Original Research Article

Study on non-verbal communication knowledge among doctors of non-clinical and para clinical departments of Government Vellore medical college hospital, Vellore, Tamil Nadu, India

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ABSTRACT

Background: Many Studies and Research Articles in our medical field focuses on Verbal Communication component. The Non-Verbal Component has been neglected in many circumstances. But Medical science endorses that Non-Verbal component plays a major role in the communication process in all set ups whether it is in the classrooms, Examination Hall, Outpatient Room or Wards or Intensive Care Units. The objective of this study is to access the knowledge and Awareness of NVC Component among Doctors of Non-Clinical and Para Clinical Departments of GVMCH - Vellore, Tamil Nadu, India.
Methods: This Cross-Sectional Study was conducted among 45 Doctors across 7 Departments of Government Medical College Vellore. Mean, Median, Mode and Standard Deviation were used for quantitative Data and Pearson Chi Square Test and Logistic regression was used for qualitative Data using Trial Version of SPSS 22.
Results: The mean Score was 7.2±2.8 with Mean scoring percentile of 28.8 ±11.5. There was Pearson's Chi Square significance for Variables like External Resources related to NVC, Books related to NVC, UG and PG pursued at, Exposure to Workshops or CME s related to NVC, and age Group < 35. But on running Logistic Regression we got statistical significance for variables like External resources related to NVC, UG studied at same state, Age Group >35 years.
Conclusions: Variables like External resources, UG studied at same state, Age Group >35 years Showed Statistical significance in knowledge on Non-Verbal communication in this Study set up.

Keywords: Non-verbal communication knowledge, Teaching faculties of non-clinical, Para clinical departments

INTRODUCTION

Non-Verbal Communication Component is associated with improved satisfaction and better use of Health Services.[1] A major part of the Academic activities of faculties of Non and Para clinical Departments are channelized through classes and Demonstration Procedures. Always, these Faculties face a huge group of students around 100 Plus students of various divisions (MBBS, Interns, Nursing, DMLT, etc.) at various time slots in a working day. Communication in these setups is both by the verbal and Non-Verbal components. The verbal component has been always given importance and the Non-verbal component has been neglected often.

But Medical science stresses that Non-Verbal component bears more effectively than the Verbal component particularly both in one to one conversation or communicating in front of group of students or Departmental staff meetings etc.

Even in our Medical literature, lot of research and studies are only focusing on Verbal component in communication domain and the Non-verbal part is not addressed effectively or underdeveloped for the Health Care Professions.[2]

This study focuses on the Non-verbal communication knowledge among the Doctors of Non- Clinical and Para Clinical Departments of GVMCH. The other objective is also to improve their Non-Verbal communication components through proper channels. Non-Verbal Communication is also called as sign language or silent language, includes all behaviours performed in presence of others or perceived either consciously or unconsciously.[3]

METHODS

This study is a Cross sectional study. This study was conducted among 45 Doctors of 7 Departments (Anatomy, Physiology, Biochemistry, Pathology, Microbiology, Pharmacology and Forensic Medicine) of Government Medical College Vellore. During the period of May-August 2018.

Inclusion criteria

All the Willing Doctors, Particularly the teaching Faculties in all cadres were included in my study.

Exclusion criteria

Those who did not consent and not willing were excluded, ortho physically handicapped were also excluded from this study.

Sampling technique

Convenient Sampling Technique.

Study tool

A pre structured Questionnaire on Basics of Non-Verbal Communication in Multiple Choice questionnaire format.

Data collection

Participants were strictly advised not to refer or Google the answers while filling and Answer Keys was given at their submission of filled Data Forms along with reference to standard books (Desmond Morris-Man Watching and The Human Zoo) with key.

The Pre structured Questionnaire with 25 Objective type Multiple choice question format, carefully framed questions on Non-Verbal Communication Domain alone was selected. Total of 25 marks allotted and the percentile also calculated to 100.

Data analysis

SPSS 22 was used for statistical software. All the quantitative Variables were calculated as Mean±SD, Pearson Chi square Test was used to assess the statistical significance. P value of less than or equal to .05 indicates significance. Logistic regression Co-efficient of Beta (r^2) was also done as Multi Variate Analysis.

