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Job Satisfaction among Health Workforce in Medical Colleges of Nepal: A Mixed Method

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ABSTRACT

Background: The medical sector in the society and its significant role of job satisfaction will improve the health workforce performance. Presently staffs/workforce management in medical colleges became more challenges. The purpose of the study was to investigate the level of job satisfaction and associated factors in medical colleges of Nepal.

Methods: The study employed descriptive, cross-sectional study with the relevant respondents' such as doctors, nurses and administrative staffs working in different medical colleges of Nepal. The study was conducted within the affiliated college of Kathmandu University School of Medical Sciences (KUSMS). Simple random sampling method was used to select respondents. A total sample size of 108 for quantitative and 18 for qualitative was collected, using the formula from Charan and Biswas, 2013. For qualitative study, we used purposive convenience sampling strategy to enroll the health workers for key informant interview to gather data on job satisfaction, impression and experience about their job.

Results: 34.3% of the respondents, we surveyed were not satisfied with their job while 65.7% were satisfied with their current job. It has also been discovered that the delivery of high-quality health care depends on the level of job satisfaction with the healthcare organization.

Conclusions: There was a significant relationship between job satisfaction of health workforce and its' associated factors in medical college of Nepal. A focus on improving work environment through increased financial motivation and career development opportunities as well as investing in health insurance for diseases with increased resources support is recommended to improve job satisfaction.

Keywords: Associated factors; health workforce; job satisfaction; medical college.

INTRODUCATION

Human life has become very complex and competed in present days. Dissatisfied people then, are likely to contribute very little for any tasks and purposes.[1] Job satisfaction results from employees' perceptions of their work.[2] here are different perspectives relating to job satisfaction such as content and process theories. Job satisfaction has its huge impact on the general life of the employees, where satisfied employees are contented. Highly satisfied worker has better physical and mental well-being. Some studies reported that 50% leave their profession after working for 5 years due to job dissatisfaction.[3,4]

In Nepal, the medical sectors have substantially changed over the last two and have decade. Initially, it was only focused on clinicians and patients, however now technological advancement, computer-mediated context, and continuous innovations have encouraged innovative product development and with it the urgency to adapt them. Interestingly, there exist huge turnover in the medical sector and is currently affecting many medical organizations and job status of millions of employees working into this area.

METHODS

The study employed descriptive, cross-sectional study with the relevant respondents' such as doctors, nurses and administrative staffs working in medical college of Nepal. The inclusion criteria were the (a) staff working

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at the center affiliated college of Kathmandu University School of Medical Sciences (KUSMS) and staff who agree to participate. The exclusion criteria followed were those who were not affiliated with KUSMS and who refused to participate in the study. Study was conducted from June to August 2024. Ethical approval was obtained from Institutional Review Committee, KUSMS before data collection (ref. no. 240/23).

Simple random sampling method was used to select respondents. A total sample size of 108 for quantitative and 18 for qualitative was collected, using the formula from Charan and Biswas, 2013. Sample size = Confidence level's Z-score^2 X Std. dev X (1-Std. Dev.)/ margin of error^2

The sample size was obtained with the 95% confidence level with 50% expected proportion and 5% margin of error. For qualitative study, we used purposive convenience sampling strategy to enroll the health workers for key informant interview to gather data on job satisfaction, impression and experience about their job.

The eligible consented participant was interviewed face to face using structured questionnaire. The questionnaire was broadly grouped into several sections such as socio-demographic characteristics, job satisfaction variables and organization related variables. The questionnaire was validated through pretesting and adjusted when enumerators had confusion on understanding any sections. We calculated Cronbach alpha to examine the scale reliability of quantitative tools and received 0.8. We made necessary modification and adapted the required changes in the final version of the questionnaire. For qualitative interviews, key informant interview (KII) guides were developed in an iterative process. The KII were led by female qualitative researchers with the background of management and also took notes in Nepali of verbal and non-verbal responses. The participants were queried about beliefs, perceptions, and experiences related to job satisfaction, job challenges and way forward in medical college.

