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**Exploring the pattern of Social Media Usage by Medical Students in School of Medicine, College of Health Sciences, Addis Ababa University**

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## **List of abbreviations/acronyms**

AAU - Addis Ababa University

SPSS - Statistical Package for Social Sciences

TASH - Tikur Anbessa Specialized Hospital

CHS-College of Health Sciences

ANOVA-Analysis of Variance

Social media-SM

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## SUMMARY

Even though millions of the younger generations are using social media (SM) for various purposes in Ethiopia, there is no clear study showing how the trends and patterns of SM usage look like in this group of people, particularly in medical schools. Therefore, the global objective of the current study was to explore the pattern of usage of SM by medical students in school of medicine, College of Health Sciences, Addis Ababa University. A descriptive cross-sectional quantitative study was conducted on four cohorts (Year II, Year III, Year IV and Year V) of study subjects. Simple random sampling technique was applied to determine the proposed sample size. Totally, 132 students were recruited from each cohort; thus a total of 528 students were included in the study. Using pre-tested anonymous questionnaire, information was collected on sociodemographics, the extent of using the SM, the type of SM used, average time spent on them, the purpose why the students use SM, the influence of these media on social interaction of students and students opinions regarding the effect of SM on their grades and academic performance. The questionnaire was tabulated and data was analyzed by using descriptive, inferential and quantitative analytical techniques with estimations from the Statistical Package for Social Sciences (SPSS). A correlation of the variables was determined and  $X^2$  was used to compare the relationship of the variables.  $p < 0.05$  was considered statistically significant.

There were 38.1% (N=201) females and 61.9% (N=327) males included in this study. Almost all students, irrespective of background were active users of SM (99.6%, N=526). Facebook was the dominant SM used by students before joining medical school (82%, N=433), followed by You Tube and Whatsapp. The number of Facebook users has been declined significantly from 82% to 47% after joining medical school. The dominance of Facebook was over taken by Telegram after joining medical school. The use of Telegram has significantly increased from 18% (N=495) to (82%, N=433) after joining medical school. The proportions of You Tube users has increased significantly from 31% (N=165) to 52% (N=275) after joining medical school. We show for the first time that majority (70%, N=379) of medical students were distracted by SM while preparing for exam and doing their assignments. The distraction of medical students by

SM while studying for examination and preparing assignments is significantly higher in males than females. The implications of this finding is triplicate: 1) The need for orientation for medical students at the beginning of the first year, 2) Continuous and intimate follow up is needed by family, Deans and advisers, 3) Special policy is also needed concerning the use of SM by medical students. Continuous personal development trainings might be important to clear out the confusion of medical students about the impact of SM.

## 1. Introduction

Social media (SM) has rapidly evolved to capture the attention of most global society, particularly the youths. Currently, billions of the global societies are using SM either for academic, personal, social, political or other purposes (1). These days, SM has become the primary method of communicating and exchanging ideas among younger generations (2-5). The most popular SM platforms commonly used by the young generation comprise Facebook, Instagram, You Tube, Telegram and Twitter (6, 7). Additionally, professional networking sites, such as LinkedIn, Doximity, and Research Gate, have gained greater attention in the business, academics and health care fields (8, 9). From more than 7 billion global populations, nearly half are active Internet users, and more than a quarter have active SM accounts (10). Globally, majority of SM users are the youths born in between 1986 and 1997. Furthermore, it is known that older generations are also using SM enthusiastically. Particularly, a recent report noted that more than 50% of online adults, with ages older than 65, use Facebook (8), one of the prominent SM.

Several studies indicate that SM has various advantages and disadvantages. One of the commonly mentioned benefits are real time communication, entertainment, academic information exchange, patient data exchange, sharing pictures and messages (11, 12). The SM also have numerous positive contributions in the daily teaching-learning activities of teachers and students. To this end, the search engines such as Google and Google Scholar made life easier for many students by assisting in their educational life. The world is becoming so small place that some educational problems encountered by students are being discussed and solved through interaction with global online counselors and experts. In addition, e-learning is made possible by the use of SM. With the aid of SM, several Universities provide online courses to millions of students in the world, without limitation. This indicates that SM is able to bring education and learning to our doorsteps with a minimal costs. In order to attend the class, the trainee need not travel to the place where the University is located. One can have several options of studying in one of the world known Universities while living in his/her own country with her/his family. Even, professors prefer assignments, thesis,

dissertation and projects to be submitted to their emails rather than the traditional hard copy. The expenditure of photocopying, the risk of misplacing lecture notes, handouts and reading materials are minimized with the application of SM (13, 14).

SM simplifies teachers' effort and promotes the way students learn and communicate with their mentors (12). Thus, it profoundly facilitates teacher-student and student-student academic and social interactions. Through an understanding of connectivism, mentors can use SM to complement traditional learning techniques and improve their students' education (15). SM also help bring students and staff together and can create ideal communities in real time (16). In addition to gaining information and valuable experience, SM have also been found to reduce stress and anxiety all whilst maintaining levels of empathy (17). Increased communication also permits for faster feedback that was found in some cases to be more valuable than in class answers. Other study also found that SM improved exam results with many students actively saying that they wanted SM to be an integral part of the curriculum (12). There is, therefore, a need for large scale quantitative studies so that the contribution of SM within teaching-learning process can be corroborated.

Unwise usage of SM has its own impact in psychosocial, academic and professional life of the person. Perhaps, many students, with unlimited access to the SM, waste their time by chatting and surfing the internet for non-educational information. They are glued to their phones all the day making them loose sense of time. Some students are also seen pressing their phones during classes, seminars and also in the libraries and in corridor. Some of them may even plug in their headsets and entertain the songs they are listening to when studying which reduce their rates of assimilation and act as a source of disturbances to others around them. In order to collect current global information, they are always seen on the internet reading, browsing and watching fashion and social blogs. Some studies even show that there is a great decrease in student's passion to read for pleasure and enjoyment but instead prefer to seek pleasure from the media by streaming videos on SM and playing with their Smart phones (1, 3, 17). The main reason why they read the subject matter is only to pass examination rather than to gain knowledge. Other literatures indicate that students who

devote their times on networking have a great tendency of having low grades, poor academic performance and become unsuccessful (18). Particular study in undergraduate medical students in South Eastern University of Sri Lanka revealed that the Facebook creates a false sense of connection with the people around the world. Interestingly, the study revealed that the closed relationship in the Facebook becomes distant and on the contrary, the distant relationship in the Facebook becomes closer. More importantly, the study found that exaggerated attachment to SM causes massive challenges on the socialization process of younger generation and their privacies (19).

The accelerated evolution of SM resulted in a new dimension of its applications in medical education. However, the effective, appropriate and wise usage of SM by medical students is the function of several factors. The level of education, the accessibility and affordability of the internet connection, the field of study and social backgrounds are some of the determining factors. More interestingly, the purpose of SM usage by students depends on the social background of the students. Since the evolution of Facebook millions of University students have been engaged in SM for different purposes, the professional and academic usage dominating the other purposes. Medical Students increasingly use SM to acquire educational information, medical practices, for socialization and sharing ideas, to announce events, and to share educational materials regarding clinical research and health care topics (18, 20). However, there has been no well-studied report about the pattern and influence of SM usage in Ethiopian medical students.

## 1.1. Statement of the problem

In the era of post-internet technology, billions of global population: the youths and adults, male and females, students and instructors are using social media (SM). Nearly no academician can escape from using SM in her/his daily life (21). Particularly, increasing number of medical students has been using SM for academic and nonacademic purposes. Since there could be some misuses and abuses of SM by medical students, the time spent on SM should be wisely controlled. There should be also some rules and regulations about SM usage by students. This is because it will have profound impact on their academic performance, social bondage and time management. Despite large volume of investigation on SM usage by medical students globally, there is no definite study carried out in Ethiopian Medical schools. In addition, unlike any of the Western country students, Ethiopian students come from various social, economic and cultural backgrounds. Therefore, the impact of SM usage by the study participants in Ethiopia will be more significant than other parts of the globe. In addition, the time spent by students on SM needs to be investigated. This is because, some of the newly joining medical students come from rural areas and they might have no previous experiences of using SM. Therefore, the objective of this study was to evaluate the SM usage by medical students in College of Health Sciences, AAU. Furthermore, the helpfulness of the SM is determined by several confounding factors. The amounts of time spent in the network, the purpose of the usage and the smartness of the user are some of the factors that define the usefulness of the SM for academic purposes. Currently, the Federal ministry of Health (FMoH) has provided a smart tablet to every student attending medical school in order to facilitate the teaching-learning process. In addition, internet connection is 24 hours free and relatively stronger in college of health Sciences, AAU. Thus, it is important to know if students are using these tablets for the intended academic purpose. Perhaps, most of these students did not have such a tablet with internet connection previously. As a result, we usually observe that many students sitting in every corridor and staring at their tablets. However, it is not scientifically studied how students manage their SM usage.

Therefore, this study could be base line to establish policy for internet and SM usage by students in medical schools in the country.

## **1.2. Literature review**

Social media (SM) is defined as websites and applications that enable people to share the desired contents quickly, efficiently, and in real-time. It is an interactive computer-mediated technology that is dynamically changing and as such it is difficult to assign a fixed definition to it. As result some authors express it arguing that “there is no single recognized definition for SM” (22). However some others have put different definition of SM. For example, according to Kaplan and Haenlein SM is a group of internet-mediated applications that was built on the ideological and technological foundations of Web 2.0 and serve as a means of exchange of user-generated content very quickly and in real time (23). Another scholar broadly defined SM as it is a “communication channel which is very popular, extremely fast and broad, has proven to be highly effective, as well as trusted by billions of people , to share and discover content concerning individuals, brands, information, entertainment and knowhow” (24). All of these definitions revolve around one common theme: SM involves some form of very fast and real time communication between individuals over the internet. Historically, SM began in 1990s with the first documented SM network called “SixDegrees“ in 1997 and this technology was able to help people to upload a profile and make friends. Asian Avenue, black planet, MiGente and a number of other community tools evolved supporting various combination of profile and publicly articulated friend from 1997 to 2001 (25). Since then, there has been marvelous improvement in internet technology and today there exist plethora of social networking sites in the world (23).

SM is one of unbelievably growing web applications that bridged millions of global populations together. This rapid evolution and dynamic change of SM is supported by unlimited advancement in internet technology (26). Currently, SM has gained more attention and participation through the discovery of mobile phones that support social networks applications. Mobile phones, particularly that are powered by Android applications, have expanded the number of people in social network and the process is

termed as Mobile social networking. One study under the title “Mobile Social Networks and Social Practices” indicated that social network tools have now been shifted from the computer to the mobile phone and these new services that are developed for mobile phones allow users to create, develop, and strengthen their social ties ubiquitously and in real time (27).

