

ORIGINAL ARTICLE

The impact of using social media on the academic performance of Qassim University students, Unaizah, Saudi Arabia

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ABSTRACT

Background: Social media has been used for the past 10 years, by changing our way of communication, exchanging, and gathering information easily. The present survey was carried out to identify the prevalence of social media use among students at Qassim University, Qassim, Saudi Arabia. Additionally, this survey aimed to assess the impact of social media use on the academic performance of students and to compare social media use among medical and non-medical students.

Methodology: All university students belonging to six medical and non-medical colleges were recruited. They answered a self-administered questionnaire, including socio-demographic information, and questions related to social media use. The majority of students either agree (41.3%) or highly agree (35.8%) that excessive use of social media is an issue affecting their academic life and 462 (43.6%) agree that social media distracts them from college.

Results: The study included 1,060 participants. The prevalence of social media use among the study participants was 99.5%. There was a significant association between social media use and the grade point average of students ($p = 0.001$). It was found that participating in academic discussions on social media improved academic performance (53.3%). Also, 62.2% reported using social media to spread knowledge among their classmates. A high percent agree (41.6%) or highly agree (31.6%) that using social media for research purposes helped to improve their grades.

Conclusion: Social media usage for academic purposes is high among Qassim University students. Most students were aware of its positive as well as negative influences on their academic performance.

Keywords: Social media, student, perception, college, Qassim, Saudi Arabia.

Introduction

Social media has been used for the past 10 years, by changing our way of communication, exchanging, and gathering information easily. It helps us remain updated and connected with the world and its latest developments. In a study conducted in the United States in 2016, they found that 69% of adults use at least one social networking platform [1,2]. The latest statistics of internet users around the world revealed that they totaled 4.021 billion, and among them 3.196 billion were using social media [3]. The reason for the increasing number of people using social media was due to its effect on politics, economy, and education. Not to mention that using it in these huge numbers was due to its simplicity and easy access [1,4,5]. There are a countless number of

social media applications and platforms, and WhatsApp, Twitter, Facebook, Instagram, Telegram, and Skype are the most commonly used applications [6,7]. In a study carried out in Saudi Arabia, 92.02% of the people using the internet use Twitter, while 65.64% of them use

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Instagram, 63.19% of them use Facebook, and 36.20% use YouTube [8]. Lately, it has been noted that the use of social media has a strong impact on students' academic performance. Depending on the usage of the person, it might resolve in a positive or a negative outcome [9]. In a study that focused on the excessive use of social media, it showed that it may lead to addiction, particularly among female users. This study showed that there is a link between using social media for longer periods and academic performance. Even though it showed a little effect, it must be taken under consideration [10]. Looking toward the positive outcome, a study was conducted to check the improvements on social media on academic performance. It focuses on the students contacting their fellow students and tutors. It resulted in a better performance for the students depending on whether there is no overuse of social media [11]. The impact of social media and academic performance is highly dependent on the student; some use it to improve their academic performance and others are more distracted by it [12]. There is a study which showed that being able to manage your time on social media and study time, i.e., multitasking, should eliminate the risk of social media affecting the academic performance [13,14]. In our study, we compared the usage of social media networking between medical and non-medical students and assessed its impact on academic performance.

Methodology

After the Institutional Review Board's approval, an observational, cross-sectional study was conducted among Qassim medical students (Unaizah College of Medicine, Unaizah College of Pharmacy, Almulaida College of Medicine) and non-medical students (Unaizah College of Engineering, Albukairiah College of Sciences And Arts, Almethnab College of Sciences and Arts), Qassim region, Saudi Arabia, during the academic year of 2019-2020. Data were collected using a validated, pretested questionnaire used in the study. Self-administered questionnaires were distributed among medical students of Unaizah College of Medicine, Unaizah College of Pharmacy, Almulaida College of Medicine, and non-medical students at Unaizah College of Engineering, Albukairiah College of Sciences and Arts, Almethnab College of Sciences and Arts at Qassim University, and a total of 1,060 participants completed the questionnaire. Responses were received and the questionnaire was in Arabic. The questionnaire was developed from the literature and formal discussions with experts. All the participants completed a questionnaire about the impact of social media usage on their academic performance which included socio-demographic characteristics and questions related to using social media (hours of using mobiles and other electronic devices, negative and positive impacts on academic performance, etc. The participants had the right to withdraw from the study at any time without any obligation toward the research team. Access to data is limited to investigators and authorized people.

No interventions and no additional investigations were carried out. A pilot study was conducted on 36 students (18 male and 18 female), 6 students from each college, before starting our study to test the validity of our questionnaire and to estimate the timing needed for each participant to complete the questionnaire. Data were tabulated and analyzed by using Statistical Package for the Social Sciences, v22. Qualitative data were represented as numbers and percentages. Pearson's chi-square and Fisher's exact tests as appropriate were used to investigate the association between two independent variables. Significance was considered at $p < 0.05$.

