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Attitude towards Working in Rural Areas among Nursing Students in a Medical College of Kaski District

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Abstract

Nursing manpower shortage is a worldwide problem and it is vital for a nation to have nurses in all level of the health care delivery system. This study aims to assess the attitude towards working in rural areas after graduation among nursing students of Kaski. A descriptive cross-sectional research design was adopted for the study which was conducted in Gandaki Medical College; Rithepani among 75 undergraduate female nursing students of Gandaki Medical College. Total enumerative sampling technique was used. Structured self-administered questionnaire was used to collect data. Data were analyzed by employing both descriptive (frequency, mean, standard deviation) and inferential statistical methods (Chi-square test). The $p \leq 0.05$ was considered statistically significant. The study found that more than half (53.3%) of the respondents had positive attitude. However, nearly half (46.7%) had negative attitude towards working in rural areas after graduation. There was statistically significant association of age ($p=0.04$) and having a family member in rural service ($p=0.02$) with attitude towards working in rural areas after graduation. Nursing students of age less than 24 years (65.7%) and those with their family member in rural service (72.0%) were more likely to choose working in rural areas after graduation. Nearly half of nursing students had negative attitude to work in rural areas after graduation. This study concludes that having a family member in rural service and those with age less than 24 years had positive attitude to rural service.

Introduction

Health workers are an integral part of health systems and a crucial element in improving health outcomes (Chen et al., 2016). In most healthcare systems around the world, nurses along with other health professionals are regarded as frontline service providers. A stable workforce and sufficient staffing is advantageous for staffs, organizations and the people who are being cared for. However, there is improper distribution of nurses and other healthcare professionals at various levels, particularly in many low-income countries (Adhikari, 2014). It is a great challenge in developing countries like Nepal to recruit health workers to work in rural areas (Adhikari et al., 2021).

Studies have shown that there are some remote districts where there are no positions allowed for healthcare professionals, including nurses (Martineau & Subedi, 2010). There is huge rural–urban mal-distribution of health professional staffing in Nepal. There is no comprehensive health workforce data available to accurately illustrate the situation along with a clear national policy guideline in place for the recruitment, deployment and retention of health professionals in rural areas (Martineau & Subedi, 2010). Though non-governmental organizations have put some effort to attract nurses, it has been a temporary and patch work solution (Adhikari, 2014).

Approximately one half of the world population lives in rural areas, but only 38% of the total nursing workforce work in rural areas. The density threshold of physicians, nurses and midwives is 4.45 per 1,000 population (World Health Organization, 2016).Health worker-to-population ratio is 0.67 doctors and nurses per 1,000 individuals in Nepal, which is significantly lower than the WHO's recommendation (International Labour Organization, 2017).

The total population residing in rural areas of Nepal is 78.99% (The World Bank, 2023).WHO has estimated that inorder to deliver universal health coverage, the world will be short of 18 million health workers by 2030 (Scheffler et al., 2018). The rural areas occupy 50% of the world population and shortages of health workers are generally the most severe in rural areas (United Nations, 2018).

Students usually begin to think about their career paths after they enter into medical colleges and these ideas get crystallized by the time they reach final years. It is found that many students end up in careers that are closely related to the choices they made in final years of medical school (Kakkar & Dahiya, 2014). In a study conducted in South Asia, only 24% of nursing students were more likely to persue rural career after graduation. Students who spent longer durations in a rural setting were more likely to select a rural practice (Silvestri et al., 2014).

In a study conducted in China, among 1171 nursing students, only 5% of nursing students desired to work in rural areas while among 3826 medical students, only 16% intended to work in rural areas. The low desire for nursing students to work in rural health reflects that there are fewer rural career opportunities for them than for medical students in the country as village clinics are staffed with one or more doctors but no nurses (Fan et al., 2022).

