Original Research Article

Attitude of First Year MBBS Students Towards Communication Skills: A Multi-Centric Cross-Sectional Study

Vidya D[1], Ramesh K[2], Punith G.D[3], Kesava Perumal S[4], Gangadhara Goud[5]

[1]Postgraduate, [2]Associate professor, [3]Postgraduate, [4]Postgraduate, [5]Professor, Department of Community Medicine, Vijayanagara Institute of Medical Sciences,Ballari, Karnataka, India.

How to cite this article: Vidya D, Ramesh K, Punith G.D et. al. Attitude of First Year MBBS Students Towards Communication Skills: A Multi-Centric Cross-Sectional Study. Indian Journal of Public Health Research and Development/Volume 15 No. 3, July-September 2024.

Abstract

Introduction: With the upcoming of technology in every field, communication has taken a step back since more interfaces have become user friendly and requires minimal human interaction. In this study, we are assessing the attitude of these new generation doctors about the importance of communication skill in patient care for their future practice.

Methodology: All the 1st year MBBS students in Karnataka were the study participants. Data was collected using a semi-structured questionnaire (26 Items) on a google form and sent to them to fill up. Collection & storage of data in prepared proforma/ MS Excel Sheet, etc.

Results: Using Principal Component Analysis (PCA), after scoring and grouping the items as high, medium and low score. The results indicate that the majority of individuals have an excellent perception (90.1%), but also are moderately sceptical (61.9 %) and moderately ignorant (90.1%) towards communication skills.

Conclusion: Overall, the results suggest that while there is generally a positive perception of communication skills, there are also some doubts and areas of ignorance that need to be addressed through targeted interventions to improve communication skills in this population. Thus, implementing the communication skills early in medical curriculum will effectively help in making these budding doctors a great social physician.

Key Words: attitude, communication skill, MBBS students, social physician

Introduction

Medical students attitudes towards doctor-patient communication have for long been a concern among medical teachers, curriculum planners and policy makers[1,2] and have been addressed in many studies. Kaufmann[3] constructed the Attitudes

Corresponding Author: Kesava Perumal S, Postgraduate, Department of Community Medicine, Vijayanagara Institute of Medical Sciences, Ballari, Karnataka, India.

E-mail: kesavpsm01@gmail.com

Orchid id: https://orcid.org/0009-0003-7828-594X

Submission date: November 2, 2023 **Revision date:** Nov 17, 2023 **Published date:July 4, 2024**

Towards Medical Communication Scale with 41 items and used it in a cross-sectional study on 203 students in their first, second and fourth year respectively. This study, which was published in 2001, showed that female students had more positive attitudes than male students, and that first and second year students had more positive attitudes than fourth year students. In 2001 de Valck[4] presented a questionnaire measuring students' attitudes towards full disclosure versus non-disclosure in breaking bad news. Following one cohort of students for three years (53 students responded in all three years) they found that students became more in favour of non-disclosure as they progressed through medical school. In 2002 Rees, Sheard and Davies[5] published the Communication Skills Attitudes Scale (CSAS), which measures students' attitudes towards learning communication skills during medical school. This scale has until spring 2006 been used and validated in three different studies in the UK involving from 216 to 490 students[6-8] and one involving 123 students in Nepal[9]. Although mostly cross-sectional, these studies report that female students have more positive attitudes than male, and that students early in medical school have more positive attitudes than students later in medical school. In addition, having recently attended communication skills teaching tends to predict fewer positive attitudes towards learning such skills. Attitudes have three main components: affective (the way we feel), cognitive (the way we think) and behavioural (the way we act) towards a particular entity[10]. Affective attitudes reflect emotional reactions and may change after repeated exposure to situations involving the goal for the attitude. Cognitive attitudes are difficult to influence but may change when new knowledge is presented; provided the knowledge is convincing and the presenter is credible[11]. Behavioural attitudes are manifestations of underlying cognitive and affective attitudes. There is evidence that changing behaviour by training new ways of acting in professional situations may influence the more fundamental aspects of attitudes without targeting them directly[12]. There is need for assessment tools enabling teachers and curriculum planners to monitor changes in specific components of attitudes among students during medical school. The use of such tools may also facilitate comparisons between different medical schools. Such comparisons are important because differences in attitudes may to some extent be linked to differences in teaching methods and/or curriculum designs, thereby helping medical educators in finding new ways of improving and refining teaching in medical schools[13].

