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Factors Influencing Brain Drain among Nurses of Selected Hospital of Kathmandu

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Abstract

Introduction: A Research study was conducted on factors influencing brain drain among nurses of selected hospitals of Kathmandu. Brain drain is the mass emigration of individuals with technical skills or knowledge, generally due to a lack of prospects, political instability, conflict or health issues, and other risk factors. Brain drain is also called "The human capital flight".

Objective: This study was conducted to identify the factors contributing to brain drain among nurses of selected hospital of Kathmandu.

Method: A cross-sectional descriptive study was conducted among 72 nurses of Civil Service Hospital using a non-probability convenient sampling technique. Data collection was done by the researcher herself using a self-administered questionnaire. Validity and reliability of the instrument and ethical consideration were maintained. Data were analyzed with the help of the SPSS 26th version and were analyzed with descriptive and inferential statistics like frequency, percentage, and chi-square test.

Result: The findings of the study showed that out of 72 nurses, 64 (88.9%) of nurses had brain drain intention. Here, 9 in 10 respondents agreed on personal factors and environmental factors followed by safety and security and social factors in push factors as major factors for brain drain. And, 9 in 10 respondents agreed on personal factors followed by economic factors and social factors in pull factors. In this study, there was no association between the socio-demographic variables and push and pull factors except in monthly income in Nepal and environmental factors of push factors. There was a significant association between monthly income in Nepal and environmental factors of push factors. The p-value is 0.030 (p-value <0.05).

Conclusion: From the result of this study, it is concluded that personal and environmental factors are the major factors causing the brain drain of nurses so concerned authorities should focus on exploring more factors so that timely intervention can be done.

Keywords: Brain drain; Factors; Nurse

Introduction

The term brain drain is the international transfer of resources in the form of human capital that are highly educated and skilled in search of a better standard of living and life quality, higher salaries, access to advanced technology, and more stable political conditions. The migration of health workers from the developing to the developed world has remained pertinent for decades now.[1]

The International Centre on Nurse Migration (ICNM), 2022 states globally, that 1 in 8 nurses are migrants. 70% of global nurse migrants are female. In 2021, 550,000 foreign-educated nurses were working across 36 high-income Organization for Economic Cooperation and Development (OECD) member countries.[2]

The inequitable distribution of health workers leads to a critical shortage of health workers leaving the health worker-to-population ratio at 0.67 doctors and nurses per 1,000 individuals, which is significantly lower than the World Health Organization's recommendation of 2.3 doctors, nurses, and midwives per 1,000 individuals. The NNC records indicate that between 2002 to 2015, a total of 5916 nurses (about 15% of the membership) had formally migrated out of the country.[3] Furthermore, nearly 1200 Nepalese students receive NOCs for overseas study each day. According to ministry of Education's No- objection certificate (NOC) section, 82,409 certificates were granted to students wishing to study abroad between January 1 and July 4, 2022.[4]

People have been forced to work abroad due to unfavorable social, political and economic circumstances in their home countries. International students may be motivated to travel overseas by the chances they acquire life skills and education.[5] The migration of health workers has devastating consequences leading to delays in providing care, closure of services, excessive workload, demoralization, a lack of services in remote areas, inability to meet health goals, and loss of life.[6]

The migration of health care workers is due to various push and pull factors. Push factors are those negative factors within the country that have forced nurses to leave the country whereas pull factors are those that attract nurses or other human resources.[7]

Brain drain jeopardies overall development so there is a need to explore the factors causing brain drain among nurses so that timely control of brain drain can be done. This study intended to explore the push and pull factors causing brain drain such as responsibility towards family, peer pressure, Safety and security, Nursing image, Social isolation, Environmental factors (Nepotism and Favoritism).

Method

A quantitative cross-sectional study design was used to find out the factors influencing brain drain among nurses in selected hospital of Kathmandu. The study was conducted in a Civil service hospital New Baneshwor, Kathmandu. This hospital is a 132-bedded and fully equipped hospital that was handed over to the Government of Nepal by the People's Republic of China. The study was lasted 9 months conducted from March 2024 and data was collected from April 2024 to June 2024. The sample size was calculated using Solvin's Formula,

Sample size (n) = $N/1+Ne^2$

Where N is total Number of participants

e is the level of error

So, in this study, the total number of staff nurse working in Civil service Hospital are 254 nurses

Also, the level of error is 10%

When applying the formula,

n= $254/1+254*0.1^2$

=254/1+254*0.01

= 254/1+2.54 =71.75

Thus, the total numbers of sample size is 72 nurses.

A non-probability convenient sampling technique was used to select the sample. The study population includes all the staff nurse of civil service hospital willing to participate in this study. Respondents who were on leave during the time of data collection were excluded. Also the respondents who did not have an intention of brain drain were not included in this study.