In a study conducted in Chitwan, Nepal among 117 final year Bachelor level nursing students, 45.3% of the nursing students had a negative attitude towards working in rural areas of Nepal after graduation while 54.7% of the nursing students had positive attitude towards working in rural areas of Nepal in which highest was in community-related characteristics and the lowest in career-related characteristics(Adhikari et al., 2021).

There is mushrooming of nursing schools but shortage of nurses is found particularly in rural areas. Nurse training institutions can play a vital role in developing a national nursing workforce plan and in producing an adequate number of competent nurses for health systems. Therefore, understanding nursing students' attitudes and intention to work in rural areas after graduation is useful for developing appropriate intervention strategies to retain nurses in health care systems, particularly in underserved areas (Pudpong et al., 2017).

Though this is a critical issue, researcher found limited studies exploring this problem in Nepal and most studies were confined to just medical students. This study would provide better view on nursing students' desire to rural job and would be beneficial to serve as baseline information for future researches to conduct further studies. This study would also help policy makers in identifying gaps and strengthening rural service. Therefore, this study finds out attitude towards working in rural areas among nursing students in a medical college of Kaski so that it gives better understanding on nursing students' preference to rural job.

Methods

A cross-sectional design was used to assess the attitude of nursing students towards working in rural areas after graduation. The study was conducted at Gandaki Medical College, Rithepani -27, Kaski which is 9.9 km away from centre of Pokhara (0 k.m). It is one of the renowned medical institution established since 2010 A.D. It is affiliated to Tribhuwan University, Institute of Medicine providing educational facilities to large number of students with different programmes on medicine, nursing and paramedics.

The research population were all the undergraduate nursing students of Gandaki Medical College enrolled in Bachelor of Science in Nursing (BSN) second year, third year and Bachelor in Nursing Science (BNS) first year , second year and third year. The target population was 76. Altogether, 75 students were included in the study. Non-probability purposive sampling technique was used to select study setting i.e. Gandaki Medical College. Total enumerative sampling technique was applied to select the number of sample from this study setting. All the students of BNS (1st, 2nd and 3rd year) and B.Sc.

Nursing (2nd and 3rd year) currently studying in Gandaki Medical College were included in this research study. Those who were absent during the period of data collection and those who did not will to participate were excluded. A student was excluded from Bsc. Nursing third year for being absent during the day of data collection.

A structured self-administered questionnaire was developed for data collection after extensive literature review. Questionnaire was developed by researcher herself. The tool was prepared in English language. The research instrument was organized into three parts such as the first part was questions related to socio-demographic characteristics second was questions related to other related variables and last part was questions related to attitude of nursing students

In the part I included seven questions related to socio-demographic characteristics: age, religion, ethnicity, marital status, permanent residence, academic year and family income per month. In part II included eight questions related to other related variables: residence during childhood, parents' current residence, mother's educational status, father's educational status, mother's occupation, father's occupation, family member in rural service and scholarship. In part III included 20 statements (10 positive and 10 negative statements). The total score range of the statements was 20-100. Each positive statement got 5 points for strongly agree and 1 point for strongly disagree and negative statements were reversely scored.

Content validity of the instrument was maintained by extensive review of literature and consultation with advisor and subject matter experts before and during the construction of the instrument. Reliability was established through Cronbach's Alpha technique (Shrestha, 2022). The reliability of the instrument was 0.8. So, the research instrument was found to be reliable. To identify accuracy, clarity and consistency of the tool, pretesting of the instrument was done by collecting data from 8 nursing students from Bachelor level in Pokhara University, Dhungepatan and modification was done in the instrument as required.

Data was collected by the researcher herself over a period of 2 weeks. The students were gathered in a hall taking permission from concerned authority and directions were provided. The researcher herself collected the data by administering structured questionnaire. Approximately 15–20 minutes time was provided to each respondent to complete the too and all of the data was reviewed and checked for completeness and accuracy. The obtained data was organized and recorded into IBM Statistical Package for Social Science (IBM SPSS, version 20). Data was analyzed and interpreted according to the objectives of the study. Data was analyzed by employing both descriptive and inferential statistical methods. Data analysis was done by using descriptive statistics such as frequency, mean and standard deviation. Inferential statistics (chi-square test) was used to find out the association between selected socio-demographic data and attitude of the nursing students.