Results

This cross-sectional study was designed to show the impact of social media use on the academic performance of Qassim University students. The study included 1,060 participants who fulfilled a self-administered questioner. Males constituted 58.6% and the most frequent (43.6%) age group was 20-22 years. There were 415 (39.2%) students from medical colleges compared to 645 (60.8%)

Table 1. Socio-demographic characteristics of the study participants.

		n	%
Gender	Female	439	41.4%
	Male	621	58.6%
Age (years)	18-20	227	21.4%
	20-22	462	43.6%
	22-24	260	24.5%
	>24	111	10.5%
Major	Medical	415	39.2%
	Non-medical	645	60.8%
Father's level of education	Higher education	402	37.9%
	High school diploma	209	19.7%
	Bachelor's degree	148	14.0%
	Diploma	119	11.2%
	Did not finish high school	182	17.2%
Mother's level of education	Higher education	325	30.7%
	High school diploma	211	19.9%
	BA	145	13.7%
	Diploma	59	5.6%
	Did not finish high school	320	30.2%
Income level	Insufficient and is not saving	59	5.6%
	Sufficient but is not saving	351	33.1%
	Sufficient and is saving	626	59.1%
	Indebted	24	2.3%
GPA	<3	143	13.5%
	3.5-4	332	31.3%
	4-4.5	319	30.1%
	4.5-5	266	25.1%

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from non-medical colleges. Their grade point average (GPA) was most frequently (31.3%) 3.5-4 and 4-4.5 (30.1%). The education of father and mother was ranked as higher education in 37.9% and 30.7%, respectively (Table 1).

The prevalence of social media use among the study participants was 99.5%. The used networks included Twitter (12.0%), Snapchat (10.9%), You Tube (7.9%), and WhatsApp (7.3%), while the majority (57.9%) used more than one type. About two-thirds reported of using more than three websites for more than 3 hours (62.0% and 65.3%, respectively). Most of the respondents (39.0%) used social media for multiple purposes, including chatting, communicating with professors and

students, uploading images, and downloading audio or video content, blogging, and conducting research and surveys. The groups followed on social media were entertainment besides education and general information in 46.1% of the participants (Table 2).

Furthermore, using more than one type of social media was significantly higher among medical students ($p < 0.001$). Whereas, the time spent on social media was comparable in both groups ($p = 0.107$). Single use of social media for just communicating with professors and students, uploading images, downloading audio or video content, blogging, or for conducting research and surveys was significantly higher among non-medical students ($p < 0.001$). Likewise, single use for entertainment,

Table 2. Prevalence and nature of social media use among medical and non-medical students.

		Major						p-value
		Medical		Non-medical		Total		
		n	%	n	%	n	%	
What social media websites do you use?	I do not use social media	1	0.2%	4	0.6%	5	0.5%	<0.001*
	WhatsApp	12	2.9%	65	10.1%	77	7.3%	
	YouTube	22	5.3%	62	9.6%	84	7.9%	
	Snapchat	18	4.3%	98	15.2%	116	10.9%	
	Twitter	35	8.4%	92	14.3%	127	12.0%	
	Combination	323	77.8%	291	45.1%	614	57.9%	
	Others	4	1.0%	33	5.1%	37	3.5%	
How many social media websites do you use?	One	8	1.9%	31	4.8%	39	3.7%	<0.001*
	Two	40	9.7%	93	14.5%	133	12.6%	
	Three	78	18.8%	151	23.6%	229	21.7%	
	More than 3	288	69.6%	366	57.1%	654	62.0%	
How many hours do you spend each day on social media?	30 minutes	6	1.4%	14	2.2%	20	1.9%	0.107
	1 hour	29	7.0%	71	11.1%	100	9.5%	
	2 hours	96	23.2%	150	23.4%	246	23.3%	
	More than 3 hours	283	68.4%	406	63.3%	689	65.3%	
What is your main purpose in using social media?	Downloading audio or video content	11	2.7%	26	4.1%	37	3.5%	<0.001*
	Uploading images	1	0.2%	37	5.8%	38	3.6%	
	Communicating with professors and students	9	2.2%	32	5.0%	41	3.9%	
	Conducting research and surveys	7	1.7%	42	6.6%	49	4.6%	
	Blogging	14	3.4%	50	7.8%	64	6.1%	
	Chatting	84	20.3%	135	21.1%	219	20.8%	
	Combination	220	53.1%	191	29.8%	411	39.0%	
	Others	68	16.4%	128	20.0%	196	18.6%	
What groups do you follow on social media?	Entertainment	77	18.6%	197	30.7%	274	26.0%	<0.001*
	Education	27	6.5%	70	10.9%	97	9.2%	
	General Information	15	3.6%	88	13.7%	103	9.8%	
	Combination	273	65.9%	213	33.2%	486	46.1%	
	Others	22	5.3%	73	11.4%	95	9.0%	

*Significant at $p < 0.05$.