We then conveniently selected the eligible study participants from the center affiliated college of KUSMS. We explained about the purpose of the study. The primary instigator informed briefly about the study and asked if the respondents would be interested to participate. The respondents were provided with more detailed information of the study, whenever needed. Ethical approvals were explained emphasizing an importance of protecting respondents' privacy and confidentiality, the volunteer nature of the study and the option to drop out at any time from the study. After obtaining informed consent, we conducted an interview and responses were recorded in a separate sheet as: no response, refused to share information, busy schedule etc. Of those who accepted participation, the respondents were proceeded to final interview. The data were entered in the digital platform. The participants were further contacted when need arise. Thereby, contact information of the participants were retained for future contact. The statistical analysis was conducted in STATA version 14 (STATA Corporation, College Station, TX, USA).

The principal investigator was the responsible person for the study who facilitated data collection process and control quality of the data by auditing regularly. The work plan was developed which was used as a monitoring tool for every day. The principal investigator monitored the data and supervised the enumerators on a day-to-day basis. The principal investigator rechecked the data to maintain the data quality. There was a daily meeting to update about the study and to address any issues with and enumerators. The confidentiality was maintained throughout the data collection process. All responses were coded and numbers were used instead of names of the participants (e.g. P1, P2, etc.). All the data were stored in the single computer. Back up were kept in an external drive and were updated daily. The computer and data files were safeguarded by a password known only to authorize personnel. The identifier was stored separately.

Mean and standard deviation were used for descriptive analysis of normally distributed continuous variables whereas median and interquartile range were used for continuous variables with skewed distribution. Frequency and percentage were used for the descriptive analysis of categorical variables. χ^2 and unpaired t-test were used to find the association between various socio-demographic with job satisfaction related variables. We assessed factors associated with dependent and independent variables using bivariate and multivariable logistic regression models and reported odds ratio with 95% confidence interval. There was one main dependent variables of interest: job satisfaction in medical college. For this dependent variable, different factors were chosen appropriately based on literature review.

For qualitative analysis, the inductive thematic analysis was used to analyze translated transcripts. Familiarization of data through reviewing the transcripts multiple times allowed for new inductive codes to be added iteratively as new topics of interest were generated. Analysis was performed using the software *Dedoose* version 9.0.107.

RESULTS

The detailed characteristics of the study population are shown in table 1. There were 108 professionals from the three departments: (a) medical (35.2%), (b) nursing (30.5%), and (c) the administration (34.3%) included in the study. The majority of the respondents were medical officer (44.7%). From the administration department, majority of the respondents were of assistant level (37.8%). Among the surveyed 108 respondents, the majority held a master's level (52.8%) of education. The study involved interviews with 36.1% male and 63.9% female. Regarding marital status of surveyed respondents, majority were married (75.0%) followed by 24.1% unmarried and 0.9% divorced. Among the employee represented, 47.2% fell under the age 31 to 40 years of age. The majority of the surveyed respondents held permanent position (65.7%). We found that the employees representing medical, nursing and the administration, 71.3% earned more than NPR 50,0000 (Table 1 and 1.1).

Table 1. Descriptive findings of surveyed respondents working in medical college. (n=108)

Variables		Number (%)
KUSMS, Dhulikhel: Institute, Location		108 (100%)
Department	Medical	38 (35.2%)
	Nursing	33 (30.5%)
	Administration	37 (34.3%)
Position: Medical	Medical officer	17 (44.7%)
	Consultant	14 (36.8%)
	Sr. Consultant	7 (18.4%)
Position: Nursing	Staff Nurse	12 (36.4%)
	Bachelor Nurse	6 (18.2%)
	Master Nurse	15 (45.4%)
Position: Administration	Assistant	14 (37.8%)
	Officer	13 (35.1%)
	Above officer	10 (27.03%)
Qualification	Below bachelor	12 (11.1%)
	Bachelor level	36 (33.3%)
	Master level	57 (52.8%)
	Above Master level	3 (2.8%)
Gender of respondents	Male	39 (36.1%)
	Female	639 (63.9%)
Marital status	Married	81 (75.0%)
	Unmarried	26 (24.1%)
Age of participant	Up to 30 years old	29 (26.8%)
	31-40 years old	51 (47.2%)
	41-50 years old	21 (19.4%)
	51 years old	7 (6.5%)