Ethical approval was taken from Institutional Review Committee (IRC) of Gandaki Medical College. Ref no: 217/078/079 Administrative approval was taken from concerned authorities of Gandaki Medical College. The verbal permission was taken from nursing program co-ordinator. Informed written consent was obtained from each respondent after clarifying the purpose of study prior to the data collection. Respondents dignity was maintained by giving right to reject from the study at any time. Confidentiality was maintained by not disclosing the information to anyone except for research purpose only. Anonymity of participant was maintained by keeping code number instead of writing their name.

Results

Researcher has explored background characteristics and other related variables of the respondents along with attitude towards positive statements and negative statements regarding working in rural areas after graduation, respondents' level of attitude and association between level of attitude and selected variables. This aids in policy level to address the gaps and also guides further research on similar aspects.

Background Characteristics

This incorporates age, religion, ethnicity, marital status, permanent residence, academic year and family income per month of the respondents'.

Table 1

Background Characteristics of the Respondents

N= 75

Characteristics	n	%
Age in completed years		
< 24	35	46.6
≥ 24	40	53.4
Mean age ± SD (23.85 ± 2.43), Min= 20, Max=31		
Religion		
Hinduism	71	94.7
Buddhism	3	4.0
Christianity	1	1.3
Ethnicity		
Dalit	2	2.7
Disadvantaged Janajati	6	8.0
Relatively Advantaged Janajati	8	10.7
Upper Caste Group	59	78.7
Marital Status		
Unmarried	57	76.0
Married	18	24.0
Permanent Residence		
Urban Area	64	85.3
Rural Area	11	14.7
Academic Year		
BNS 1st year	20	26.7
BNS 2nd year	30	40.0
BNS 3rd year	8	10.7
B.Sc. Nursing 2nd year	6	8.0
B.Sc. Nursing 3rd year	11	14.7
Family Income per Month		
Rs. 10,000 to Rs. 36,000	13	17.3
Rs. 36,000 to Rs. 1,11,000	47	62.7
More than Rs. 1,11,000	15	20.0

More than half of the respondents (53.4%) were above the age of 24 years. Almost all of the respondents (94.7%) followed Hinduism while majority of the respondents (78.7%) belonged to upper caste group. Majority of the respondents (76%) were unmarried. Likewise, most of the respondents (85.3%) were from urban community. More than one-third of the respondents (40%) were currently studying in BNS second year and nearly two third of respondents (62.7%) had upper medium family income

Socio-Demographic Variables

Respondents' residence during childhood, parents' current residence, parents' educational status and occupation, having a family member in rural service and getting scholarship by Ministry of Education were included in this section.

Table 2

Socio-Demographic Variables

N= 75

Variables	n	%
Residence During Childhood		
Urban Area	58	77.3
Rural Area	17	22.7

Parents' Current Residence		
Urban Area	65	86.7
Rural Area	10	13.3
Mother's Educational Status		
Literate	67	89.3
Illiterate	8	10.7
If Literate, (n=67)		
Only Read and Write	5	7.5
Basic Education	18	26.9
Secondary Level	35	52.2
Bachelor Level	8	11.9
Master and above	1	1.5
Father's Educational Status		
Literate	73	97.3
Illiterate	2	2.7
If Literate, (n=73)		
Only Read and Write	3	4.1
Basic Education	7	9.6
Secondary Level	40	54.8
Bachelor Level	17	23.3
Master and above	6	8.2
Father's Occupation		
Employed	69	92.0
Unemployed	6	8.0
If employed, (n=69)		
Self- employed/ Business	30	43.5
Government Service	25	36.2
Foreign Employment	6	8.7
Non- government Service	5	7.2
Farmer	2	2.9
Housemaker	1	1.5
Mother's Occupation		
Employed	75	100
If employed, (n=75)		
Homemaker	49	65.3
Self-employed/ Business	16	21.3
Government Service	3	4.0
Non-government Service	5	6.7
Farmer	2	2.7
Family Member in Rural Service		
Yes	25	33.3
No	50	66.7
Scholarship by Ministry of Education		
Yes	17	22.7
No	58	77.3

