

Non-Scholastic Qualities and their Association with Social Media usage among Medical Students in Puducherry, India

Sahla Sathar, Ganesh Kumar S¹, Srikanta Kanungo²

ABSTRACT


Background: Non-scholastic qualities, namely personal characteristics, interpersonal activities, and communication skills, are needed for the effective functioning of a medical professional. The study aimed to assess non-scholastic qualities and their association with social media usage among medical students. **Methods:** This is a descriptive, cross-sectional study in a tertiary care medical institution in Puducherry, coastal south India. The non-scholastic qualities were assessed by standard questionnaire and categorised as low, moderate and high qualities. Social media usage was assessed by SONTUS (Social Networking Time Use Scale) and the participants were categorised as low, average, high, and extremely high users. Multiple logistic regression analysis was done. **Results:** Out of 270 medical students, 63% belonged to the moderate non-scholastic quality category. About 36% of the students had high non-scholastic quality. Most of the students were extremely high users of social media (60%). About 48% (47/98) of students with high non-scholastic qualities had extremely high social media usage, while 67% (115/172) of students with low and moderate non-scholastic qualities had extremely high social media usage, and both the associations were statistically significant ($P = 0.003$). Those with a high level of social media usage had 2.27 times (95% CI: 1.239-4.166) higher non-scholastic qualities compared to extremely high social media usage. **Conclusions:** The majority had moderate non-scholastic qualities and extremely high use of social media.

Key words: Non-scholastic qualities, social media use, undergraduate medical students

Key messages: Majority of medical students had moderate non-scholastic qualities and extremely high use of social media usage.

Non-scholastic qualities are needed for the effective functioning of any medical professional.^[1] These qualities include three domains, namely, personal characteristics, interpersonal activities, and communication skills.^[2]

A study, which analysed these qualities, showed that the overall mean score of non-scholastic abilities was

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MBBS Undergraduate Student, ¹Additional Professor of Preventive and Social Medicine, JIPMER, Puducherry, ²Scientist-C, ICMR Regional Medical Research Center, Bhubaneswar, Odisha, India

Address for correspondence: Dr. Ganesh Kumar S
Additional Professor of Preventive and Social Medicine, JIPMER, Puducherry, India. E-mail: sssgan@yahoo.com

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average and that the mean personal quality domain score was proportionately lesser than other domains of non-scholastic abilities.^[2] Recent guidelines of National Medical Commission Bill 2017 in India highlighted the importance of high-quality medical professionals as one of the components in medical education and practice. Constitution of Under Graduate Medical Education Board to regulate medical education at the undergraduate level also mentioned competency-based curriculum based on these values. In view of the above, non-scholastic qualities are one of the important abilities required among undergraduate medical students.^[1]

For more than a decade, the Social Networking Sites (SNSs) have increased in number and popularity across the world.^[3] In 2019, it is estimated that there will be around 258.27 million social network users in India, up from close to 168 million in 2016.^[4] A study among 18- to 44-year-old smartphone users found that nearly eight in ten adults and nine in ten young adults reach for their phone within 15 minutes of waking.^[5] A recent meta-analysis found that the majority (75%) of the medical students admitted using SNSs, whereas 20% used these sites for sharing academic and educational information.^[6] Studies have been conducted regarding the effects of social media in the aspects of attitude and depression.^[7,8] Whether non-scholastic qualities are related to social media usage among medical students is an unexplored area of research. Therefore, this study aimed to assess non-scholastic qualities and their association with social media usage among undergraduate medical students.

METHODS

Ethical clearance was obtained from the Institutional Ethics Committee for Human Studies of the tertiary care medical institution. Informed written consent was taken from all the students participating in the study.

This descriptive, cross-sectional study was conducted among medical students of a tertiary care medical institution in Puducherry, India, from July 2018 to September 2018. Using the formula, $n = (Z\sigma/E)^2$, where $Z = 1.96$, standard deviation (σ) of the mean non-scholastic quality score as 3.27^[2] and Standard Error as 0.4, the minimum sample size was found to be 257.

