). The dependent variable, job satisfaction, was defined as "the degree of positive affective orientation towards employment" (Price & Mueller, 1986). The job satisfaction scale used in this study was developed by Mueller and McCloskey (1990) and has been tested by themselves (Mueller & McCloskey, 1990) and others (Pearson & Chong, 1997). Figure 1 displays the framework for this study.

Method

This study, a survey of 135 nurses practicing in a 170 bed remote teaching hospital in Central Australia, was an extension of previous research undertaken by the principle investigator (Chaboyer, 1998). The hospital services a large geographic area and its patient population is predominantly Aboriginal Australians. The previous study was designed to identify and

Figure 1 Job Satisfaction Conceptual Framework



compare aspects of hospital nursing practice. The survey tested the psychometric properties of several instruments, including ones developed by the first author (Chaboyer, 1998). This study extends the previous work by using instruments proven to be valid and reliable in the Australian hospital nursing population to measure predictor variables, and an internationally tested instrument to measure job satisfaction. After ethical approval was granted by university and Health District ethics committees, a total of 257 surveys were distributed via the hospital's internal mail and 135 returned for a response rate of 52%.

Survey Development and Testing

The survey used in this study was comprised of three published instruments, the Job Characteristic Inventory (Sims, Szilagyi & Keller, 1976), the Ward Organisational Features Scales (Adams & Bond, 1995), and the Job Satisfaction Scale (Mueller & McCloskey, 1990). Three scales entitled "Staffing Difficulties", "Perceptions of Pooling" and "Respected by Others", developed and tested by the principle investigator (Chaboyer, 1998), were also used to measure aspects of the work environment. A series of demographic questions were included in the survey. The Job Characteristic Inventory was initially devised and tested on a sample of over 1,100 hospital workers including approximately 200 nurses (Sims et al., 1976). Since its conception, several researchers

have investigated its psychometric properties with the conclusions that it appears to be valid and reliable (Brief & Aldag, 1978; Fried, 1991; Pierce, McTavish & Knudsen, 1986). The Job Characteristic Inventory items were measured on a three point Likert scale, where one equalled the least amount and three the most amount of the construct measured. The "Variety" scale contained five items, the "Autonomy" scale contained six items, the "Task Identity" contained four items and the "Feedback" scale contained five items.

The Acute Ward Organisational Features Scales was developed and tested on 825 nurses in 119 acute care wards in 19 different hospitals in Britain. Initial testing of its scales reported by Adams and Bond (1995) and Adams, Bond and Arber (1995) demonstrates reasonably good validity and reliability. Subsequent testing of the scales used in this study supported the initial testing results (Chaboyer, 1998). The items on the three scales used in this study were measured on a four point scale, utilising the scale originators anchors, where one demonstrated the least amount and four the most amount of the construct measured. The "Ward Facilities" scale contained five items, the "Collaboration with Medical Staff" contained nine items and the "Cohesion amongst Nurses" scale contained ten items.

Mueller and McCloskey (1990) published a 30 item instrument to measure nurses' job satisfaction after several years researching the phenomenon. This instrument contains items directed at eight aspects of job satisfaction; extrinsic rewards, scheduling satisfaction, family/work balance, co-workers, interactions, professional opportunities, praise/recognition and control/responsibility. More recently this instrument has been used and evaluated positively internationally (Misener, T., Haddock, S., Gleaton, J., Ajamieh, A.R.A., 1996). The "Job Satisfaction" scale was measured on a five point scale where one indicated very unsatisfied, three measured satisfied and five signified very satisfied.

The "Staffing Difficulties", "Perceptions of Pooling" and "Respect by Others" scales, constructed by the principle investigator of this study, were developed as a result of a qualitative study of Australian nurses and have been tested on a sample of 555 nurses in three large hospitals, exhibiting good internal consistency and construct validity (Chaboyer, 1998). The five "Staffing Difficulties" items were measured on a five point scale where one equalled never and five always. The "Perceptions of Pooling" scale was comprised of six items rated on a five point scale where one indicated never and five all the time. The twelve "Respected by Others" items were measured on a four point scale where one signified never and four always.

Cronbach's alpha reliabilities were used to determine internal consistency of the scales. A comparison of the alpha reliabilities obtained in this study to the scale originator's is reported in Table 1. Using Nunnally and Bernstein's (1994) criteria, it appears that the autonomy and perceptions of pooling scales did not demonstrate adequate internal consistency however the global job satisfaction scale was highly reliable.

