

## USAGE OF SOCIAL MEDIA AS AN ADJUNCT FOR DISPENSING MEDICAL EDUCATION: TEACHERS' PERCEPTION IN A RURAL MEDICAL COLLEGE

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### Abstract

**Background:** The world is racing regarding technology in all walks of life. Our very own medical macrocosm is no exception to this. Hence it was felt that it is now the need for an hour to know about medical education givers' perceptions about the same especially in a rural populace. The prime objective of the study was to ascertain how teachers at a rural medical institution feel about using social media as an adjunct in delivering medical education. **Methods:** It was a cross-sectional descriptive survey research study. In order to gather responses to a self-created questionnaire with about 24 items, including a mix of close-ended and open-ended questions, divided under 4 aspects, namely education, social, collaborative learning, and personal innovativeness, 110 medical teachers from a rural medical college in central India, were used in this study. An online questionnaire was used for data gathering. Statistical data were analyzed accordingly. **Results:** Out of 110 respondents, 99% acknowledged using the internet, with social media use being confirmed by 98.8%. Regarding time spent, teachers use social media for less than two hours in 41.7% of cases, and between two and four hours in 29.8% of cases. The majority of respondents agreed that the different types of social networking sites they use include YouTube (86.6%), WhatsApp (95.8%), and Wikipedia (73.2%). This study demonstrated how medical educators utilize social media for social, educational, collaborative, and personal purposes. **Conclusion:** This study evaluated social media usage among medical teachers at a rural medical college and the relationship between their beliefs and attitudes toward it. It was discovered that most teachers expressed a favorable impression of the effectiveness and usefulness of social media tools and their use in medical education.

## INTRODUCTION

Over the years, social media and networking sites have metamorphosed from few-user-based sites into phenomena that have become niches for billions of users. Although the mission of medical education has remained the same for centuries, the environment in which that mission exists is changing dramatically. Teachers should therefore devise novel tactics that prepare for and welcome this transition. The digital revolution, which has changed many elements of

curriculum and instruction, is the main force behind this transition. Medical educators across the nation struggle to adjust to new technologies, but they also foresee the likelihood of advances that are of critical importance. The tradition of giving lectures merely with one type of audio-visual (AV) aid is obsolete. The use of information technology (IT) in medical education has become an essential ingredient as medical educators grow more technologically adept, and it is also spreading through social media usage. However, using the same is constantly a topic of

debate among the medical community. A comprehensive review should be conducted in the developing academic field of digital media use in education. Social media tools are believed to be linked to enhanced knowledge (examination scores, for example), attitudes (empathy), and skill sets (reflective writing, for instance).<sup>[1-3]</sup> Technology is an open-ended weapon that may be used for both good and detrimental purposes, as it's widely known.<sup>[4]</sup> Although the emergence of new media technologies like the internet and social media offers great opportunities to promote and improve global communication, there is still ambiguity over potentially unfavorable consequences.<sup>[5]</sup> Common projects like Wikipedia, blogs or microblogs such as Blogger and Twitter, content communities like YouTube, social network sites such as Facebook, Whatsapp, Snapchat, or Instagram, and social worlds like human sim constitute the five broad categories into which social media can be divided.<sup>[6-8]</sup>

By using audio, video, and documentary materials presented in creative and engaging ways, teaching may be made entertaining. Technology-enhanced instruction involves a commitment to staying current with social media trends and teaching strategies.<sup>[9]</sup> The relationship between learning methods and culture is known as pedagogy, and it is founded on the beliefs of the educator regarding how learning should and really occurs. Assuring respect between teachers and students through pedagogy is necessary for meaningful relationships.<sup>[10]</sup>

To be effective, teachers must be willing to sufficiently understand technological advancements and modify their teaching methods. Hence, the prime objective of the study was to ascertain how teachers at a rural medical institution feel about using social media as an adjunct in delivering medical education.

## MATERIALS AND METHODS

### Study Design and Setting and Participants

This study aims to assess the perception of teaching faculty in a rural medical college in central India. The study utilized a cross-sectional descriptive survey design to collect data from the teaching staff at a single point in time. The study period spanned from January 2022 to July 2022.

A complete enumeration method was employed to select participants for this study. The researchers assigned participants based on their accessibility, ensuring representation from the teaching faculty. The inclusion criteria for the study encompassed all teaching faculty members in the college, regardless of their qualifications and cadre, who provided written consent. Those who did not provide consent were excluded from the study. The sample size consisted of the entire teaching staff population at the college. Written consent was obtained from all participating teachers, ensuring their voluntary participation and the protection of their rights and

privacy. Moreover, ethics approval was obtained from the ethics approval committee of the institute.

