Whatsapp as a Platform for Self Directed Learning in Medical Students

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ABSTRACT

Introduction: *Teaching a smart generation of medical students has always been a challenging issue. Mobile technology is one of the latest extensions of technological innovations that can be integrated into medical education. Many studies have indicated that mobile, wireless device technology supports teaching and learning. The biggest advantage is that it can be used anywhere and anytime and can serve as a tool for Self-Directed Learning (SDL).* **Aim and Objectives:** *To implement WhatsApp as a platform for SDL and to study the perception of students and teachers.* **Methodology:** *An interventional study was carried out among the first semester students of Baba Saheb Ambedkar Medical College and hospital, in the month of Oct-Dec 2019 after obtaining clearance from the ethical committee. Consent of students and faculty was obtained after sensitizing them. WhatsApp group dedicated to SDL activity was made with participating students and faculty and the SDL module was shared on the WhatsApp group. This was followed by an assessment using Google form. A pre-validated questionnaire on Google form was used to collect feedback from the faculty and students. Data from Google sheet was imported to excel sheet and perceptions of students and teachers were analyzed. The interaction over WhatsApp was also analyzed.* **Findings:** *Of the 125 students in 1st semester 118 participated in the study. Majorities (85%) of them found self-directed learning through WhatsApp to be an interesting exercise, were satisfied (83%), and felt that it motivated them to study and enhanced their learning. Over 8% felt that learning was self-paced. About 70% of students felt that this platform increased interaction with their peers. All teachers felt that WhatsApp was a good tool to conduct SDL and over 80% felt that it increased student participation and made assessment easier. Though 66% felt that it was time-consuming, over eighty percent were motivated to conduct SDL using this platform.* **Conclusions:** *Students and teachers are favorably inclined to use WhatsApp for self-directed learning and welcomed its role in enhancing their learning experience; however, large multi-center studies are required before it's adopted in the medical curriculum across the board.*

Keywords: Self-directed learning, E-learning, WhatsApp, Mobile learning, Medical education

INTRODUCTION

Teaching a smart generation of medical students has always been a challenging issue. Delivering subject contents at their pace and understanding their practices of learning subjects becomes the priority for a medical teacher. One of the institutional goals for the Indian Medical Graduate is to possess an attitude for continued self-learning [1]. Self-Directed Learning (SDL) is only achievable when students possess a sense of self-awareness of their own beliefs, strengths, abilities, strategies, and accept the responsibility for their learning. In this regard, students should be provided with an encouraging environment, ample time, and authentic contexts to actively and confidently make connections with existing knowledge and apply them in real-life contexts, to co-construct knowledge with peers, and most importantly, to be responsible for their learning and become self-directed learners [2]. This can be enhanced by the integration of mobile technology into medical education.

Mobile technology is one of the latest extensions of technological innovations that can be integrated into medical education [3,4]. Many studies have indicated that mobile, wireless device technology supports teaching and learning [5-7].

The biggest advantage of this technology is that it can be used anywhere and anytime and can serve as a tool for self-

directed learning. The modern generation of students belongs to the 'generation Z'. They are much more tech-savvy as well as are accustomed to mobile-based learning.

WhatsApp is a free messenger application that works across multiple platforms like iPhone and Android phones, and this application is being widely used among undergraduate students to send multimedia messages like photos, videos, audio along with simple text messages [8].

Since an internet facility is required for using WhatsApp, a lot of information can also be accessed in real-time, and sharing that information through technology is both instantaneous and convenient [9].

According to Bere, WhatsApp messenger has many features like Multimedia, group chat, unlimited messaging, and cross-platform engagements [10,11].

Many studies conducted using WhatsApp as a platform for learning suggest that it makes learning easy, favors problem-solving, and resolves to learn difficulties.

The literature review did not reveal any study on conducting Self-Directed learning using WhatsApp in medical students. This study was thus conducted to use WhatsApp as a platform for self-directed learning and also to study the perception of students and faculty about this method of self-directed learning.

METHODOLOGY

An interventional study was carried out among the first semester students of Baba Saheb Ambedkar Medical College and hospital, in the month of Oct-Dec 2019 using convenient non-probability sampling, after obtaining clearance from the ethical committee.

The Inclusion Criteria were all students of the first-semester batch 2019 and the exclusion criteria were all students who did not give consent to participate in the study.

The faculty and students were sensitized about the study. Consent of students and faculty who are willing to participate in the study was obtained. A core team of faculty from the Dept. of Anatomy, Biochemistry, and Community Medicine was formed to develop and administer the module of SDL. WhatsApp group dedicated to SDL activity was made with participating students and faculty. A session was conducted with the students and the learning outcomes of each activity were discussed. The reference material, case-based scenarios, for the SDL module were then shared on the WhatsApp group. The students were being given one week to read the references and discuss their queries in the group. After a week assessment was done by MCQ's and short answers were sent a Google form on the WhatsApp group. Following assessment, the correct answers to the questions were posted on the group. The students were then given two days to post their doubts and queries on the group which was clarified by the faculty in charge of the module. After all three modules of SDL were conducted in Dept. of Anatomy, Biochemistry and Community Medicine a structured, predesigned, pre-validated Google-form questionnaire was used to collect feedback from the faculty and students. The interaction over WhatsApp was also analyzed.

Data from Google sheet was imported to excel sheet and the perception of students and teachers were analyzed.