The introduction of SM has diverted the academic life of students’ to a different dimension. A plethora of studies have revealed how students use SM networks for their personal benefits. In addition, they have confirmed that SM plays an important role in the academic and social life of students in higher education (28, 29, 30). They showed that SM plays an important role in enhancing relationship, improving learning motivation, offering personalized course material, and developing collaborative abilities. It was also found that students who had accounts on SM frequently used it to connect with old friends and family members, find new friends, obtain or share learning materials, receive update of events, post information, while away time among others. In addition to formal learning, it was also reported that SM can be a means to enhance academic learning and skill development of students (30). Some students may embrace SM platforms for learning, discussion and other educational purposes. Further studies indicated that while sharing contents with their respective partners the younger generation are engaged in self-administered independent-learning, intimate interaction with colleagues, and developing deep-rooted academic knowledge (31). Participation on SM, particularly on Facebook and Twitter, has helped students develop new words and improve their texting skills (32). Other study also showed (33) that students use SM for exchange of assignments, educational resources and discussions on academic and other issues. Students also benefit from chatting with other students, teachers and external sources to acquire more information and knowledge. A number of studies conducted by researchers in the area of social networks discovered many uses of social networks by students and young people. It is undeniable fact that SM has contributed great value in facilitating teaching-learning process in the 21st century. Studies demonstrated that huge number of students including those at the PhD level commonly use SM to improve their studies (34).

However, there have been several other studies indicating that SM is a distracter of students' academic life (35). These authors explain that social networks distract the attention and concentration of the students toward learning and converts it towards non educational activities such as useless and unnecessary chatting. On contrary, one study entitled "the impact of social networking in promoting education" revealed that students benefit from chatting with other students, teachers and external sources to acquire knowledge (36). Supporting these findings, another study indicated that students gained more vocabulary, improved their writing skills and reduced their spelling mistakes through SM usage (32). SM augment learning by providing both students and teachers the opportunity to connect in new and very exciting ways thereby encouraging flexible mode of learning. It is stated that flexible learning expands the choice on what, when and how people learn. SM support different flexible styles of learning including E-learning, which is strongly accepted by millions of global academic community (37). Other scholars revealed that SM benefits students by connecting them to one another on assignments and class projects (38). Furthermore, it was indicated that SM certainly generate new opportunities to engage students in higher education as they are remarkably effective at connecting people confidently and facilitating the exchange of information (39). All of these studies appreciate the indisputable contribution of SM in the teaching-learning process.

However, it is noteworthy to give attention on some negative impact of SM in the academic life of students. According to Davies and Cranston, some of the risks associated with SM included criminal activities such as identity theft and fake contacts. In addition, sexual abuse or harassment and unsuitable advertising were commonly reported (1). Similarly, mentioned cyberbullying, online harassment, sexting, Facebook depression, and privacy concerns as some of the challenges associated with social networking (38). Other study conducted by scholars have also proved that SM can be detrimental to students' academic life if caution is not taken in its usage. For instance, the study conducted by Obi, and his colleagues indicated that SM affects students use of English language (40). They use short-handwritings when chatting with friends and unconsciously get used to it thereby replicating same errors during examinations. Other

studies also revealed unequivocally that SM can be problematic to students' academic life if caution is not taken in its usage (35, 41, 42). Another study in Ghana showed that the study subjects experienced negative effects such as poor grammar spelling, late submission of assignments, less study time and poor academic performance (43). In Ethiopia, a study carried out in 493 female students in Jimma University indicated that frequent nonacademic visiting of SM is negatively associated with the academic performance of students (44).

## **2. Objectives**

### **2.1. General objective**

The general objective of this study was to evaluate the usage of social media (SM) by medical students in College of Health Sciences, Addis Ababa University.

### **2.2. Specific objectives**

- Identify which SM is commonly used by medical students
- Explore for what purposes do medical students use SM
- Determine the relationship between SM usage and academic performance of students
- Determine the relationship between SM usage and social background of medical students
- Determine the time invested on SM and study by medical students

### **3. Research questions**

The rapid advancement of SM websites and applications together with the increasing popularity of SM among students have raised concerns regarding the influence of these media on the academic performance of students. Major concern for instructors and parents is the excessive time spent on Facebook and other SM at the expense of completing their academic tasks. In addition, it is not clearly known whether this students use SM to augment their academic activity or for unintended useful for nothing activities. Particularly, in Ethiopian situation, no well-defined study was carried out on SM usage by medical students. Thus, there are open questions to be answered by this study. These are:

- Which SM is commonly used by Medical Students?
- For what purposes do medical students use SM? (Medical education, social issues, personal issues, share jokes, political issue, etc)
- How is the SM usage linked with the academic performance of students?
- How often do medical students use SM applications in their studies?
- How does the pattern of SM usage look like in different batches of medical students?

### **4. Theories and the conceptual framework**

Online SM focus on building and reflecting social associations among people who share common interests and activities. On the other hand, SM help students socially connected with each other for sharing their daily learning experiences and do conversation on several other subjects (45, 46). In the age of internet technology, it looks that learning theories have shifted from behaviorist to constructivist and connectivist theories. Connectivism theory explains how internet technologies have created opportunities for learning across online peer networks. SM can be used to connect the learners to each other to increase the social potential for learning, enhance learning from peers, share content, connect outside the classroom, easily exchange ideas, create a community of practice and connect with content experts. The concepts that were common for both theories were that their philosophical approach to education and that weave through these constructivist theories are that of the belief that

knowledge is subjectively constructed, primarily within a social context. Accordingly, learning is a social process whereby students learn best when they actively construct their own knowledge, understanding and meaning through interaction with their peer (47,48). This theory also explains that the learning environment should be considered to be a critical piece of a constructivist approach whereby the learners are provided with the tools, resources and support needed to build their own knowledge. Importantly, some of subjects of connectivism mirror the themes of constructivist theories. Both share that learning is social, learning is an active process, learning requires reflection and learning takes place in a particular context.

## 5. Materials and methods

### 5.1. Study design and questionnaire

This was a descriptive cross-sectional quantitative study that was conducted at School of Medicine, College of Health Sciences (CHS), Addis Ababa University (AAU). School of Medicine, CHS is one of the oldest medical schools accommodating the largest number of students every year. Following a cross-sectional design, four cohorts of medical students (Year II, Year III, Year IV and Year V) were included in this study. A well-structured self-administered anonymous questionnaire was designed and distributed among the cohorts. To improve the reliability and validity of the questionnaire, it was pre-tested on a selected sample of study participants that were not included in the study. These helped enhance the design of the questionnaire and eliminated all ambiguities and misunderstandings. Using the questionnaire, information was collected on sociodemographics, the type of SM used, the extent of SM usage, the purpose why the students used SM, the influence of the SM on social interaction of students, students perceptions regarding the effect of SM on their grades and academic performance and average time spent on SM and academic study. Students were asked to provide the cumulative grade out of 4.0 of each semester to correlate time spent on SM with students' grades. To keep confidentiality, the questionnaire did not require student's name to be provided.

### 5.2. Samples and sampling procedure

Simple random sampling technique was applied to determine the proposed sample size. On average, there were 200 medical students in each batch. Considering 5% of margin of error at 95% of confidence level and 50% distribution for 200 students in a batch, the sample size was calculated as follows:

$$\text{Sample Size} = \frac{\frac{z^2 * p(1-p)}{e^2}}{1 + \frac{z^2 * p(1-p)}{e^2 N}}$$

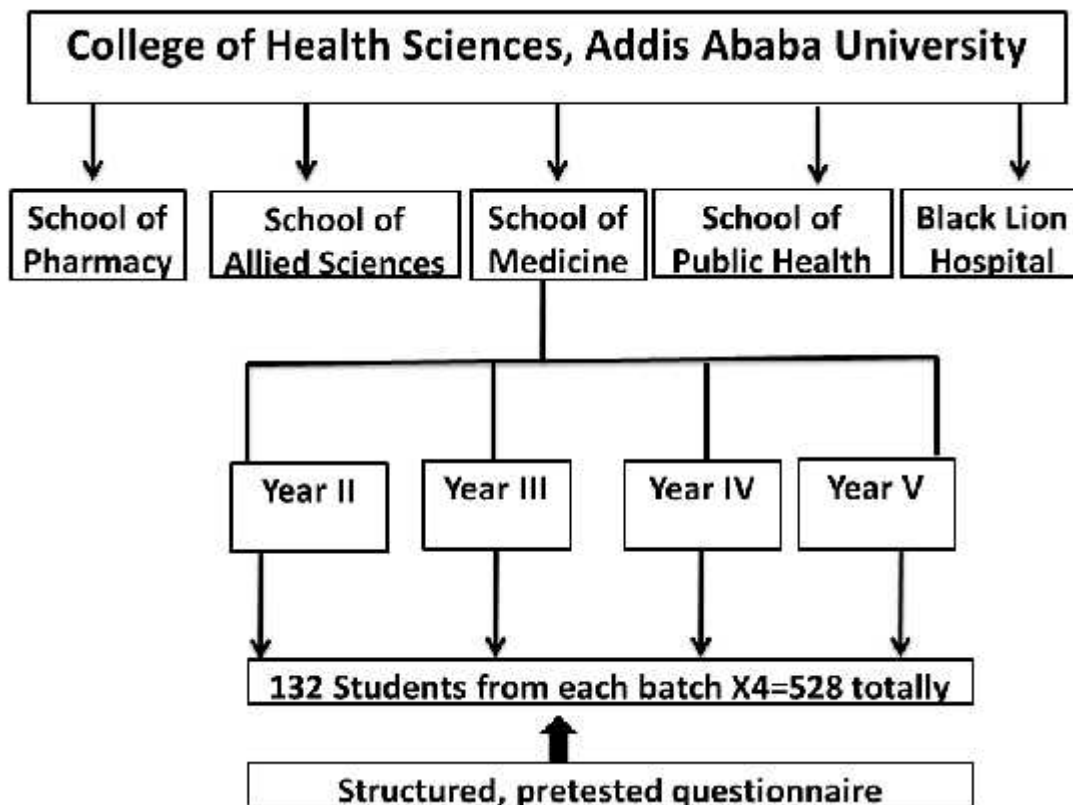
Where  $N$ =Population size,  $e$ = Margin of error,  $Z$ =Z-score at 95% confidence level and  $p$ =proportion of population.

With the application of this formula the sample size was determined to be 132 for each cohort. Thus, 528 students were included to participate in this study from all cohorts.

One hundred and thirty two students were randomly selected from each batch to respond to the survey. The questionnaire was administered to the first 132 students within each cohort (batch) who met in their lecture hall randomly. This was in order to give equal chance to all participants in every batch.

### **5.3. Source population and study population**

The source population was all Undergraduate Medical students in school of Medicine, CHS, AAU. The study population was Year II, Year III, Year IV and Year V medical students. As determined in the above formula only 528 medical students were included in this study: 132 students were randomly selected from each of the cohorts. Any medical student who was at second, third, fourth and fifth year had equal chance to be included in this study (Figure1). First year and interns were excluded from this study. This is because the access to the first year students was difficult as they live in different campus (Sefere Selam). It was also difficult to get the proposed number of interns to survey because they were scattered in different nearby hospitals for their clinical attachment.



**Figure1. Schematic view of study site, population and sampling procedure**

#### **5.4. Data analysis**

The questionnaire, which was answered by the respondents, was tabulated and data was analyzed by using inferential and descriptive quantitative techniques with estimations from the Statistical Package for Social Sciences (SPSS). Thus, SPSS and Microsoft Excel 2010 (Microsoft Corporation, Seattle, WA) software for Windows was used for statistical analysis. To this end, all data was entered into excel sheet and then exported to SPSS 24.0 (IBM SPSS, Chicago, IL). Nominal variables were expressed as numbers and proportions whereas continuous variables were presented as mean and standard deviation. A Pearson's correlation coefficient was applied to correlate different variables and  $X^2$  was used to compare the relationship of different variables.  $p < 0.05$  was considered statistically significant.

