

ORIGINAL RESEARCH ARTICLE

MOTIVATING FACTORS FOR CHOOSING DENTISTRY AND PLAN AFTER GRADUATION

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ABSTRACT

**Background:** The knowledge of current motivation to choose dentistry and future plan of dental graduates is critical to health care systems and may result in major change for policies in dental education. This study aimed to assess the motivational factors that influenced students to choose dentistry as a profession and their future plan after graduation.

**Methods:** A cross-sectional study was conducted among the 120 students who have cleared the final Bachelor of Dental Surgery (BDS) examination and were undergoing their mandatory internship program. The data was collected between January 2020 to April 2020. Data analysis was done using Statistical Product and Service Solution (SPSS) version 20 with descriptive and inferential statistics.

**Results:** The leading professional reason was the flexible working hour, 54.8% (n=57). Job stability, 50% (n=52), the desire to help people, 49% (n=51) and a desire to be associated with a health profession, 69.2% (n=72) were the primary reasons on economic, vocational and personal domains respectively. Around half of the participants 52% (n=54) have planned for further study after graduation. Similarly, 28.8% (n=30) of the participants have planned to live and work outside Kathmandu valley, 28.8% (n=30) were planning to live and work within Kathmandu valley.

**Conclusions:** This study found that the flexible working hour, job stability and desire to help people were the motivational factors for choosing dentistry. Majority have planned for further study. In future, only those from outside Kathmandu valley were willing to serve the people beyond the valley.

INTRODUCTION

In recent years, factors for choosing dentistry has been studied in detail.<sup>1</sup> Dental students' perceptions towards dental education and their motivational factors vary over time and between countries.<sup>2</sup> Knevel RJM et al reported that the main reasons for Nepalese students to choose dentistry were the desire to serve others and to work in health care settings.<sup>3</sup> Meanwhile, the reasons for choosing medicine by Nepalese student were interest in serving the sick people, personal interest in medicine and high social prestige of medical field.<sup>4</sup>

The knowledge of current motivation to choose health care workforce is critical to health care systems and may result in major change for policies in dental education.<sup>2</sup> At present there is a production of about 500 dentists per year in Nepal. National oral health policy has the plan to recruit dental services at district and PHC level. However, 34, district in Nepal are not served by a single dentist and 19 districts were served by one or two dentists only. The dentist population ratio is decreasing in capital and major cities but remains very high in rural areas of Nepal.<sup>5</sup>

Data related to the motives and future plan of dental students serve as a valuable tool for oral health workforce planning models. Knowledge about the factors related to retention of qualified providers and their career plans can contribute to the development of strategies to address oral health workforce shortages in remote or rural areas or other underserved areas.<sup>3</sup> This study was conducted to assess the motivational factors that influenced students to choose dentistry as a profession and their future plan after graduation.

METHODS

A self-reported cross-sectional questionnaire survey was conducted among the students who have cleared the final Bachelor of Dental Surgery (BDS) examination and were undergoing their mandatory internship program. The survey was conducted in five Tribhuvan University affiliated dental colleges in Nepal between January 2020 to April 2020.

The Ethical approval for the study was obtained from the National Health Research Council (ERB protocol 628/2019) and later further approvals from the concerned authorities

of individual colleges were obtained to collect the data. After taking the informed consent from the interns, questionnaire was delivered by the investigators and the data was collected on the same day. The participation was entirely voluntary and those not willing to participate were excluded from the study. The list of TU affiliated colleges running dental BDS program in Nepal includes, Universal College of Medical Sciences Bhairahawa, KIST medical college and teaching hospital, Lalitpur, Peoples' Dental college, Kathmandu, MB Kedia dental college, Birgunj, Chitwan Medical College, Bharatpur, and Gandaki Medical College, Pokhara.