RESULTS

Of the 125 students in 1st semester, 118 participated in the study. The majority (85%) of them found self-directed learning through WhatsApp to be an interesting exercise, were satisfied (84%). Over 80% felt that learning was self-paced. Nearly 70% of students felt that this platform increased interaction with their peers and enhanced their learning. About sixty percent of students reported that this mode of conducting SDL improved their understanding and motivated them to study. Less than 20% of participants felt that it was a time-consuming exercise (Chart 1).

All faculty members felt that though WhatsApp was a good tool to conduct SDL and over 80% felt that it increased student participation and made assessment easier. Over two-thirds of them felt that it increased the critical thinking of students and student-teacher interaction.

Though 66% of teachers felt that it was time-consuming over eighty percent were motivated to conduct SDL using this platform (Chart 2).

Student's Responses about self-directed learning through WhatsApp were:

1. It is a good activity.

2. It is a better way of assessment and study.

3. It is a good exercise that compels us to study the topic before or while attempting it.

4. It was a fun activity which I feel should be done more often.

5. The sessions were interesting and enhanced learning through interactive discussion with peers.

6. The SDL through WhatsApp is good and the positive part is that we are also provided the study material for focused (on the topic) learning.

7. SDL through WhatsApp is good and saves time. I enjoy it

8. It was a fun experience and less time consuming

9. For me, it is a new way of interactive study and an interesting way of learning through SDL. WhatsApp group made everyone available anytime anywhere.

10. SDL has been an interesting exercise. I liked how the topics are chosen were comparatively easier and could be managed well despite our tight schedules. I liked sitting in the library with a group of friends discussing the topic at hand, it brought forward different interpretations and more knowledge. I, however, feel concerned regarding the assessment method through a questionnaire open for a long duration. False assessment can be made for somebody who did not study the topic but conveniently copied the answers floating, ironically on WhatsApp itself.

DISCUSSION

Educational research has shown that medical students are often, passive recipients of information in classroom settings when traditional lectures are delivered [12]. Feden reported that a student's learning activity is enhanced when they are actively involved [13].

Social media has presented medical education training strategies in a new dimension. In a survey in 2011, online media was reported to be the primary source of information among healthcare professional students. As healthcare professional students change their learning style it is mandatory that as teachers, we adopt new strategies to connect with them effectively [14].

These days WhatsApp is currently used by both students and teachers for communication. In 2014, a study conducted in Taibah University on attitudes of students suggested that WhatsApp instant messaging made learning easy favored problem solving and resolved to learn difficulties [15].

In the study of Mohana Krishnan K, et al. students reflected that the messages conveyed through the WhatsApp-based discussion platform were clear, easy to understand, thought-provoking, and enabled to gain confidence before the examination [16].

Dar QA, et al. reported that students found that in WhatsApp-based learning, interaction with teacher and peers was easy as compared to the face to face classroom teaching. Students also felt that they were able to learn at any time, at any place in a relaxed manner [17].

In keeping with the latest trends study was conducted to implement self-directed learning using WhatsApp as a platform and study the perception of the teachers and students regarding the same.

The results were encouraging as students found it to be an interesting exercise. It motivated them to study and were satisfied with this mode of teaching. Eighty percent of students felt that learning was self-paced and 68% reported that it increased interaction with peers. It increased the student-teacher interaction, understanding of the course content and helped cleared their doubts.

Similar results have been reported by Raiman L, et al, in a study amongst final year MBBS students where problem-based learning was better studied in the WhatsApp-based forum [18].

A further study amongst second phase MBBS students of ESIC Joka, Kolkata also revealed positive reflection from students who were incorporated in WhatsApp-based discussion forum [19].

A study by Indu M, et al. at Kerala amongst Dental undergraduate students showed that better academic results in the students who had been included on the WhatsApp-based discussion platform [20].

In the study in Oman Medical College, Iraq, students reflected that WhatsApp-based teaching was as a whole was their "positive learning experience" [21].

Nanda M reported that most of the students showed that interest in this method among both slow learners (88%) and fast learners (87%) and felt their knowledge has improved (80% in slow and 77% in fast learners). The overall performance also improved in the second-semester examinations [22].

In the present study, teachers were also very positive about using this social media as a tool to enhance education and felt that it enhanced the critical thinking of students and increased student-teacher interaction.

The majority reported that it made student assessment easy, even though was time-consuming they were willing to conduct self-directed learning using WhatsApp as a platform.

Studies have been conducted to see the impact of social media use on student's perception of academic performance and reported that use of social media had a positive effect on student learning; and a positive influence on students' perceptions of their academic performance [23,24].

The limitations of the study were that it was restricted to a single batch of students in pre-clinical subjects and the sample size was small also the senior faculty members were reserved and not in favor of using social media for medical education.

Implications

Implementation and integration of any social media platform into education would require the training of the faculty members. Also the faculty members would need to reconsider their current methods of teaching and training adopt new methods in their teaching that encourage students to use social media platforms as part of their learning. The students would also have to be made aware of the implications and potential advantages of the social media platform being used in their learning. This can be achieved by conducting hands-on workshops for both students and faculty.

CONCLUSION

Students and teachers were favorably inclined to use WhatsApp for self-directed learning and welcome its role in enhancing their learning experience, however large multicentre studies are required before it's adopted in the medical curriculum across the board.

DECLARATIONS

Conflicts of Interest

The authors declared no potential conflicts of interest concerning the research, authorship, and/or publication of this article.

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