RESULTS

Mean Age group of this study subjects was 40.8±6.4 (Mean±S.D) in years. Mean years of service or teaching experience of study subjects is 9.2±5.4. (Mean±SD) in years.

Table 1: Gender distribution among study subjects.

Gender	Frequency	Percentile
Male	22	55%
Female	18	45%
Total	40	100

On Gender Distribution pattern in this study. Males constituted 55%(n=22) and Females constituted 45%(n=18).

Table 2: Distribution of residence among study subjects.

Place of residence	Frequency	Percentile
Urban	24	60
Rural	10	25
Not clear	6	15
Total	40	100

On the Distribution of Residence pattern in this study subjects from Urban constituted 60% (n=24) and subjects from Rural constituted 25% (=10).

Table 3: Distribution of designation of study subjects.

Designation	Frequency	Percentile
Professor	3	7.5
Associate	8	20
Senior assistant	15	37.5
Assistant	3	7.5
Tutor	11	27.5
Total	40	100

On the Distribution of Designation or cadre wise of study subjects: subjects from Senior Assistant Professor cadre constituted 37.5%(n=15) and Tutors constituted 27.5%(n=11), the Professor Cadre constituted 7.5%(n=3). All of 65%(n=26) of this Study subjects completed their Under- Graduate MBBS in their own home state. (Both Government and Private Universities). The 30%(n=12) of this Study subjects completed their Undergraduate MBBS in their Allied or Nearby states. (Both Government and Private Universities).

Table 4: Distribution of persuasion of under graduation-MBBS of study subjects.

Under graduation	Frequency	Percentile
Same state (Tamil Nadu)	26	65
Allied state	12	30
Overseas	2	05
Total	40	100

Table 5: Distribution of persuasion post-graduation-M. D, Diploma of study subjects.

Post graduation	Frequency	Percentile
Same state (Tamil nadu)	21	52.5
Allied state	8	20
Overseas	0	0
Nil	11	27.5
Total	40	100

Table 6: Books imbibed or read related to non-verbal communication pattern among the study subjects.

	Frequency	Percentile
Yes	5	12.5
No	35	87.5
Total	40	100

Only 52.5% (n=21) of this Study subjects completed their Post Graduate MD of their respective Speciality in their own home state. (Both Government and Private Universities). The 20 % (n=8) of this Study subjects completed their Post Graduate MD of their respective

Speciality in their Allied or Nearby states. (Both Government and Private Universities).

Table 7: Other external resources exposed related to non-verbal communication pattern among the study subjects.

	Frequency	Percentile
Yes	6	15
No	34	85
Total	40	100

Table 8: Scoring marks of study subjects.

	Frequency	Percentile
Less than 8	26	65
More than 8	14	35
Total	40	100

Table 9: Univariate analysis for study variables with Pearson s chi square significance.

Study variables	DF	p value
Exposure to external resources related to NVC	1	0.02
Books read related to NVC	1	0.04
Under graduation at same state verses allied state	2	0.05
Post-graduation at same state	2	0.03
Masters verses diplomas verses allied state	2	0.03
Age >35 verses age <34 years	2	0.05

Table 10: Multi variate analysis for study variables with statistical significance on logistic regression.

Study variables	DF	p value	R^2-beta coefficient	95% confidence interval (C.I)	
				Lower	Higher
Exposure to external resources related to NVC	1	0.03	0.75	0.40	0.92
Under graduation at same state verses allied state	2	0.05	0.66	1.2	2.6
Age >35 verses age <34	2	0.05	0.81	1.0	3.4
Books related to NVC	1	2.45	0.31	0.45	1.88
Post-graduation at same state verses allied state	2	0.09	0.40	0.30	0.88
Masters verses diplomas	2	2.85	0.22	0.9	2.56

Only 12.5%(n=5) of the study subjects has read books and articles related to Non-verbal communication Context. Only 15%(n=6) of the study subjects had Exposed to External resources related to Nov verbal communication Context.

Here the External resources included are Videos, talk show, Conclave, Panel discussion, Role play, Combined Medical Education, or training programs. Out of the Total 25 Multiple choice questions related to Non-verbal communication knowledge. Each right answer carries one

mark and Maximum total per subject is 25.65%(n=26) scored less than 8 marks, 35%(n=14) scored More than 8 marks. On Running the Multi Variate Analysis for study variables with Statistical significance on logistic regression was seen for three variables-Exposure to External resources, Under graduation persued at same state and Age More than 35 Years.