## **6. Ethical consideration**

It was assumed that this study had no impact on the study participants. The questionnaire was anonymous. However, students participated with self-willingness in the study. Everybody had a right not to participate in the study. A letter of ethical approval was obtained from Health Sciences Education Center, college of health sciences, Addis Ababa University.

## 7. Results

### 7.1. Socio-demographic Characteristics and background information

There were four cohorts of study subjects included in this study, each with a sample size of 132. The findings of this study revealed that 38.1% (N=201) were females and 61.9% (N=327) were males. The range of the age of the study subjects was 20 -27 years and the mean was 22 years (Table1).

**Table1. Sex and age distribution of study subjects**

Characteristics		Frequency	Percent
Sex	F	201	38.1
	M	327	61.9
Age in Years	20	94	17.8
	19	44	8.3
	21	136	25.8
	22	92	17.4
	23	113	21.4
	24	40	7.6
	25	8	1.5
	27	1	0.2
Total		528	100

In order to make the comparison plausible among the cohorts, equal number of study subjects was included from all four cohorts. This study also indicated that the majority (81.8%, N=432) of study subjects were from urban background (Table2).

**Table2. Academic year and previous residence area of the study subjects**

Characteristics		Frequency	Percent
Academic Year	Year II	132	25
	Year III	132	25
	Year IV	132	25
	Year V	132	25
Previous Residence Area	Rural	96	18.2
	Urban	432	81.8
Total		528	100

According to this study majority of the study subjects had already an experiences of using SM (SM) at lower grades before joining medical school (89.2%, N=471). The proportion of study subjects that had no exposure for SM before joining medical school is 10.8%(N=57,  $p=0.001$ ). Currently, almost all of the study subjects were using SM (99.6%, N=526) (Table3).

**Table3. Previous and current experiences of SM usage**

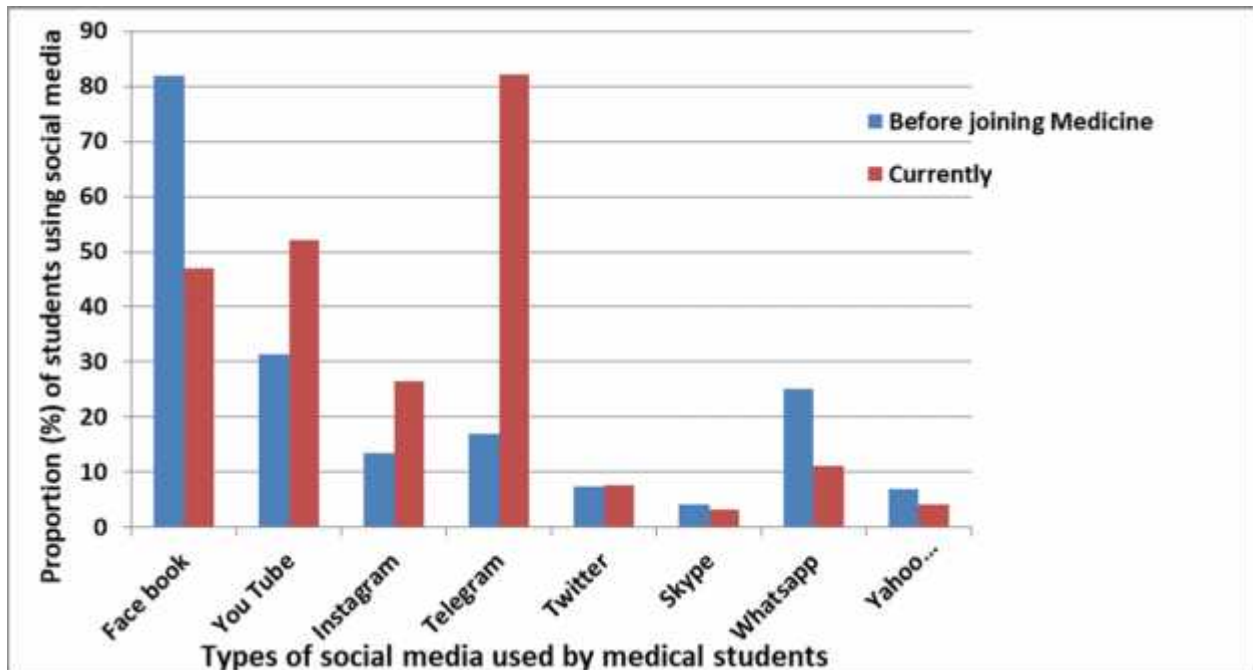
Characteristics	Before joining Medical School		After joining Medical School	
	Had experiences	Had no experience	Currently using	Currently not using
Females	33% (N=175)	5% (N=26)	38% (N=201)	0
Males	56% (N=296)	6% (N=31)	61.6% (N=325)	0.4% (N=2)
Urban	73% (N=389)	8% (N=43)	81% (430)	0.4% (N=2)
Rural	16% (N=82)	3% (N=14)	18% (N=96)	0

Males were dominant users of SM before joining school of medicine; however the finding was not statistically significant ( $p=0.186$ ). Majority of females (175 out of 201 females) had experiences of SM before joining medical school. Interestingly, all of the female medical students became SM users after joining medical school (Table3). The

pattern of SM usage by students before and after joining medical school indicated that there was an increase from 56% (N=389) users to 61.6% (N=325) users; however the result was statistically significant ( $p=0.023$ ) (Table3).

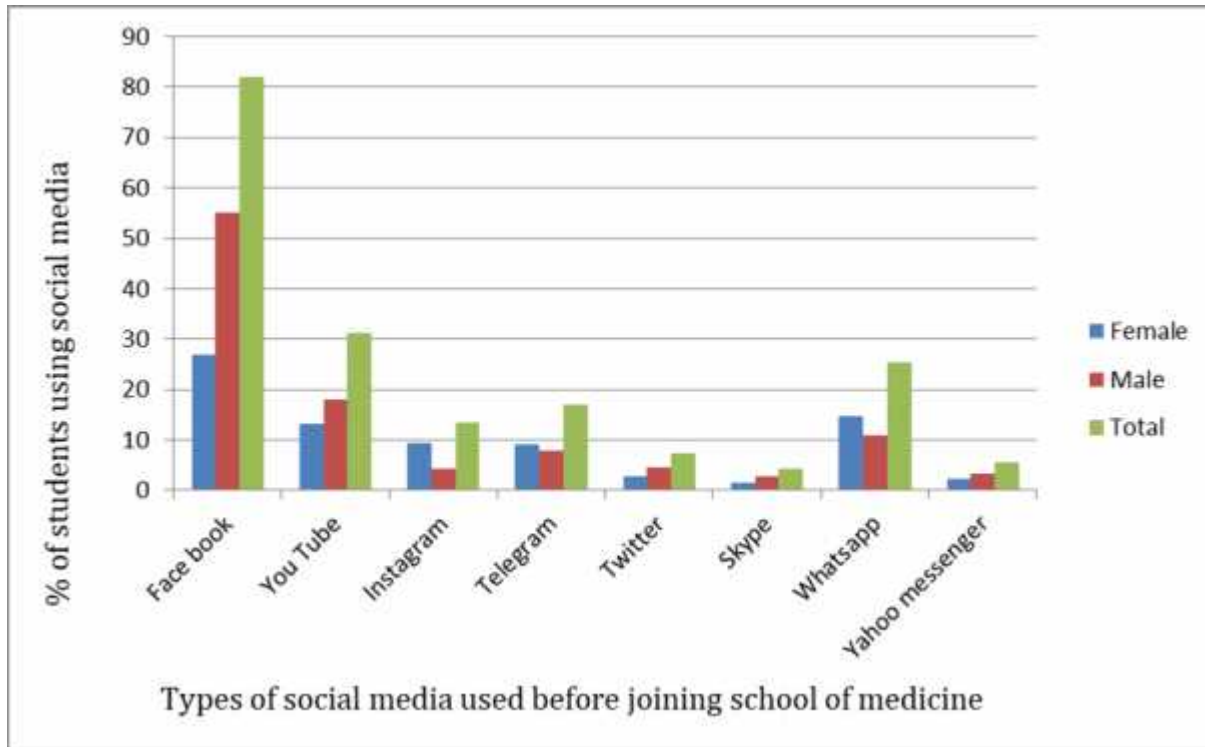
## **7.2. Types of SM used by Medical students**

As shown in Fig 2, 82% of our study subjects had been active users of Facebook before joining medicine. The top three most commonly used SM students before joining medicine were Facebook (82%), You Tube (31.3%) and Whatsapp (25%). Skype, Yahoo messenger and Twitter were the least commonly used SM by students before joining medicine. The use of Facebook by students declined significantly ( $p < 0.05$ ) from 82% to 47% after joining medical school (Figure2). Furthermore, the dominancy of Facebook was over taken by Telegram after joining medicine. Telegram had been less commonly used by students before joining medicine (16.9%, N=89). Currently, striking number of medical students are using telegram (82.2%, N=434). In general, the usage of Facebook, Whatsapp and Yahoo messenger had been declined whereas the You Tube, Telegram and Instagram increased significantly ( $p < 0.001$ ). Apparently, there was no significant difference in Twitter and Skype usage among students before and after joining medicine. Even though the proportion of medical students using Facebook decreased significantly, still nearly half of the medical students use it actively. More interestingly, more than 50% of medical students actively use You Tube too (Figure2).



**Figure2. Comparison of the proportion of students using SM before and after joining medical school**

The use of Facebook and You Tube were significantly higher among male than female medical students ( $p=0.0001$ ) before joining medicine. The male and female Facebook users were 55% (N=290) and 29% (N=153), respectively, before joining medicine; whereas the proportion of male and female students using You Tube were 18% (N=95) and 13% (N=67), respectively. Significantly higher proportion of female medical students than males had been visiting Instagram (9%, 4%,  $p=0.001$ ) and telegram (9%, 8%,  $p=0.002$ ), respectively before joining medicine. In all other studied SM cases, the difference between male and female SM users was not statistically significant at  $p=0.065$  (Figure3).

