

# Pharmacy Practice Scenario and Job Satisfaction among Nepalese Pharmacists

\*Dharma Prasad Khanal<sup>1</sup>, Bishwo Raj Dhungana<sup>2</sup>, Naresh Kadyat<sup>3</sup>

<sup>1,2</sup>Manmohan Memorial Institute of Health Sciences, Soalteemode, Kathmandu, Nepal

<sup>3</sup>PRIME Pharmaceuticals Pvt Ltd, Birjung, Nepal

\*Corresponding Author:

Prof. Dr. Dharma Prasad Khanal; M Pharm PhD

Email: drdpk@mimihs.edu.np

## ABSTRACT

**Introduction:** Pharmacists are the key players of the health care system. Job satisfaction is a very important contributing factor for person's productivity and motivation. The main objective of this study is to find out the present scenario of pharmacy practice and job satisfaction of Nepalese pharmacists.

**Methods:** A practice scenario and job satisfaction related questionnaires were developed and pilot test was done with ten pharmacy practitioners who were practicing from more than ten years in Nepal for reliability. Minor modification on questionnaires was done after pilot testing. Ethical clearance was taken from the MMIHS –IRC.

**Results:** Male pharmacists are dominating to female. The satisfaction level of Nepalese pharmacist was found to be 73.60%. Similarly, around 73.10% of pharmacists were satisfied with nature of work and 71.60% of pharmacists were satisfied with the time duration of work whereas nearly half of the pharmacists were unsatisfied with their income and pay scale.

**Conclusion:** About 70% pharmacists are highly productive stage of between ages 20-30 years. The inherent interest in the pharmacy profession found among Nepalese pharmacists is an optimistic and policy-makers could develop, modifying national health policy for the implementation of pharmaceutical service as an integral part of national health care system of the country for the benefit of the public health as a whole.

**Keywords:** Pharmacist, satisfaction, job, salary, pharmacy practice.

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## INTRODUCTION

According to FIP there are 4.067718 licensed pharmacists working in the 74 countries around the globe of which 2,824,984 are actively practicing. In total 75% pharmacists are working in community setting, 13.30% in hospitals and 12.7% in other

areas. Pharmacist density per 10,000 population varies countries to countries and lowest 0.04 in Chad to 18.88 in Malta. Several countries have many times more pharmacies than pharmacists (Uruguay, Vietnam, Pakistan, Nepal, Rwanda), flagging the

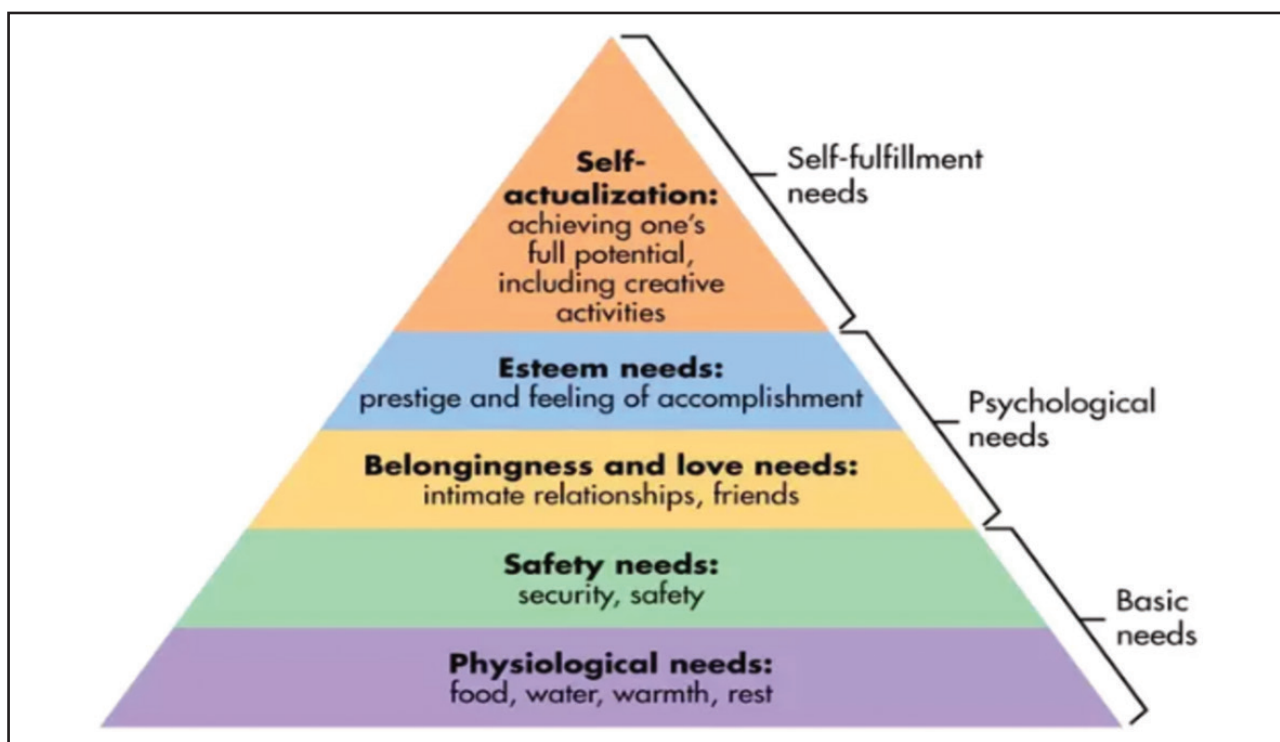
issue of appropriate supervision of pharmaceutical services. The female pharmacists varies from lower 20% to higher 80% around the countries of the world. Almost 80% of the pharmacist workforce is female in the Czech Republic whilst only 20% of the workforce is female in Uganda<sup>2</sup>. Job satisfaction is a very important contributing factor for person's productivity and motivation<sup>3</sup>. Job satisfaction is the extent that a person receives fulfillment or gratification from his/her workplace activities, the attitude toward the job as a whole.<sup>4</sup>