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education, or general information was significantly higher among non-medical students. However, it was noted that using for multiple purposes and following different groups on social media was significantly higher among medical students ($p < 0.001$) (Table 2). Table 3 demonstrates a significant association between using social media and the GPA of the students ($p = 0.001$). Using WhatsApp, YouTube, and a combination of more than one type of social media was significantly associated with a 4-4.5 GPA, whereas using Snapchat and Twitter was

significantly associated with a 3.5-4 GPA. Additionally, using social media was significantly higher among the 20-22 age group ($p < 0.001$). However, gender did not exhibit a significant association with social media use ($p = 0.109$).

Table 4 demonstrates the student's views on the relationship between age and using social media. There was an agreement among most of the students that age has an impact on social media usage (65.6%), social media websites are less popular among older generations

Table 3. Association of gender, age, GPA, and the nature of social media use.

		Use and nature of social media												p-value
		No		WhatsApp		YouTube		Snapchat		Twitter		Combination		
		n	%	n	%	n	%	n	%	n	%	n	%	
Gender	Female	1	20.0%	22	28.6%	30	35.7%	53	45.7%	50	39.4%	264	43.0%	0.109
	Male	4	80.0%	55	71.4%	54	64.3%	63	54.3%	77	60.6%	350	57.0%	
Age	18-20	3	60.0%	12	15.6%	19	22.6%	22	19.0%	30	23.6%	127	20.7%	<0.001*
	20-22	1	20.0%	36	46.8%	43	51.2%	55	47.4%	72	56.7%	240	39.1%	
	22-24	1	20.0%	12	15.6%	14	16.7%	29	25.0%	20	15.7%	178	29.0%	
	>24	0	0.0%	17	22.1%	8	9.5%	10	8.6%	5	3.9%	69	11.2%	
GPA	<3	2	40.0%	22	28.6%	14	16.7%	22	19.0%	11	8.7%	63	10.3%	0.001*
	3.5-4	1	20.0%	19	24.7%	22	26.2%	41	35.3%	46	36.2%	191	31.1%	
	4-4.5	1	20.0%	24	31.2%	31	36.9%	28	24.1%	41	32.3%	188	30.6%	
	4.5-5	1	20.0%	12	15.6%	17	20.2%	25	21.6%	29	22.8%	172	28.0%	

*Significant at $p < 0.05$.

Table 4. Student's perception of the relationship between social media use and age.

		Major						p-value
		Medical		Non- medical		Total		
		n	%	n	%	n	%	
Age has an impact on social media usage.	Disagree	89	21.4%	179	27.8%	268	25.3%	0.133
	Strongly disagree	38	9.2%	59	9.1%	97	9.2%	
	Agree	173	41.7%	249	38.6%	422	39.8%	
	Strongly agree	115	27.7%	158	24.5%	273	25.8%	
Social media is becoming tedious and I am getting older for them.	Disagree	181	43.6%	271	42.0%	452	42.6%	0.088
	Strongly disagree	77	18.6%	95	14.7%	172	16.2%	
	Agree	102	24.6%	201	31.2%	303	28.6%	
	Strongly agree	55	13.3%	78	12.1%	133	12.5%	
Social media websites are less popular among older generations.	Disagree	106	25.5%	162	25.1%	268	25.3%	0.886
	Strongly disagree	38	9.2%	51	7.9%	89	8.4%	
	Agree	171	41.2%	269	41.7%	440	41.5%	
	Strongly agree	100	24.1%	163	25.3%	263	24.8%	
Younger generations are the most active users of social media.	Disagree	47	11.3%	88	13.6%	135	12.7%	0.001*
	Strongly disagree	15	3.6%	44	6.8%	59	5.6%	
	Agree	148	35.7%	269	41.7%	417	39.3%	
	Strongly agree	205	49.4%	244	37.8%	449	42.4%	

*Significant at $p < 0.05$.

(66.3%), and younger generations are the most active users of social media (81.7%).