The questionnaire was developed by reviewing the literature and consultation with subject experts. A structured self-administered questionnaire in English was used for data collection. The study was conducted in three parts:

Part I: Sociodemographic information

Part II: Questionnaire related to brain drain intention among nurses

Part-III: Questionnaire related to factors contributing to brain drain

The tool was developed based on a literature review and guidance and supervision of the research supervisor and subject experts. A 5 point likert scale was developed through literature review for exploring push and pull factors. To ensure reliability, a pretest was done among 10% of the actual study population in Bir Hospital. Then, as per the results of the data collection, the required changes were made under the guidance of the research experts.

Data was collected after getting approval from IRC of Civil Service Hospital and Everest College of Nursing, Affiliated to Purbanchal University, Sinamangal Kathmandu. The purpose of the study was clearly explained to all the respondents. Informed verbal and written consent was obtained from each respondent before data collection. Data was collected using a self-administered structured questionnaire. The confidentiality and anonymity of the participants was ensured. And, respondents didn't face any harm during the study. Collected data were analyzed by SPSS version 26.0. Descriptive statistics were used to describe the socio-demographic data and chi-square were used to determine the association between variables.

Result

Table 1 reveals that the majority of the respondents 88.9% were of the age group 21-30 years whereas 11.1% of respondents were of the age group 31-40 years. Also, half of the respondents had completed PCL Nursing, and half of the respondents had undergraduate. 58.3% of the respondents were unmarried and 41.7% of respondents were married. 61.1% of the respondents had a monthly income of 21-40 thousand and a minority of respondents (2.8%) had a monthly income of more than 60 thousand. 44.4% of the respondents thought that their monthly income abroad would be more than 3, 20,000 and a minority of respondents (8.3%) thought that their monthly income in abroad would be less than 1, 60,000. 93.1% of respondents (majority) were nurses and 1.4% (minority)

were a nurse and teacher. Among 10, 6 of the respondents (61.1%) had work experience of less than 5 years and 12.5% of respondents had work experience of more than 10 years.

Table 1: Sociodemographic Characteristics of the respondents (n= 72)

Characteristics	n	%
Age (in years)		
21-30	64	88.9
31-40	8	11.1
Educational Level		
PCL Nursing	36	50
Bsc. Nursing	14	19.4
BN	22	30.6
Marital Status		
Unmarried	42	58.3
Married	30	41.7
Monthly income in Nepal		
Upto 20 thousand	7	9.7
21-40 thousand	44	61.1
41-60 thousand	19	26.4
More than 60 thousand	2	2.8
Monthly income in abroad		
Less than 1,60,000	6	8.3
1,61,000- 2,40,000	15	20.8
2,41,000- 3,20,000	19	26.4
More than 3,20,000	32	44.4
Designation		
Nurse	67	93.1
Nurse and student	4	5.6
Nurse and teacher	1	1.4
Work Experience		
Less than 5 years	44	61.1
5-10 years	19	26.4
More than 10 years	9	12.5
Working Unit		
In patient unit	72	100
Career Development Program		
Yes	4	5.6
No	68	94.4
Specific Career Development Program		
Not any	68	94.4
Palliative training	2	2.8
Leadership and management training	1	1.4
ICU	1	1.4

Table 2 reveals that 52.8% had the intention of changing jobs and 47.2% did not have the intention of changing their job. 52.94% of respondents wanted to go abroad while 17.64% wanted to work in NGO/INGO. 44.13% of respondents wanted to change their jobs due to a lack of career development while 11.76% wanted to change their jobs due to poor working conditions and excessive workload. 88.9% had the intention of migrating abroad while 11.1 % had no intention of migrating abroad. 73.4% wanted to go

USA and 4.7% wanted to go UK and other countries (Canada, Denmark). 54.7% had a desire to migrate since childhood whereas 45.3% had no desire to migrate since their childhood. 62.5% had developed a desire to migrate abroad after medical education while 37.5% had a desire to migrate abroad before medical education. 46.9% would go abroad within 1-3 years and 4.7% would go abroad within 7-10 years. 43.8% wanted to go abroad for better education and 14.1% wanted to go abroad for better living standards.

Table 2: Questionnaire related to brain drain intention among nurses (n= 72)

The Intention of Changing Job	N	%
Yes	34	52.8
No	38	47.2
Choice of changing job		
Government		
NGO/INGO	6	17.64
Going Abroad	18	52.94
Reasons for changing job		
Inadequate financial incentives	11	32.35
Poor working condition	4	11.76
Lack of career development	15	44.13
Excessive workload	4	11.76
The intention of migrating abroad		
No	8	11.1
Yes	64	88.9
Country		
USA	47	73.4
Australia	11	17.2
UK	3	4.7
Others	3	4.7
Desire to migrate since childhood		
Yes	35	54.7
No	29	45.3
Time for starting of migration intention		
Before medical education	24	37.5
After medical education	40	62.5
Plan for migration		
Within a year	21	32.8
1-3 year	30	46.9
4-6 year	10	15.6
7-10 year	3	4.7
The main purpose of migrating abroad		
Further education	27	42.2
Better education	28	43.8
Better living standard	9	14.1

Table 3 shows the data about the push factors contributing to brain drain in which 56.3% agreed on social factors, 92.2% agreed on personal factors, 92.2% agreed on environmental factors and 81.3% agreed on safety and security for migrating nurses abroad.