### Data Collection Tool

The data collection tool utilized in this study was a questionnaire specifically designed by the researchers from the School of Health Professions Education and Research faculty piloted and validated the questionnaire. The questionnaire consisted of 24 items, comprising both close-ended and open-ended questions. Close-ended questions were answered on a 4-point Likert scale, with response options including strongly agree, agree, disagree, and strongly disagree. Open-ended questions allowed participants to provide responses in a free-text format.

Four categories were used to split the questionnaire: education, collaborative learning, social purpose, and personal innovation. With the use of a few open-ended questions, responses were gathered based on the opinions, actual practices, and experiences of the students. The detailed questionnaire along with the responses have been comprehensively presented in Tables 1,2,3,4.

### Study Procedure

The following steps were undertaken in the study procedure:

#### Questionnaire Development

The researchers developed the questionnaire based on the study's objectives, ensuring it encompassed relevant aspects related to teaching faculty perception.

#### Pilot Testing

A small group of teachers unrelated to the study participants were selected for a pilot test of the questionnaire. This helped identify any ambiguities or shortcomings in the questionnaire, and based on their feedback, necessary revisions were made.

#### Distribution of Questionnaire

The finalized questionnaire was then distributed to all teaching staff members of the college. Participants were informed about the study's purpose and assured of the confidentiality and anonymity of their responses.

#### Completion of Questionnaire

The teaching staff members were requested to complete the questionnaire anonymously, ensuring their privacy. Adequate time was provided for participants to fill out the questionnaire.

#### Data Collection

Once the questionnaires were collected, the data was compiled for further analysis. The collected data included both quantitative responses from the Likert scale and qualitative responses from the open-ended questions.

#### Data Analysis

The collected data were analyzed using the Statistical Package for the Social Sciences (SPSS version 28) by International Business Machines (IBM), Chicago, USA. The responses to the close-ended questions were quantitatively analyzed, calculating means (M) for each item. The Likert scale responses were interpreted as follows:

Strongly agree (4)  
 Agree (3)  
 Disagree (2)  
 Strongly disagree (1).  
 Additionally, the mean cut-off point was calculated by summing the values of strongly agree, agree,

disagree, and strongly disagree (4+3+2+1) and dividing the total by 4, resulting in a cut-off point of 2.5. Statements were accepted if the decision was "Yes" and rejected if the decision was "No." Open-ended responses were analyzed thematically to extract key themes and insights.