Results:

Nurses in this study ranged in age from 20 to 60 years with an average age of 35 (s.d. = 9.7). The correlation between age and job satisfaction score was not statistically significant. There were 124 (93 %) females and 9 (7%) males in this study. Nurses in this study had a wide range of experience as Registered Nurses and the vast majority were employed full-time. In addition, just over 60 percent were Level I bedside nurses and approximately 20 percent were Level II clinical nurses who assumed charge duties. The nurses in this study had been in their current area of practice for an average of 5.8 years (s.d. = 5.4) and the average number of new positions these nurses were hired into in the past three years was 1.9 (s.d. = 1.5). Almost 50 percent of the nurses were single and without children. Over 50 percent of the nurses said that they were not contemplating changing jobs in the next year. Interestingly, there was no association between job satisfaction scores and plans to change jobs.

Table 1:
A Comparison of the Internal Consistency of Scales to that of their Originators

Scale	α This Study	α Scale Originator
Work Content Variables		
Variety (Sims et al., 1976)	0.78	0.78
Autonomy (Sims et al., 1976)	0.68	0.84
Task Identity (Sims et al., 1976)	0.80	0.75
Feedback (Sims et al., 1976)	0.83	0.83
Work Environment Variables		
Ward Facilities (Adams & Bond, 1995)	0.78	0.78
Collaboration with Medical Staff (Adams & Bond, 1995)	0.85	0.83
Cohesion Amongst Nurses (Adams & Bond, 1995)	0.89	0.91
Staffing Difficulties (Chaboyer, 1998)	0.81	0.70
Perceptions of Pooling (Chaboyer, 1998)	0.68	0.65
Respected by Others (Chaboyer, 1998)	0.88	.88
Job Satisfaction (Mueller & McCloskey, 1990)	**0.90**	**0.89**

Table 2 identifies the mean scores for all scales and their individual correlations with the Job Satisfaction Scale. The average job satisfaction score was 3.21, which indicates that these nurses were slightly more satisfied than dissatisfied. The summated score (not averaged) had a potential range from 30 to 150 and an actual range in this study from 40 to 122 with a mean score of 83.6 and standard deviation of 15.6. This result is noted as previous researchers have alternatively reported mean or summated scores for this scale. It appears that the nurses in this study were moderately satisfied with the structural and contextual elements of their jobs. Importantly, the five scales that independently correlated strongest with job satisfaction were Feedback, Variety, Cohesion Amongst Nurses, Task Identity and Collaboration with Medical Staff.

Table 2: Scale Results and their Correlations with Job Satisfaction

Scale	Mean	S.D.	Correlation with Job Satisfaction
Work Content Variables			
Variety (range 1 – 3) (Sims et al., 1976)	2.14	0.47	***0.49
Autonomy (range 1 – 3) (Sims et al., 1976)	2.32	0.40	***0.35
Task Identity (range 1 – 3) (Sims et al., 1976)	2.36	0.51	***0.38
Feedback (range 1 – 3) (Sims et al., 1976)	1.71	0.54	***0.50
Work Environment Variables			
Ward Facilities (range 1 – 4) (Adams & Bond, 1995)	2.68	0.48	*0.27
Collaboration with Medical Staff (range 1 – 4) (Adams & Bond, 1995)	2.51	0.49	***0.37
Cohesion Amongst Nurses (range 1 – 4) (Adams & Bond, 1995)	2.71	0.46	***0.45
Staffing Difficulties (range 1 – 5) (Chaboyer, 1998)	3.22	0.83	-0.07
Perceptions of Pooling (range 1 – 5) (Chaboyer, 1998)	2.98	0.65	0.19
Respected by Others (range 1 – 4) (Chaboyer, 1998)	2.88	0.37	**0.28
Job Satisfaction (range 1 – 5) (Mueller & McCloskey, 1990)	3.21	0.52	

*p < 0.05
**p < 0.01
***p < 0.001

Prediction of Job Satisfaction

A General Linear Model (Tabachnick & Fidell, 1996) was generated to identify the variables most predictive of job satisfaction (see table 3). Three scales, Variety, Feedback and Collaboration with Medical Staff, which satisfied the significance test of 0.05, were most predictive of job satisfaction (r = .55; r2 = .30). That is, these three scales together predicted 30 percent of the variance obtained in the global job satisfaction score. Although the scales entitled Task Identity and Cohesion Amongst Nurses were individually correlated with job satisfaction, using multivariate analysis, they did not add to the predictive ability of the three scales identified earlier.