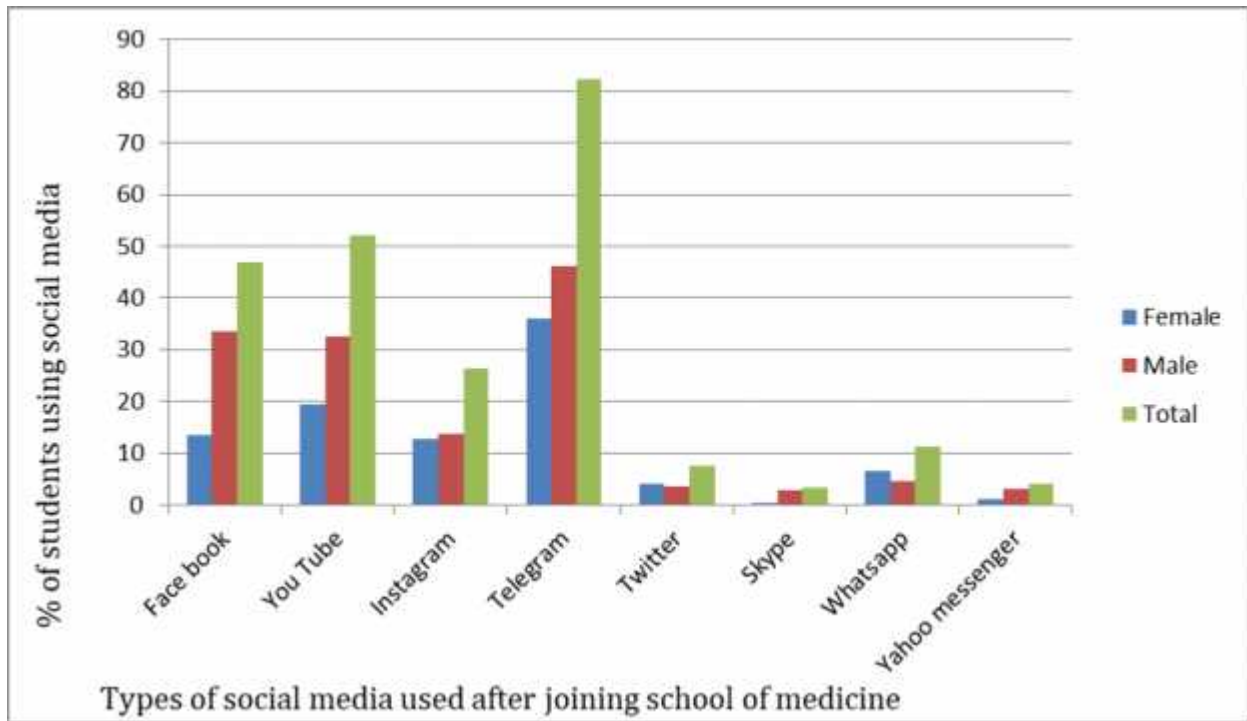


**Figure3. The pattern of SM usage by medical students before joining medicine**

Investigation of current experiences of medical students about SM usage indicated that the usage of Facebook (females=13%, males=34%), You Tube (females=20%, males=33%) and Telegram (females =36%, males=46%) were significantly higher among male medical students than female ones ( $p < 0.001$ ). In contrary, significantly higher number of female medical students is currently using Whatsapp (Figure 4).

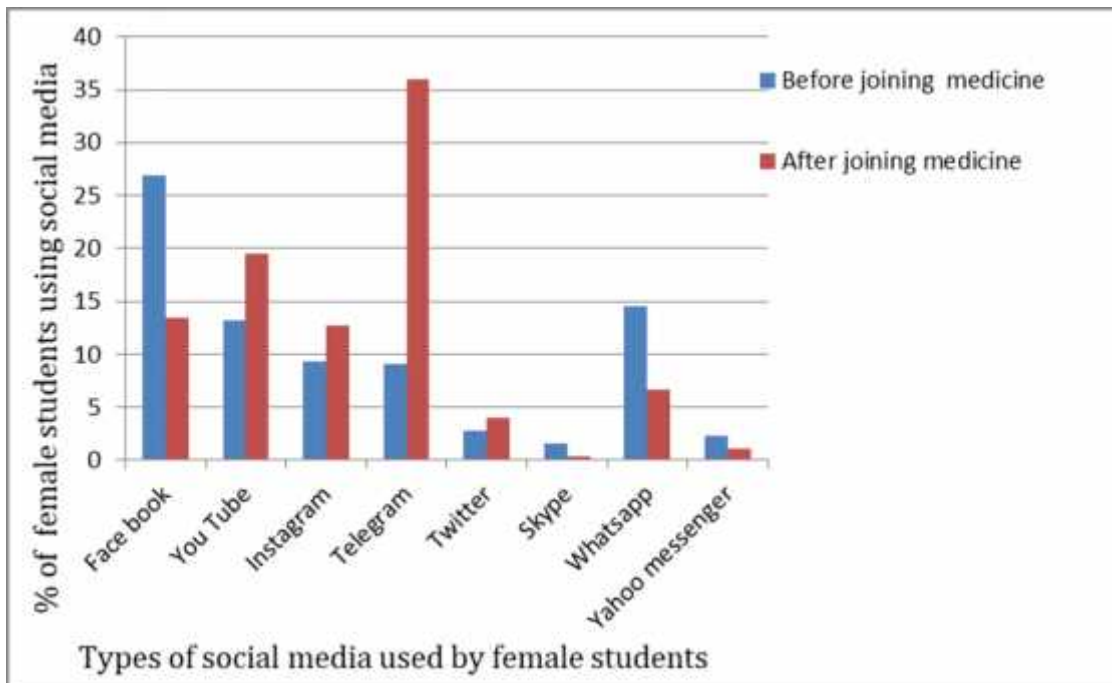
Interestingly, most public SM were more commonly used by male medical students than female ones after joining medicine. Yahoo messenger, Skype and twitter were not significantly used by all medical students after joining medical study (Figure 4). Telegram was the leading SMSM more commonly used by both male and female medical students currently. The pattern of Facebook usage after joining medical school indicated that significant proportion of both female and male students withdrew from using Facebook. The proportion of medical students (in both sexes) using Telegram was increased after joining medical school. There were no statistically significant

differences between male and female users of Skype, Instagram and Yahoo messenger both before and after joining medicine (Figure4).



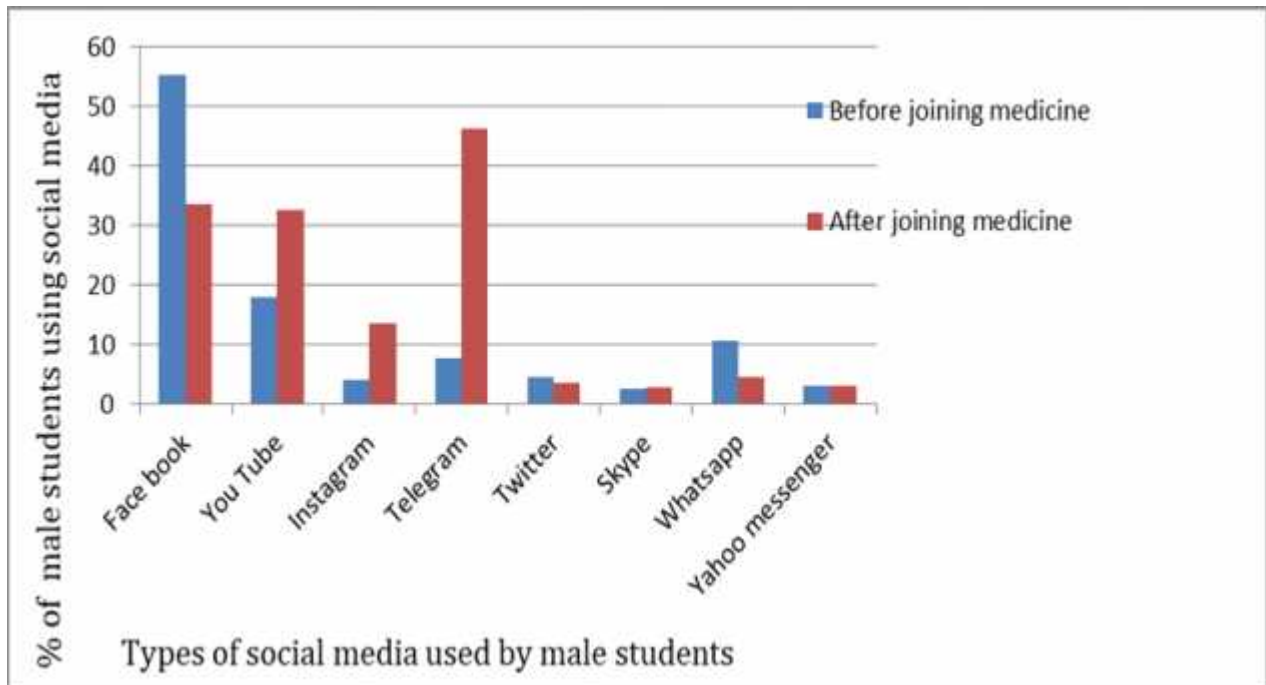
**Figure4. The pattern of SM usage by medical students after joining medicine**

The culture of using SM by female medical students was significantly changed after joining medicine. The proportion of female students using Facebook and Whatsapp was significantly dropped after joining medical school. Interestingly, the number of female students using You Tube and Telegram was significantly increased from 13% (N=67) to 20% (N=106) and 9% (N=48) to 36% (N=190), respectively ( $p=0.001$ ). The pattern of Skype, Twitter and Yahoo messenger usage among female medical students remained the same both before and after joining medical school (Figure5).



**Figure5. The habit of using SM by female students was changed after joining medicine**

Similarly, the pattern of SM usage by male medical students before and after joining medicine was surveyed. The proportion of male medical students using Facebook was significantly dropped after joining medicine from 55% (N=291) to 36% (N=177). However, still currently, significant proportion of male medical students were using Facebook actively (Figure6).



**Figure6.**The pattern of using SM by male students was changed after joining medicine

Several SM were used by different academic year students differently. According to this study the most commonly used SM by all academic years studied was Instagram followed by You Tube and Facebook. All academic year students under study were using Facebook. However, the proportion of students using Facebook decreased as their academic year increases significantly ( $p=0.001$ ). The pattern of telegram usage was also different across the batches. Telegram usage was common habit in year II, III and IV students; but it significantly decreased in year V students (Table4). This table also shows that cohorts below year V had significantly ( $p=0.001$ ) lower experiences of using Skype and Yahoo messenger.

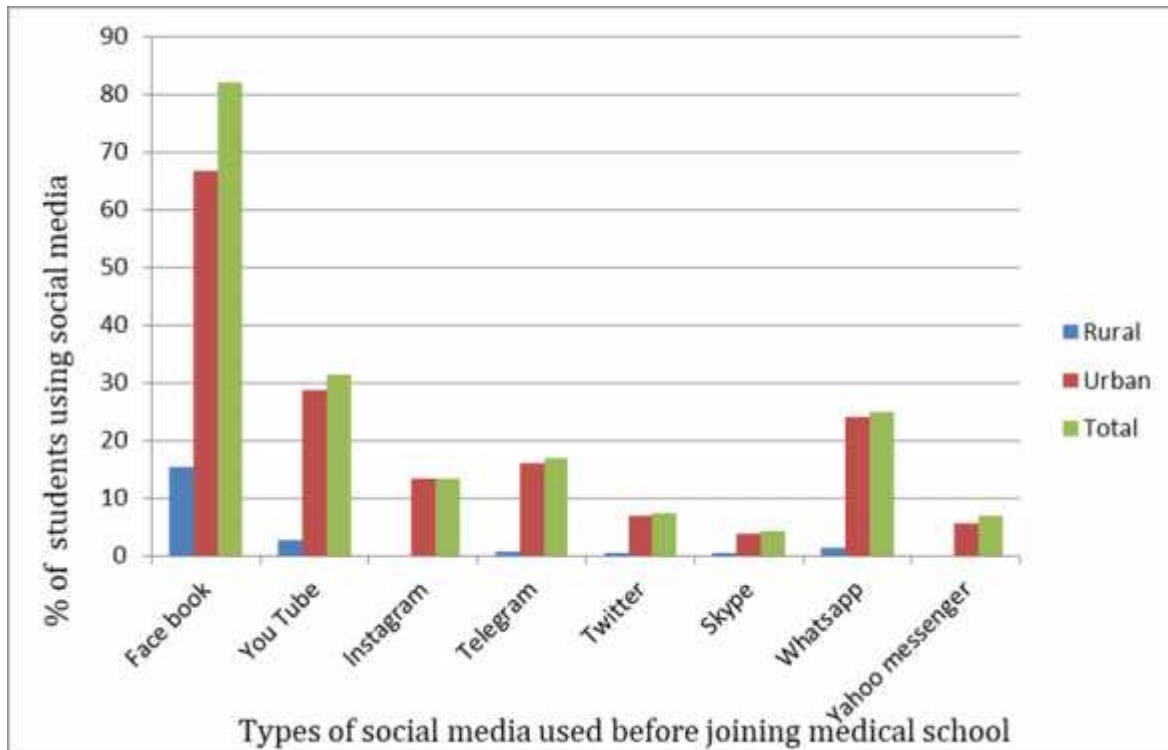
**Table4. The proportion of medical students using SM after joining medical school by academic year**

Types of SM	Academic year				Total
	Year II	Year III	Year IV	Year V	
Facebook	13.1	11.6	12.5	9.8	47.0
You Tube	14.0	14.4	15.3	8.3	52.1
Instagram	5.9	8.3	7.0	5.5	26.3
Telegram	24.1	23.1	21.0	14.0	82.2
Twitter	1.9	2.7	3.0	0.0	7.6
Skype	0.4	0.4	0.8	1.7	3.2
Whatsapp	3.4	4.4	2.1	1.3	11.2
Yahoo messenger	0.9	1.5	1.7	0.0	4.2

According to this finding only 18.2% (N=96) of the study subjects were from rural background. Majority of these (15.3%, N=81) were actively engaged in using Facebook before joining medical school. Medical students from rural background did not have an exposure for other SM before joining medical school (Figure7). Urban students were actively engaged in using in all SM. They were actively using Facebook, You Tube and Whatsapp SM applications. Significantly higher proportion of medical students with urban background had experiences of using Facebook than rural ones (15%, 67%, respectively and  $p=0.001$ ).

