

Language barriers for foreign / non-local medical and dental students in and around greater Noida the need for inclusion of local language classes in the curriculum

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Abstract: *Introduction:* An opportunity for a student to pursue his favorite course from a foreign/ distant university is a dream come true. In the medical and dental profession where their patient interaction (preferably in the local language) is the basis of the learning process, students who might not understand the local language may face barriers in interaction and hamper their learning process. *Aim:* To assess the perspectives and attitudes of foreign/non-local students on the language barriers among medical and dental students and its effect on their learning process. *Material and Methods:* The study included 200 students (convenience sampling) in and around various colleges of Greater Noida who were foreigners and/or came from Non-Hindi speaking places. Their perspectives, attitudes and barriers faced were assessed through an online questionnaire which was pre-validated and pre-tested. The questionnaire consisted of 10 close-ended questions on a dichotomous scale. An additional question was also added wherein they were asked if they would prefer if they were taught Hindi as a part of their curriculum. Data was analyzed using SPSS version 22.0 and primarily, the chi-square test was applied for data analysis. *Results:* This study included a total of 106 (53%) foreign dental students and 94 (47%) students from Non-Hindi speaking places of India (Particularly North-Eastern India). It was revealed that a majority of the students (177, 88.5%) faced difficulties while interacting with the patients and needed help of their peers. The responses were found to be statistically significant ($p < 0.5$). Most of them (178, 89%) could understand the local language but nearly half of them 101 (50.5%) revealed having difficulties in speaking the local language. Almost all (187, 93.5%) of the students also reported that it would be beneficial if they were taught the local language as a part of their curriculum. *Conclusion:* Students preferred that classes to learn the local language would be a part of their curriculum and such classes are suggested to familiarize the students to the local language. It would also be a benefit for them if they were also taught as to how to deal with certain cultural beliefs and practices of the local people so that it can be incorporated in their patient treatment methods.

Keywords: Language, Barrier, Attitude, Hindi.

Introduction

The age old proverb “Every two miles the water changes, every four miles the speech” is really apt for the Indian Scenario. In India, as many as 19,500 languages are spoken as mother tongues and as a result of such cultural variations, the mother tongue of every member of the household may not be the same [1]. Due to geographic variations, an institute of higher education might

be far away from the place of residence of students aspiring to study in an institution of academic excellence. An aspirant who dreams of pursuing a career in either medicine or dentistry in India has to mostly leave his hometown/ country which is influenced by various factors (getting admission into their choice of institute, choice of place, financial constraints etc).

For proper academic and social adjustment, language skills are very important and a lack of language proficiency can affect the student's ability to engage socially with other students, burdening the student with loneliness and mental pressure [2-4]. In India, approximately 3% percent of the population is truly said to be fluent in both English and an Indian language [5]. Therefore, it can be safely assumed for foreign/non-resident students that while pursuing various courses (in particular either medicine or dentistry), they may face some kind of language barrier. This barrier has the capability to affect their effective and equitable healthcare provision to the society as a result in miscommunication between the patient and the clinician.

In light of the above-mentioned barriers face by the foreign/ non-local students, this study aimed to assess language barriers among these students getting admission in medicine and dental courses in an around Greater Noida and its effect on their patient communication and treatment.

Material and Methods

The present study adopted a cross-sectional study design and used an online questionnaire (pre-tested and pre-validated) with Cronbach's alpha as 0.83. In this study, all foreign/ non-resident students were identified by adopting two sampling techniques: firstly, through convenience sampling and then, all those selected were asked to further recommend the names of other foreign/non-resident medical/dental students studying in and around Greater Noida (snowball sampling). A total of 217 responses were reported, out of which 17 were excluded due to missing data; making the total sample as 200. The students were not asked to enter their e-mail id/personal details so as to avoid any bias and keep the data purely confidential.

The questionnaire was first written on paper, and after pre-testing and pre-validating it, it was uploaded in Google forms and the link was distributed among the students. (Questionnaire link: <https://forms.gle/KdigNGPZGtfHfFpx6>). The Questionnaire was divided into three sections: The first collected information regarding the country of residence, course pursued, year of study and age group. The next section contained seven questions of language barriers faced by the students. The seventh question was a bonus

question in which student were asked about the meaning of pyria/ pyorrehea (periodontitis), a term used commonly by the patients in their native language. In the third section, the students were asked if they felt the need to include local language classes as a part of the curriculum (question 8), while the ninth question was an open-ended questions asking for any suggestions from their side.