Table 1.1: Descriptive findings of surveyed respondents working in medical college (n=108)

Variables		Number (%)
Service year	< 5 years	23 (21.3%)
	5-10 years	38 (35.2%)
	10-15 years	23 (21.3%)
	>15 years	24 (22.2%)
Job status	Permanent	71 (65.7%)
	Contract	23 (21.3%)
	Daily wages	2 (1.9%)
	Other	12 (11.1%)
Average monthly income	<50,000 NPR	0 (0.0%)
	50,000-75,000 NPR	8 (7.4%)
	76,000-100,000 NPR	23 (21.3%)
	>100,000 NPR	77 (71.3%)

A total of seven respondents (6.5%) were suffering from serious medical conditions. The medical condition from which the respondents were mostly suffering was accident (2.8%), chronic disease (18.7%) where hypertension, heart diseases, diabetes and asthma were reported. Among those who were suffering, 8.1% were unsatisfied with their job (Table 2).

Table 2. Physical health of surveyed respondents of Medical College. (n=108)

Variables	Number (%)
Suffering from serious medical condition/disease within the last month	
Yes	7 (6.5%)
No	101 (93.5%)
Perception on work station effecting health condition	
Yes	3 (2.8%)
No	105 (97.2%)
Possession of chronic diseases	
Yes	20 (18.7%)
No	87 (81.3%)
Type of medical condition/disease currently suffering with:	
Hypertension	15 (83.3%)
Heart diseases	1 (50.0%)
Diabetes	1 (100.0%)
Asthma	1 (50.0%)
Other	4 (100.0%)
Physical abnormality	0 (0.0%)

Table 3 and 4 show the findings related to organizational and personal input factors. Majority of the respondents (71%) reported that the work that their work included the tasks that required further training. Similarly, 36% of the respondents agreed about organizational practices hindering the effectiveness of their work where 64% disagreed for that. It is interesting to see the minor differences among the staff who thinks thought utilizing an organizational norms, procedures, and practices in their work is challenging (57.4% disagree *vs* 42.6% agree). Similarly, there was very few differences in findings relating to those employees who reported to have a feeling that they did not have motivation and that deteriorates their performance (58.3% disagree and 41.7% agree). Yet, one-third of the respondent reported that they were not getting any internal satisfaction for their work (38.9% agree and 61.1% disagree). More than one third of the respondent (47.2%) also reported that they had to wait for the actions of their superior for any task.

Table 3. Findings relating to organizational input factors and impression among surveyed respondents. (n=108)

Variables		Number (%)
Human capital		
Work including tasks which cannot exploit previous experience/ competences	Disagree	85 (78.7%)
	Agree	23 (21.3%)
Work includes tasks requiring further training	Disagree	31 (28.7%)
	Agree	77 (71.3%)
I feel that my personal characteristics are not appropriate for performing my work.	Disagree	95 (88.0%)
	Agree	13 (12.0%)
Organizational standards, practices and routines		
Organizational practice hinder effectiveness of my work	Disagree	69 (63.9%)
	Agree	39 (36.1%)
Utilizing organizational norms, procedures, and practices in my work is challenging	Disagree	62 (57.4%)
	Agree	46 (42.6%)
Information systems		
The information systems of the company do not support my work	Disagree	78 (72.2%)
	Agree	30 (27.8%)
I cannot find the information needed from the information system	Disagree	80 (74.1%)
	Agree	28 (25.9%)
Quality of information		
I have to wait for the documents which I need during my work	Disagree	62 (57.4%)
	Agree	46 (42.6%)

Table 4. Findings relating to Personal input factors and impression among surveyed respondents (n=108)

Variables		Number (%)
Motivation and job satisfaction		
I feel that I do not have motivation and that deteriorates my performance	Disagree	63 (58.3%)
	Agree	45 (41.7%)
I feel that I do not get internal satisfaction from my work	Disagree	66 (61.1%)
	Agree	42 (38.9%)
Personal issues and physical fit		
My physical health deteriorates my performance	Disagree	84 (77.8%)
	Agree	24 (22.2%)
I feel that I cannot concentrate on my work because there are problems in my personal life	Disagree	94 (88.0%)
	Agree	14 (12.0%)
Clarity of job satisfaction		
I feel that I do not know what is included in my work	Disagree	83 (76.8%)
	Agree	25 (23.2%)
I feel that I do not know what is included in my colleague's work	Disagree	92 (85.2%)
	Agree	16 (14.8%)
Delays and waiting		
I have to wait for the actions of my superior	Disagree	57 (52.7%)
	Agree	51 (47.2%)
I have to wait for the actions of mother employees	Disagree	69 (63.9%)
	Agree	39 (36.1%)