The yearly enrolment of total students in the BDS program in the above colleges appears to be 50, 40, 50, 30, 40 and 25 respectively as per the data provided by Nepal Medical Council. So, a total of 235 students should enter the internship program and get trained every year in Tribhuvan University affiliated dental colleges in Nepal. But the actual number falls short, taking into considerations various factors like fail percentage of students in each batch, students waiting for supplementary exams and drop out students, the tentative eligible number of interns for the participation of study was 200. The students from Gandaki Medical College were excluded and data not obtained, as the first batch of students were yet to start their internship programme. By taking 50% of the population, the desired sample was 100. To cover up for non-response rate 20% of the population was added making total sample 120. The data was collected from randomly selected 24 interns from each college (24 intern out of total intern present to make the sample 120) using close ended questionnaires. The questionnaire addressed two themes, reasons to choose dentistry and plan after graduation. Data analysis was done using Statistical Product and Service Solution (SPSS) version 20. Demographic variables and participants responses were presented using descriptive statistics. Comparisons were made using chi square test.

## RESULTS

Of the total 120 questionnaires distributed, 104 completed questionnaires were included in the study with the participation rate of 86%. This means 52% of the interns of TU affiliated dental colleges participated in the study. Out of 104 respondents, 70.2 percent (n=73) were female and 29.8 percent (n=31) were male with the mean age of the 24.12 years (range 22-28). The participants with the permanent address outside Kathmandu valley was around 54% (n=56)

Interns were asked various reasons for choosing dentistry as their professional career. The reasons were categorized as economic, professional, vocational and personal domains. The majority of the participants, 50% (n=52) chose dentistry as they viewed that studying dentistry will help them achieve professional skills thus providing opportunity for a stable job as well as build their own practice. The leading professional reason was that the participants could determine their own work hour, 54.8% (n=57). Similarly, the desire to help people, 49% (n=51) and a desire to be associated with a health profession, 69.2% (n=72) were also the primary reasons on vocational and

personal domains respectively (Table 1).

**Table 1: Motivational factors for choosing dentistry as a career**

Motivational Factors		Number (%)
Economic	It is easier for a dentist to find a job	10 (9.6)
	I want to make a lot of money	21 (20.2)
	Dentistry offers stable work	52 (50)
	Dentistry is the best paid among the available careers	21 (20.2)
Professional	I can determine my own hours	57(54.8)
	I can be my own boss	33 (31.7)
	I can earn money everyday	13 (12.5)
	I will not be on salary	1 (1)
Vocational	I like to interact with others	27 (26)
	I like helping people	51 (49)
	I have manual skills	26 (25)
Personal	There are many dentist in my family, I was encouraged by them	4 (3.8)
	My family and friends encouraged me to study dentistry	15 (14.4)
	I was unable to enter medical school	13 (12.5)
	I have desire to have a health occupation	72 (69.2)

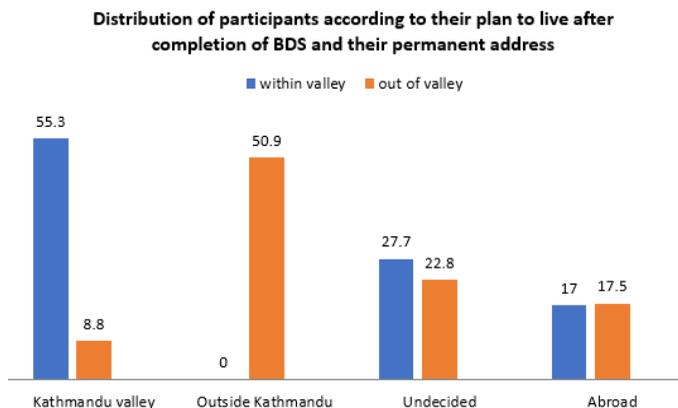
A little more than half of the participants 52% (n=54) have planned for further study. Around 3% of the respondents were planning to leave dentistry and enroll into some other business. After the completion of BDS course, only 28.8% (n=30) of the participants have planned to live and work outside Kathmandu valley, while similar percentage, 28.8% (n=30) were planning to live and work within Kathmandu valley. More than 17% (n=18) were planning to settle abroad, while 26% (n=25) appear to be undecided. Interns' plan to live and work was compared with their permanent address. Among the 57 participants whose current permanent address was outside Kathmandu valley, 50.9% (n=29) decided to go back to their home town and serve. Meanwhile, 55.3% (n=26) of the participants who were permanently residing within Kathmandu valley planned to serve in the valley itself p =0.00) (Figure 1).