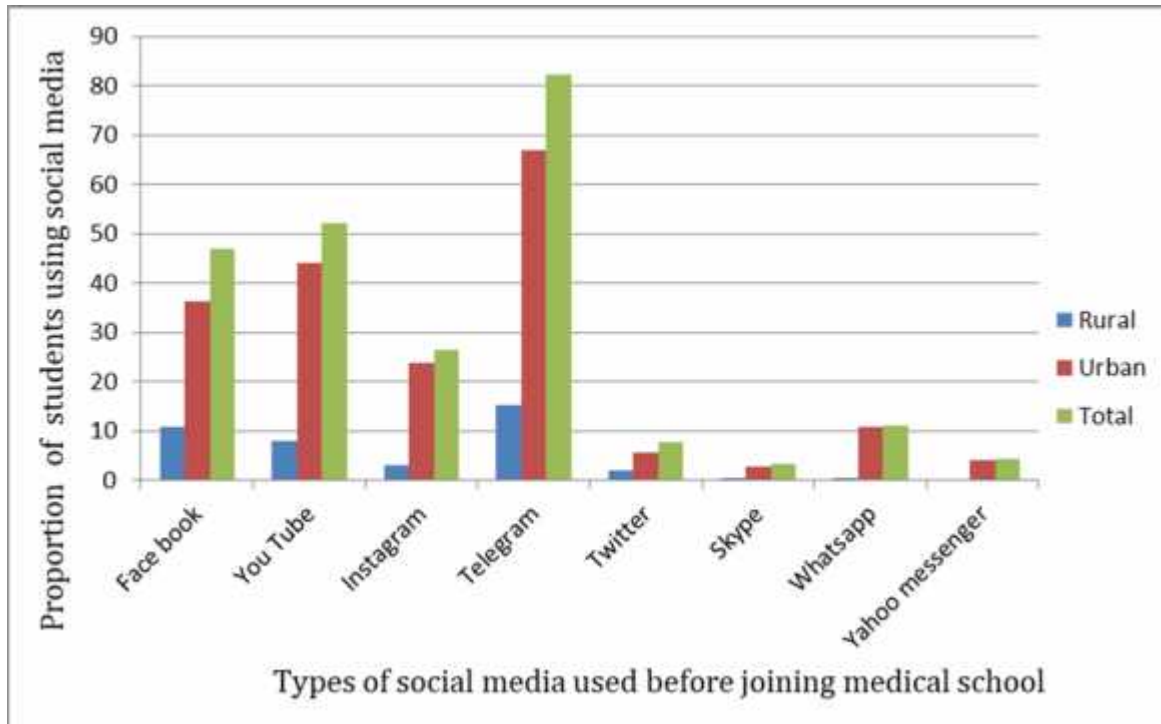
This study also revealed that there was significant association between the geographical background and the pattern of SM usage. Medical students with both rural and urban background had an exposure to several SM before joining school of medicine. The most common SM used by both rural and urban background students was Facebook, You Tube and Whatsapp, followed by telegram. Medical students with rural background showed no experiences of using Instagram before joining medicine. Medical students from urban background have diversified experiences of using various

SM (Figure7). Skype and the Yahoo messenger were the least commonly used SM by both rural and urban background students.



**Figure7. Previous residence and types of SM used before joining medical school**

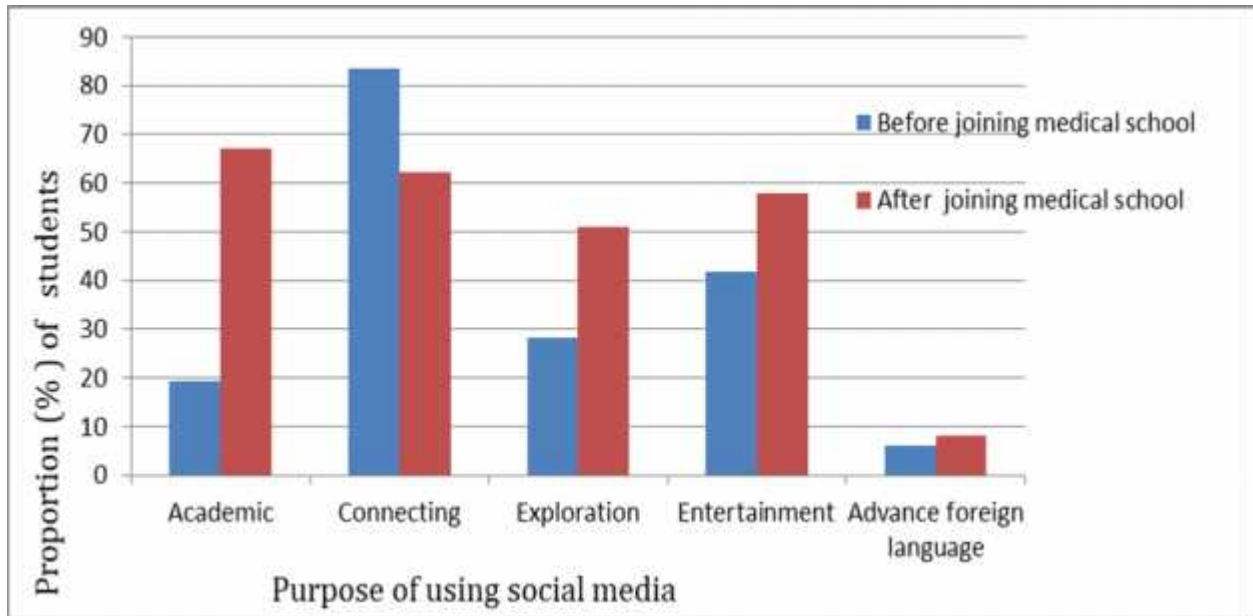
The trends of SM usage by medical students with rural and urban background changed after joining medical school significantly. The most commonly used SM by both groups of the study subjects were Telegram and You Tube, followed by Instagram. Facebook was not dominant SM after joining medical school in both study groups. The least commonly used SM after joining medical school in both groups of study were Twitter, Skype, Yahoo messenger and Whatsapp in both groups of study (Figure8). Students with rural background use Facebook and You Tube equally. The relationship between previous residence and the types of SM used by medical students was amazingly different. Medical students with rural background started to use SM that had not been used before joining school of medicine.



**Figure8. Previous residence and types of SM used after joining medical school**

### **7.3. Purpose of using SM by medical students**

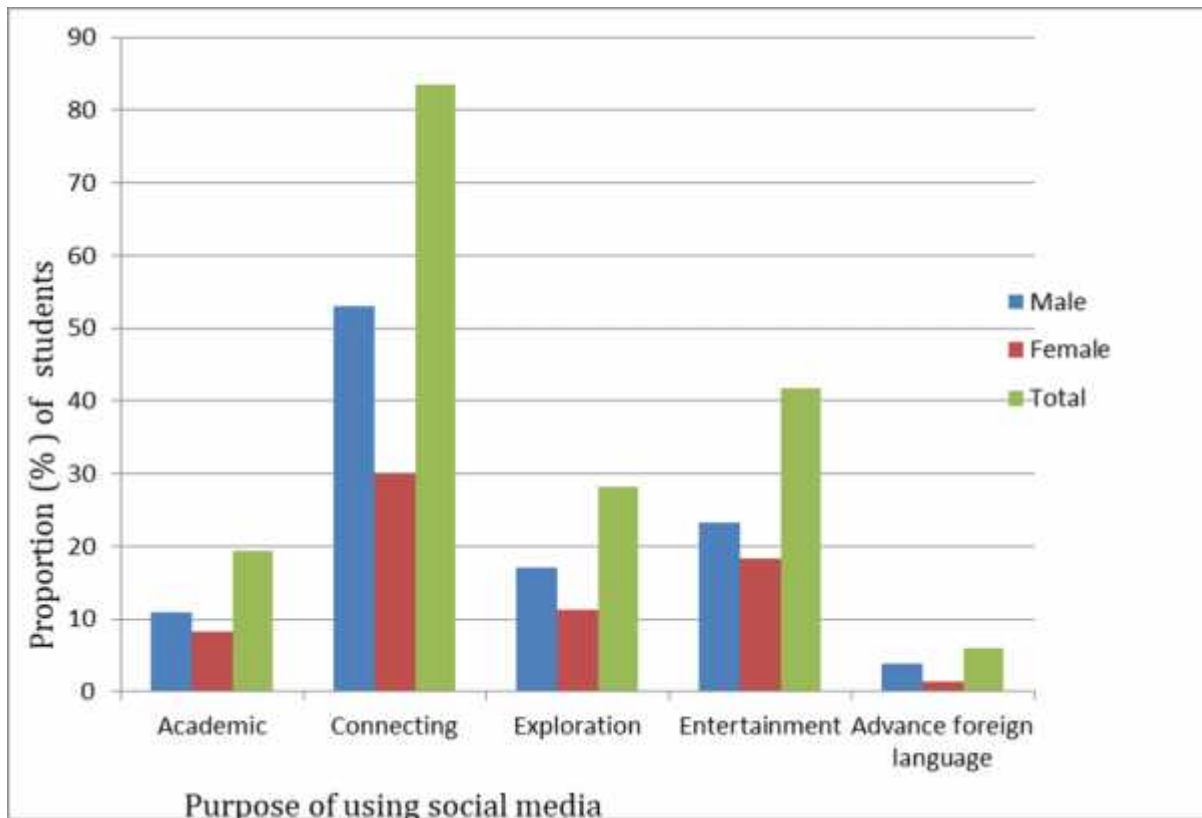
The purpose of using SM was determined by this study. Accordingly, most of the students had been using SM for nonacademic purposes before joining medicine. There were significant differences between the purposes of using SM by medical students before and after joining medical school. Previously, more than 80% of students were using SM for connecting and communicating with families and friends. This was followed by entertainment, and exploration. Least proportion of students was using SM for academic purposes and advancement of foreign languages before joining medical school (Figure7).