Objectives: To assess the attitude of 1st year MBBS students on communication skills.

Measures:

We decided to use the Communication Skills Attituded Scale (CSAS) because it addresses teaching and learning of communication skills most specifically and because it is the tool that has been most widely used and validated. The CSAS contains 26 statements concerning attitudes towards learning communication skills. Thirteen statements are positively worded (e.g.: "In order to be a good doctor I must have good communication skills" – item 1) and thirteen negatively (e.g.: "I don't need good communication skills to be a doctor" – item 19). Each statement is followed by five boxes in a Likert-like consecutive order, named "Strongly disagree", "Disagree", "Neutral", "Agree" and "Strongly agree" and is numbered from 1 to 5 respectively. The informant is asked to check one box only. Negative and positive statements are presented in a haphazard order. Each item was scored from 1 to 5 according to the box that had been checked in the questionnaires[14]. Before analysing the data, we reversed the scores for the 13 negative items in order to obtain the same direction of scores for both negative and positive items; i.e., a higher score represents more positive attitudes for all items. The original questionnaire is presented in the article published in 2002 by Rees, Sheard and Davies on Communication Skills Attitudes Scale (CSAS)[5] and the Norwegian version can be obtained from the corresponding author.

Methodology

Study setting and subjects consist of all the first year MBBS students in Karnataka (69 medical colleges in Karnataka) for a study period of 6 months. The source of data was obtained by circulating a semi-structured questionnaire to the first year MBBS students in all medical colleges of Karnataka. All the students of the 2022-2023 MBBS batch were included in the study and the students who did not respond

were excluded. Data were collected using a semi structured questionnaire on a google form and sent to their respective devices for them to fill up, collection &storage of data in prepared proforma/ MS Excel Sheet, etc. The total response was 1070 and hence the sample size.

STATISTICAL ANALYSIS:

KMO & Bartletts test of sphericity, Principal component analysis (PCA)and correlation analysis (Spearman's rho) were performed by using SPSS (ver. 26).

Correlation analysis: A bivariate inter correlation matrix between the scores for all items in the CSAS showed positive correlations at a 0.05-level or higher (Spearman's rho mainly between 0.2 and 0.4) for all pairs of items.

Results

Principal component analysis and tests for skewness and reliability Kaiser-Meyer-Olkin measure of sampling adequacy was 0.915 and Bartlett's test of sphericity showed a significance of < 0.001, both suggesting that a principal component analysis (PCA) is feasible. The PCA with direct Oblimin rotation of the scores from the 26 items in the questionnaire gave five factors with initial Eigenvalues >1 which explained 49.36% of the variance (Table 1 & 2).

Table 1: Principal component analysis

Component	Initial Eigenvalues			
	Total	% of Variance	Cumulative %	Total
1	6.897	26.526	26.526	6.897
2	2.380	9.153	35.680	2.380
3	1.398	5.375	41.055	1.398
4	1.125	4.327	45.382	1.125
5	1.020	3.923	49.306	1.020

Table 2:

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.915
Bartlett's Test of Sphericity	Approx. Chi-Square	8577.678
	df	325
	Sig.	.000