The detailed finding relating to output factors and job satisfaction among the surveyed respondents were shown in table 5. Around 24% of the respondents reported of not being able to make innovations in their work and 25% reported of the outputs of the work were not utilized in other projects. Nearly half of the respondents (44%) reported of feeling that the work was beyond the time allotted for the tasks. Interestingly, majority of the respondents reported of having a feeling of working with full productivity (68%).

Table 5. Findings relating to output factors related to job satisfaction among surveyed employee. (n=108)

Variables	Number (%)
A. Output factors	
Innovations:	
Feeling of not being able to make innovations	
Disagree	82 (75.9%)
Agree	26 (24.1%)
Quality:	
Feeling of not being satisfied with the quality of work	
Disagree	87 (80.6%)
Agree	21 (19.4%)
Utilization of outputs:	
Feeling that the outputs of the work are not utilized in other projects	
Disagree	81 (75.0%)
Agree	27 (25.0%)
Time efficiency:	
Feeling that the work is beyond the time allotted for the tasks	
Disagree	60 (55.6%)
Agree	48 (44.4%)
B. Direct productivity measures	
Productivity:	
Feeling of working with full productivity	
Disagree	34 (31.5%)
Agree	74 (68.5%)

The details of feeling about effectiveness of teamwork, leadership, reward and recognition, empowerment and participation, training and individual development, working hours, communication and working condition is shown in table 6. There were an equal percentage of women who had opinion of good teamwork in the organization (50% good vs 50% bad). Nearly half of the respondent reported of having bad leadership in an organization (44%) and having nominal plan of training and individual development (50%). 46% of the respondents reported of having bad communication mechanism within an organization, however, 60% reported of having good working condition within an organization.

Table 6. Descriptive presentation of variables and statement information of job satisfaction. (n=108)

Variables	Number (%)
Teamwork	
Bad	54 (50.0%)
Good	54 (50%)
Leadership	
Bad	48 (44.4%)
Good	60 (55.6%)
Reward and recognition	
Bad	53 (49.1%)
Good	55 (50.9%)
Empowerment and participation	
Bad	51 (47.2%)
Good	57 (52.8%)
Training and individual development	
Bad	50 (50.0%)
Good	50 (50.0%)
Working hours	
Bad	50 (50.0%)
Good	50 (50.0%)
Communication	
Bad	50 (46.3%)
Good	58 (53.7%)
Working condition	
Bad	43 (39.8%)
Good	65 60.2%)

The results from the logistic regression analyses are given on table 7 and 7.1. We did not find a significant association with the job satisfaction and service years, job status, suffering from medical conditions or productivity. We found that the administration departments had lower odds of job satisfaction compared to medical and nursing professionals (aOR=0.80, 95% CI: 0.22-2.95, *P*=0.74). The respondents who hold above master's degree had higher odds of job satisfaction compared with those having other degrees (aOR=4.33, 95% CI: 0.12-15.65, *P*=0.42). Females were at a higher odd of job satisfaction compared with the male counterparts (aOR=2.16, 95% CI: 0.69-6.83, *P*=0.19). The respondents who were unmarried had lower odds of job satisfaction than married (aOR=0.85, 95% CI: 0.16-4.69, *P*=0.86).

Table 7. Results from bivariate and multivariable logistic regression analysis for job satisfaction among the medical professionals.

