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Migration Intention among Nepalese Nursing Students

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Abstract

Introduction: The migration of health workers has emerged as a major challenge affecting healthcare delivery globally, with a notable rise in nurses moving from low-and middle-income countries to high-income countries. This inclination to migrate often develops during undergraduate education. This study aimed to determine the intention to migrate abroad among nursing students in Nepal.

Methods: A cross-sectional study was conducted among 388 nursing students enrolled in various nursing colleges across Nepal between January and May 2026. Participants were recruited through convenience sampling, with outreach conducted via social media platforms. The proportions of students intending to migrate were calculated, and determinants of migration intention were analyzed using binary logistic regression.

Results: A substantial majority of the participants (75%) expressed an intention to migrate abroad. The most commonly cited push factors were low pay (97.9%), poor working conditions and safety standards (95.9%), and the political state of the country (92.4%). The predominant pull factors were better working conditions abroad (99.7%), higher salary (97.9%), and clear career progression (97.3%), with all pull factors exceeding 93%. Academic year and choosing nursing as a channel of migration were significantly associated with migration intention ($p<0.05$).

Conclusions: Migration intention among nursing students in Nepal is alarmingly high, driven by a complex interplay of economic, professional, and socio-political factors. Urgent, coordinated action from policymakers and stakeholders is needed to address the root causes and implement effective retention strategies.

Keywords: Brain drain; Emigration; Nepal; Nursing students

Background

Migration of health workers between continents in recent years has become one of the major challenges affecting healthcare delivery globally.[1] Though nurses' migration from developing to developed countries has existed for many decades, there is a recent increase in the number of nurses migrating from low-and middle-income countries to high-income countries.[2] Many countries now depend on internationally trained nurses to address domestic shortages.[3]

The global distribution of nurses is highly skewed. High-income countries, which account for 17% of the world's population, host nearly half (46%) of the world's nurses. Low-income countries have 9.3 nurses per 10,000 population, and high-income countries have 100 nurses per 10,000 population.[4] The inclination to migrate emerges during undergraduate nursing education rather than after professional practice.[5]

Health worker migration worsens workforce shortages in low-resource countries.[4] The loss of skilled workforce strains healthcare systems, increasing workload and reducing job satisfaction among remaining nurses.[6]

Methods

A cross-sectional study was conducted among nursing students enrolled in various nursing colleges across Nepal between January and May 2026. Ethical clearance was obtained from the Institutional Review Committee (IRC) of Nobel Medical College Teaching Hospital, Biratnagar, and written informed consent was secured from all participants prior to data collection. Nursing students aged 18 and above and currently enrolled in institutions within Nepal were eligible for inclusion, while those

unwilling to participate, or enrolled in institutions outside Nepal, and not holding Nepalese citizenship were excluded. The required sample size was determined using Cochran's formula: $n=Z^2pq/d^2$ where, Z= 1.96 (at a 95% confidence level), p= 64.2%= 0.642,[4] q= 1-p, i.e., 0.358, d= 0.05. Accounting for an anticipated 10% non-response rate, the final calculated sample size was 388. Participants were recruited through a non-probability convenience sampling technique, with outreach conducted via social media platforms including Facebook, WhatsApp, and Viber. Data were collected using a structured questionnaire developed based on a review of relevant literature. The questionnaire collected information on participants' characteristics, academic background, intention to migrate abroad, and perceived push and pull factors influencing migration intention. The questionnaire was administered online, and the English-language version of the questionnaire is provided as Supplementary File 1. Data were analyzed using both descriptive and inferential statistical methods. Descriptive analysis encompassed computation of frequencies, percentages, mean, median, and standard deviations (SD). Binary logistic regression analysis was used for inferential statistics to identify the determinants of migration intention. All analyses were performed using the Statistical Package for the Social Sciences (SPSS), version 23.

Results

The study findings revealed that the sample was predominantly female, comprising 96.9% of respondents, with nearly three-quarters (71.6%) aged 22 years or younger. In terms of academic enrolment, the majority (87.6%) were pursuing a Bachelor of Nursing program, and approximately one-third (34%) were in their first year. Nearly three-quarters (72.4%) of the participants were enrolled in nursing institutions situated in Koshi Province, and more than half (62.6%) reported an urban permanent residence. With respect to parental education, over half (57.2%) had at least one parent who had completed higher secondary education or above, and the median monthly household income was NPR 50,000. More than half (69.8%) of the participants reported having family members or close relatives residing abroad. Only one quarter (25%) had prior international travel experience, while a

notable majority (63.1%) indicated that they had chosen nursing as a deliberate channel for international migration. (Table 1)

