Original Article

# Does Chief Nurse's Ward Management Behavior Influence Nurses' Job Satisfaction in District Hospitals of Bhutan?

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## Abstract

**OBJECTIVES:** Chief nurse's ward management behavior is a key factor affecting job satisfaction of nurses working directly under them. Therefore, the purpose of this study was to investigate the influence of chief nurse's ward management behavior on job satisfaction of nurses working in major district hospitals in Bhutan.

**MATERIALS AND METHODS:** A cross-sectional study was conducted involving 246 nurses working across 18 district hospitals in Bhutan. Data on nurses' job satisfaction and chief nurse's ward management behavior were collected using Minnesota Satisfaction Questionnaire (MSQ)-short version and Supervisory Behavior Description Questionnaire (SBDQ) respectively. A generalized linear model (GLM) with a binomial distribution was used to indicate the relationship between chief nurse's ward management behavior and nurses' job satisfaction.

**RESULTS:** The result showed that 54.09% of nursing employees were satisfied with their job. In terms of chief nurse's ward management behavior, chief nurses of Bhutan are inclined to display behavior which is more of an autocratic nature than democratic. There was a strong positive correlation between chief nurse's ward management behavior and nurses' job satisfaction. The GLM also indicated a strong positive relationship between the nurses' job satisfaction with chief nurse's ward management behavior.

**CONCLUSION:** Nurses' job satisfaction was significantly and positively associated with chief nurse's ward management behavior. This finding call for an interventional program to promote chief nurse's ward management behavior.

**Keywords:** nurses' job satisfaction, chief nurses' ward management behavior, Bhutan.

Globally nurses form an integral part of healthcare system and Bhutan is no exception. In many countries nurses account for 50% of all healthcare professionals and are actively involved in every sphere of healthcare setting including responding to medical emergencies, delivery of primary healthcare services, and in the care of ill, disabled and dying patients.[1] They also constitute a critical workforce in achieving sustainable development goals and to realize universal health coverage.[1] Therefore, it is important to take a closer look into the matter concerning their well being and job satisfaction so that they continue to deliver essential healthcare services to their full potential.

Job satisfaction refers to a pleasurable emotional state culminating from the judgment of one's job or job experience.[2] It is simply how contented an individual is with one's job; whether or not one likes the job.[3] It is broadly categorized into intrinsic, extrinsic and general job satisfaction.[4,5] An intrinsic component of job satisfaction is concerned with personal perception and internal feelings resulting from recognition, advancement, success at work, and connections with the colleagues.[4] Extrinsic job satisfaction arises from external factors such as salary, reward and working environment.[4] General job satisfaction results from the combined effect of intrinsic and extrinsic job factors.[5]

In particular, nurses' job satisfaction indicates the extent to which nurses are satisfied with their workplace, nature of work or leaders among others.[6] Nurses who are contented with the job are highly committed and devoted to their professional calling thus enhancing their productivity and quality of patient care.[6,7] Nurses' job satisfaction has been shown to be influenced by a constellation of factors including organizational commitment,[6] turnover intention[8] and burnout.[9]

One of the key factors influencing nurses' job satisfaction is chief nurse's ward management behavior. Leadership behavior influences employee's job satisfaction by creating enabling working environment[10] and by boosting their morale and work behavior.[11] An association between perceived managerial support and the wellbeing of the employees was reported in the previous studies.[12,13] Sullivan et al.,[14] demonstrated the positive impact of good leadership and management behavior on an employee's job satisfaction in nursing and midwifery as well as in other healthcare workers. A similar cross-sectional study carried out in Egypt reported supervisory support as an independent predictor of low nurses' job satisfaction.[15]

Although the impact of chief nurse's ward management behavior on nurses' job satisfaction is well-studied across the globe, there is limited or no study which warrants such information in Bhutan. Further, studies conducted in other countries on chief nurse's leadership behavior and nurses' job satisfaction revealed conflicting findings. For instance, contrary to studies which demonstrated significant association,[12-15] a study done in the United States of America unveiled absence of significant relation between the aforementioned variables.[16] Therefore, in order to seal the gap of knowledge, the current study was conducted with the primary objective to explore how chief nurse's ward management behavior influenced nurses' job satisfaction in Bhutan. A secondary objective was to describe Bhutanese nurses' job satisfaction and to determine chief nurse's ward management behavior.