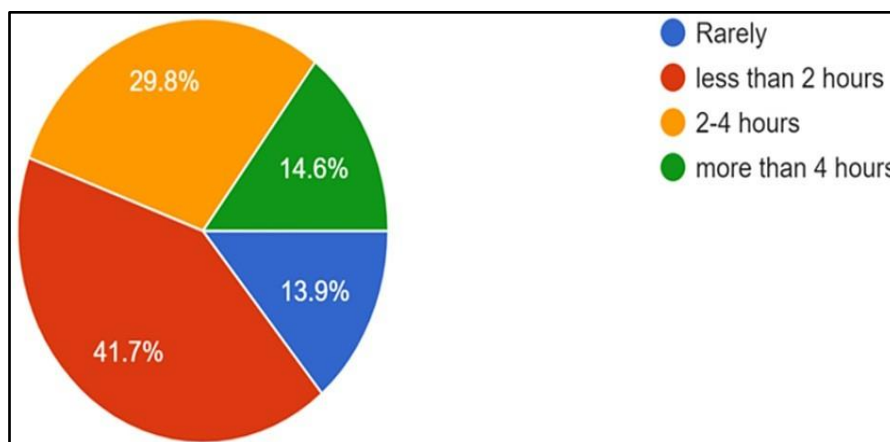


Figure 1: Pie Diagram showing the duration of social media usage per day

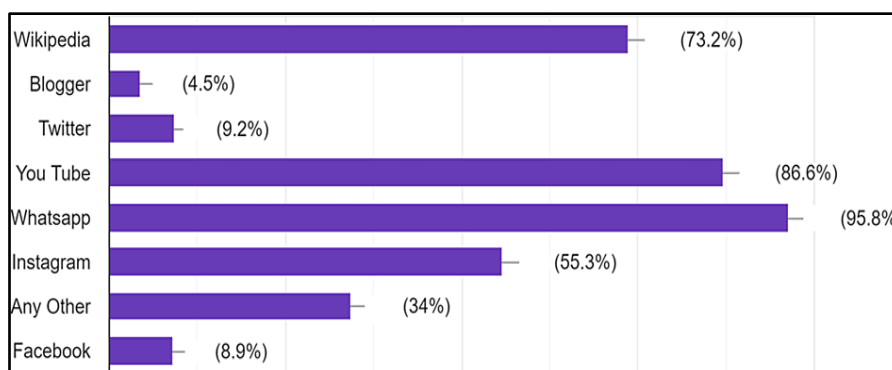


Figure 2: Various categories of social networking sites used

## RESULTS

### Outcomes of internet usage

110 respondents in total, out of the 127 conventional teaching faculty at the institute, participated in the current study. In accordance with our research, 99% of instructors used the Internet, and 98.8% of them admitted to using social media. This staggering increase in internet usage may be attributable to the availability of wifi in the institution or cost-effective internet plans. In total, 41.7% of faculties use social media for less than two hours each day, followed by 29.8% of teachers for between two and four hours and 14.6% for more than four hours. Only 13.9% of medical teachers use social media on a daily basis. The same has been portrayed in Figure 1 through a pie diagram.

Common projects such as Wikipedia, blogs or microblogs including Blogger or Twitter, content communities like YouTube and Instagram, and social

networking services like Facebook and WhatsApp can all be categorized as social media. With 95.8% of participants using it, WhatsApp is the most popular app, followed by YouTube at 86.6%, Wikipedia at 73.2%, and Instagram at 55.3%. Less frequently visited websites by medical teachers were Twitter (9.2%) and Blogger (4.5%). Graphical representation can be seen in Figure 2.

### Main outcomes of the questionnaire

Four categories were used to split the questionnaire were education, collaborative learning, social purpose, and personal innovation. With the use of a few open-ended questions, responses were gathered based on the opinions, actual practices, and experiences of the students.

#### Education Purpose

The items were constructed to react to research questions in the form of a 4-point Likert scale in order to determine whether a sizable portion of the respondents use social media for educational

purposes or not. Table 1 displays the submitted information.

#### Collaborative Learning

The items were designed to react to research questions in the form of a 4-point Likert scale in order to determine whether a sufficient number of respondents use social media for collaborative or peer-to-peer learning purposes or not. The information given for it is displayed in Table 2.

#### Social Purpose

The items were constructed to react to research questions in the form of a 4-point Likert scale in order to determine if a sufficient number of respondents utilize social media for social purposes or not. All of the claims under the social component are allowed because the mean score for each statement is greater than the mean cut-off mark, which is 2.5, reflecting the significant changes that digital media have made to social and communication landscapes. The information offered for it is displayed as follows in Table 3.

#### Personal Innovativeness

The items were intended to react to research questions in the form of a 4-point Likert scale in order to determine whether a sufficient number of respondents use social media for personal innovativeness purposes or not. The information given for it is displayed in Table 4.

#### Teachers' viewpoints on social media use

According to open-ended questionnaire questions, teachers believed the following about the advantages of social behavior:

1. Access to academic information or fresh updates in health.
2. Information exchange and fostering connections throughout communities.
3. Enhance your capacity for open-mindedness and education about various modes of thought.
4. For amusement or to reduce boredom and routine feelings.

Teachers believed that the disadvantages of social behavior included:

1. Time wastage, productivity loss, and distraction from daily activities.
2. Lessen social interactions as a result of less face-to-face interaction.
3. A decline in focus and motivation to study.
4. Being exposed to offensive or harmful stuff.

Teachers were also aware of potential challenges that can arise from using social media, such as the veracity or validity of the information posted there, privacy concerns, cyberbullying, or trolling issues. Positive responses outnumbered negative ones among the perceptions we received, however, we did receive both. Overall, study findings show that social media usage helps medical educators both personally and professionally.

**Table 1: Responses on education purpose**

S. no.	Question	SA	A	D	SD	Mean	Decision
1	Innovation in medical education should always be encouraged.	68	42	0	0	3.64	Yes
2	Social media helps in developing an e-learning module for students.	32	65	12	1	3.16	Yes
3	A video of a lecture on YouTube is better than a real class.	20	42	35	13	2.62	Yes
4	Is it ok for you if you send notes by email?	22	47	28	13	2.72	Yes
5	Social media can be used by students to communicate with other teachers.	9	40	44	17	2.38	No