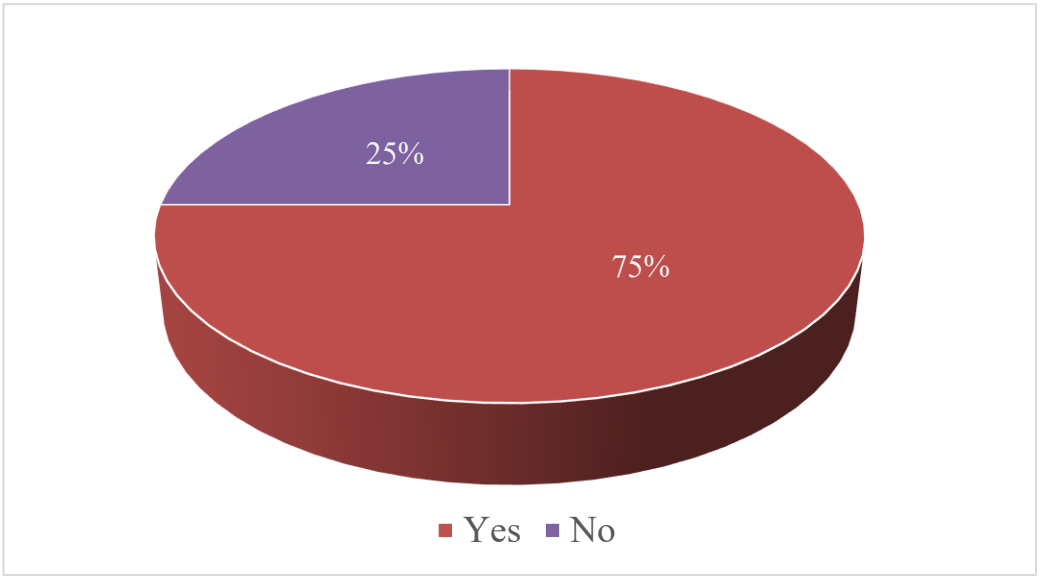
Table 1. Characteristics of the participants n=388

Variables	Frequency (N)	Percentage (%)
Age (in years)		
≤22	278	71.6
>22	110	28.4
Mean± SD 22.06±3.904		
Sex		
Male	8	2.1
Female	376	96.9
Prefer not to say	4	1.0
Education		
Proficiency	34	8.8
Bachelors	340	87.6
Masters	14	3.6
Academic year		
First	132	34.0
Second	122	31.4
Third	74	19.1
Final year	60	15.5
Province of the current college		
Koshi	281	72.4
Madhesh	32	8.2
Bagmati	56	14.4
Others (Gandaki, Lumbini, Karnali, Sudurpashchim)	19	4.9

Permanent residence		
Rural	145	37.4
Urban	243	62.6
Parents' highest education (any one parent)		
Secondary or less	166	42.8
Higher secondary and above	222	57.2
Monthly household income		
≤50,000	243	62.6
>50,000	145	37.4
Median (IQR) 50,000 (35,000-80,000)		
Family members or close relatives living abroad		
Yes	271	69.8
No	117	30.2
Prior international travel		
Yes	100	25.8
No	288	74.2
Choosing nursing as a channel of migration		
Yes	245	63.1
No	143	36.9

Out of 388 participants, a substantial majority of the participants (75%) expressed an intention to migrate abroad. (Figure 1)

Figure 1. Nursing students' intention to migrate abroad n=388



A range of push and pull factors were reported among the 291 participants who intended to migrate abroad. Among the push factors, low pay (97.9%), poor working conditions and safety standards (95.9%), and the political state of the country (92.4%) were the most predominantly cited concerns. With respect to pull factors, better working conditions abroad (99.7%), higher salary (97.9%), and clear career progression (97.3%) were the most compelling attractions, with all pull factors exceeding 93%, reflecting a strong and consistent draw toward opportunities abroad. Push factors, while slightly more variable, nonetheless reflected widespread dissatisfaction with the prevailing professional environment within the country. (Table 2)

Table 2. Push and pull factors influencing migration intention n= 291

Factors	Frequency (N)	Percentage (%)
Push Factors		
Low pay	285	97.9
Excessive workload	256	88.0
Unclear career pathway	221	75.9
Interdisciplinary discrimination	238	81.8
Job insecurity	226	77.7
Limited job opportunities	221	75.9
Poor working conditions and safety standards	279	95.9
Political state of the country	269	92.4
Pull Factors		
Higher salary abroad	285	97.9
Clear career progression abroad	283	97.3
Better working conditions and safety standards abroad	290	99.7
Better work-life balance abroad	273	93.8
Better quality of life abroad	278	95.5