The study population included the 3rd, 5th, and 7th-semester undergraduate medical students. There were 156, 131, and 155 students in the 3rd, 5th, and 7th semesters, which were regular batches. The 1st and 9th-semester students were omitted due to feasibility

constraints. We included 270 medical students, with 90 students from each semester. The convenience sampling method was used to select 90 students from each semester.

The non-scholastic qualities were assessed based on a standard questionnaire taken from a previous study conducted among medical students.^[1] The personal quality domain has 14 questions, which include qualities like regularity, punctuality, hard work and attitude to work, inventiveness, originality and initiative, dependability, and psychological robustness of the student during the last three months. Interpersonal activities has seven questions. Communication skill has six questions on skills in writing and talking; ability to communicate with peers, teachers and patients; and assertiveness. Thus, the total number of questions in the assessed parameters was 27, with a score of 0 or 1 for each question, and the total score ranges from 0 to 27. An individual with a total score that ranges from 0 to 9 is regarded as low in non-scholastic quality; a score that ranges from 10 to 18 is regarded as moderate, and score that ranges from 19 to 27 is regarded as high non-scholastic quality.^[2] A score of 1 is given for each positive response except 4th, 7th, and 9th questions in the personal quality domain, 7th question in the interpersonal activity domain, and 1st question in the communication skill domain, where a positive response is given 0 score.

Social media usage time was assessed by SONTUS (Social Networking Time Use Scale).^[3] The questionnaire consists of 52 situation-related questions and 29 duration-of-usage-related questions. The global scores are made under the following five components: relaxation and free periods, academic-related period, public place related use, stress-related periods, and motive for use. The Global SONTUS score is interpreted as follows: An individual with a global score that ranges from 5 to 9 is regarded as low user of SNSs, a score that ranges from 10 to 14 is regarded as average user of SNSs, score that ranges from 15 to 19 is regarded as high user of SNSs, score that is more than 19 is regarded as extremely high user of SNSs.

The study was explained in brief by the Principal Investigator in classroom and written consent was obtained. The consent forms and the questionnaires were distributed in the classroom to the designated medical undergraduates and was self-administered. The questionnaire included the details of age, gender, semester studying, place of stay, marks obtained in the previous examination, assessment of non-scholastic qualities, and social media usage questionnaire (SONTUS).

Statistical analysis

Analysis was done through Statistical Package for the Social Sciences (SPSS) version 19.0 [IBM PASW Statistics, Country office Bangalore, India]. Data regarding non-scholastic qualities is presented as the mean and standard deviation in each domain and overall score categories. Social media usage is presented as a categorical variable and expressed in percentages. Age, semester, gender, place of stay, marks obtained in the previous exam, and social media usage were the independent variables, and two-level outcomes, namely low with moderate vs. high non-scholastic qualities, were the dependent variables in Multiple Logistic Regression Analysis.

RESULTS

All the 270 students completed the assessment. The overall mean non-scholastic quality score was 17.34 (SD = 3.44). The social media usage score was 19.4 (SD = 3.91). The non-scholastic qualities were grouped into three categories based on the total number of positive responses. Most of the students (63%, 170/270) were having moderate non-scholastic qualities. Very few students (0.7%, 2/270) had low non-scholastic qualities, while 36.3%(98/270) had high-level non-scholastic qualities. About 60% (162/270) of the students were extremely high users of SNSs, while a significant proportion (26.7%, 72/270) of students were high users and 11.8% were average users. Low users were only 1.5% (4/270).

Less than half of the students (38.1%) currently practice any spiritual-related activity. Some interpersonal problems were present in 48.5%, and 51.5% avoid talking to people when it is necessary.