**Table 2: Professional plans of interns after BDS completion**

Plans	Frequency (%)
Further study	54 (51.9)
Seeking job	25 (24)
Going abroad	8 (7.7)
Undecided	14 (13.5)
Any other	3 (2.9)
Total	104 (100)

When participants were asked about their choice of work setting, greater percentage chose to start their own dental practice while still associated with a private hospital or a clinic as a part timer, 50% (n=52) followed by the others working

planning to work in a dental hospital, 22.1% (n=23) (Table 3).



**Figure 1: Plan after graduation of dentistry according to their permanent address**

Nearly three fourth of the study populations 72.1% (n=75) were worried for finding a descent job in the future. When

their expectation of finding a job in the future was compared with their intention to work, significant number of participants who were not worried for future job have planned to start up their own dental practice while still working on a part time basis in a private dental hospital or a clinic, 65.5% (n=19). Greater percentage of interns who were worried for finding job had planned to move abroad 10.7% (n=10) compared to those interns who were not worried for finding job, 3.4% (n=1) (p=0.007) (Table 4).

**Table 3: Intention to work after graduation**

Intention to work	Frequency (%)
Both own practice and existing hospital	52 (50)
Existing dental hospital	23 (22.1)
Own hospital	6 (5.8)
Abroad	9 (8.7)
Undecided	14 (13.5)
Total	104 (100)

**Table 4: Intention to work after graduation according to the expectation of employment**

Intention to work after graduation	Worried for job		Total
	Yes	No	
Own practice and existing dental hospital	33 (44%)	19 (65.5%)	52 (50.0%)
Existing dental hospital	22 (29.3%)	1 (3.4%)	23 (22.1%)
Own practice	2 (2.7%)	4 (13.8%)	6 (5.8%)
Abroad	8 (10.7%)	1 (3.4%)	9 (8.7%)
Undecided	10 (13.3%)	4 (13.8%)	14 (13.5%)
Total	75 (100%)	29 (100%)	104 (100%)

## DISCUSSION

In our study, BDS students who have cleared the final examination of TU and doing their internship were included. The subjects were chosen from the dental colleges affiliated to single university to maintain the homogeneity of the participants in terms of entry requirements, selection criteria and curriculum. Since interns have already completed their BDS course, they were expected to know their future plans. Until June 2015, the numbers of male and female dentists registered in Nepal Medical Council were 733 (40.65%) and 1070 (59.35%) respectively.<sup>5</sup> Our survey revealed greater percentage of female dentist, (70.2% vs 29.8%). This finding is consistent with previous study conducted in Nepal<sup>3</sup> and also worldwide.<sup>6,7</sup> The increasing trends of female in dentistry could be because of flexibility of working hours, which will aid in better maintenance of family and domestic commitments.<sup>7,8</sup> Majority of our participants belonged to Brahmin, Chettri or Newar caste. Higher percentage (73.1) of the respondents' parents education was bachelor level or above and only 8.7% of the respondents' parents were below school leaving certificate. Parental educational background was higher in studies conducted among selected Nepalese students perusing dentistry,<sup>3</sup> and medicine.<sup>6</sup> Similar finding is found in studies conducted elsewhere.<sup>6,9</sup> This finding is in agreement with the notion that parents with higher education also expect good academic achievement in their children to facilitate better career choices.<sup>10</sup>

The main motivating factor for choosing dentistry in our study was the desire to have health occupation. Students from Thailand, Japan, Canada and Malaysia have also mentioned health care related occupation as one of the reasons for choosing dentistry.<sup>10,11</sup> However it was not an alternative or less preferred course than medicine as found in other studies where the students' first preference was medicine.<sup>2,12,13</sup> The preference of dentistry over medicine could be to avoid long working hours, stressful life, less hands-on approach to care and longer difficult career pathway.<sup>8</sup> Parental influence was considered as an important factor in choosing dentistry in India, in Yemen and also among Asian students.<sup>2,14</sup> In contrast, in our study only a small number of participants (14.4%) had parental influence to choose dentistry. This is similar to the study conducted among selected Nepalese dental students.<sup>3</sup> When comparing the same with medical counterparts in Nepal, parental influence or doctor in the family had a small impact on career decision making.<sup>4</sup> The finding in our study was consistent with other published studies.<sup>10,11</sup>