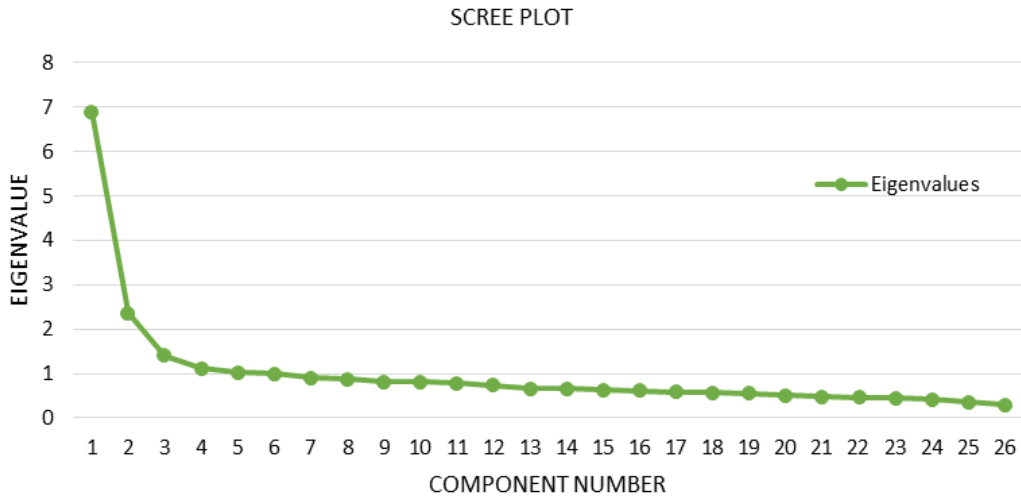

Figure-1

Table-1 and the Scree plot (Figure 1) suggested that the CSAS mainly tests three factors explaining variance of 26.52%, 9.15%, 5.37% each respectively. In addition, the Scree plot displayed a levelling-out from component 4. We therefore excluded two additional factors (component 4 and 5) explaining 4.3% and 3.9% of the variance respectively. In selecting items to describe each of the three factors (first 3 components) we chose the items that loaded more than 0.4 on one factor and at least 0.10 lower on any of the other two factors. The pattern matrix with loadings after rotation is shown in Table 3 and a description of the wording of the items and measures of internal reliability and skewness for each factor is shown in Table 4

Table 3: Pattern Matrix with loadings for each item on each of the factor

	Component				
	1	**2**	**3**	**4**	**5**
1.In order to be a good doctor I must have good communication skills.	.237	.069	-.072	.073	.607
4.Developing my communication skills is just as important as developing my knowledge of medicine.	.368	-.072	-.080	.329	.440
5.Learning communication skills has helped or will help me respect patients.	.560	-.033	-.070	.082	.366
7.Learning communication skills is interesting.	.544	-.039	-.282	.140	-.159
9.Learning communication skills has helped or will help facilitate my team- working skills.	.834	.015	.018	-.137	-.008
10.Learning communication skills has improved or will improve my ability to communicate with patients.	.803	-.048	.102	-.047	.052
12.Learning communication skills is fun.	.361	.068	-.476	.045	-.018
14.Learning communication skills has helped or will help me respect my colleagues.	.684	-.035	-.189	.019	.002
16.Learning communication skills has helped or will help me recognize patients' rights regarding confidentiality and informed consent.	.670	.000	-.119	-.057	.060
18.When applying for medicine, I thought it was really a good idea to learn communication skills.	.425	-.103	-.337	.196	-.025
21.I think it's really useful learning communication skills on the medical degree.	.647	-.085	-.041	.128	.057
23.Learning communication skills is applicable to learning medicine.	.215	-.091	-.162	.482	.222
25.Learning communication skills is important because my ability to communicate is a lifelong skill	.690	.051	.086	-.063	.160
2.I can't see the point in learning communication skills.	.358	.232	.262	.224	.004
3.Nobody is going to fail their medical degree for having poor communication skills.	-.128	-.117	.016	.792	.085
6.I haven't got time to learn communication skills.	-.004	.541	-.351	.070	-.083
8. I won't be interested in attending the sessions on communication skills.	.469	.050	.013	.309	-.312
11.Communication skills teaches the obvious and then complicates it.	.086	.536	.173	-.020	.067
13.Learning communication skills is too easy.	.050	-.076	.772	.059	-.094
15.I find it difficult to trust information about communication skills given to me by non-clinical lecturers.	.214	.520	.172	.055	-.152
17.Communication skills teaching would have a better image if it sounded more like a science subject	-.265	.557	.157	-.006	.351
19.I don't need good communication skills to be a doctor.	.495	.296	.140	.138	-.007
20.I find it hard to admit having some problems with my communication skills.	-.065	.639	-.159	-.071	.029
22.My ability to pass exams will get me through medical school rather than my ability to communicate.	-.129	.215	.096	.648	-.108

Continue.....

24.I find it difficult to take communication skills learning seriously.	.074	.557	-.282	.230	-.151
26.Communication skills learning should be left to psychology students, not medical students.	.513	.335	.208	.102	-.128
Extraction Method: Principal Component Analysis. Rotation Method: Oblimin with Kaiser Normalization.[a]					
a. Rotation converged in 11 iterations.					