**Figure9. Purpose of using SM before and after joining medical school**

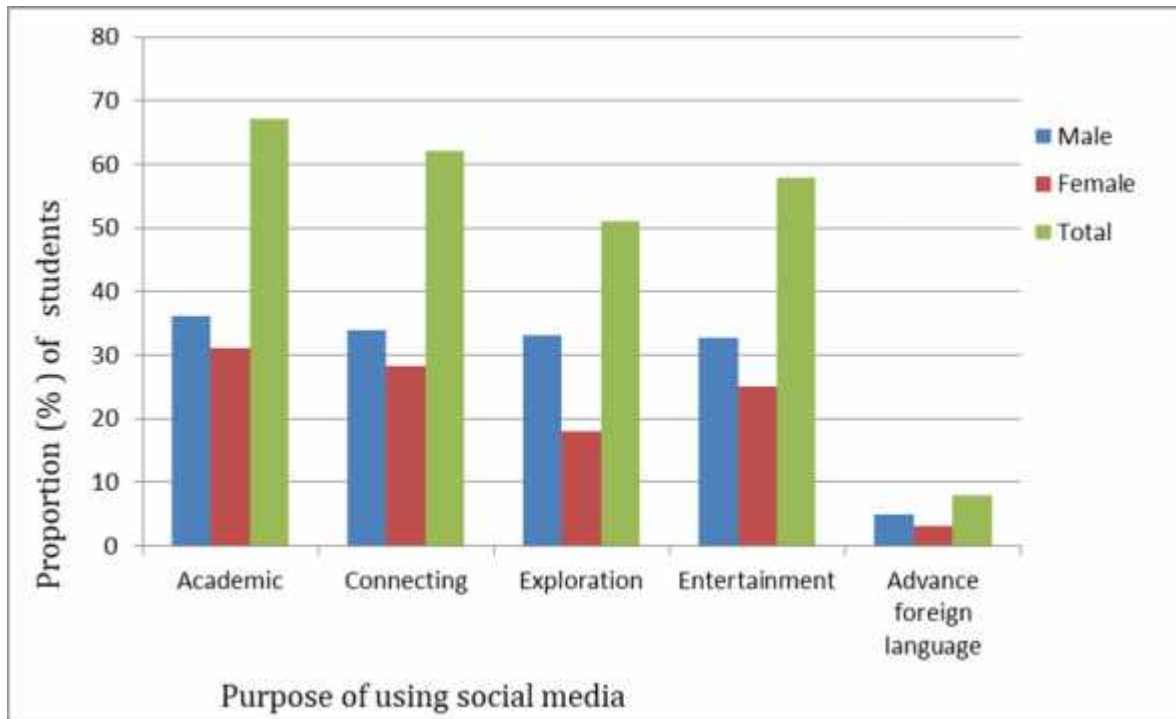
Interestingly, the purpose of SM usage by medical students was changed dramatically after joining medicine. The current findings indicated that medical students use SM for multiple purposes. However, the proportion of students using SM for academic purposes was increased from 19% (N=85) to 67% (N=354), which was statistically significant ( $p=0.001$ ). The proportion of students using SM for connecting, entertainment and exploration was also significantly increased ( $p=0.001$ ) after joining medical school. There were not statistically significant differences on using SM for advancement of language observed both before and after joining medical school in both sexes (Figure7).

The purposes of using SM could be different in male and female medical students. According to the current investigation more than half of the students were using SM for connecting and communicating with family and friends. The proportion of male students using SM for academics, connecting, entertainment and exploration was significantly higher than female medical students both before and after joining medicine. There was no significant difference between the proportion of male and female students using SM for advancing foreign language before joining medical school (Figure8).



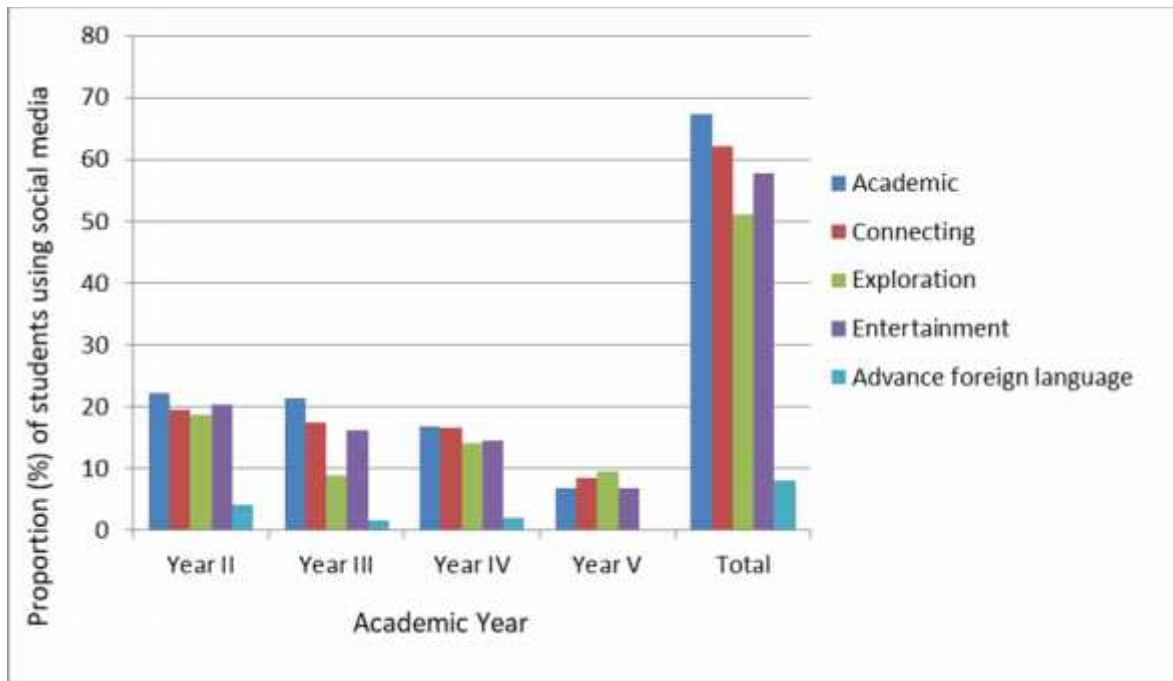
**Figure10. Purposes of using SM before joining medicine**

Females were also active users of SM before joining medicine. The purpose of female medical students for using SM was not significantly different from the male colleagues in both before and after joining medicine (Figures 10 and 11). This result indicated that males use SM for academic and nonacademic purposes equivalently. Higher proportions of females were using SM for academic purposes compared to the male colleagues both before and after joining medicine.



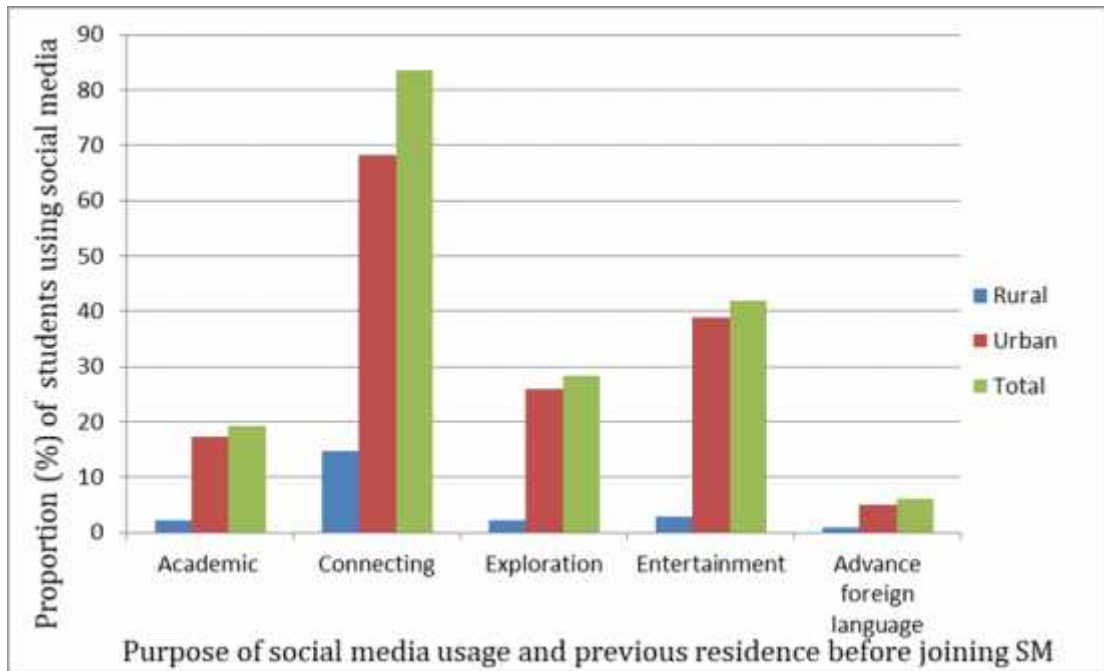
**Figure11. Purposes of female and male medical students of using SM after joining medical school**

This study indicated that there were significant differences in the interests of medical students for using SM. In general, the year I and II students reported that they use SM primarily for academic purposes; however, significant portion of these cohorts use SM also for connecting with families and friends and entertainments. Interestingly, the proportion of students using SM for any purposes was significantly dropped at year V. The proportion of students using SM for connecting with family and friends remained the same in all batches except in year V (Figure12).



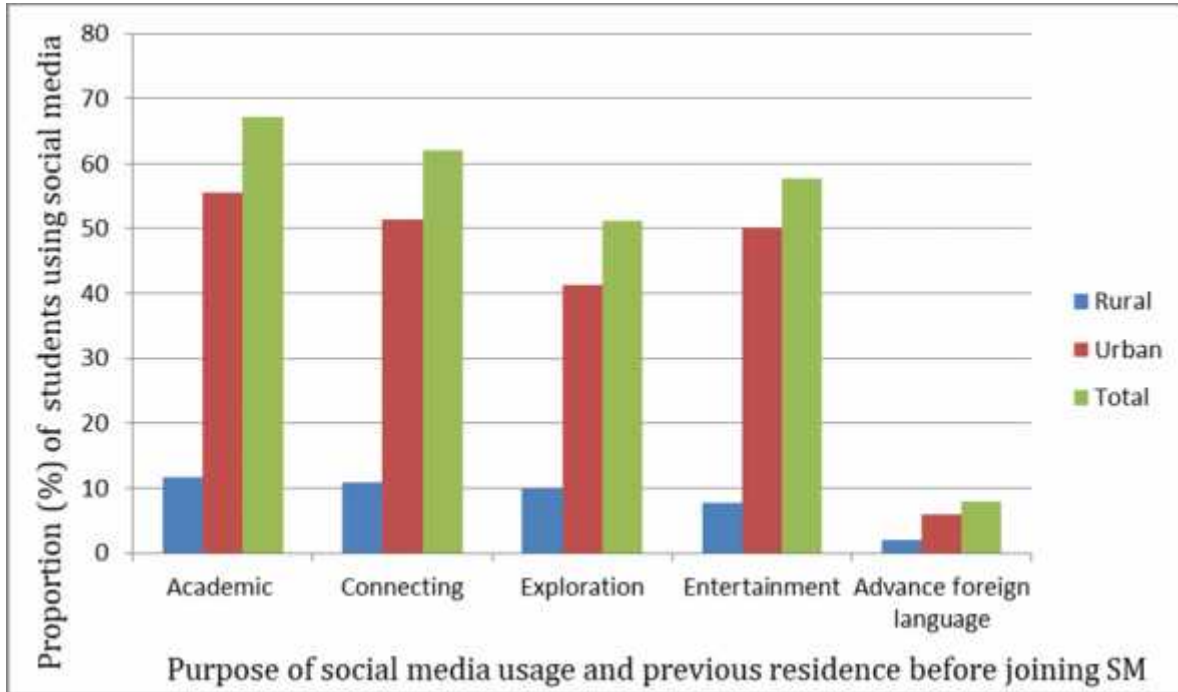
**Figure12. Academic Year and purpose of using SM**

This study also assessed the association between social back ground of students and purposes of using SM before and after joining medical school. Accordingly, majority of students were using SM for nonacademic purposes. The proportion of students using SM for connecting with friends and family was higher in both rural and urban backgrounds before joining medical school. Small proportions of students from both rural and urban background were using SM for advancing foreign language before joining medical school (Figure13).