Variables that lost statistical significance are Exposure to Books, Post-graduation at same state and Designation of Masters (M.D) verses Diploma (DPH).

DISCUSSION

In this study Males out number females by Participation, Males contributed 55% and females were 45% only, But the Intelligence quotient or any other Unique technique among the gender perspective has not been applied in this study. But similar study by Vogel D, Meyer M et al, shows that female students showed Higher Scores for verbal communication compared to Male students while communicating with patients.[3] Even the Empathy component in Nonverbal communication was also taken into study and Female students scored well than male students in the study by Vogel D, Meyer M et al.[3]

The study Variable of Residence of study subjects, Both Urban and Rural did not show any difference to the outcome variable Non-Verbal communication knowledge. Even the Cadre or Post wise divisions of study subjects also did not show any difference to the outcome variable Non-Verbal communication knowledge.

The variable Denoting MBBS studied in same state had Statistical significance both in Univariate and Multi Variate Analysis (p Value=0.05) with the outcome variable.

Univariate Analysis and Significance (P Value <0.05) was seen in six Study variables namely - External Resources related to NVC, Books related to NVC, UG studied at same state, PG studied at same State, Exposure to Workshops or CME s related to NVC, and Age Group <35 Years.

Multi Variate Analysis and r^2 (Exponent of Beta Value) Significance was seen in three Study variables namely- Exposure of study subjects to External Resources, Undergraduate studied at Same State, and Age Group <35 Years.

In the Questionnaire and Scoring only 35% (n=14) had more than 8 and only 65%(n=26) had Less than 8 for total of 25 Marks. This focuses on to improve the domain on No-verbal communication skills and knowledge.

There was a strong relationship among the quality, amount and the method of using non-verbal communication by teachers while teaching. Based on the findings of the study by Bambaeeroo F, Shokrpour N, et al, it was found that the more the teachers used verbal and non-verbal communication, the more efficacious their education and the students' academic progress were.[2] Under non-verbal communication, some other patterns were used. For example, emotive, teamwork, supportive, imaginative, purposive, and balanced communication using speech, body, and pictures all have been effective in students learning and academic success.[4]

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Claramita M and Susilo AP et al, study emphasizes more on basic skills such as listening to subtle non-verbal cues are needed for doctors and nurses. A guideline on doctor-patient communication tailored to local culture was developed as well as training also persued in the long run.[4] There is a Paradigm need in acquiring new communication skills and practise in the present situation by Gunther Kress Study.[6]

Higher the Literacy among Teachers relected in higher NVC Knowledge and skills as shown by them - Cope B and Kalantzis Study.[7] Showing pictures and Demonstrations during sessions among students was effectiveand backed up by NVC than the verbal Components as by Kress GR and Van Leewen T study.[8,9] Gestures and Hand Movements during class sessions by teachers had more impact on learning among students than compared to teacher sticking to the table and chair as mentioned in the study by Lyotard.[10]

Gestures are included in a nonverbal communication and theyplay an important role in the interaction between people, it is demonstrated that they can have an effect on the human interaction. A study made by Mehrabianin the 1967 shows that in a human communication "words account for only a small part 7% of the meanings exchanged; a much greater part 38% is transmitted through speech rhythm, volume, and tone of voice; and yet a greater part 55% is transmitted through body language" (Mehrabian and Wiener 1967; Mehrabian and Ferris 1967; also reported in Mehrabian 1972). Moreover, gestures are culture specific, they depend on the custom of the speakers; for instance, Italy is one of the major countries in where emblems are a strong part of their communication.[11] On the contrary, in Japan, gesticulation it is not well seen and accepted across people and it is related with absence of education. As a consequence, gestures do not necessarily help the transmission of information especially if the speakers do not share the same culture.[12]