Binary logistic regression analysis was performed to identify the determinants of migration intention. The overall model was statistically significant ($\chi 2$= 111.821, df=17, p<0.001), explaining between 25% (Cox & Snell R^2) and 37.1% (Nagelkerke R^2) of the variance in migration intention. The Hosmer and Lemeshow test indicated adequate model fit (χ^2=8.803, df=8, p=0.359). Study findings revealed that, of all the variables examined, academic year and choosing nursing as a channel of migration were the only statistically significant predictors. Final-year students were significantly more likely to intend to migrate compared to first-year students (OR=3.655; 95% CI: 1.468-9.100; p=0.005). Most notably, participants who viewed nursing as a channel of migration had significantly higher odds of intending to migrate compared to those who did not. (OR= 10.491; 95%CI: 5.832-18.873; p< 0.001). However, no statistically significant association was observed between migration intention and variables like age, sex, education, province of current college, permanent residence, parents' highest education, monthly household income, family members or close relatives living abroad, and prior international travel. (Table 3)

Table 3. Determinants of migration intention n=388

Variables	Odds Ratio Exp (B)	95% CI	p-value
Age (in years)			
≤22	1	1	
>22	0.625	0.315-1.240	0.179
Sex			
Male	1	1	
Female	4.936	0.966-25.206	0.055
Prefer not to say	14.615	0.548-390.032	0.109
Education			
Proficiency	1	1	0.195
Bachelors	0.551	0.182-1.670	0.293

Masters	0.194	0.033-1.148	0.071
Year of study			
First	1	1	**0.020**
Second	2.072	0.987-4.351	0.054
Third	2.283	0.994-5.242	0.052
Final year	3.655	1.468-9.100	**0.005**
Province of the current college			
Koshi	1	1	0.972
Madhesh	0.822	0.280-2.412	0.722
Bagmati	0.850	0.362-2.000	0.710
Others (Gandaki, Lumbini, Karnali, Sudurpashchim)	0.973	0.232-4.079	0.970
Permanent residence			
Rural	1	1	
Urban	1.644	0.923-2.928	0.92
Parents' highest education (any one parent)			
Secondary or less	1	1	
Higher secondary and above	1.274	0.712-2.277	0.415
Monthly household income			
≤50,000	1	1	
>50,000	0.878	0.481-1.603	0.672
Family members or close relatives living abroad			
Yes	1	1	
No	1.192	0.649-2.186	0.571
Prior international travel			

Yes	1	1	
No	1.216	0.620-2.385	0.570
Choosing nursing as a channel of migration			
No	1	1	
Yes	10.491	5.832-18.873	**<0.001**

Discussion

The present study revealed that three-quarters (75%) of nursing students expressed an intention to migrate abroad. This finding is broadly consistent with a growing body of literature documenting high migration intention among nursing students across diverse global settings.

Within Nepal, comparable trends have been reported. A study conducted in 2018 found that 92.5% of nursing students expressed some intention to migrate,[3] and a study among nursing students in the Kaski district of Gandaki Province similarly reported that 93.3% intended to migrate abroad.[7] A more recent large-scale study spanning 32 campuses across seven major universities in Nepal reported that 61.6% of the students harboured aspirations to migrate abroad.[8]

Beyond Nepal, high levels of migration intent have been documented across multiple regions. In Indonesia, approximately 91.3% of nursing students reported an intention to migrate,[9] while in Ghana, 64.2% expressed a desire to leave the country upon completion of their studies.[4] Among the Asian and African medical students educated in China, more than half (53.38%) desired to remain temporarily or permanently outside their home countries.[10] A study conducted in Iran reported an above-average desire to migrate among nursing students (66.3 ± 20.3),[2] while a comparative study of nursing students in Iran and Iraq found that 69.5% of Iranian and 58.1% of Iraqi students intended to emigrate.[11] Among nursing students in India, 54% expressed an intention to migrate overseas,[12] further corroborating these trends.

Findings from Turkey, however, present a contrasting picture, with less than half (43.8%) of nursing and midwifery students reporting consideration of living abroad.[13] Similarly, an earlier multi-country

survey conducted in 2014 across premier government institutions in Bangladesh, Ethiopia, India, Kenya. Malawi, Nepal, Tanzania, and Zambia found that only 28% of medical and nursing students anticipated migrating abroad.[14] The comparatively lower rates observed in these studies may reflect differences in study context, time period, and institutional setting. Taken together, however, the weight of recent evidence, particularly from low-and middle-income countries, points to a sustained growing trend of migration intent among nursing students, underscoring the urgency of addressing underlying systemic factors that drive health worker emigration.