**Figure13. Previous residence and purpose of using SM before joining medical school**

This study showed that the interest for using SM changed significantly after joining medical school in both rural and urban students. The proportion of students with urban background using SM for academic purposes increased significantly ( $p=0.001$ ) from 17% (N=90) to 57% (N=301). Similarly, significant proportion of students with rural background changed their interest to use SM for academic purpose after joining medicine (increased from 2% to 12%). There was no statistically significant difference in proportion of both cohorts of students using SM for academic purposes before and after joining medicine (Figure14).

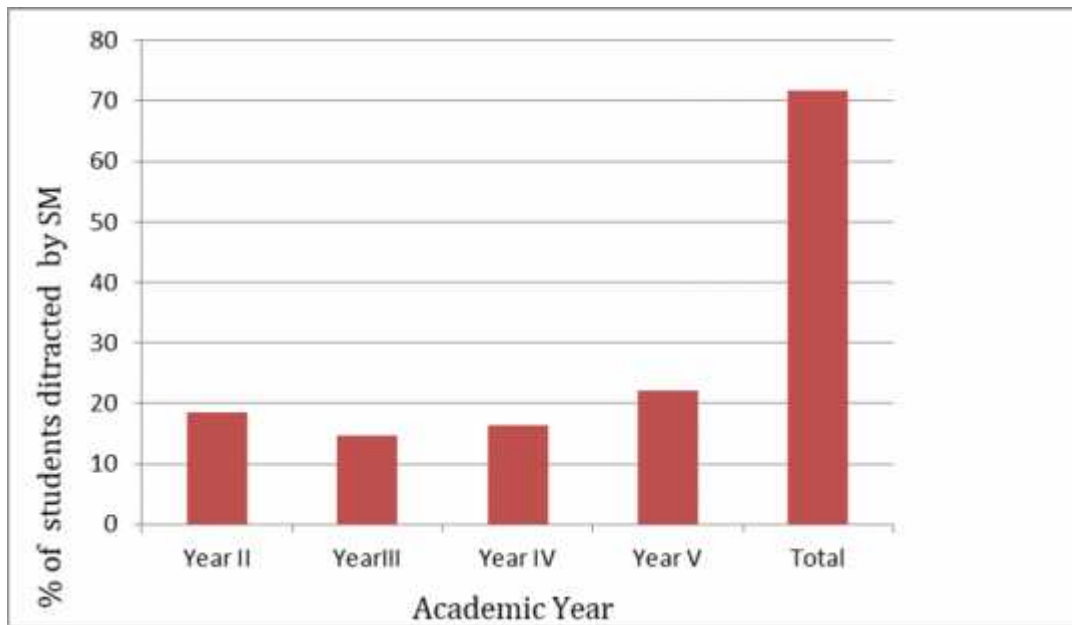


**Figure14. Previous residence and purpose of using SM after joining medicine**

#### **7.4. The impact of SM on student's performance**

This study also explored the impact of SM on students' performance. We have surveyed whether students could be stable at their study during exam times and whether they are aware of the value that SM has for their academic performance. This was assessed by self-reported questionnaire. According to our finding, majority (70%, N=379) of medical students were distracted by SM while preparing for exam and doing their assignments (Figure15). The distraction of medical students by SM, while studying for examination and preparing assignments, is significantly higher in males than females ( $p=0.001$ ). Totally, 25% and 47% of female and male students, respectively, reported that they were distracted by SM while doing their assignments and studying for examination (Figure15).

The assessment of variation in proportion of distraction among different academic year students by SM while preparing for examinations and doing assignments was explored. The result indicated that the year II and year V students were more distracted by SM while preparing for examination and doing their assignments (Figure15). There was no statistically significant difference in between year III and year IV students for being distracted by SM while preparing for examinations and doing assignments ( $p=0.067$ ).



**Figure15. Academic years and proportion of students distracted by SM**

The belief of students about the role of SM on academic performance was investigated. The result showed that most medical students were not sure whether SM has benefit for their academic achievement or not. Equal proportions of the students believe that the use of SM could decrease/ increase their academic performances. However, it was difficult to compare this finding because there was large rate of non-respondents (Table5).

**Table5. Perception of students about the impact of SM on academic performance**

Sex	Proportion of students believing that SM has impact on performance		
	% of students believe in decreases	% of students believe in increases	% of students not certain
Female	7.0	5.3	25.8
Male	8.9	8.7	44.3
<b>Total</b>	15.9	14.0	70.1

The perception of different cohorts of students about the role of SM on academic achievement was also explored. The result showed that students in all studied cohorts were not sure about the benefits of SM. Significant proportion of year II students believe that SM could negatively affect (5.7%, N=30,  $p=0.001$ ) their performance compared to the students that believe that SM could increase (3.6%, N=19,  $p=0.001$ ) their academic performance. Only very small proportion of year V students believed that the use of SM could affect their academic performance in either way (Table6).

**Table6. Academic year and the perception of students about the impact of SM on academic performance**

Academic Year	Proportion of students believing that SM has impact on performance		
	% of students believe in decreases	% of students believe in increases	% of students not certain
2	5.7	3.6	15.7
3	4.0	5.5	15.5
4	4.9	5.5	16.5
5	1.3	1.3	22.3
<b>Total</b>	15.9	14.0	70.1

According to the current study one-third of students were spending half an hour to an hour in SM per day. The number of medical students investing 2-3 hours per day was also significant. Some medical students even invest higher hours in SM (4-5 hours) per day. Some visited SM only once a week (9.3%, N=49) and others visited SM twice (3%, N=16) a week (Table7).

**Table7. Time invested on SM by medical students**

<b>Time spent per day or weekly</b>	<b>Frequency</b>	<b>Percent</b>
4-5hrs per day	70	13.3
2-3hrs per day	143	27.1
30min-1hr per day	178	33.7
3 times a week	50	9.5
Twice a week	16	3
Weekly	49	9.3

It was also investigated whether there was relationship between time spent on SM and sex of the study subjects. The result revealed that males invest significantly higher time on SM than female medical students. Interestingly, 8.7% of males were investing 4-5 hours per day in SM while only 4.5% females were spending the same amount of time. The proportion of male medical students spending 2-3 hours per day on SM were nearly twice that of female medical students (Table8).

**Table8. Time invested on SM by sex among medical students**

<b>Time spent by medical students</b>	<b>Sex</b>	<b>Proportion of students</b>
<b>Four to five hours per day</b>	Female	4.5
	Male	8.7
<b>Two to three hours per day</b>	Female	9.7
	Male	17.4
<b>Thirty minutes to 1 hour per day</b>	Female	14.4
	Male	19.3
<b>Three times a week</b>	Female	2.3
	Male	7.2
<b>Twice a week</b>	Female	1.9
	Male	1.1
<b>Weekly</b>	Female	2.8
	Male	6.4

Several medical students (35.6%, N=188) spent 2-3 hours per day on their study followed by 4-5 hours (31.3%, N=165) and more than 6 hours (22%, N=116). Only small proportion (10.4%, N=55) of students reported that they studied only for 1 hour or less than one hours per day (Table9).

**Table9. Time invested on study by medical students**

<b>Time spent on study per day</b>	<b>Frequency</b>	<b>Percent</b>
1hrs or less	55	10.4
2-3hrs per day	188	35.6
4-5hrs per day	165	31.3
More than 6hrs	116	22

## 8. Discussions

Proper and wise use of social media (SM) is important to acquire the maximum possible benefits from them. Here, we investigated the pattern of SM usage by medical students in school of medicine, Addis Ababa University, Ethiopia. To the best of our knowledge this is the first study of its kinds to be conducted among medical students in Ethiopia. Results of demographic data indicated that 38.1% (N=201) and 61.9% (N=327) of the study subjects were females and males, respectively. In addition, the proportion of study subjects from rural background (18.2%, N=96) was significantly ( $p=0.01$ ) lower than the urban background (81.8%, N=432). Even though, all national medical schools were not involved in the study, this result shows that there might be serious need to revise the placement policy for medical students in Ethiopia. Recent literatures indicated that students with rural background tend to serve in rural health facilities and cope up with the community easily as they had social and geographical familiarity (48). As this is beyond the scope of the current study, further investigation, involving representative samples at national level, is needed to clear out the exact implication of these results.

School of medicine at Addis Ababa University (AAU) provides every student with an android tablet that is equipped with smart applications. In addition, there is also free WiFi service available for the whole day in the school. Thus, it was important to consider the previous exposure level of the study subjects for SM before joining school of medicine. The assumption was that some of students were naïve for SM and would have abused the freely available apparatus and connection. Here, we show that majority of medical students had experiences of using SM even before joining medical school. Because of the freely provided android tablet apparatus and full-day available internet connection, both female and male students had equal opportunity for SM after joining medical school. The survey result indicated also that almost all students either from rural or urban background were active users of SM in school of medicine, Addis Ababa University (99.6%, N=526) (Table3). Similar survey conducted by Mulisa and Getahun on 500 secondary students from five schools located in central Ethiopia indicated that 353 participants were found to be active users of SM (49). Similar study from Iraqi indicated also that SM are very popular among second year medical students

of College of Medicine, University of Babylon (50). Further study from Bangladesh has also indicated millions of students of different disciplines have regular interactions on Facebook with friends, teachers, and senior students of the institution. They indicated that students have been spending significant time on these media, particularly in Facebook (51). This indicates that in the dynamically changing era of communication technology no medical student can escape from using SM.

Several SM have been used by medical students in different parts of the globe (47-50). However, the common types of SM used by medical students in Ethiopia have not been determined so far. Here, we have investigated the proportion of medical students using the selected eight SM (Facebook, You Tube, Skype, Whatsapp, Instagram, Telegram, Twitter and Yahoo messenger) before and after joining medical school. Among others, these are currently the most popular SM widely used by the young and adults in Ethiopia. Our findings revealed that the type of SM used by medical students before and after joining medical school was not the same. Facebook was the dominant SM used by students before joining medical school (82%, N=433). This finding is in line with the result from Ghana (52) that showed that 90% of college students are using Facebook. Study on secondary students by Mulisa and Getahun (49) also showed that 327 students from 353 active SM users use Facebook. Taken together, this indicates that students have already ample experiences of using SM before joining higher institute and Facebook is the dominant SM practiced by many secondary school students. Global experiences also show that Facebook is one of the most popular SM with total number of active users of more than 2 billion, from which 30% are age group in between 20-29 years.