## Materials and method

It was a cross-sectional study conducted to examine the influence of chief nurse's ward management behavior on nurses' job satisfaction in the months of April to June 2021. The target population included all registered nurses working across eighteen district hospitals in Bhutan. Nurses working in regional and national referral hospitals were excluded because those nurses were directly under the supervision of Nursing Superintendent. Based on their educational qualification, registered nurses in Bhutan are categorized into assistant nurse, staff nurse and clinical nurse.[17] Nurses graduted with a certificate course are called assistant nurses while those with a diploma course are called staff nurses. Similarly, nurses who have a bachelor degree and above are called clinical nurses. Collectively, there were 1,517 registered nurses working across various levels of healthcare institutions inBhutan.[18]

The study sample consisted of all Bhutanese registered nurses (midwives included) meeting the following inclusion criteria:

1. working in the district hospital under the supervision of chief nurse
2. work experience of at least two years.

However, nursing administrators, nurse anesthetists, nurses on leave and contract nurses were excluded from the study.

The sample size was calculated using Lwanga & Lemeshow's formula[19] which is given by:

$$n = Z^2P(1-P)/d^2$$

n = Number of sample size
Z = 1.96 for 95% confidence
P = Estimated proportion in study population
d = Acceptable margin error

The study used a confidence level of 95%, an estimated proportion of 0.20 and an acceptable margin error of 5%. Thus by substituting the values in the formula, the sample size required was at least 246.

Based on a total number of nurses employed across the selected hospitals, 6 to 30 nurses were recruited from each hospital (Figure 1). The recruitment process involved collection of email addresses of nurses from their head nurse. The electronic questionnaires prepared in googlesheet containing study variables, consent form and participant information sheet were emailed to the respondents. The online data collection continued till the required samples from each hospital were obtained.

### *Instruments*

Data were collected using three self-administered research questionnaires.

**First,** the demographic questionnaire developed by the researcher was used to gather demographic data of the respondents.

**Second,** the short-form MSQ developed by Weiss et al.[5] was used to measure the job satisfaction level of the respondents. It is a five points Likert scale indicating: 1 = very dissatisfied, 2 = dissatisfied, 3 = neutral, 4 = satisfied and 5 = very satisfied with their job. The scale is composed of two domains which measure external and internal satisfaction. The highest possible score in the domain of internal and external satisfaction were 60 and 25 respectively. The score in general satisfaction ranges from 20 to 100 with higher score indicating higher level of job satisfaction.[20] To determine job satisfaction in external and internal domains, mean scores were used to categorize the level of satisfaction.[21] A score greater