SA - Strongly agree; A - Agree; D - Disagree; SD - Strongly disagree

**Table 2: Responses on collaborative learning**

S. no.	Question	SA	A	D	SD	Mean	Decision
1	Social media may support collaborative and peer-to-peer learning.	16	69	22	3	2.87	Yes
2	Members of the groups can exchange files, links, information, polls, and videos very quickly.	48	57	4	1	3.37	Yes
3	Social Media makes possible collaboration between learners and teachers on a given task.	17	51	35	7	2.70	Yes
4	Students will achieve better results if social media is integrated into lectures.	21	65	18	6	2.90	Yes
5	Social media encourages virtual meetings with students.	10	39	44	17	2.37	No

SA - Strongly agree; A - Agree; D - Disagree; SD - Strongly disagree

**Table 3: Responses on social purpose**

S.no	Question	SA	A	D	SD	Mean	Decision
1	There are no ethical issues involved in the use of social media for learning activities.	16	61	25	8	2.77	Yes
2	The Use of social media will increase communication barriers.	16	39	41	14	2.52	Yes
3	You use social media for maintaining contact with peers.	29	70	9	2	3.13	Yes
4	Do social networking sites help you in increasing your self-esteem and well-being?	15	64	21	10	2.75	Yes
5	You are worried about the potential abuse of social media.	29	55	20	6	2.91	Yes

SA - Strongly agree; A - Agree; D - Disagree; SD - Strongly disagree

**Table 4: Responses on personal innovativeness**

S. no.	Question	SA	A	D	SD	Mean	Decision
1	Social Media can be a good way to get an update.	44	62	3	1	3.33	Yes
2	Social media can be used to explore new things.	43	61	5	1	3.33	Yes
3	Social Media can be used for increasing your popularity.	8	31	48	23	2.20	No
4	The use of smartphones by teachers will increase the 'ease' of using social media.	41	62	5	2	3.19	Yes
5	Do you think social media can be used for teaching learning activities?	19	63	22	6	2.86	Yes

SA - Strongly agree; A - Agree; D -Disagree; SD - Strongly disagree

## DISCUSSION

The study findings of Baquee et. al. revealed that every participant uses social media, highlighting the pervasiveness of this technology among young people. By designating YouTube as the most well-known social media platform, the analysis supports the outcome.<sup>[11]</sup> Mizra et.al. conducted a study to determine the prevalence of the Information and Communication Technology (ICT) approach among teachers in the Rajouri district of Jammu and Kashmir, India, where there is no support for ICT-integrated education because the majority of instructors entered the profession before the advent of technology.<sup>[12]</sup>

De Alwis et.al.'s findings show that Sri Lankan respondents gave greater ratings for effort expectation than did Indian teachers, who had higher mean ratings for performance expectancy, social influence, and favorable conditions.<sup>[13]</sup> In her article "social media and education sector: enriching relationship" Ms. Anindita Bose<sup>[14]</sup> covered the following topics: Teachers also utilize social networking sites, proving that they are not solely used by people between the ages of 18 and 28. Social media use in the classroom by teachers can boost pupil dedication and engagement. They can swiftly obtain material and assimilate it into the lecture's subject matter. They can make the class more engaging by using examples from recent occurrences leading to better and more extensive communication. Twitter and LinkedIn provide a professional learning network whereas Skype can be used as a conversational platform. The sharing of lectures from other professors and staff members, improving teacher-student engagement, and facilitating communication off campus foster better communication with students.

Kaur et.al. in their study observed that teachers' personalities and emotional intelligence are impacted by the online experience they get from using social media. Their attitudes towards many aspects of life alter as they engage with more people and gain more knowledge, which can assist to develop their personalities and their emotional intelligence (EI).<sup>[15]</sup> Recently, Bharucha J et.al. have evaluated that technology-savvy students in India have started using social media sites like Facebook, Twitter, and LinkedIn as study aids instead of just distractions from their studies. The students had created a number

of Facebook study groups and noted how helpful these groups were for exchanging knowledge, question banks, and study advice.

Senior students and teachers are not reluctant to participate in these groups, and their contributions are quite helpful.<sup>[16]</sup> Ansari J et.al. in their study observed that university students use social media more intensely for collaborative learning, the more knowledge sharing between peers and colleagues occurs ( $r = .583$ ,  $p < 0.001$ ). This is because there is a strong positive correlation between the use of social media for collaborative learning and online knowledge-sharing behavior ( $p < 0.001$ ). Additionally, there is a statistically significant positive correlation between interactions with teachers and student involvement ( $r = .450$ ,  $p < 0.001$ ), indicating that more interactions with teachers result in higher levels of student engagement.<sup>[17]</sup>