Job satisfaction is a critical element of any work environment. Thus various studies have been conducted on job satisfaction. Researchers have point out that job satisfaction grading and measurement can be a complex task as it may not be a simple average of workers' satisfaction in different aspect of a job<sup>3</sup>. A theory was proposed by Maslow and his theory guide

to assess the hierarchy of needs. His theory proposed a five-tier model of human needs, often represents as hierarchical levels within a pyramid<sup>5</sup>.

The different levels of needs on Maslow's hierarchy are discussed as follows<sup>4,5</sup>:

- (i) **Physiological needs:** These are biological needs that a person eat, breath and maintain normal physiology, if a person were deprived of all needs, first he/she search for satisfaction of these needs.
- (ii) After fulfilling the first physiological need than security needs become active.
- (iii) When first two need are satisfied, the third is the needs for love, affection and belongingness can emerge. Maslow clearly described that people attempt to defeat feelings of remote isolation and sadness.



**Figure 1:** Maslow's hierarchy of needs pyramid<sup>6</sup>

(iv) The forth level is needs for esteem: after the satisfactions of first three level of needs, the needs for esteem can become dominant. This includes self-esteem as well as honor from others. When these needs are not fulfilled, person may be depressed, frustrated, the person feels inferior, weak, helpless and worthless.

When these needs are satisfied, the person feels self-confident and valuable as a person in the world.

(v) **Needs for self-actualization:** When the satisfaction is achieved up to four level, then and only then are the needs for self-actualization activated. Maslow describes self-actualization

as a person's need to be and do that which the person was "born to do." "A musician must make music, an artist must paint, and a poet must write." These needs make themselves felt in signs of restlessness.

Similarly, other researchers has also raised the issue of inadequacy of single-item overall job satisfaction measures compared with a composite measure of overall job satisfaction using several job facets<sup>7</sup>.

A pharmacist means a person who has obtained minimum bachelor's degree or the qualification equivalent to that from the recognized educational institution on the pharmacy subject. There are a total of four universities; Tribhuvan University, Kathmandu University, Pokhara University and Purbanchal University. There are 22 B Pharm degree colleges. The pharmacy education and profession in Nepal is regulated by the Nepal Pharmacy Council 2000 A.D. The pharmaceutical education was started in Nepal with the commencement of the Proficiency Certificate Level, a two and half year program (Intermediate in Pharmacy that is similar to Diploma of Pharmacy) at the Institute of Medicine, Tribhuvan University in 1972 with the leadership of a British Pharmacist Paul David Spivey. But Bachelor of Pharmacy could not be started in institute of Medicine. The Bachelor of pharmacy (B. Pharm) program was started in Kathmandu University in 1994 after twenty two years of PCL program, in Nepal. The B. Pharm programs later were started at Tribhuvan University in 2000, at Pokhara University in 2001 and at Purbanchal University affiliated Asian college in 2007<sup>8</sup>. According to Nepal Pharmacy Council [9] currently, 57 educational institutions are running pharmacy courses like diploma in pharmacy (3 year community and hospital based program), bachelor of pharmacy (4 years), master of pharmacy (2 years) and doctor of pharmacy are run by different universities. The total number of registered bachelor degree holder pharmacists is 3761 by 2075/2076<sup>9</sup>.