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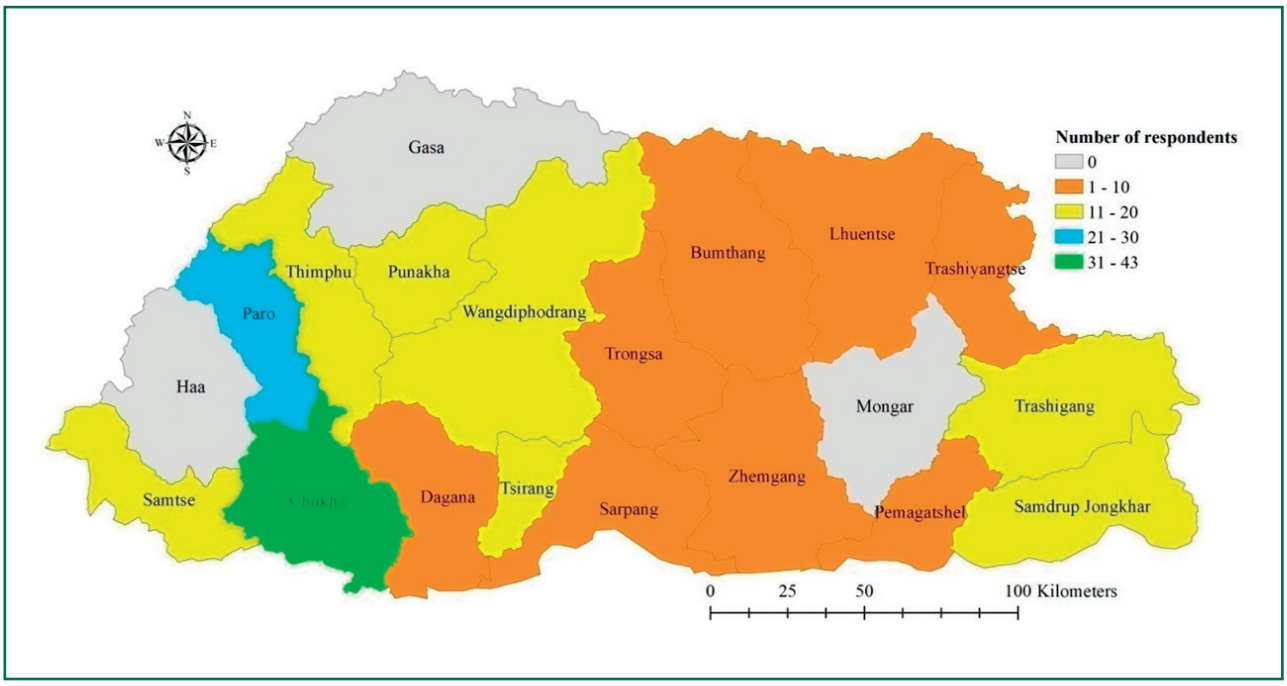



**Figure 1:** Number of respondents included in the job satisfaction survey of nurses in Bhutan, April - June 2021.

or equal to mean score indicated adequate satisfaction in the particular domain while a score less than the mean score indicated dissatisfaction.

**Third,** a SBDQ[11] was used to determine chief nurse's ward management behavior as reported by the respondents. It is a 48-item scale rated on a five point Likert scale. However, in this study we used a three point Likert scale to weight each item of the scale since it is simpler, easier and quicker to administer compared to a five point Likert scale.[22] Each numerical value on a three point Likert scale represents: 1 = never, 2 = sometime and 3 = always. It is categorized into two dimensions viz: consideration and initiating structure each bearing 28 and 20 items respectively. Raw and mean scores were used for the interpretation of scores in the two dimensions of chief nurse's ward management behavior.[21] A score greater than mean in the dimension of consideration was perceived to display strong democratic behavior, while the score lower than mean indicated low or absence of that behavior. Similarly, the score greater than mean in the dimension of initiating structure was perceived to display strong autocratic behavior, while the score lower than mean indicated low or absence of that behavior.

### *Statistical analysis*

Demographic characteristics, dependent and independent variables were described using descriptive statistics such as frequency, percentage, mean and standard deviation.

To determine reliability of the instruments, a pilot study involving 30 respondents fulfilling the same inclusion criteria as that of parent study was conducted. The reliability coefficient in the domains of external, internal and general job satisfaction of MSQ were 0.92, 0.84 and 0.95 respectively. Likewise, Chronbach's alpha in the domain of consideration and initiating structure of SBDQ were 0.85 and 0.91 respectively, while it was 0.93 for the main scale. The tool was also evaluated by two local public health professionals and their feedbacks were incorporated.