Compared to paramedical and nursing students, medical students used social media more frequently overall ( $P = 0.009$ ), confirmed by Lahiry et.al. in their study. However, the amount of time spent using it for academic purposes was comparable. Sixty-eight percent (60.87%) thought social networking had a favorable (better) effect on academic performance.<sup>[18]</sup> Verma R et al observed in social media, green schools are not very active. The most popular social media platforms are Facebook and WhatsApp, however frequent updates are not made on Facebook. The YouTube channel does not frequently post videos.<sup>[19]</sup> Media of India - Wikipedia infers that by 2010 there were 100 million Internet users in India, or 8.5% of the total population.<sup>[20,21]</sup> Sei-ching Jonna Sin et.al., assessed the effects of social media use on seeking out daily life information in their study conducted in the United States. Pursuant to the results of our research, 89.21% of teachers approved of social media use in classroom activities.<sup>[22]</sup> In a comparison study by L. Al- Sharqi et.al. between arts and science colleges regarding perceptions of social media impact on social behavior, entertainment was rated as the highest category for both college groups with about 79 percent followed by information searching and the third highest category was learning for both groups.

Since the participants in our study were medical teachers, personal innovativeness was given top priority, followed by educational purpose on rank II, collaborative learning, and finally social purpose. Facebook, YouTube, Hike, and Twitter were the order of social media sites used in one study, but



Whatsapp, YouTube, Wikipedia, and Facebook were the order of social media sites used in our study.<sup>[23]</sup> In a study by Ali et.al. on enhancing the academic use of social media, 58% of the subjects used it for 2-4 hours; in our study, 55.6% of the subjects used it for less than 2 hours, and 29.8% used it for 2-4 hours.<sup>[24]</sup> Kuppuswamy et.al. investigated how social networking sites affect young people's education and came to the conclusion that, depending on the individual's interests, social media can have beneficial as well as detrimental effects on education.<sup>[25]</sup>

We also received conflicting responses to our open-ended question regarding how faculties felt about the influence of social media. Our study's findings indicate that teachers have a good attitude toward using social media for educational purposes. They also understood the advantages and disadvantages of social media use as well as the challenges that come with it.

Amidst the creditable finding of the study, it has a few limitations. The study was conducted at a single institution so, the findings may not be applicable to other medical institutes or educational settings, as different institutions may have unique characteristics and contexts that could influence teaching faculty perceptions. As the study utilized a cross-sectional design, which means data was collected at a specific point in time. This design does not allow changes in perceptions over time to be examined. It provides a snapshot of the teaching faculty's perception at a particular moment, but longitudinal studies would be needed to assess changes in perception over time. The study did not account for potential confounding variables that could influence teaching faculty perceptions, such as age, teaching experience, academic qualifications, or teaching load. These variables might have a significant impact on the perceptions of teaching faculty and should have been considered in the analysis.

## CONCLUSION

The main goal of this study was to analyze the teacher's perspectives on social media usage in a rural medical college and the relationship between their beliefs and perceptions in this area. According to the study's findings, Whatsapp is the most popular social networking platform among instructors, who use it on average for less than two hours every day. Social media is being used by teachers for a variety of reasons, including social, educational, collaborative learning, and personal innovation. The results imply that social media platforms can be quite beneficial when used as teaching aids. Social media tools and their application in education are seen favorably by teachers. Teachers appreciated the use of social media platforms to share additional resources for their curriculum. The overwhelming majority of teachers had positive views about the effectiveness

and practicality of social media technologies and their integration into the classroom.

Additionally, it was shown that teachers' attitudes toward social media platforms were having a favorable impact on their student's academic achievement. Therefore, one of the major consequences of this study is for medical institutions and educators, who must take into account the academic use of social media technologies and investigate different approaches and opportunities for providing students with educational resources via social media.

## DISCLOSURES

**Human Subjects:** Consent was obtained or waived by all participants in this study. Institutional Ethics Committee for Research on Human Subjects of Mahatma Gandhi Institute of Medical Sciences, Wardha issued approval MGIMS/IEC/PHY/27/2018.

Consent was obtained or waived by all participants in this study. Institutional Ethics Committee for Research on Human Subjects of Mahatma Gandhi Institute of Medical Sciences, Wardha.

**Animal subjects:** All authors have confirmed that this study did not involve animal subjects or tissue.

**Conflicts of interest:** In compliance with the ICMJE uniform disclosure form, all authors declare the following:

**Payment/services info:** All authors have declared that no financial support was received from any organization for the submitted work.

**Financial relationships:** All authors have declared that they have no financial relationships at present or within the previous three years with any organizations that might have an interest in the submitted work.

**Other relationships:** All authors have declared that there are no other relationships or activities that could appear to have influenced the submitted work.

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