The type of nonverbal communication that deals with the study and interpretation of gestures is kinesics- also known as body language. Within this area of non-verbal communication, there are other powerful communicative behaviours such as eye gaze, facial expressions, posture, personal space, and even appearance (Fernando Poyatos.[13] However, gestures constitute a special and complex form of non-verbal communication, there are mainly two types of gestures: illustrators, which are simple movements of the hands that support speech, and emblems, which are more specific and stand for a concrete verbal meaning, just like words in verbal communication, they vary in infinite ways across cultural frontiers.[13]

In many cases, gestures from different societies look identical but they have completely different meanings, for

example, the common American ok gesture means money in Japan, zero in France, and in othercountries such as Brazil and Ethiopiait has negative connotations it is seen as an obscene gesture (Desmond Morris et al.[12] Therefore, this does not only illustrate the fact that the same gesture expresses several meanings depending on the culture, but also these examples show how gestures are deeply rooted in certain societies.

Another remarkable aspect of gestures is that differences that may seems insignificant in their articulation, can have significant consequences in the message transmitted. For instance, in the British Isles the difference between a "palm-in" and "palm-out" V gesture is noticeable.[12] The one that suggests the message of victory is performed with the palm facing outward, whereas the other performance is used as an insult and it is strongly offensive. As a consequence, even though there is only a slight positional difference during the gesture articulation, the change in its meaning is abundant.[14]

Italian language is characterized by different types of gestures that play an important role in communication. Most of those gestures are done unconsciously during the interaction between the speaker and the listener; also, due to the vast amount of cultures in the world it is difficult to find gestures that are understood and accepted across countries. Therefore, body communication changes according to societies and it can be easily misunderstood. Some of the Italian gestures are not iconic (the sign does not reflect the meaning) but totally arbitrary and they are culture-specific (which it means that they do not appear in any other cultures). Moreover, these movements can have two different purposes: on the one hand, the speaker uses them to emphasize the message, so the body gesture goes in parallel with the words while they are speaking; on the other hand, the same gesture can actually replace words, so that speakers instead of saying the concept they will give an arbitrary representation of the meaning.

An example of culture-specific non-verbal communication, both cases can be displayed in the verbal communication in order to emphasize or to replace the word while people are speaking. The first motion is done by bringing the palm at the shoulder level and shaking the hand backward and forward; it is used to suggest past times, and it is associated with the expression long time ago. The second gesture consists in joining the palms of the hands and shake them backward and forward, swinging it on the palms, it is used to signalize questions such as why or what are you doing Maria GraziaBusà.[15]

The increment of body movements in a conversation firstly highly depends on the context in where the conversation takes place; secondly, to the education background of the speakers; and lastly, to the emotions involved in the exchange.[16] As a matter of fact, it is rare to find doctors gesticulating during their interaction with patients.

Humans concentrate so hard on words that they seem to forget that their movements, postures and expressions are telling their own story. Lastly NVC can bring many fresh insights to the study of Human Affairs.[17]

CONCLUSION

Of all the different Direct and Indirect parameters of Non Verbal Communication knowledge in a medical college set up, in this study the three parameters namely Exposure to External Resources, Under Graduate done at same state and age more than 35 years of the study subjects has statistical significance and holds the vital parameters for Non-Verbal Communication knowledge among teaching faculties of Non-Clinical and Paramedical Departments. To improve The NVC Component-Doctors are recommended to participate or expose to External resources like CME, Workshops, Panel discussion, Paper Presentation, Conferences, Conclaves, and also the mother language learning of Both schooling and college has a higher impact in this NVC Skill and more studies or research to be concentrated in this area. Naturally Aging also improves the NVC Component.

Limitations of this study includes:

- The total Sample size was 45 and Non-Respondent rate was 11.1%(n=5), 3 of the study subjects did not returned the data sheet and 2 of the data sheets was not properly filled.
- Study Variables like Books Imbibed and External resources on Non-Verbal Communication Component were not accurately recorded as the study subjects had a lot of recall bias.
- After collecting the data sheets from the study subjects and giving them there Answer keys-Subjects were too much concerned about their performance results.
- Sample size can be increased by including Clinical departments, but in that case the scenario changes, as Clinical departments have different dimensions of Non-verbal components in different setting like breaking the bad news, handling an emotionally unstable attender or mob, Conveying a Morbid picture of patient Etc.
- Motivating the Study subjects to improve their non-verbal knowledge and skills is too cumbersome and a persistent one with different modalities.

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