57.4% (155/270) belonged to the age group of 20-22 years. 53.3% (144/270) were males. The majority of the students who scored 80% and above in the previous examination belonged to the group with low and moderate non-scholastic qualities (76.5%, 13/17). A significant association was found between social media usage and non-scholastic qualities ($P = 0.008$). About 48% (47/98) of students with high non-scholastic qualities had extremely high social media usage, and 67% (115/172) of students with low and moderate non-scholastic qualities had extremely high social media usage, and both the associations were statistically significant ($P = 0.003$). 67% (115/172) of low and moderate non-scholastic qualities had extremely high social media usage, and this association was found to be significant ($P = 0.003$). After adjusting for variables which included age, semester, gender, place of stay, marks in the previous examination and social media use, multiple logistic regression analysis showed

that those with high level of social media usage have 2.27 times higher high non-scholastic abilities compared to extremely high social media usage and it was significant ($P = 0.008$, 95% CI: 1.24 4.166), but the low and average users did not demonstrate significant association [Table 1].

DISCUSSION

The majority of students had average non-scholastic quality, but the mean score was marginally lesser (17.34) compared to a previous study by Kumar and Sarkar (19.4), which may be due to the inclusion of three classes and larger sample size.^[2] The Kumar and Sarkar study analysed these qualities amongst medical students and showed that an overall mean score of non-scholastic abilities was average; and mean personal quality domain score was found to be proportionately lesser than other domains of non-scholastic abilities.^[2]

Personal qualities, interpersonal activities, and communication skills are very essential to excel in the medical profession. There is a rise in the need for doctors with the right moral values and good communication abilities for an ethical and empathetic practice.^[9]

Social media usage was extremely high. Whether such excessive use decreases non-scholastic quality level

Table 1: Association of high non-scholastic qualities: Multiple Logistic Regression Analysis

Variable	Adjusted odds ratio (95% CI)	P
Age (in years)		
18-19	0.97 (0.49-1.96)	0.94
20-22	Ref	-
Semester		
3 rd semester	1.28 (0.56-2.93)	0.56
5 th semester	1.20 (0.57-2.53)	0.62
7 th semester	Ref	-
Gender		
Male	1.51 (0.62-1.81)	0.83
Female	Ref	-
Place of stay		
Hostel	1.28 (0.68-2.41)	0.45
Outside hostel	Ref	-
Marks obtained		
<50%	0.34 (0.06-1.88)	0.22
50%-80%	2.05 (0.62-6.79)	0.24
>80%	Ref	-
Social Media Usage		
Low and Average	2.05 (0.95-4.42)	0.07
High	2.27 (1.24-4.17)	0.008*
Extremely high	Ref	-

* $P < 0.05$ is considered as significant (Categories High vs. Low and moderate non scholastic qualities)

should be explored by follow-up studies. Studies done in undergraduate students had found that excessive social media usage is associated with social anxiety disorder and nomophobia.^[10,11] It may affect the quality of patient care in various ways. Excessive social media usage among medical professionals can cause sleep disturbances, distraction from work, impatience, etc., and can affect their professional conduct and skills.^[12]

However, social media has been also used to discuss various professional information and to help patients.^[13,14] Social media in workplaces can be used to discuss any medical issues or doubts. They provide a platform for a thorough discussion about the diagnosis and management of rare cases. Social media connects medical professionals from various parts of the world to confer and conclude with experienced colleagues. So, the reasons for using social media must be explored by further studies. If social media usage is affecting adversely, then, ways to reduce the excessive usage and appropriate use of social media for beneficial purposes must be explained to the students.