Table 4: Component Correlation Matrix

Component	1	2	3	4	5
1	1.000	.130	-.164	.381	.100
2	.130	1.000	.100	.205	-.054
3	-.164	.100	1.000	-.101	-.003
4	.381	.205	-.101	1.000	.010
5	.100	-.054	-.003	.010	1.000
Extraction Method: Principal Component Analysis. Rotation Method: Oblimin with Kaiser Normalization.					

From our study it is found that, Factor 1 consists Fourteen items in total, out of which ten were positively coded items (questions-5,7,9,10,12,14,16,18,21,25) and four were negatively coded items (questions-2,8,19,26). We have named this factor as "***PERCEPTION***" because all these items describe the students' perceptions towards communication skills.

Factor 2 has total of six items (questions-6,11,15,17,20,24). All six items were found to be negatively coded. We have named this factor as "***SCEPTICISM***" because all items highlight the significant presence of doubt and critical thinking in the content, indicating a strong sense of questioning and uncertainty surrounding communication skills.

Factor 4 has three items in total, out of which one is positively coded item (question-23) and two were negatively coded (questions-3,22) items. We named this factor as "***IGNORANCE***" because the above-mentioned items describe the ignorant nature of the students towards communication skills.

Three items (questions-1,4,13) were excluded because they had low and/or mixed loadings. These items deal with various topics that point in different directions.

SCORING

Table - 5

FACTOR 1- PERCEPTION (n=1160)			
Range		Frequency	Percent (%)
LESS THAN OR EQUAL TO 34	poor	3	0.3
35 TO 49	good	112	9.7
GREATER THAN OR EQUAL TO 50	excellent	1045	90.1
Total		1160	100.0

90.1% of the students had excellent perception on the importance of communication skills.

Table - 6

FACTOR 2- SCEPTICISM (n=1160)			
Range		**Frequency**	**Percent (%)**
LESS THAN OR EQUAL TO 17	mild	409	35.3
18 TO 24	Mode rate	718	61.9
GREATER THAN OR EQUAL TO 25	severe	33	2.8
Total		1160	100.0

Nearly 61.9% of the students were moderately sceptical about the communication skills being taught or included in the curriculum.

Table - 7

FACTOR 3- IGNORANCE (n=1160)			
Range		Frequency	Percent (%)
LESS THAN OR EQUALTO 5	poor	13	1.1
6 TO 12	moderate	1045	90.1
GREATER THAN EQUAL TO 13	extensive	102	8.8
Total		1160	100.0

About 90.1% of the students were moderately ignorant towards the importance of communication skills.

Discussion

The present study aimed to assess the attitudes of first year MBBS students towards communication skills, with a focus on their perception of the importance of communication skills and their attitudes towards the communication skills taught in the curriculum. The results reveal several interesting findings that warrant further discussion. The high percentage of students (90.1%) who had an excellent perception of the importance of communication skills is a positive indication. Effective communication is a vital aspect of healthcare, as it plays a crucial role in establishing a strong doctor-patient relationship, improving patient outcomes, and ensuring patient satisfaction. The fact that the majority of first-year MBBS students recognize the significance of communication skills is encouraging and suggests that they understand the relevance of this competency in their future medical practice. However, the study also highlights an area of concern with approximately 61.9% of students expressing moderate scepticism about the communication skills being taught or included in the curriculum. This finding raises questions about the effectiveness and adequacy of the communication skills training provided in medical education. It may indicate that the current curriculum lacks comprehensive and structured communication skills training, leading to student uncertainty about its practical applicability. The discrepancy between the recognition of the importance of communication skills and the scepticism towards its inclusion in the curriculum demands attention from medical educators and policymakers. Another noteworthy finding is that around 90.1% of the students exhibited moderate ignorance towards the importance of communication skills. This result is somewhat surprising, considering the majority of students acknowledged the significance of communication skills. It is possible that students might not fully grasp the depth of the impact communication can have on patient care and overall healthcare outcomes. This finding suggests a need for further education and awareness campaigns that emphasize the role of communication in medical practice. The study's multi-centric cross-sectional design provides a broader perspective on the attitudes of first year MBBS students across different institutions. This strengthens the study's generalizability and provides valuable insights into the prevailing attitudes towards communication skills among medical students at the early stages of their education. Nevertheless, it is important to recognize certain limitations within