In the present study, the most commonly cited push factors among nursing students intending to migrate were low pay, poor working conditions and safety standards, and the country's political climate. The primary pull factors were better working conditions abroad, higher salaries, and clear career progression abroad. These findings align closely with a study conducted in Ghana, where bad working conditions (50.3%), low salaries (39.3%), and lack of jobs (11.7%) emerged as the leading push factors, while good working conditions (32.3%), better income (25.2%), and job availability (7.5%) were the most frequently cited pull factors.[4] A qualitative study from Nepal similarly identified inadequate utilization of graduate knowledge and experience, personal ambition, socio-political factors, and wage disparities among health practitioners as key drivers of migration intention.[5] These findings are further corroborated by a scoping review that found multiple studies consistently highlighting economic incentives, perceived improvements in quality of life, policy and educational system influences, and familial influences as central motivators for migration.[15]

Regarding demographic and academic association with migration intention, a study from Iran reported a significant relationship between academic year and migration intention, a finding consistent with the present study.[12] A study conducted in Slovakia showed no association between nurses' considerations of migration and their age, the highest attained education, which was similar to the present study findings, which showed no such association.[6]

While a Ghanaian study identified having friends or relatives living abroad as a strong predictor of migration intention,[16] no such association was observed in the current study. Likewise, a study

conducted in Kaski, Nepal, reported statistically significant associations between migration intention and sociodemographic variables, including marital status and monthly family income;[7] however, the present study found no such association with family income, and marital status was not assessed.

The present study has several limitations worth acknowledging. Participants were recruited through convenience sampling via an online survey, which may have introduced selection bias by excluding students with limited internet access, and limits representativeness and generalizability of the findings to the broader nursing student population in Nepal. Furthermore, the sample was predominantly drawn from Koshi Province, with considerably fewer respondents from Bagmati and Madhesh Provinces, and only a negligible proportion from Gandaki, Lumbini, Karnali, and Sudurpashchim, reflecting a considerable geographic imbalance. As with all self-reported data, findings are also subject to social desirability bias. Nonetheless, this study is among the few to examine migration intention across multiple provinces, offering a broader perspective than single-institution studies.

Conclusions

The findings of this study underscore that migration intention among nursing students in Nepal is alarmingly high and is driven by a complex interplay of economic, professional, and socio-political factors. If left unaddressed, this trend poses a serious threat to the sustainability of Nepal's healthcare workforce and the equitable delivery of health services. Policymakers and relevant stakeholders must take urgent coordinated action to improve remuneration, working conditions, and occupational safety for nurses, while establishing transparent merit-based career progression. Strengthening political stability and investing in the overall professional development of nurses are equally critical. Academic institutions also have a role to play in fostering a sense of professional identity and commitment to national services among nursing students. Addressing the root cause of migration intention demands systemic, long-term reform rather than piecemeal intervention, and future research should explore effective retention strategies and longitudinal migration behaviour among nursing graduates in Nepal.

List of abbreviations

CI: Confidence Interval

DF: Degree of Freedom

IRC: Institutional Review Committee

OR: Odds Ratio

SD: Standard Deviation

SPSS: Statistical Package for the Social Sciences

Declarations

Ethics approval and consent to participate

Ethical approval for this study was obtained from the IRC of Nobel Medical College Teaching Hospital (Reference Number: 52/2025) prior to data collection. This study was conducted in accordance with the ethical principles outlined in the Declaration of Helsinki. The study was conducted through an online survey. Before accessing the questionnaire, participants were provided with information about the study and informed that participation was voluntary. Informed consent was obtained electronically from all participants before data collection. Participants were asked to indicate their consent by selecting either "Agree" or "Disagree" on the online consent form. Only participants who selected "Agree" were permitted to proceed to the questionnaire.

Consent for publication

Not applicable

Availability of data and materials

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

Competing interests

Not applicable

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Authors' contributions

NKC conceptualized and designed the study, contributed to data acquisition, analysis, and interpretation. MKC contributed to study conceptualization and design, literature search, data acquisition, and critical revision of the manuscript. KD contributed to conceptualization, statistical analysis, and critical revision of the manuscript. AC contributed to the study design, literature search, data acquisition, and drafting the manuscript. SB contributed to study design, literature search, and critical revision of the manuscript. SP contributed to study design, data acquisition, statistical analysis, and interpretation of the findings. JK contributed to study planning, literature processing, critical revision, and finalization of the manuscript. All authors reviewed and approved the final version of the manuscript and agreed to be accountable for all aspects of the work, ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. NKC is the guarantor of the study.

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