The correlation between chief nurses' ward management behavior and nurses' job satisfaction was assessed using Spearman's rank correlation coefficient owing to the non-normal distribution of the data. The effects of chief nurses' ward management behavior and demographic variables on nurses' job satisfaction were assessed using a binomial GLM with logit link. The response variable was a two-column matrix containing success and failure of job satisfaction, where the number of failure was calculated by subtracting the individual satisfaction score from the number of trials (i.e., total satisfaction score). The explanatory variables were sex (categorical), qualification (categorical), position in the job (categorical), consideration (continuous) and initiating structure of chief nurses' ward management behavior (continuous). The influence of age and other variables were not tested because of collinearity issues. Since the position title and qualification were highly correlated, two models were constructed to include them separately as follows: (1) Nurses' job satisfaction as a function of sex, qualification and chief nurses' ward management behavior; (2) Nurses' job satisfaction as a function of sex, position title and chief nurses' ward management behavior. The best model was selected using Akaike Information Criteria (AIC).[23]Odds ratio's (OR) were

calculated by exponentiating the estimated regression coefficients of the GLM model. All analyses were performed in R Software (version 3.6.3).

### *Ethical considerations*

Ethical clearance to conduct the research was granted by the Research Ethical Board of Health (REBH), Thimphu (vide reference number REBH/PO/2018/044) and the permission to collect the data was approved by the heads of 18 district hospitals of Bhutan. Data were collected online from those nurses who volunteered and consented to take part in the study. Strict confidentiality and anonymity of the data was maintained by the researchers.

## Results

The majority of the respondents were in the age bracket of 31-40 years (56.90%). Males had higher proportion than females (male vs female: 55.30% vs 43.50%), and most of them had served for less than 5 years in the service (45.50%). In terms of educational qualification, nearly three quarters of the respondents had a diploma in nursing. Similarly, 73.20% were staff nurses and the majority (41.00%) reported having worked in the current work setting for 4 to 8 years. While 61.80% of the respondents were satisfied with current position level, 38.20% were dissatisfied. The majority (71.50%) of the respondents agreed that chief nurse's leadership was associated with their job satisfaction.

### *Nurses' job satisfaction*

The actual score of nurses' job satisfaction was 38-97 with mean score of 70.31 (SD = 12.59). While the majority (59%) of the respondents expressed satisfaction in terms of intrinsic job satisfaction, less than half (49.19%) reported satisfaction in the domain of extrinsic job satisfaction (Table 2). Overall, more than half (54.09%) of the respondents were satisfied with their job.

### *Chief Nurse's ward management behavior*

Actual score of chief nurse ward management behavior ranged from 65 to 135 with a mean of 102.25. The result indicated that chief nurses in Bhutan displayed satisfactory ward management behavior. The mean score in the domain of consideration and initiating structure were 59.46 and 42.67 respectively (Table 3). In the domain of consideration, 41.46% of the respondents perceived that their chief nurse's ward management behavior was democratic, while 58.54% indicated absence of such behavior (Table 4). Likewise, in terms of initiating structure 46.75% of the respondents perceived that their chief nurse's ward management behavior was autocratic while 53.25% indicated absence of such behavior. Overall, the majority of the respondents perceived that their chief nurse displayed behavior traits more of an autocratic nature than democratic.

**Table 1:** Demographic characteristics of the respondents (n = 246)

| Characteristics | n (%) |
|---|---|
| Age (years) | |
| 20 - 30 | 86 (35.00) |
| 31 - 40 | 140 (56.90) |
| ≥41 | 20 (8.10) |
| Gender | |
| Female | 107 (43.50) |
| Male | 136 (55.30) |
| Prefer not to say | 3 (1.20) |
| Number of years in the service | |
| ≤ 5 | 112 (45.50) |
| 6 - 10 | 87 (35.40) |
| 11 - 15 | 22 (8.94) |
| ≥ 16 | 25 (10.16) |
| Educational qualification | |
| B.Sc. | 37 (15.00) |
| Certificate | 28 (11.40) |
| Diploma | 180 (73.20) |
| M.Sc. | 1 (0.40) |
| Position title | |
| Assistant Nurse | 28 (11.40) |
| Staff Nurse | 180 (73.20) |
| Clinical Nurse | 38 (15.40) |
| Work experience in the current hospital (in years) | |
| 1 - 4 | 96 (39.00) |
| 5 - 8 | 101(41.00) |
| ≥ 9 | 49 (19.90) |
| Satisfaction in current position level | |
| No | 94 (38.20) |
| Yes | 152 (61.80) |
| Linkage of chief nurse leadership with job satisfaction | |
| No | 70 (28.50) |
| Yes | 176 (71.50) |
| Qualification of chief nurse | |
| BSc | 93 (37.80) |
| Certificate | 1 (0.40) |
| Diploma | 76 (30.90) |
| MSc | 76 (30.90) |