Discussion:

In this study nurses varied widely in their ages and years of experience. There was no correlation between either of these two variables and job satisfaction scores which differs from a recent study of public health nurses (Cumbey & Alexander, 1998). These findings are similar to Irvine and Evans (1995) meta-analysis results, which also did not find that age or work experience predicted job satisfaction. Half of the nurses in this study were single, which is quite different from the results from Huntley's (1995) study of nurses in rural and remote hospitals in New South Wales, Australia. In her survey of nurses working in 6 different hospitals, 79 percent of the 115 nurses were married. In addition, while 84 percent of the nurses in Huntley's study had been in their position for five years or longer, in this study almost one quarter of the nurses had been in their positions for one year or less. Only approximately one third of nurses in this study had been employed by the institution for six or more years.

Secondly, this hospital services a very unhealthy population (30% of whom are Aboriginal Australians). In this region there is a disproportionate number of children, sick people and crime. Consequently there is a disproportionate demand for teachers, nurses and police compared to other towns and cities in the Australian context. This greater demand requires more nurses than would otherwise be required and therefore creates a disproportionate requirement for relocating large numbers of locum (short-term) nurses to the study hospital. Finally, it could be that Huntly (1995) studied nurses in small hospitals, whereas this hospital, while being in a remote area, is by comparison, a larger teaching institution.

Nurses in this study were moderately satisfied with the content and environmental elements of their jobs, findings similar to a recent study of public health (Cumbey & Alexander, 1998). The average job satisfaction score was 3.21, which indicates that they were slightly more satisfied than dissatisfied. Comparisons with a sample of nurses living in the Left Bank (Misener et al., 1996) identify similar results to that of these Australian nurses. Although the nurses in The Misener et al., study had higher summated scores (98.6 compared to 83.6), their standard deviation was greater than the standard deviations in this study (Chaboyer, 1998) (s.d. = 17.6 as compared to a s.d. = 15.6 in this study).

Table 3: Predictors of Job Satisfaction

Scale	Standardised B	t-value (significance)	Stepwise R	Adjusted R^2
Variety (Sims et al., 1976)	0.300	3.96 ($p < 0.001$)	0.40	0.16
Feedback (Sims et al., 1976)	0.295	3.89 ($p < 0.001$)	0.52	0.27
Collaboration with Medical Staff (Adams & Bond, 1995)	0.198	2.61 ($p = 0.01$)	0.55	0.30

Possible reasons for these differences are three fold. Firstly, the current hospital is situated in a tourist town, isolated from the rest of the country and still considered somewhat of a frontier destination. Many nurses attracted to this environment are themselves "tourists" with no intention of staying a long time, hence the result that 43% intended leaving their current job and yet stated being satisfied. Many such mobile nurses are inherently single or without dependants.

While nurses in this study were more

\satisfied, than dissatisfied, with their jobs, surprisingly almost half of them said that they were considering changing jobs in the next year. This lack of association between job satisfaction and intent to change jobs is supported statistically, with no correlation between the two variables. Additionally, Irvine and Evans (1995) have identified negative correlations between job satisfaction and actual turnover and between behavioural intention to quit and actual turnover. As mentioned earlier, it may be that nurses working in remote acute hospitals are themselves "tourists".

The Autonomy scale did not demonstrate adequate reliability, with alpha coefficients substantially less than 0.80. While Sims et al., (1976) reported good internal consistency for this scale, Fried's (1991) analysis of several studies using the Autonomy scale reports Cronbach's alpha reliabilities ranging from 0.56 to 0.99. Similarly, the perceptions of pooling scale demonstrated less than adequate reliability. It would appear that future researchers should use these two scales cautiously when attempting to measure job autonomy and perceptions of pooling in the Australian context.