Majority of the respondents (77.3%) had spent their childhood in urban areas. Likewise, most of the respondents (86.7%) had their parents currently residing in urban area. More than half of the respondent's mother (52.2%) and again more than half (54.8%) of respondent's father had education up to secondary level. Similarly, nearly half of the respondents (43.5%) had their father employed in

business while nearly two-third of respondents (65.3%) had their mother as a homemaker. Likewise, two third of respondents (66.7%) did not have any family member in rural service and majority of the respondents (77.3%) were studying in full payment.

Respondent's Attitude towards Positive Statements Regarding Working in Rural Areas after Graduation

This section includes 10 statements regarding positive aspects of working in rural areas which reflects nursing students' attitude towards those aspects.

Table 3

Working in Rural Areas after Graduation

N= 75

Statements	Strongly Disagree n (%)	Disagree n (%)	Neutral n (%)	Agree n (%)	Strongly Agree n (%)
It is a kind of social service to work in rural areas.	–	3(4.0)	9(12.0)	42(56.0)	21(28.0)
Nurse-patient relationship is closer in rural health facility than in city hospitals.	–	5(6.7)	13(17.3)	39(52.0)	18(24.0)
There is less workload in rural area than in urban area.	2(2.7)	2(2.7)	23(30.7)	33(44.0)	15(20.0)
Rural health facility gives more autonomy to nurses than in city hospital.	2(2.7)	2(2.7)	23(30.7)	33(44.0)	15(20.0)
Rural placement teaches us problem solving in real life.	1(1.3)	3(4.0)	8(10.7)	38(50.7)	25(33.3)
Professional growth is enhanced while working in rural areas.	15(20.0)	26(34.7)	26(34.7)	7(9.3)	1(1.3)
There is adequate clinical exposure in rural health facility.	7(9.3)	21(28.0)	24(32.0)	16(21.3)	7(9.3)
Promotion to a nurse leader is easier in rural areas than in urban areas.	1(1.3)	7(9.3)	20(26.7)	29(38.7)	18(24.0)
A diverse range of nursing skills are used in rural health facility.	6(8.0)	6(8.0)	26(34.7)	28(37.3)	9(12.0)
Financial rewards are higher for nurses working in rural setting than in urban areas.	2(2.7)	5(6.7)	12(16.0)	37(49.3)	19(25.3)

More than half (56.0 %) of the respondents agreed that it is a kind of social service to work in rural areas. Likewise, more than half (52.0%) agreed that nurse-patient relationship is closer in rural health facility than in city hospitals. Among the total respondents, nearly half of the respondents (44.0%) agreed that there is less workload in rural areas and again nearly half of the respondents (44.0%) agreed on having more autonomy in rural health facility. Also, more than half of the respondents (50.7%) agreed that rural placement teaches problem solving in real life. More than one-third of the respondents (34.7%) disagreed as well as were neutral to enhancement of professional growth while working in rural areas. Similarly, nearly one-third of respondents (32.0%) were neutral for having adequate clinical exposure in rural health facility. More than one-third of the respondents (38.7%) agreed that promotion to a nurse leader is easier in rural areas than in urban areas and again more than one-third of the respondents (37.3%) agreed about use of diverse range of nursing skills in rural health facility. Likewise, nearly half (49.3%) agreed on having higher financial rewards in rural setting than in urban areas.

Respondent's Attitude towards Negative Statements Regarding Working in Rural Areas after Graduation

This section includes 10 statements that signifies poor aspects of working in rural areas which reflects nursing students' attitude towards those aspects.

