

Neurology as future career – medical student’s opinion and factors influenced: A study from Nepal.

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article

Background

Neurology is an important area of Medical Science. Every medical student should know about the nervous system, which is connected with different other systems of the body – plays a vital role in integration. Unfortunately a very less number of students willing to go in the field. Hence the present study was undertaken to find out the determinants for the choice of neurology for the future career specialization.

Methods

The present study was done in 2012. This questionnaire based study was done in Manipal College of Medical Sciences, Pokhara in Nepal. 269 answered the questionnaire completely and correctly, giving an overall response rate of 79.58%.

Results

Poor quality of life, excess clinical activities was the major determinants of choice of career.

Conclusion

From the study, this is obvious that, there are several factors responsible for the choice of neurology. Students should attend neurology out-patient clinics to get interest in the subject. Different practical oriented aspects like neurophysiological procedures and interventional neurology they need to read more.

Keywords Anatomy, Cadaver, Clinical manifestation, Dissection, Formalin, Medical student, Nepal.

Background

Neurology is an important area of Medical Science. Every medical student should know about the nervous system, which is connected with different other systems of the body – plays a vital role in integration. Although the subject is very interesting, Neurophobia [1] among students, i.e., perception that neurology is a difficult and complicated subject to understand (43%) is a universal problem that motivates students to keep away from this specialty [2]. Medical students choice for career specialization depends on several factors. Guidance is required for deciding medical specialization fields. During medical school, medical students develop interest in one or more specialty careers based on their knowledge [3].

Choice of neurology as a specialization subject is important. Unfortunately a very less number of students willing to go in the field. Literatures suggest that, in India even after 62 years of establishment of Neurological Society of India [4]. and later, the Indian Academy of Neurology, there are less than 1000 Neurologists with a ratio of one Neurologist/1,250,000 population [5]. In Nepal there are also a very less number of Neurologists. In this present study, we assessed the student's motivational factors which help them to choose the neurology specialty in future. Different other crucial factors include the characteristics of the medical college, lifestyle preferences, prestige, drawbacks, job opportunities, expected earnings, longitudinal care, preclinical and clinical familiarity, and role models [6-8]. Medical curriculum in Nepal is divided into basic sciences and clinical sciences. Basic Science subjects are taught in first two years and Clinical subjects throughout the last five semesters (two and half years) of this professional course [9, 11]. Tribhuvan University (TU), Kathmandu University (KU), BP Koirala Institute of Health Sciences (BPKIHS) and NAMS (National Academy of Medical Sciences) are the institutions conducting postgraduate degree programs. TU is the pioneer institution for starting postgraduate courses in Institute of Medicine [12].

At the Manipal College of Medical Sciences (MCOMS), Pokhara, Nepal, students are coming from Nepal, India, Sri Lanka and other countries. Although different research work carried out in US medical student population and data is lacking from other countries [6, 13].

Hence the present study was undertaken to find out the determinants for the choice of neurology for the future career specialization [13, 14].

Material and Methods

Study Period

The present study was done in 2012.

Study design and the participants

This questionnaire based study was done in Manipal College of Medical Sciences, Pokhara in Nepal.

Response Rate

269 answered the questionnaire completely and correctly, giving an overall response rate of 79.58%.

Questionnaire design and Validity

Questionnaire was designed questionnaire based on demographic details, important motives, factors related to career choice like awareness and fascination etc.

Data collection

Investigators distributed the questionnaires amongst the medical students of Basic Sciences and students were instructed to answer each question honestly and after understanding it correctly.

Inclusion criteria

All the first year students of Basic Sciences were included in the study.

Exclusion criteria

Students who are absent, or incorrectly /incompletely questionnaire were excluded.

Sample size calculation

From a pilot study of 30 students it is estimated that for 99% confidence interval and, significance level $\alpha = 1\%$, $P = 70\%$, $Q = 30\%$, allowable error = 10%, required sample size was 218. $P =$ percentage of students opted their post graduation in Clinical subjects [15].