This implies the ratio of pharmacist to patient ratio is too little, which reveals shortage of pharmacists in Nepal, moreover assistant pharmacists are providing

services in many sectors where pharmacists are not available.

## MATERIALS AND METHODS

A set of questionnaires related to personal information a, practice site and job satisfaction were developed and pilot test was done with ten pharmacy practitioners who were practicing from more than ten years in Nepal for reliability. Minor modification on questionnaires was done after pilot testing.

### Sample Size:

Sample size:  $d = 2\sqrt{pq/n}$

Where, n = sample size

p = Probability of pharmacist with satisfaction  
= 50% = 0.5

q = Probability of pharmacist with dissatisfaction  
= 50% = 0.5

d = margin of error = 0.05

Sample size = 400

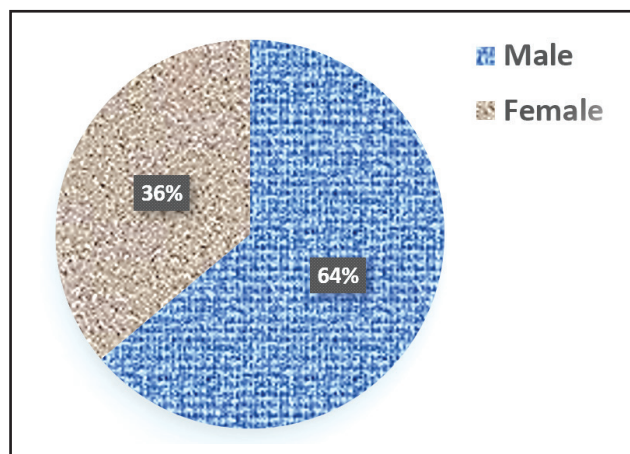
Questionnaires hard copy were administered personally by coauthor in Kathmandu Valley and by Email or some social networking sites such as viber, whatsapp, Imo and Facebook were also used for data collection in some cases for pharmacists practicing outside of Kathmandu valley. In total 600 set of questionnaires were administered by all methods. Ayurvedic and homeopathic pharmacists were excluded.

**Ethical approval:** Approved from IRC of Manmohan Memorial Institute of Health sciences with IRC register number MMIHS-IRC-297.

**Data analysis:** Data analysis was done using IBM, SPSS version 16; a statistical software. Satisfaction questions were measured on a 4 point likert scale of satisfaction. Points awarded to the responses were; 1=highly unsatisfied, 2=unsatisfied, 3=satisfied, 4=highly satisfied and all yes/no questions were coded as 1 and 2, Sum, mean, and ratio of different categories were computed and results were analyzed by descriptive statistics.

## RESULTS AND DISCUSSION

Total 600 sets of questionnaires were administered by different methods. Out of which 416 pharmacists responded. The response rate of the study was 69.33% where as a study conducted in India the response rate was 32.78%<sup>3</sup>. Analysis of responses from 416 pharmacists revealed significant differences in practice scenario and job satisfaction level.



**Figure 2:** Gender distribution of respondents (n=416)

The male pharmacists to female pharmacists ratio (fig 2) was M = 63.94%/ F = 36.06. Mean age of working pharmacists (Table I) was 29.29 years and 70% pharmacists are between ages 20-30 years.

**Table 1:** Age categories of respondents

Age category	Frequency	Percent (%)
20-30	292	70.20
30-40	110	26.40
50-60	8	1.90
40-50	4	1.0
>60	2	0.5
<b>Total</b>	<b>416</b>	<b>100</b>

A research conducted by Gustafsson M et al [18] reported that the majority of respondents pharmacists were female (95%), and most were employed at a community pharmacy (85%). The mean age was 39.7 years. The majority of graduates (91%) were satisfied with their job "most of the time" or "all of the time", and 87% of the respondents would "definitely" or "maybe" choose the same career again.