Table 3: Distribution of Respondents Regarding the Pull Factors Contributing to Brain Drain. (n=64)

S.N.	Factors	n (%)	
		Agree	Disagree
1.	Social Factors	36 (56.3%)	28 (43.8%)
2.	Personal Factors	59 (92.2%)	5(7.8%)
3.	Environmental Factors	59 (92.2%)	5 (7.8%)
4.	Safety and Security	52 (81.3%)	12(18.8%)

The pull factors contributing to brain drain where 67.2% agreed on economic factors, 90.6% agreed on personal factors, and 56.3% agreed on social factors for migrating nurses abroad (Table 3).

Table 4: Distribution of Respondents Regarding the Pull Factors Contributing to Brain Drain. (n=64)

S.N.	Factors	n (%)	
		Agree	Disagree
1.	Economic Factors	43 (67.2%)	21 (32.8%)
2.	Personal Factors	58 (90.6%)	6(9.4%)
3.	Social Factors	36(56.3%)	28 (43.8%)

Significant association between monthly income in Nepal and environmental factors was found (p <0.05).

Table 5: Association between Monthly Income in Nepal and Push Factors (Environmental factors) (n=64)

Environmental Factors	n(%)	n(%)
	Agree	Disagree
Upto 40,000	45 (97.8%)	1(2.2%)
More than 40,000	14(77.8%)	4(22.2%)
χ^2 value	4.705	
p-value	0.030*	

Discussion

The research study entitled was conducted to find out the brain drain intention among nurses and contributing push and pull factors of brain drain as well as the association between push/pull factors and sociodemographic variables.

Among 72 nurses, socio-demographic data revealed majority 88.9% of respondents were young i.e. 21-30 age group, and the remaining 11.1% were in the age group 31-40. Half of the respondents had only completed PCL Nursing and another half had completed under graduation. Also, 58.3% of respondents were unmarried and 41.7% of respondents were married. This finding is consistent with the study conducted in Nepal in which 93.20% of respondents were of

the age group 20-30. Also, 58.10% of respondents had completed PCL Nursing, and 66.20% were unmarried which is not consistent with the findings of this study.[8]

Among 72 respondents, majority 88.9% had an intention to migrate abroad. This finding is consistent with the study conducted by Munikar S et al. in 2019 which showed the nurses intended to migrate abroad is 93.20%. [8]

More than ½ (65.67%) respondents were not satisfied with their job while 70.3% were not satisfied with the salary. These findings of the study are inconsistent with the study conducted by Kadel M et al. in 2019 which showed that 96.96% of nurses were not satisfied with their salary. [9]

Also, among brain drain intended nurses everyone had their future plan to go abroad in which 68.8% of respondents wanted to go for further study abroad and 31.2% wanted to go for work abroad. These findings of the study are inconsistent with the study conducted by Kadel M et al. in 2019 which showed that 39.4% of respondents wanted to go for further study abroad and 16.2% wanted to go for work abroad. [9]

In the personal factor, 59.4% of respondents agreed on the dream to go abroad/personal ambition which is consistent with the study conducted among 99 nurses in a private hospital, Biratnagar which showed 59.6% of respondents had stated a very important factor was personal ambition.[9]

In safety and security, 45.3% strongly agreed on violence in health personnel. This finding of the study is consistent with the study conducted by Munikar S et al in 2019 which showed that 50% of respondents agreed on occupational security.[8]

In social factors, 59.4% agreed on political stability. This finding is consistent with the study conducted by Thapa B et al. in 2017 which shows 62.3% stated political stability as a very important pull factor for brain drain.[10] In contrast, the finding of the study conducted among 100 nurses only 12% of nurses agreed on political stability which is inconsistent with the finding of this study.[11] This difference may be due to less political interference in private hospitals compared to government hospitals and most of the respondents (58%) work in private hospitals.

In this study, 67.2% of respondents had started processing for abroad. This finding of the study is inconsistent with the study conducted by Kadel M et al. in 2019 which showed that only 23.2% of respondents had started processing for abroad.[9]

Also, nearly 3/4 of respondents wanted to control brain drain problems and 75% wanted to come back to Nepal if they go abroad. This finding of the study is inconsistent with the study conducted by Kadel M et al. in 2019 which showed that 81.8% of respondents wanted to control brain drain and 68.7% wanted to come back to Nepal if they go abroad. [9]

Conclusion

Most of Nepalese nurses migrate abroad due to various personal factors and environmental factors of the country like their dream to go abroad, nepotism and favoritism, nursing image, too much workload and low income and health care challenges followed by violence in health personnel and family/peer influence, family's responsibility and isolation. Also, various pull factors like personal factors, economic factors, and social factors motivate skilled human resources to migrate from developing to developed countries. The main pull factors in this study are personal factors which include personal development, and autonomy followed by economic and social factors.

Recommendation

There is a need for large-scale mixed-methods research studies to find out the actual factors of brain drain among nurses so that more factors can be identified and prevent future brain-drain of nurses by addressing their problem.

Conflict of interest

The author declares no conflict of interest.

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