The second most opted influence was the professional reason that is the participants can determine their own hour during practice. Which is similar to the finding of previous study conducted among Nepalese dental professionals.<sup>3</sup> Flexible working hour is one of the reasons for the popularity of dentistry worldwide.<sup>15</sup> The flexible working hour may permit contribution of enough time to family.<sup>11</sup>

The third influence was under the economic domain. Half of the participants chose dentistry because "it is a stable job." This is comparable to the findings of Aggarwal A et al who reported 53.7% of the students found stable work to be the valid factor for choosing dentistry.<sup>2</sup> Financial part was also the motivating factor for 20.2% of the population of our study. Similar findings were found among the students from China and Tunisia, where the financial aspect was the first motive to choose dentistry.<sup>13,17</sup>

The main influence in vocational domain was that they like helping people. Similar finding is also mentioned in the study conducted in India, where 57.5% of the students pursued dentistry because they like to help people in general.<sup>2</sup> Previous studies have also shown altruistic motive as one of the influencing factor for choosing dentistry.<sup>10-12,14</sup>

Majority of the participants planned for further study after BDS. It could be due to lack of opportunities in government jobs and perceived increased competition for jobs due to expansion of number of education programmes.<sup>3</sup> A further explanation supported by previous studies is the aspiration of higher earnings in combination with a higher professional status compared to general dentist.<sup>9</sup> Similar finding was reported by Yan X et al where 74% of the Chinese students planned to continue with further education after graduation mainly for increased opportunities for job.<sup>17</sup> Whereas in countries like Australia, Canada, Japan more students preferred to practice general dentistry after graduation.<sup>1,6</sup> In country like ours where 34 out of 75 districts are not served by any dentist<sup>5</sup>, the need of general dentist is more. While in our study approximately one fourth of the participants (24%) planned for seeking job right after BDS. This finding suggests the need to increase job opportunities for general dentist throughout the country. Few students (3%) have planned to leave dentistry and enroll into some other business. Which provoke the thinking that these students might have been compelled to pursue the profession which was unable to fulfill their career expectation.<sup>13</sup>

Most of the developing countries lacked enough dentists in rural areas<sup>18</sup> and migrating to large cities within their countries in the primary trend among dentists.<sup>19</sup> In a study reported by Shrestha et al, 57% of the professionally active Nepalese dentist worked in Kathmandu valley.<sup>5</sup> In our study also, only the participants whose address was outside Kathmandu valley were planning to serve beyond the capital city. This is consistent with the finding that people with rural background are more willing to live and work in rural areas.<sup>6</sup> This highlights the reformation

needed while recruiting the students in future. More emphasis should be given to enroll the students from all over the nation during entrance. As suggested earlier, to increase the interest of students for rural practice schools need to provide students with more opportunities to witness the practice of rural dentists and experience rural living in order to draw them towards rural practice after graduation.<sup>19</sup> In our study, 8.7% planned to work abroad. This number is less compared to India, China and Japan.<sup>2,17</sup> Though only 8.7% reported of going abroad the percentage might increase if the students will not be able to meet their job expectations.

Regarding work plan after graduation, majority planned to have their own practice and work in the existing dental hospitals. This reason could be to raise one's professional status and at the same time to improve professional skill by working under experienced dentist.<sup>3</sup> Majority of the participants were worried for finding job in the future. Most of them who were worried have planned to go abroad whereas most of them who were not worried have planned to work in existing dental hospitals. This finding gives the suggestion to create the vacancy for dentist in various health sectors and also set up dental hospitals in areas where there are none.

This study has tried to explore the attitude of Nepalese dental students towards dentistry in Nepal and their future plans. The results would have been more elaborative if we could use qualitative methods. Further we did not compare the findings with other university students and gender. Further investigations are needed for in depth exploration.

## CONCLUSION

This study found that job stability was the main reason for choosing dentistry. The finding that most of the participants wanted to pursue further education after graduation indicate the insecurities perceived as a general dentist in terms of higher earnings. Similarly majority of the participants wanted to work inside Kathmandu Valley, where the number of dentists is the most compared to whole country. All these findings suggest changes in recruitment policy during BDS entrance examination. There is also a need to increase the number of job opportunities for dentists in public or private sectors.

**CONFLICT OF INTEREST:** None

**FINANCIAL DISCLOSURE:** None

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