Data analysis was done using SPSS version 21.0 [6] and apart from descriptive statistics, the chi-squared test was used for analysis of the qualitative data. Confidence interval was kept at 95% and p value was kept as <.05 for statistical analysis.

Results

The characteristic of the study population is described in table-1. Most students belonged to the age group of 18-21 Years [56(28%)] and females formed a majority of the study respondents [146 (73%)]. Most of the respondents were Dental students [163 (81.5%)]. It was observed that the maximum responses [55 (27.5%)] were given by Interns while the least responses were given by third year students [25 (12.5%)].

| Characteristic | n, % |
|----------------------|-------------------|
| Age Group | |
| <18 Years | 47 (23.5%) |
| 18-21 Years | 56 (28.0%) |
| 22-25 Years | 49 (24.5%) |
| >25 Years | 48 (24.0%) |
| Gender | |
| Males | 54 (27%) |
| Females | 146 (73%) |
| Medical Students | 37 (18.5%) |
| Dental Students | 163 (81.5%) |
| Year of Study | |
| First Year | 47 (23.5%) |
| Second Year | 28 (14.0%) |
| Third Year | 25 (12.5%) |
| Final Year | 45 (22.5%) |
| Internship | 55 (27.5%) |
| Total | 200 (100%) |

Table-2 Describes the number of foreign and non-resident students participating in the study. A total of 106(53%) of foreign students responded to the questionnaire with most of them [88, (83.01%)] belonging to South East Asian Countries. Among non-residents, the majority belonged to North-eastern regions on India [90, (95.8%)].

| | n, % |
|--|-------------------|
| Foreign Dental/ Medical Students | |
| • South-East Asia | 88 (83.01%) |
| • Countries other than south east Asia | 14 (13.02%) |
| • Africa | 04 (3.97%) |
| • TOTAL | 106 (53%) |
| Students from Non-Hindi Speaking Regions of India | |
| • North- east India | 90 (95.8%) |
| • South India | 4 (4.2%) |
| • TOTAL | 94 (47.0%) |
| Total | 200 (100%) |

The response of the students to the questionnaire is described in table 3. It was observed that students’ response to the question “Were you able to communicate freely to your patients regarding the treatment you wanted to provide?” was no in 24% of the students and 39% of the students responded by saying “Somewhat” and the difference was found to be statistically significant. Another significant response was the use of specific words by the local patients to specify their disease and 75% of them had difficulty in understanding them.

The responses to the bonus question (Table 4) “What is payria (pyorrhoea)” was incorrectly answered by 47.5% of the dental students while 35 students were ineligible to answer the questionnaire as they were not from a medical background. However, two medical students attempted to answer the question and got correct responses. The responses were added in the analysis of the results and the differences were found to be significant, indicating a language barrier among the students.

| Sl. No | Question | Yes | No | Maybe/ A Little Bit/ Sometimes | Chi-Square Test |
|--------|--|------------|------------|--------------------------------|-----------------|
| 1 | Did you/did you face any difficulties while talking to your patients/peers in the native language? | 156 (78%) | 22 (11%) | 22 (11%) | NS |
| 2 | Were you able to communicate freely to your patients regarding the treatment you wanted to provide? | 67 (33.5%) | 55 (27.5%) | 78 (39%) | 0.01* |
| 3 | Were you able to clearly understand the signs and symptoms explained by the patient without any help from your peers? | 24 (12%) | 24 (12%) | 152 (76%) | NS |
| 4 | In your opinion, do you feel that you were at a disadvantage with your peers while dealing with your patients as compared to your peers? | 87 (43.5%) | 22 (11%) | 91 (45.5%) | NS |
| 5 | Do you feel comfortable in treating patients who only speak the local language? | 44 (22%) | 144 (72%) | 12 (6%) | NS |
| 6 | Do you understand the specific local words used by the patient to specify their disease? | 23 (12.5%) | 150 (75%) | 27 (12.5%) | 0.03* |
| 7 | Do you feel the need to include local language classes as a part of the curriculum? | 194 (97%) | 6 (3%) | ----- | NS |

| Answer to bonus question | Correct Answer | Incorrect Answer | Not a dental student | Significance |
|----------------------------|----------------|------------------|----------------------|--------------------|
| What is payria (pyorrehea) | 68 (34%) | 97 (48.5%) | 35 (17.5%) | 0.04 (Significant) |