Table 4

Negative Statements Regarding Working in Rural Areas after Graduation

N= 75

Statements	Strongly Disagree n(%)	Disagree n(%)	Neutral n(%)	Agree n(%)	Strongly Agree n(%)
My family would not like me to work in a rural area.	10(13.3)	32(42.7)	15(20.0)	13(17.3)	5(6.7)
People in rural areas are not friendly.	30(40.0)	33(44.0)	2(2.7)	7(9.3)	3(4.0)
There is communication problem between nurses and patients in rural setting.	11(14.7)	20(26.7)	22(29.3)	13(17.3)	9(12.0)
Placement in rural areas makes us feel isolated from family and friends.	4(5.3)	18(24.0)	17(22.7)	22(29.3)	14(18.7)
Community amenities are not easily accessible in rural areas.	1(1.3)	7(9.3)	30(40.0)	25(33.3)	12(16.0)
The equipments in rural health facilities are not easily available.	–	8(10.7)	10(13.3)	34(45.3)	23(30.7)
Hospital infrastructure is not adequate in rural area.	1(1.3)	3(4.0)	9(12.0)	38(50.7)	24(32.0)
It is difficult to undertake further degree while working in rural areas.	3(4.0)	16(21.3)	20(26.7)	26(34.7)	10(13.3)
Rural health facility provides less opportunities to upgrade knowledge and skills.	6(8.0)	12(16.0)	15(20.0)	30(40.0)	12(16.0)
Rural practice does not give recognition as a nurse.	11(14.7)	34(45.3)	17(22.7)	13(17.3)	–

Less than half of the respondents (42.7%) disagreed that their family would not like them to work in rural areas. Again, less than half of the respondents (44.0%) disagreed that people in rural areas are not friendly. Likewise, more than one-fourth of the respondents (29.3%) were neutral about having communication problem between nurses and patients in rural setting and again more than one-fourth of the respondents (29.3%) agreed that placement in rural areas makes us feel isolated from family and friends. Also, more than one-third of respondents (40.0%) were neutral about having community amenities not easily accessible in rural areas while nearly half of the respondents (45.3%) agreed that equipments in rural health facilities are not easily available. Similarly, more than half of the respondents (50.7%) agreed that hospital infrastructure is not adequate in rural areas. More than one-third of respondents (34.7%) agreed on having difficulty to undertake further degree while working in rural areas and again more than one-third of respondents (40.0%) also agreed that rural health facilities provides less opportunities to upgrade knowledge and skills. Likewise, nearly half of the respondents (45.3%) disagreed about working in rural areas does not give recognition as a nurse.

Respondents' Level of Attitude on Working in Rural Areas after Graduation

On the basis of mean value (65.44), their level of attitude has been classified.

Table 5
Working in Rural Areas after Graduation

N= 75

Level of Attitude	n	%
Positive attitude (≥ mean value)	40	53.3
Negative attitude (< mean value)	35	46.7

Mean± SD (65.44±7.56)

The mean value was 65.44. More than half (53.3%) of the respondents had positive attitude and nearly half (46.7%) had negative attitude towards working in rural areas after graduation.

Association between Level of Attitude and Selected Variables

Researcher has identified the relationship between selected variables and level of attitude among nursing students.