the study. Firstly, being a cross-sectional study, it only captures attitudes at a specific point in time and cannot establish causality or changes in attitudes over time. Longitudinal studies may offer more insights into how attitudes evolve throughout the medical education journey. Secondly, self-reported attitudes might be subject to response bias, and students may provide socially desirable responses rather than expressing their genuine feelings. To overcome this, future research could consider using qualitative methods or observational assessments of communication skills to complement the self-reported data.

Conclusion

This study sheds light on the attitudes of first year MBBS students towards communication skills, revealing a strong recognition of its importance among the majority of students. However, the scepticism towards the curriculum's emphasis on communication skills and the moderate ignorance towards its significance indicate areas for improvement in medical education. Medical institutions should take these findings into account to strengthen and enhance communication skills training, ensuring that future healthcare professionals are adequately equipped to deliver effective and patient-centred care. Furthermore, continued research on this topic will contribute to a more comprehensive understanding of the factors influencing medical students' attitudes towards communication skills throughout their education and training.

Acknowledgement: Top of Form

We would like to thank the first year MBBS Students who had participated in the study. We would like to extend our sincere gratitude to VIMS Ethics Committee Faculty members to grant the approval of the study.

Conflict of Interest: Nil

Source of Funding: Self

Ethical Clearance: taken from Institutional Ethics Committee (IEC), VIMS, Ballari {Approval No – 76/2022}

References

1. Meryn S: Improving doctor-patient communication. Not an option, but a necessity. BMJ 1998, 316:1922.
2. Jones R, Higgs R, de AC, Prideaux D: Changing face of medical curricula. Lancet 2001, 357:699-703.
3. Kaufman DM, Laidlaw TA, Langille D, Sargeant J, MacLeod H: Differences in medical students' attitudes and self-efficacy regarding patient-doctor communication. Acad Med 2001, 76:188.
4. De Valck C, Bensing J, Bruynooghe R, Batenburg V: Cure-oriented versus care-oriented attitudes in medicine. Patient Education and Counselling 2001, 45:119-126.
5. Rees C, Sheard C, Davies S: The development of a scale to measure medical students' attitudes towards communication skills learning: the Communication Skills Attitude Scale (CSAS). Med Educ 2002, 36:141-147.
6. Rees C, Sheard C: The relationship between medical students' attitudes towards communication skills learning and their demographic and education-related characteristics. Med Educ 2002, 36:1017-1027.
7. Rees C, Sheard C: Evaluating first-year medical students' attitudes to learning communication skills before and after a communication skills course. Med Teach 2003, 25:302-307.
8. Cleland J, Foster K, Moffat M: Undergraduate students' attitudes to communication skills learning differ depending on year of study and gender. Med Teach 2005, 27:246-251.
9. Shankar RP, Dubey AK, Mishra P, Deshpande VY, Chandrasekhar TS, Shivananda PG: Student attitudes towards communication skills training in a medical college in Western Nepal. Educ Health (Abingdon) 2006, 19:71-84.
10. Petty RE, Wegener DT, Fabrigar LR: Attitudes and attitude change. Annu Rev Psychol 1997, 48:609-647.
11. Wood W: Attitude change: persuasion and social influence. Annu Rev Psychol 2000, 51:539-570.
12. Kurtz S, Silverman J, Draper J: Teaching and learning communication skills in medicine 2nd edition. Oxon: Radcliffe publishing; 2005:58-62.
13. Searle J, Prideaux D: Medical education research: being strategic. Med Educ 2005, 39:544-546. 16. Gude T, Anvik T, Baerheim A, Fasmer OB, Grimstad H, Hjortdahl P, Holen A, Risberg T, Vaglum P: [Teaching clinical communication
14. Anvik, T., Gude, T., Grimstad, H. *et al.* Assessing medical students› attitudes towards learning communication skills – which components of attitudes do we measure? *BMC Med Educ* **7**, 4 (2007). https://doi.org/10.1186/1472-6920-7-4.