The suggestions of the students are seen in table 5. A total of 36 students chose to provide their suggestions and the best 5 are shown in table 5.

| ANSWERS TO SUGGESTIONS | |
|---|---|
| Additional comments/ feedbacks/ suggestions | 1. Simultaneously with the language classes, some (educational) events can be organized (including the local and international students) to motivate the use of the local language. For example a nukarnatak session on tobacco or aids involving both local and international students to perform for the local people. Success of the event will be a booster in confidence to speak in public. |
| | 2. The message should reach our respective council. |
| | 3. Hope this actually works. At least our learning is in English. |
| | 4. Communicating with patients is a bit difficult. Extra effort is required for us to learn that language |
| | 5. Staff/ friend is needed by my side. Gives negative feel to the patient. |

Discussion

The present study, which aimed to assess language barriers among foreign/ non-local students getting admission in medical and dental courses in an around Greater Noida and its effect on their patient communication and treatment found significant gaps in language communication between the patients and students which could hamper their diagnosis in treating their patients. In agreement to our study results, Park E et al. [7], employed a quantitative

approach to gather and obtain a comprehensive understanding of the linguistic experience of 182 international students who spoke English as a second language and were undertaking undergraduate and postgraduate programs at three universities in South East Queensland (Australia). As per our study, the authors also used an online survey in addition with a paper survey. Interestingly, their results revealed that L2 international students in the Australian context had more issues with L2 (second language) speakers than L1 (first language) speakers due to their accented ness.

However, in a few instances, foreign accented English appeared to be understood by native listeners, including some of the local dialects used for communication. In our study, only 33.5%(67) students were able to communicate freely with their patents regarding the treatment they wanted to provide, supporting the language barrier faced by international/ foreign students. Their study also considered other factors, which included the length of stay in the country, which could affect the comprehensibility of the accent spoken by the natives by the international students.

Sabbour SM and colleagues aimed to assess the perspectives of students and staff on language barriers in medical education in Egypt and their attitude towards Arabization (native language) of the medical curriculum through a questionnaire survey which included 400 medical students and 150 staff members. The responses to their questionnaire included dichotomous (yes/no, agree/disagree) or a Likert-type scale (attitudes towards Arabization) along with two open-ended questions used for other comments or suggestions; and almost similar questionnaire was used by in our study, thus facilitating easy comparisons of our results. They reported that many students (56.3%) did not consider learning medicine in English an obstacle, and44.5% of staff considered it to be anobstacle only in the 1st year of medical

school. It was also reported that 44.8% of students translated English terms to Arabic to facilitate studying and 70.6% of students in their clinical study years would prefer to learn patient history-taking in Arabic. The students also suggested teaching in Arabic language in some specialties and is somewhat similar to our results as suggested by 97% (194) of the students supporting the need for inclusion of local/native language classes as a part of their curriculum [8].

It was documented in the literature that Medical students are able to differentiate between effective and ineffective teaching methods in lectures with students stating that lectures by properly qualified teachers as a particularly important feature of their study [9]. In India, while the entire teaching for medical and dental students is in English language, we do not expect any barriers in learning among the students. There is a slight possibility of social desirability bias by the respondents, which however, might not affect the results by a significant margin. This study was a preliminary effort to assess the barriers faced while communicating in the native language by foreign/ non-resident students in

Greater Noida and the results indicated that there is a need to train these students in the native language for aiding them in effective communication and diagnosis of the patient. We aim to expand the reach of the study in the future by including various other universities of importance in India so that the results can be generalized and effective measures can be advised to the respective councils for inclusion of local language in the curriculum for foreign/non-residential students. We also aim to add the perceptions of the respective faculties and ask for their suggestions.

Conclusion

As assessed through the present study, students preferred that classes to learn the local language would be a part of their curriculum and such classes are suggested to familiarize the students to the local language. It would also be beneficial for them if they were also taught as to how to deal with certain cultural beliefs and practices of the local people so that it can be incorporated in their patient treatment methods.

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