A study conducted in India [14] reported 300 (79.57%) respondents were males and 77 (20.42%) were females. Majority of participants were younger than 30 years (90.18%, n=340).

**Table 2:** Course selection view of respondents

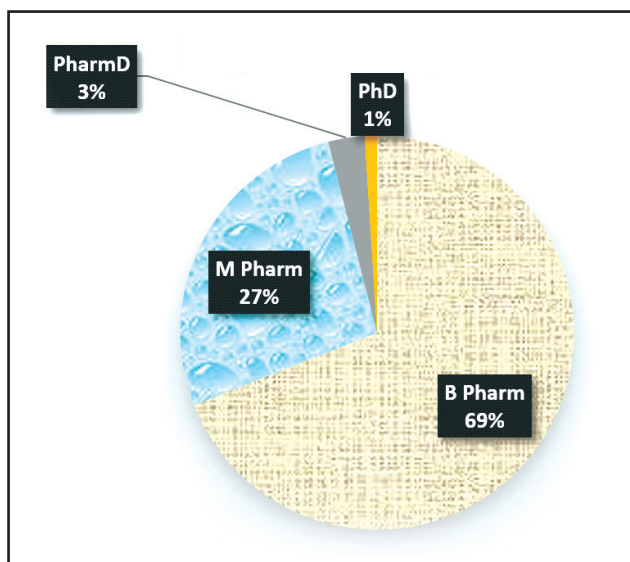
Join the course	Frequency	Percent (%)
My choice	281	67.50
I got chance to join	73	17.50
Others	34	8.20
Because my friend joined the course	15	3.60
Because of my family pressure	13	3.10
<b>Total</b>	<b>416</b>	<b>100</b>

67.50% pharmacists had their own choice joining the course, 17.50% pharmacists admitted to the course by chance (that means they wanted to admitted to medical or dental course, but could not got the opportunity) and rest of them join by family pressure of friend's suggestions etc.

**Table 3:** University of respondent's graduation

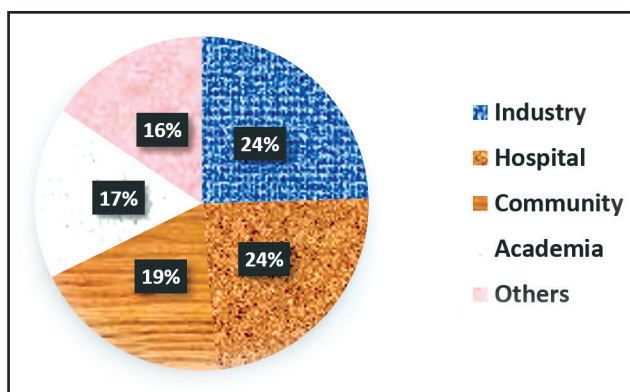
University Name	Frequency	Percent (%)
Tribhuvan University (TU)	139	33.40
Kathmandu University (KU)	97	23.30
Purbanchal University (PU)	48	11.50
Rajiv Gandhi University	45	10.80
Pokhara University	40	9.60
Other Universities	47	11.40
<b>Total</b>	<b>416</b>	<b>100</b>

In total 88.60% of the pharmacists were graduated from four Nepalese Universities and Rajiv Gandhi University India, viz: TU = 33%, KU=23%, PU 12%, Rajeev Gandhi university 11% and Pokhara university 10% respectively.



**Figure 3:** Degrees of respondent pharmacists (n=416)

Out of 416 respondents (Fig 3), undergraduate (B Pharm or equivalent) were 69%, Graduate (M Pharm or equivalent) 29%, PharmD 3% and PhD 1% respectively. A study done in India<sup>14</sup> reported large number of respondents had a qualification of Masters of Pharmacy (40.58%, n=153) followed by Bachelors of Pharmacy (39.78%, n=150). Hospital pharmacists made a large portion of the sample (40%, n=151). Out of 416 respondents, 24.50% are working in industry (Table VI), 24% in hospital, 19.00% in community, 17.00% in academia and 16.00% in regulatory and other sectors respectively. But according to FIP 75% pharmacists are working in community setting globally<sup>1</sup>, It is very interesting that equal number (24%) of practicing pharmacists are working in industries and hospitals (fig: 4). This is the good sign of the development of pharmaceutical service in the hospital sector.