While managers may not have control over many external factors that affect the health care system and its workers, they can have a great influence over some of the work related factors that influence their employees job satisfaction. In this group of nurses, job variety, feedback and collaboration with medical staff were the three independent variables that were most predictive of job satisfaction. In this research, job variety per se must be interpreted cautiously as the nurses in the study may have been attracted to a unique working environment in the first place. Not only is this hospital in a remote and arid part of a very large continent, it also has 75% of all bed days occupied by Aboriginal Australians. Many of these patients speak English as a second or third language and live in third world conditions with poor health status compared to the national average.

Other authors have noted that routineness of work is positively correlated with job satisfaction (Cavanagh, 1992). Misener et al., note that "it has not been shown whether items on job satisfaction scales are stable in differentiating variables that are 'trait vs state' specific" (1996, p 97). They go on to assert that responses to certain items may be biased by recent experiences or, in the case of our research, may be context specific. Clearly the nurses attracted to the environment of the study hospital might well be those who are looking for interesting experiences and variety anyway. Notwithstanding this distinction it is incumbent on managers to assist staff looking for "variety" or "routineness" to match their role or duties to their personality and, in this setting, additional variety in the role for many is an important factor to identify and nurture.

Feedback is identified in many forms of biological, human and organisational life. The fact that nurses identify this as an important job satisfier supports modern humanistic management and leadership theory in that a basic human need for information on one's performance (generally positive or constructive) is necessary to support the self esteem or perspective the nurse has on their role or position in the organisation. Elton Mayo (1933) first described this important need in factory workers as early as the 1930's in a now famous study that showed that even if workers perceived that management were taking an interest in them and providing feedback, their job satisfaction and consequent job productivity improved significantly. A recent American study affirmed the importance feedback plays in nurses' job satisfaction (Tonges, Rothstein & Carter, 1998).

Staff feedback from supervisors and colleagues is simple, cheap and effective and should never be understated or trivialised as a strategy to overcome job satisfaction issues. Performance appraisals, informal and formal meetings, communication books, newsletters and their like, are all useful tools to support staff feedback in busy work environments and are all

capable of improving staff satisfaction.

Finally, collaboration with medical staff stems from a long standing and well described attitude among nurses that they need, or believe they belong to, a multidisciplinary team environment to feel fully appreciated as professionals in a team situation. The findings from this study support recent work by Adams, Bond and Hale (1998). The power differential and latitude given to nurses by their medical colleagues is something that nurses may not be able to control in many circumstances, however nurses can influence these relationships significantly. By establishing trusting and familiar working relationships with medical staff, nurses then achieve access to additional job satisfiers such as input into decision making, enhanced autonomy, respect, authority and other positive elements to their work. Political survival or tenability in the hospital work place can be dependent on conditions and cooperation, few of which are more powerful or influential than those shared between nursing and medicine. The results of this study actually demonstrate the desire and need for such relationships.

Conclusion

Whilst job variety, feedback and collaboration with medical staff were statistically identified as strong predictor variables of job satisfaction in this study, other correlates included cohesion among nurses, task identity or the ability to complete a whole job as allocated, autonomy and respect. It appears from these results that there is no single panacea for job satisfaction. The individual satisfiers for many nurses are as complex and varied as the nurses themselves, however some common and consistent issues are emerging that can inform and direct managers to those areas that will yield the maximum benefit. In this study of nurses in a remote teaching hospital in Australia, job variety, feedback and collaboration with medical staff are areas that managers in other remote hospitals may wish to explore further in order to improve nurses staff job satisfaction.

Clearly larger samples in other remote hospitals are required. However the results of this study are not dissimilar to other studies. Common themes have emerged as job satisfiers for nurses in city and remote hospital settings alike. The fact that these variables can be studied, measured and acted upon provides hope to nurse managers who must frequently contend with the frustration of low staff morale, high staff turnover and difficulty in recruitment and retention of staff to remote hospital environments.

Authors

Wendy Chaboyer RN, MN is a Lecturer, Faculty of Nursing and Health, Griffith University, QLD, PMB 50, Gold Coast Mail Centre, Qld., Australia, 4217

Gerald Williams is Director of Nursing Services Alice Springs Hospital, NT and Senior Lecturer, Flinders University of South Australia.

Wendy Corkill is a Clinical Nurse Specialist Intensive Care Unit, Alice Springs Hospital.

Julie Creamer RN, MN is a Registered Nurse, Intensive Care Unit, John Flynn Hospital & Medical Centre Tugun, QLD and Sessional Associate Lecturer, Griffith University.

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