An earlier study had found that non-scholastic qualities had association with marks obtained in the previous exam.^[2] Contrary to the expected result from our study, it was found that the majority of students scoring 80% and above belonged to the group with low and moderate non-scholastic qualities. This may be because of the confounding effect of other variables and a lesser number of students with higher marks category. There are other factors of the cognitive domain which influence the marks obtained in the previous examination. Studies have found that non-cognitive skills have a relationship with cognitive measures and performance in examinations.^[12,13]

A limited number of studies had assessed non-scholastic qualities in medical students. Also, social media usage has an association with overall non-scholastic qualities, with comparatively more extremely high social media usage among those with low and moderate non-scholastic qualities. Such studies may have an important impact on the skills of a healthcare professional.

The use of standard scales and representation from three batches of students are strengths of the study. The context of social media usage is an important factor that may influence the non-scholastic qualities, which was not assessed. There may have been a subjective bias that influenced the findings. There might be other factors that influence non-scholastic qualities like prior exposure during childhood period or training on some of these aspects, which were not assessed. Further studies should explore the reasons for this average level

of non-scholastic qualities. Conducting multi-centre studies in other medical college students, including all the semesters or classes, and prospective studies to analyse behavioural factors associated with it may explore non-scholastic qualities in a larger context and its associated factors.

The results of this study highlight the importance of the reduction of extreme social media usage among medical students.

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Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. Kumar S, Z Zayapragassarazan Multi-Source Feedback (360 Degree Feedback) for Assessing Non-Scholastic Abilities. Available from: <http://www.jipmer.edu/September%202010/2%20Articles.pdf>. [Last accessed on 2019 Jul 10].
2. Kumar SG, Sarkar S. Assessment of nonscholastic abilities and its associated factors among medical students: An exploratory study. *J Educ Health Promot* 2017;6:3.
3. Olufadi Y. Social networking time use scale (SONTUS): A new instrument for measuring the time spent on the social networking sites. *Telem Inform* 2016;33:452-71.
4. Statista.com [Homepage on the internet]. India: Number of social network users 2022 | Statistic [Internet]. [Updated July 2017]. Available from: <https://www.statista.com/statistics/278407/number-of-social-network-users-in-india>. [Last accessed on 2018 Jan 20].
5. IDC-Facebook Always Connected | Facebook | Smartphone [Internet]. Scribd. Available from: <https://www.scribd.com/document/133435243/IDC-Facebook-Always-Connected>. [Last accessed on 2018 Jan 22].
6. Guraya SY. The usage of social networking sites by medical students for educational purposes: A meta-analysis and systematic review. *N AM J Med Sci* 2016;8:268-78.
7. Rosen LD, Whaling K, Carrier LM, Cheever NA, Rokkum J. The media and technology usage and attitudes scale: An empirical investigation. *Comput Human Behav* 2013;29:2501-11.
8. Lin LY, Sidani JE, Shensa A, Radovic A, Miller E, Colditz JB, *et al.* Association between social media use and depression among U.S. young adults. *Depress Anxiety* 2016;33:323-31.
9. Jung HY, Kim JW, Lee S, Yoo SH, Jeon JH, Kim TW, *et al.* A study of core humanistic competency for developing humanism education for medical students. *J Korean Med Sci* 2016;31:829-35.
10. Honnekeri BS, Goel A, Umate M, Shah N, De Sousa A. Social anxiety and internet socialization in undergraduate students: An exploratory study. *Asian J Psychiatr* 2017;27:115-20.
11. Dasgupta P, Bhattacharjee S, Dasgupta S, Roy JK, Mukherjee A, Biswas R. Nomophobic behaviour among smartphone using medical and engineering students in two colleges of West Bengal. *Indian J Public Health*

- 2017;61:199-204.
12. Surani Z, Hirani R, Elias A, Quisenberry L, Varon J, Surani S, *et al.* Social media usage among healthcare providers. BMC Res Notes 2017;10:654.
 13. Maloney S, Moss A, Illic D. Social Media in health professional education: A student perspective on user levels and prospective applications. Adv Health Sci Educ Theory Pract 2014;19:687-97.
 14. Cartledge P, Miller M, Phillips B. The use of social networking sites in medical education. Med Teach 2013;35:847-57.