**Table 2 :** Raw score and level of satisfaction in the domain of intrinsic and extrinsic job satisfaction scale (n = 246).

| Domain | Raw score | n (%) | Level of satisfaction |
|---|---|---|---|
| Intrinsic job satisfaction | < 42.96 | 101 (41.00) | Dissatisfied |
| | ≥ 42.96 | 145 (59.00) | Satisfied |
| Extrinsic job satisfaction | < 20.22 | 125 (50.81) | Dissatisfied |
| | ≥ 20.22 | 121 (49.19) | Satisfied |


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*Influence of chief nurse's ward management behavior on nurses' job satisfaction*

Spearman's rank correlation coefficient showed significant correlation between chief nurse's ward management behavior and nurses' job satisfaction ($p < 0.001$). From the two GLMs, we chose model 1 owing to its low AIC value. Both considerations and initiating structure in the chief nurse's ward management behavior significantly influenced the odds of job satisfaction of nurses. The odds of nurses' job satisfaction were 1.016 times more likely to increase for each additional trait of autocratic ward management behavior ($p < 0.001$). Similarly, the odds of nurses' job satisfaction were 1.033 times more likely to increase for each additional trait in the democratic ward management behavior ($p < 0.001$). However, the odds of nurses' job satisfaction were not associated with demographic characteristics of nursing staff ($p > 0.05$) (Table 5).

**Table 3 :** Possible score, actual score, mean and standard deviation (SD) of chief nurse ward management behavior (n = 246)

| Domain | Possible score | Actual score | Mean ± SD |
|---|---|---|---|
| Main scale | 48 - 144 | 65 - 135 | 102.25 ± 14.33 |
| Consideration | 29 - 87 | 40 - 79 | 59.46 ± 7.93 |
| Initiating structure | 19 - 57 | 22 - 58 | 42.67 ± 7.92 |

**Table 4 :** Raw score, frequency, percent and interpretation of chief nurse ward management behavior

| Chief Nurse's ward management behavior | Raw score | n (%) | Interpretation |
|---|---|---|---|
| Democratic | ≥ 59.46 | 102 (41.46) | Majority indicated that their chief nurses were more autocratic than democratic. |
| | < 59.46 | 144 (58.54) | |
| Autocratic | ≥ 42.67 | 115 (46.75) | |
| | < 42.67 | 131 (53.25) | |

**Table 5 :** Influence of chief nurse's ward management behavior on nurses' job satisfaction in Bhutan

| Variables | Coefficients (95% CI) | Odds ratio (95% CI) | *p* |
|---|---|---|---|
| Model 1 | | | |
| Intercept | -1.753 (-1.995, -1.512) | | |
| Sex | | | |
| Male | -0.031 (-0.088, 0.270) | 0.969 (0.916, 1.027) | 0.298 |
| Female (Ref) | | | |
| Qualification | | | |
| Diploma | 0.072 (-0.016, 0.160) | 1.075 (0.984, 1.174) | 0.106 |
| Bachelors & Masters | 0.097 (-0.013, 0.207) | 1.102 (0.987, 1.230) | 0.082 |
| Certificate (Ref) | | | |
| Initiating leadership | 0.016 (0.012, 0.021) | 1.016 (1.012, 1.021) | < 0.001 |
| Consideration leadership | 0.032 (0.027, 0.037) | 1.033 (1.027, 1.038) | < 0.001 |
| AIC | 2487 | | |
| Model 2 | | | |
| Intercept | -1.735 (-1.977, -1.494) | 0.176 (0.138, 0.224) | |
| Sex | | | |
| Male | -0.037 (-0.094, 0.021) | 0.964 (0.910, 1.021) | 0.213 |
| Position | | | |
| Staff Nurse | 0.067 (-0.020, 0.153) | 1.069 (0.980, 1.165) | 0.131 |
| Clinical Nurse | 0.026 (-0.086, 0.139) | 1.026 (0.918, 1.149) | 0.65 |
| Assistant Nurse (Ref) | | | |
| Initiating leadership | 0.017 (0.012, 0.021) | 1.017 (1.012, 1.021) | < 0.001 |
| Consideration leadership | 0.032 (0.027, 0.037) | 1.033 (1.027, 1.038) | < 0.001 |
| AIC | 2487.6 | | |