Outcome variables

Specialization subjects (Neurology, Surgery, Neurosurgery etc.) were used as a dependent variable.

Explanatory variables

Sociodemographic and other associating factors like age, gender, nationality etc. were also considered in the preference of one's career.

Ethical committee approval

Ethical Committee approval was taken.

Data management and statistical analysis

Descriptive statistics and testing of hypothesis were used in this study for the analysis. We used Statistical Package for the Social Sciences (SPSS) for Windows Version 20.0 (SPSS Inc; Chicago, IL, USA). Association between different variables examined by Chi-square test. $P < 0.05$ considered as statistically significant.

Results

The mean age for the Indians (85, 31.6%), Nepalese (110, 40.9%) and Sri Lankans (74, 27.5%) students were $18.3 \pm SD 0.7$, $18.6 \pm SD 0.8$ and $18.0 \pm SD 1.5$ years respectively. Hindu students comprised of majority (61.4% Indians and 89.6% Nepalese) while in Sri Lankan students, the majority (53.8%) were Buddhist.

Table 1 shows the Drawbacks in Neurology.

Table – 1: Drawbacks in Neurology

	Poor quality of life	Exclusive hospital based career	Workload	Competition	Excess clinical activities	Total
Male	48(26.96)	35(19.66)	29(16.29)	13(7.3)	53(29.77)	178
Female	20(21.97)	15(16.48)	20(21.97)	12(13.18)	24(26.37)	91
P value	0.04					

* $p < 0.05$, statistically significant

Table 2 shows various factors influencing students for Neurology

Table – 2: various factors influencing students for Neurology

	Male	Female
Communication skills	12(6.74)	10(10.98)
Long relation with patients	23(12.92)	9(9.89)
Simple complaints	9(5.05)	5(5.49)
Routine work	45(25.28)	16(17.58)
Diversity of work	35(19.66)	25(27.47)
Physical work	17(9.55)	9(9.89)
Team work	31(17.41)	15(16.48)
Stressful work	6(3.37)	2(2.19)
Total	178	91
P value	0.03	

Discussion

Medical profession has several disadvantages which lead to burnout and anxiety of medical students [17-18].

In the present study students had pointed out several aspects like Poor quality of life, exclusive hospital based career, workload, competition, excess clinical activities etc. Several

other studies showed that work – life balance is impaired; it was more in females (35.3%) than in males (32.7%) [19].

Research works in Neurosurgical field suggested that some major stressors included in this area were patient care, communication, workload, management and supervision, organizational and personal circumstances [20].

This study revealed that Poor quality of life, Excess clinical activities are the major determinants of choice of career in neurological field. Students need much guidance in this context. This is well known that Medical students make their specialty career choices quite early [1-5].

Hence, neurology is at a disadvantage, because of very less exposure with neurology faculty. The neurology exposure is required more, in the curriculum and in CME programs is not always sufficient reported by 30-60% of students in a study. Early exposure to the subject can improve the scenario [16].

Conclusion

From the study, this is obvious that, there are several factors responsible for the choice of neurology. Students should attend neurology out-patient clinics to get interest in the subject. Different practical oriented aspects like neurophysiological procedures and interventional neurology they need to read more. Students need to interact with clinically oriented videos of neurology to know more about the subject.

This can be achieved by various constructive steps like inclusion of factors concerned with the choice of medical career in the selection events of medical schools and post-graduate training. Longitudinal research based on career selection, fascination, drawbacks should be done for the development of future medical doctors must be spread among the budding doctors. The findings of this research will provide ample career guidance for future medical professionals to help them to fill the gap in neurology.

Limitations & future scope of the study

The main drawback is this is a cross-sectional study. Multicentric institutional based similar studies should be carried out.

Competing interests

The authors declare that they have no competing interests.

Authors' contribution

BR and IB designed the questionnaire, interpreted the data, drafted the manuscript, and revised it. BR conceived of the study with IB, and BS acquired & interpreted the data and

revised the manuscript. BS took part in data analysis, interpreted the data, and revised the manuscript.

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