**Figure 4:** Working sector of respondent pharmacists (n=416)

**Table 4:** Experience of respondents regarding joining job or remaining jobless after completion of B Pharm course

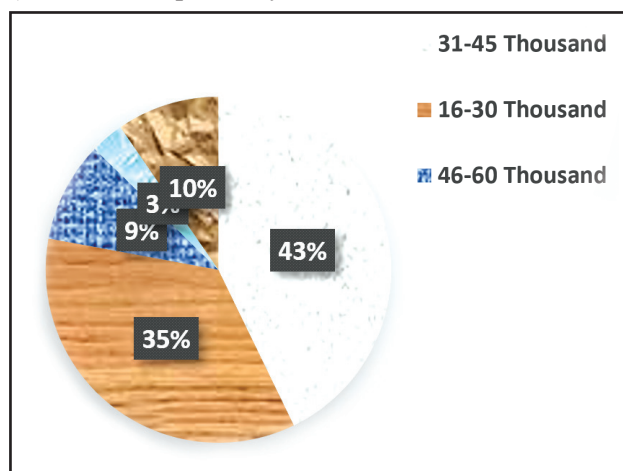
Jobless	Frequency	Percent (%)
No	213	51.2
Yes (< 6 months)	203	48.8
<b>Total</b>	<b>416</b>	<b>100</b>

51% join job immediately after graduation and 49% were jobless for the period of 4-6 months. 26% of the jobless pharmacists stay as volunteer for 1 month. 38.70% of practicing pharmacists are working away from the home town (Table VIII), 36.80 at home town, 19.00% near to home town respectively.

**Table 5:** Working Place of respondents

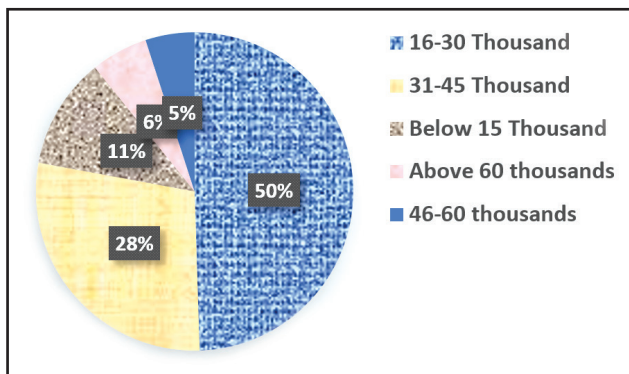
Working place	Frequency	Percent (%)
Away from Hometown	161	38.70
Hometown	153	36.80
Near to Hometown	79	19.00
Other	23	5.50
<b>Total</b>	<b>416</b>	<b>100</b>

Expected salary of 43% of practicing pharmacist is 31-45 thousands NPR (US\$= 278 to 404 in June 2019 exchange rate )/ month, 16% expect 16-30 thousands NPR (US\$= 144 to 269 / month, where as 10% expect 46-60 thousands NPR (US\$= 413 to 538 / month, 3% expect above 60 thousands NPR (above US\$= 638 / month, and 10% satisfy in about 15 thousands NPR (UD \$ 140 respectively.



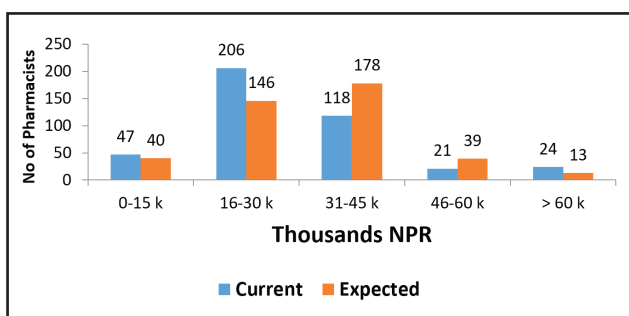
**Figure 5:** Expected salary of respondent pharmacists (n=416)

It is very interesting that 35% practicing pharmacists expect (fig 6) and 50% of practicing pharmacists are drawing 16-30 thousands NPR ( US\$= 144 to 269 / month, on other hand 43% practicing pharmacists expect 31-45 thousands NPR (US\$= 278 to 404 in 2019)/ month but only 28% are drawing that level of



**Figure 6:** Current salary of respondent pharmacists (n=416)

Salary presently. In total 10% expect and 11% drawing below 15 thousands (UD \$ 140 in 2019/ month) salary. In the upper salary level 9.4% expect and 5% of practicing pharmacists are drawing 46-60 thousands NPR (US\$= 413 to 538) / month. In the highly paid group 3% expect above 60 thousands NPR (above US\$= 638 / month, but 5.80% are drawing that level of salary during survey time. In US in 2018, the median pay of a pharmacist was \$126,120 per year and \$60.64 per hour<sup>10</sup>.