Variables		Number (%)	Job satisfaction					
			Bivariate analysis			Multivariable analysis		
			OR	95% CI	*P-value*	aOR	95% CI	P-value
Department	Medical	38 (35.2%)	1.00			1.00		
	Nursing	33 (30.6%)	1.04	0.39-2.79	0.94	1.03	0.21-5.04	0.97
	Administration	37 (34.3%)	0.96	0.37-2.48	0.93	0.80	0.22-2.95	0.74
Qualification	Below bachelor	12 (11.1%)	1.00			1.00		
	Bachelor level	36 (33.3%)	2.8	0.73-10.70	**0.13**	3.84	0.61-24.38	0.15
	Master level	57 (52.8%)	3.29	0.92-11.85	0.07	2.94	0.38-22.56	0.30
	Above master level	3 (2.8)	2.8	0.19-40.06	0.45	4.33	0.12-15.65	0.42
Gender	Male	39 (36.1%)	1.00			1.00		
	Female	69 (63.9%)	1.59	0.70-3.60	**0.27**	2.16	0.69-6.83	0.19
Marital status	Married	81 (75.0%)	1.00			1.00		
	Unmarried	27 (25.0%)	0.55	0.22-1.36	**0.20**	0.85	0.16-4.69	0.86
Age of participants	Up to 30 years	29 (26.8%)	1.00			1.00		
	31-40 years	51 (47.2%)	1.29	0.51-3.30	0.59	0.59	0.10-3.64	0.57
	41-50 years	21 (19.4%)	1.76	0.53-5.86	0.35	0.81	0.06-11.64	0.88
	51 years and above	7 (6.5%)	4.23	0.45-39.87	0.21	2.99	0.12-71.81	0.5

The respondent who had done service for 10 to 15 years had higher odds of job satisfaction compared to them who served less (aOR=3.17, 95% CI: 0.25-40.59, *P*=0.38). The respondents who were suffering from any diseases had higher odds of job unsatisfaction (aOR=1.21, 95% CI: 0.17-8.65, *P*=0.85) compared to those who do not have any diseases sufferring. The respondents who were working with full productivity had higher odds of job unsatisfaction compared to their counterparts (aOR=1.66, 95% CI: 0.64-4.32, *P*=0.30).

Table 7.1 Results from bivariate and multivariable logistic regression analysis for job satisfaction among the medical professionals

Variables		Number (%)	Job satisfaction					
			Bivariate analysis			Multivariable analysis		
			OR	95% CI	*p-value*	aOR	95% CI	*p-value*
Service year	<5 years	23 (21.3%)	1.00			1.00		
	5-10 years	38 (35.2%)	1.18	0.41-3.37	0.76	0.88	0.11-7.10	0.91
	10-15 years	23 (21.3%)	3.65	0.94-14.19	**0.06**	3.17	0.25-40.59	0.38
	>15 years	24 (22.2%)	1.54	0.47-5.02	0.47	1.05	0.07-15.76	0.97
Job status	Permanent	71 (65.7%)	1.00			1.00		
	Contract	23 (21.3%)	2.22	0.13-37.26	0.58	1.02	0.25-4.28	0.97
	Daily wages	2 (1.8%)	1.88	0.10-34.13	0.67	0.53	0.02-17.22	0.72
	Others	12 (11.1%)	1.00	0.05-19.96	1.00	0.47	0.08-2.75	0.40
Suffering from medical condition	Yes	7 (6.5%)	0.68	0.14-3.20	0.62	1.21	0.17-8.65	0.85
	No	101 (93.5%)	1.00			1.00		
Having chronic disease	Yes	20 (18.7%)	1.00					
	No	87 (81.3%)	0.60	0.20-1.81	0.37	0.71	0.18-2.82	0.63
Productivity	Working with full productivity	74 (68.5%)	1.55	0.67-3.60	0.31	1.66	0.64-4.32	0.30
	Working without full productivity	34 (31.5%)	1.00			1.00		
Job satisfied: n=37 (34.3%) and job unsatisfied: n=71 (65.7%)								
Calculations are done using mixed logistic regression analysis								

The surveyed respondents reported that they had work stress up to the level which can be handled but become fully rush especially during exams of the students and become unproductive for patients. Some of the health workforce also felt that the patient and staff ratio was not correct and the mental health is having an impact leading to job dissatisfaction. Some of the respondents were finding difficulty for work-life balance due to work stress. However, some health workers mentioned that even though they were under stress and there was lack of adequate staff, they were continuing to work professionally. They believed that they were sincere and intended to work because they were satisfied and proud to work in the top university of the nation and also had a co-worker who supported each other to generate comfortable working environment.