Investigation on the pattern of Facebook usage by medical students showed that the number of Facebook users has been declined significantly ( $p=0.01$ ) from 82% to 47% after joining medical school (Figure2). This is mainly attributed to the stressful academic environment in medical school that needs extra time for reading, doing assignments, managing academic and clinical duties. It is expected that medical students need to spend much time on reading for their assignments and examinations than socialization. It is also noteworthy to mention that still interesting number (nearly 50%) of medical

students was engaged in using Facebook. However, the dominance of Facebook was over taken by Telegram after joining medical school. The use of Telegram has significantly increased from 18% (N=495) to 82% (N=433) after joining medical school. Telegram is free software based on VoIP technology and used as messaging and calling tool by millions of the world people. Its users can form groups and distribute lists of information among the groups. That is why it has increased popularity among our medical students in near past. The students use Telegram for sharing and posting lecture and exam schedules and communicating other messages from instructors and Dean's office. Finally, the rapid expansion of Telegram is attributed to its ease of use, instant sharing, increasing popularity and the ubiquitous access through mobile phone and tablets.

You Tube was the second most commonly used SM by medical students both before and after joining medicine. The proportions of its users has increased significantly ( $p=0.01$ ) from 31% (N=165) to 52% (N=275) after joining medical school. This is partly because, unlike other SM, You Tube is an extremely practical teaching tool, with over half of viewings on handheld mobile gadgets. In addition, it is not limited by time or place, unlike books, lectures and tutorials. Even it has been used to teach students from kindergarten through the graduate level with You Tube. Thus, it is not amazing to see students streaming videos in every corridor of the lecture halls and dormitory. Because of the attractive features of its audiovisual materials You Tube was most commonly used by the young and adults. For example, 46% of the You Tube users in United Kingdom are 18-24 years old. Similarly, more than all of our SM users, including You Tube users, are in the age range of 19-26 years. Our study shows that very small proportions of students use Twitter, yahoo messenger, skype and Whatsapp. This is in contrary to the study carried out in Saudi Arabia by Asiri and his colleagues where they showed that most medical students use Twitter/WhatsApp every day for extended period of time (52).

The purpose of using SM was determined by this study. There were significant differences between the purposes of using SM by medical students before and after joining medical school. Accordingly, most of the students had been using SM for

nonacademic purposes before joining medicine, like connecting with friends and family, exploration of new things and enjoying themselves with videos and music (Figure 9 and 10). For example, the difference between the proportions of students using SM for academic purpose changed significantly ( $p=0.001$ ) from 19% to 68%. However, this purpose is dramatically changed after joining medical school. This might be the effect of pressure in academic life in medicine. The proportion of students using SM for connection with family and friends dropped significantly ( $p=0.001$ ) from 83.5% (N=441) to 62.1% (N=327) after joining medical school. This finding is in line with a research conducted among Ethiopian high schools by Mulisa and Getahun where they showed that most students perceive SM as tools for recreational and relational purposes (49). However, the proportion of students using SM for exploration of new things and news increased significantly ( $p=0.001$ ) from 28.2% (N=149) to 51.1% (N=270), respectively before and after joining medical school. Similarly, the use of SM for entertainment was also elevated from 41.8% (N=221) to 57.8% (N=305) after joining medicine. This indicates that most of medical students use SM for academic purposes and releasing academic stress by relaxing themselves after long time study. In addition, SM is a way to make connections, not only on campus but with friends outside of school. This is in line with findings from Iraqi medical school where the main reasons for SM usage among medical students were visiting medical pages and groups and to communicate with friends and follow their posts and updates. In addition, medical students use SM for killing spare time, studying in groups on Facebook messenger, reading news, following fashion and styles and sports (50, 51). Taken together, irrespective of the type of SM used and the purpose of using SM, it is important to monitor the time spent on SM by medical students.

Due to the alarmingly increased popularity of SM in medical schools and other disciplines, professors and educational leaders are questioning whether performance of students is affected by how much time is spent on these sites. Some people believe that the evolution of SM is a mixed blessing for teaching-learning process (5, 6). Some others believe that the benefit of SM outweighs the disadvantages (9, 10). However, there is no scientific study carried out in Ethiopian medical schools that show how much time medical students invest on SM. There is also no data that shows how students

balance the time invested on their study and SM. Here, we show for the first time that majority (70%, N=379) of medical students were distracted by SM while preparing for exam and doing their assignments (Figure14). The distraction of medical students by SM while studying for examination and preparing assignments is significantly higher in males than females ( $p=0.001$ ). Similar study conducted by Alahmar among second year medical students in Iraqi indicated that majority of study participants do not deactivate Facebook occasionally like during exams (50). Gupta and Irwin also indicated that Facebook can disturb students, especially making their learning duties less important than surfing and chatting with friends and family (53). Our finding has triplicates of implication: 1) The need for orientation for medical students at the beginning of the first year, 2) Continuous and intimate follow up is needed by family, Deans and advisers, 3) Special policy is also needed concerning the use of SM by medical students.

The belief of students about the role of SM on academic performance was investigated. The result showed that most medical students were not sure whether SM have benefit for their academic achievement or not. Equal proportions of the students believe that the use of SM could either decrease or increase their academic performances. However, it was difficult to compare this finding because there was large rate of non-respondents. Further investigation is needed to correlate the time invested on SM and the cumulative grades of students. However, we tried to acquire self-reported grades of students, most medical students refused to write their grades in the survey documents. Therefore, special mechanism might be needed to acquire their grades to study the association between the performance and pattern of SM usage in future. The perception of different cohorts of students about the role of SM on academic achievement was also explored. The result showed that students in all studied cohorts were not sure about the benefits of SM. This indicates that there is confusion among students concerning the benefits or disadvantages of SM. This finding is in contrary to the study conducted by Tezer and his colleagues among Near East University students in Cyprus. They showed that students with SM accounts had achieved better grades when compared with the students that did not have any SM account. Moreover, unlike in our finding,

students from Cyprus had moderate attitudes towards SM (54). In our cases, further study is needed to clarify the confusion about the benefits of SM.

According to the current study one-third of students were spending half an hour to an hour in SM per day. The number of medical students investing 2-3 hours per day was also significant. Some medical students even invest higher hours in SM (4-5 hours) per day. This is in parallel to the study conducted by Asiri and his colleagues among Saudi Arabian medical students. They demonstrated that most medical students use Twitter/WhatsApp every day for 3-4 or more than 5 hours (52). Mulisa and Getahun also revealed that students likely spend more time on SM per day than on academic activities. Their finding indicated particularly that the duration of time students spend on Facebook alone seems to be equal with the time spent on academic activities (49). Another two important studies conducted in Ghanaian Universities indicated that majority of University students spent over two hours on SM on a daily basis for nonacademic purposes (55, 56). Taken together, it is possible to deduce that and obsession with SM by students can have negative impacts on their academic performance. Thus, students really need special attention; otherwise they might be victims of SM addiction in future. It was also investigated whether there was relationship between time spent on SM and sex of the study subjects. The result revealed that males invest significantly higher time on SM than female medical students. This result is in congruent with the findings of A'lam Elhuda and Dimetry in Khartoum, Sudan. They showed that the prevalence of social networks users among medical students was 93.1%, with higher prevalence among males than females (97.6% and 91.1%, respectively (57). Taken together, this might be due to the fact that males have easier access to social networks and more cultural and social freedom than females to practice what they want. Interestingly, 8.7% of males were investing 4-5 hours per day in SM while only 4.5% females were spending the same amount of time. The proportion of male medical students spending 2-3 hours per day on SM were nearly twice that of female medical students. This might be further explained by the fact that female students feel responsibility while using SM. However, this finding contradicts with the result of Asiri et al from Medical school of King Khalid University, Saudi Arabia. They attributed the higher use of SM by females in Saudi Arabia to the fact that females

may consider social networks as an easy way to interact with friends and people from the world in a conservative community (50). They explained that males can freely go out on their own any time day and night, therefore; they need not spend as much time as females in SM.

## **9. Conclusions and Recommendations**

There might be serious need to revise the placement policy for medical students in Ethiopia, as majority of study subjects were females and rural backgrounds. Majority of students had experiences of using SM even before joining medical school. Facebook, You Tube and Telegram were the most dominant SM used by students before joining medical school. However, the dominancy of Facebook was over taken by Telegram after joining medical school.

SM have influenced the living styles of medical students in our college in many ways. Most of the students had been using SM for nonacademic purposes before joining medicine; however, this trend was changed after joining medical school. The time spent by medical students is too much to be considered by the authorities and families. There should be also special strategy to control the type of SM medical students using. Continuous personal development trainings might be important to clear out the confusion of medical students about the impact of SM. This kind of trainings might help students to re-engineer the purpose of SM usage from nonacademic purpose to academic purpose. It looks that the evolution of SM is a mixed blessing for teaching-learning process in our set up, where the youngsters are using SM mostly for nonacademic purposes. The distraction of medical students by SM while studying for examination and preparing assignments is significantly higher in males than females. The implications of this finding is triplicate: 1) The need for orientation for medical students at the beginning of the first year, 2) Continuous and intimate follow up is needed by family, Deans and advisers, 3) Special policy is also needed concerning the use of SM by medical students. Finally, special strategy might be needed to acquire their grades to study the association between the performance and pattern of SM usage in future.

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**2. Which social media have you been using while you were in high school or lower grade?**

A) Facebook

B) Youtube

C) Instagram

D) Telegram

E) Twitter

F) Skype

G) Whatsapp

H) Yahoomeessenger

**3. For What purpose have you been using social media while you were in high school or lower grade?**

A) For Academic purpose (for Class schedule, Discussions and assignments, Receive and sends information's)

B) Connecting with friends and family (Chatting, sharing photos and videos)

C) Exploration of new things and news (Information like national and international news)

D) For entertainment (Downloading, listening music and Video)

F) To advance foreign language

### **III. Previous Social Media Usage**

**4. Do you currently use social media?**

A) Yes

B) No

**5. Which social media are you currently using?**

A) Facebook

B) Youtube

- C) Instagram
- D) Telegram
- E) Twitter
- F) Skype
- G) Whatsapp
- H) Yahooomessenger

**6. For What purpose are you using social media currently?**

- A) For Academic purpose (for Class schedule, Discussions and assignments, Receive and sends information's)
- B) Connecting with friends and family (Chatting, sharing photos and videos)
- C) Exploration of new things and news (Information like national and international news)
- D) For entertainment (Downloading, listening music and Video)
- F) To advance foreign language

**IV. Social Media Usage and Academic performance**

**7. Please, provide your Grade point averages (GPA) in the following space; for example like 2.8 or 3.6 or 4.0.**

Year II \_\_\_\_\_

Year III \_\_\_\_\_ Year IV \_\_\_\_\_ Year V \_\_\_\_\_

**8. Is the use of Social Media increase or decrease your academic performance?**

- A) Increase
- B) Decrease
- C) Not certain

**9. How frequently are you using social media currently?**

- A) 30 minutes to 1 hour per day
- B) 2 – 3 hours per day

C) 4 – 5 hours per day

D) Weekly

E) Twice a week

F) Three times a week

**10. How much time do you spend on your study per day?**

A) 1 hour or less

B) 2-3 hours

C) 4-5 hours

D) More than 6 hours

**11. Do you find yourself distracted by Social Media Websites while completing assignments or studying for examination?**

A) Yes

B) No

**Thank You!**