CI: Confidence interval; Ref: Reference (baseline); AIC: Akaike Information Criteria

## Discussion

The study revealed that more than half of the respondents were satisfied with their job. They were satisfied to a greater degree in the domain of intrinsic job satisfaction compared to extrinsic job satisfaction. The low level of satisfaction in the domain of extrinsic job satisfactions in the current study echoes those reported in the previous study.[24] The possible reason for low level of satisfaction in this domain could be due to the fact that the majority of the respondents in the study were staff nurses with limited opportunity for academic advancement. As per the Royal Civil Service Commission of Bhutan (the highest body for human resource management), the position of those civil servants with diploma education wishing to pursue a bachelor degree are not protected which discourages them to advance their educational career.[25] A previous study indicates limitation in the educational opportunity as one of the factors limiting extrinsic job satisfaction.[26]

Overall, the level of job satisfaction in the current study was lower than those reported in Lebanon[8] and higher than those reported in Egypt.[15] The differences in job satisfaction levels observed in the current study and previous studies might be due to differences in methodology adopted and instruments used. It is also plausible that the working environment might have played a role in variation in job satisfaction,[24] since the participants in the current study expressed more dissatisfaction in terms of extrinsic job satisfaction particularly in the aspects of authority, recognition and variety.

Although our study indicated a satisfactory level of chief nurse's ward management behavior, the majority of respondents felt that it was more of an autocratic than democratic behaviour which could be due to lack of leadership training for chief nurses.[27] Though autocratic behavior might be essential during times of crisis, democratic behavior is by far the most desirable behavior known to positively influence employees' well-being and job satisfaction.[21] In this regard, appropriate leadership training and education may be helpful in instilling leadership behaviors for chief nurses in Bhutan.

Consistent with the research hypothesis, our study revealed a strong positive relationship between nurses' job satisfaction with both autocratic and democratic styles of leadership. The possible mechanism through which leadership behavior influences job satisfaction of the employees has been described by various researchers.[10,11] According to Bogler,[10] different leadership behavior engenders a different working environment and directly affects the job satisfaction of the employees. It is also evident that supervisory behavior influences job satisfaction of an employees by impacting their morality and work behavior,[11] psychological well-being,[28] and by the way of empowerment.[26]

The findings of the study should be interpreted in the light of its limitations. It is probable that there might be reporting bias since data collection was carried out using a self-reported questionnaire. However, the biggest strength of our study was inclusion of nurses from eighteen district hospitals of Bhutan which markedly strengthened the generalizability of the study findings to Bhutanese nurses. Moreover, our study is the first of its kind to provide baseline information on chief nurse's ward management behavior and nurse job satisfaction.

## Conclusion

The study indicated that majority of the nurses in Bhutan were satisfied with their job. There was a strong positive association between nurses' job satisfaction and chief nurse's ward management behavior. This underscores the importance of providing appropriate leadership training for chief nurses to promote their ward management behavior which can ultimately improve nurses' job satisfaction

### *Recommendation for further research*

Our study is limited by its cross-sectional design that used a preset list of questions. Therefore, we recommend conducting a qualitative study using an in-depth interview involving both chief nurse and nursing staff. This will generate new insights not captured in our study.

### *Conflict of Interest*

The authors declare that they have no conflict of interest.

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