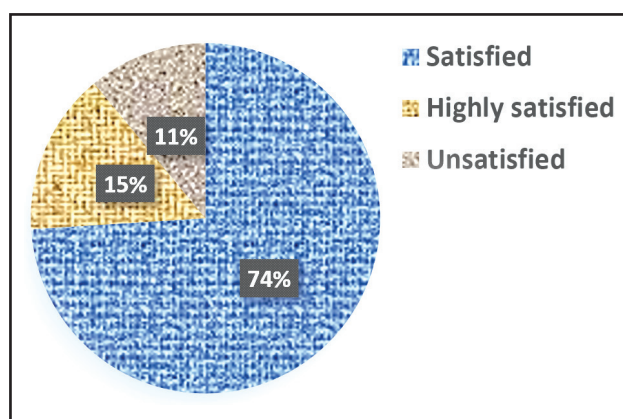


**Figure 7:** Comparison of current and expected (n=416)

When asked on a scale of 1 to 7 (with 1 being "not at

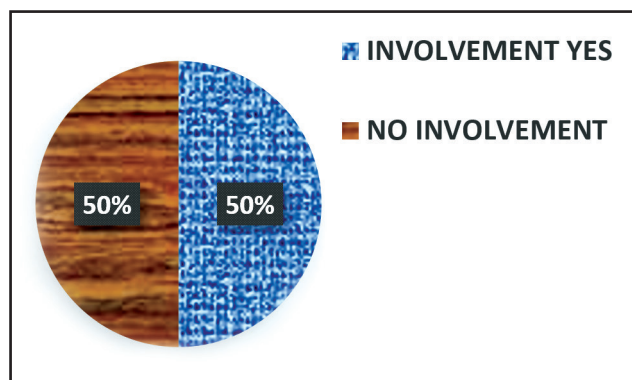
all" and 7 being "extremely"), how satisfied they are with their current annual total compensation, of 290 pharmacist respondents to that question, about 62% answered 5,6,or 7. But, when asked how they would rate their current overall job satisfaction on that same scale, of 273 pharmacist respondents to that question, only about 51% answered 5, 6, or 7. Some of the top reasons given for their dissatisfaction were workload, management, and work/life balance<sup>11</sup>.

A study conducted in Romania reported a low level of satisfaction regarding the pay–promotion subscale, a high level of satisfaction with the management–interpersonal relationship dimension, and a high level of satisfaction regarding the organization–communication<sup>12</sup>. A research study in India concluded that that the satisfaction level of Indian pharmacists is lower than other countries. Age, qualification and practice setting significantly affected the mean satisfaction score<sup>13</sup>.



**Figure 8:** Satisfaction level of practicing pharmacists

A study conducted in Malaysia<sup>14</sup> reported that only 52% of the pharmacists who responded were satisfied with their current jobs. The study outcomes indicate the major factors that affect pharmacists’ job satisfaction. A research done in Ethiopia reported that out of 43 total respondents most 32 (74.4%) were satisfied by their job and the rest 11 (25.6%) are not satisfied by their job<sup>15</sup>. A research conducted in Saudi Arabia, reported that independent community pharmacists in Riyadh had lower levels of job satisfaction than their counterparts in dispensaries and chain pharmacies and similar results reported from the Sweden<sup>16-18</sup>.



**Figure 9:** Respondent's involvement in professional pharmacy organizations (n=416)

It is very difficult to understand that 50% of practicing pharmacists are not involved in any professional organizations.

## CONCLUSION

It is interesting that previously industry was the main job hub of pharmacists in Nepal but now hospital sector is also emerging and in present study it is equal to industry. The Government and other authorities have to consider for a universal, multifaceted measure of satisfaction not merely the salary benefits.

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