Table 6

Association between Level of Attitude and Selected Variables

N= 75

Variables	Level of Attitude		$\chi 2$	p-value
	Positive n (%)	Negative n (%)		
Age in years				
< 24	23(65.7)	12(34.3)	4.042	**0.04***
≥ 24	17(42.5)	23(57.5)		
Marital Status				
Unmarried	30(52.6)	27(47.4)	0.047	0.83
Married	10(55.6)	8(44.4)		
Permanent Residence				
Urban Area	35(54.7)	29(45.3)	0.322	0.57
Rural Area	5(45.5)	6(54.5)		
Academic Programme				
B.Sc. Nursing	11(64.7)	6(35.3)	1.142	0.29
BNS	29(50.0)	29(50.0)		
Academic year				
First year	15 (75.0)	5(25.0)	5.187	0.08
Second year	16(44.4)	20(55.6)		
Third year	9(47.4)	10(52.6)		
Family Income				
< Rs. 36,000	7(53.8)	6(46.2)	0.002	0.97
≥ Rs. 36,000	33(53.2)	29(36.8)		
Residence during Childhood				
Rural Area	10(58.8)	7(41.2)	0.266	0.61
Urban Area	30(51.7)	28(48.3)		
Mother's Occupation				
House maker	25(51.0)	24(49.0)	0.304	0.58
Others°	15(57.7)	11(42.3)		
Family Member in Rural Service				
Yes	18(72.0)	7(28.0)	5.250	**0.02***
No	22(44.0)	28(56.0)		
Scholarship by Ministry of Education				
Yes	10(58.8)	7(41.2)	0.266	0.61
No	30(51.7)	28(48.3)		

*Significant (Significance level at p≤ 0.05)
Dalit, Disadvantaged Janajati, Relatively Advantaged Janajati
° Government service, Non-government service, Self-employed, Farmer

There was a significant association between age of respondents and having a family member in rural service at p=0.04.

Discussion

This study found more than half (53.3%) of the respondents had positive attitude and nearly half (46.7%) had negative attitude towards working in rural areas after graduation. The finding is supported by a cross sectional study conducted among 117 nursing students of two nursing colleges of Chitwan which revealed that more than half of the respondents had positive attitude towards working in rural areas after graduation (Adhikari et al., 2021). The finding is also supported by a cross- sectional study conducted in Bangladesh where more than half of the nursing students had positive attitude to work in rural areas (Pudpong et al., 2017). This finding is in contrast with the cross-sectional study among 221 nursing students of South Asia which revealed that less than one-third of nursing students had intention to work in rural areas (Silvestri et al., 2014). Similarly, a descriptive cross-sectional study conducted among 1,771 nursing students showed that only 5% of nursing students in China were willing to work in rural setting (Fan et al., 2022). The differences in findings might be due to differences in sample size, instruments and differences in settings.

This study shows that use of diverse range of nursing skills, higher financial rewards and more autonomy in rural settings has brought positive attitude to work in rural areas among nursing students. Limited infrastructure, limited professional growth, difficulty in developing skills and isolation from family and friends has brought negative attitude among nursing students. Similar concerns were echoed in a study conducted in Pokhara among final year bachelor level nursing students (Siwakoti et al., 2023).

The present study revealed that there is significant association between age of the respondents and their attitude to work in rural areas (p= 0.04). It is similar with the study conducted in five Asian countries in which age of nursing students had significant association with their attitude to work in rural areas at p= 0.002 (Pudpong et al., 2017).

In this study, there is significant association between having a family member in rural service and attitude of nursing students (p= 0.014). It is consistent with the study conducted in Uttarakhand, India which showed that having one of the parents' working in rural areas had significant association with willingness of students to work there at p= 0.001 (Bartwal & Singh, 2018). The experience of family members might have influenced the attitude of the study participants.

The findings of the study can be helpful and work as a guidance for the college to change the attitude of students and develop positiveness towards rural work after graduation.The findings of the study can also be used as a reference material by the future researcher for the further study in related subject matter.

Conclusion

On the basis of findings of the study, it is concluded that more than half of the nursing students had positive attitude towards working in rural areas after graduation. This study concludes that having a family member in rural service and those with age less than 24 years had positive attitude to rural service. The nursing students believe that working in rural areas is a kind of social service and nurse patient relationship is closer there. They do believe that rural service provides more autonomy and workload is less there. There was negative attitude in nearly half of the nursing students. Poor community amenities, inadequate equipments and hospital infrastructure and less opportunities to upgrade skills and knowledge has brought negative attitude towards rural service. There is need of proper allocation of resources in rural areas as per need and seminars and workshops related to rural opportunities need to be conducted. Also, it would be better if factors affecting nursing students' attitude were explored and addressed.

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