Some of the respondents believed the salary system was fair but the incentives to be unformalized among clinical and paramedic staff. However, some respondent believed that the salary system was not reasonable and less than expectations. Incentive mechanisms was also not satisfying for some respondents. Some respondents also believed that the salary system should be highly increased for the risky departments such as psychiatry, operation theater, emergency. Some believed, it should be transparent.

Majority of the health workers reported that there was satisfying career development opportunities in the organization leading to job satisfaction. The organization was providing unpaid or paid study leave for further education which was leading to job satisfaction. Similarly, the regular training opportunities were provided for improving our services. However, some health workers were not happy because of lack of career development facility for them as because of being appointed into a contract basis.

DISCUSSION

Employee satisfaction is crucial success factor for all organization including medical organizations, and has a major impact on many economic and social phenomenon.[5] The satisfaction of employees is analyzed actually by the intrinsic and extrinsic factors such as work environment such as organizational policy and administration; interpersonal relationship with supervisors, co-workers, working conditions, salary, supervision, status, and work security that the individual produces.[6] If the organization could create a comfortable work environment, a suitable salary, and always maintain relationship between co-workers, then employees could have high job satisfaction.[5,7]

The administration departments had lower odds of job unsatisfaction compared to medical and nursing professionals. The respondents who hold the master's degree and above had higher odds of job unsatisfaction compared with those having other degrees. Females were at a higher odds of job unsatisfaction compared with the male counterparts. The respondent who had done service for 10 to 15 years had higher odds of job unsatisfaction compared to them who served less. The respondents who were suffering from any diseases had higher odds of job unsatisfaction. The respondents who were working with full productivity had higher odds of job unsatisfaction compared to their counterparts. The qualitative findings also identified that the existing remuneration and incentives was inadequate to cover health workers' living expenses. Financial factors had been reported of associated with job satisfaction in the studies around the world including Kenya, Ethiopia, China and Nepal.[8-11] As remuneration was linked with meeting personal and family needs, we highly recommend the administration of the medical college for salaries adjustment of the health workers, free health services and rewards to the health workers to improve job satisfactions.

We also found in our study that facilitation and limitation in the career development as a major factor for job satisfaction which as in line with the previous studies conducted in Nepal.[11,12] Studies reported inadequate career development opportunities affects the job satisfaction and ultimately the performance of health workers in Nepal and other countries.[1,9,11,13-15] Health workers perceived training opportunity as adequate and equitable in our study which contradicts with the previous studies done in Nepal.[11,16] Yet, we suggest the need of regular in-service interventions such as career development, and training opportunities for health workforce working in medical college. Health workers of older age who served more than 10 to 15 years were more dissatisfied than younger health workers in our study which might be due to the job saturation as compared to the young ones. Studies from Nepal, Cyprus, China, Ethiopia and Nepal showed similar findings while younger health workers were more job satisfied.[8,11,12,17,18] Nepal's Health Policy 2019 identified further education, in-service training and professional development opportunities for human resource development. However, little is focused when it comes to improving the working conditions and providing management support in Nepal.[19] Lack of formal motivation scheme may have left these health workers abandoned which is similar in other parts of the world.[20] Hence, the motivated and satisfied health workforce is thus crucial to attaining policy objectives and efforts should be made to design interventions taking into account the contextual realities of the country.

This paper provides a comprehensive perspective regarding the factors affecting job satisfaction among health workforce of medical college in Nepal by employing mixed methods in a low resource setting. The study limitations include small sample size and heterogeneous nature of health workforce working in medical college that hindered quantitative analysis by professional group. A self-reported bias might have occurred in the responses.

CONCLUSION

Our study investigated the relationship between job satisfaction and factors associated in medical college of Nepal. Organizational commitment is likely to be strongly associated with employee job satisfaction. Some employee reported lack of good relationship between health workforce and supervisors, and it should be given due considerations. The organization also lack on certain factors such as working conditions, training development facilities and long working hours. Job security and employee welfare measures should be given utmost importance, so that the employee's turnover may be minimized.

CONFLICT OF INTEREST

There is no any potential conflict of interest concerning this paper.

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