Student's perception of the negative impact of social media on their academic performance is illustrated in Table 5. The majority of students either agree (41.3%) or strongly agree (35.8%) that excessive use of social media is an issue affecting their academic life, and 462 (43.6%) agree that social media distracted them from college. Furthermore, a high percent (43.1%) agree that social media affected their lifestyle and 40.1% strongly agree that they spend many hours on social media than in reading. Moreover, students in medical colleges were more significantly aware that social media distracted them from college ($p = 0.002$), affecting their lifestyle ($p = 0.035$), and that they did not depend exclusively on

the information they get from social media ($p < 0.001$) compared to their counterparts.

Awareness of a positive impact of social media on the academic performance of students is shown in Table 6. The agreement that participation in academic discussions on social media improved academic performance was reported by 53.3%. Also, 62.2% reported using social media to spread knowledge among their classmates. A high percent agree (41.6%) or strongly agree (31.6%) that using social media for research purposes helped to improve their grades. The majority (75%) agree that they use some websites as resources to fulfill what they have learned in class. Using social media to fulfill what has been learned in class and for research purposes to improve grades was more frequently reported by medical

Table 5. Student's perception of the negative impact of social media on their academic performance.

		Major						p-value
		Medical		Non-medical		Total		
		n	%	n	%	n	%	
Excessive use of social media is an issue affecting my academic life.	Disagree	67	16.1%	134	20.8%	201	19.0%	0.247
	Strongly disagree	19	4.6%	22	3.4%	41	3.9%	
	Agree	176	42.4%	262	40.6%	438	41.3%	
	Strongly agree	153	36.9%	227	35.2%	380	35.8%	
Social media is distracting me from college.	Disagree	81	19.5%	186	28.8%	267	25.2%	0.002*
	Strongly disagree	22	5.3%	30	4.7%	52	4.9%	
	Agree	183	44.1%	279	43.3%	462	43.6%	
	Strongly agree	129	31.1%	150	23.3%	279	26.3%	
I can't compare the hours I spend on social media with the ones I spend reading.	Disagree	71	17.1%	105	16.3%	176	16.6%	0.819
	Strongly disagree	17	4.1%	34	5.3%	51	4.8%	
	Agree	158	38.1%	250	38.8%	408	38.5%	
	Strongly agree	169	40.7%	256	39.7%	425	40.1%	
My grades stopped improving since I started using social media.	Disagree	181	43.6%	275	42.6%	456	43.0%	0.411
	Strongly disagree	54	13.0%	105	16.3%	159	15.0%	
	Agree	114	27.5%	178	27.6%	292	27.5%	
	Strongly agree	66	15.9%	87	13.5%	153	14.4%	
Use of social media has a negative impact on my academic performance.	Disagree	134	32.3%	229	35.5%	363	34.2%	0.322
	Strongly disagree	33	8.0%	62	9.6%	95	9.0%	
	Agree	154	37.1%	233	36.1%	387	36.5%	
	Strongly agree	94	22.7%	121	18.8%	215	20.3%	
Using social media is affecting my lifestyle.	Disagree	94	22.7%	192	29.8%	286	27.0%	0.035*
	Strongly disagree	33	8.0%	56	8.7%	89	8.4%	
	Agree	199	48.0%	258	40.0%	457	43.1%	
	Strongly agree	89	21.4%	139	21.6%	228	21.5%	
I rely exclusively on the information I get from social media without consulting other sources.	Disagree	189	45.5%	264	40.9%	453	42.7%	<0.001*
	Strongly disagree	116	28.0%	112	17.4%	228	21.5%	
	Agree	78	18.8%	191	29.6%	269	25.4%	
	Strongly agree	32	7.7%	78	12.1%	110	10.4%	

*Significant at $p < 0.05$.

Table 6. Student's perception of the positive impact on social media on their academic performance.

		Major						p-value
		Medical		Non-medical		Total		
		n	%	n	%	n	%	
I participate in academic discussions on social media which improved my academic performance.	Disagree	177	42.7%	218	33.8%	395	37.3%	0.016*
	Strongly disagree	36	8.7%	64	9.9%	100	9.4%	
	Agree	148	35.7%	246	38.1%	394	37.2%	
	Strongly agree	54	13.0%	117	18.1%	171	16.1%	
I use social media to spread knowledge among my classmates.	Disagree	111	26.7%	174	27.0%	285	26.9%	0.846
	Strongly disagree	33	8.0%	61	9.5%	94	8.9%	
	Agree	181	43.6%	277	42.9%	458	43.2%	
	Strongly agree	90	21.7%	133	20.6%	223	21.0%	
Using social medial for research purposes helps improve my grades.	Disagree	76	18.3%	136	21.1%	212	20.0%	0.001*
	Strongly disagree	13	3.1%	59	9.1%	72	6.8%	
	Agree	181	43.6%	260	40.3%	441	41.6%	
	Strongly agree	145	34.9%	190	29.5%	335	31.6%	
I use some websites as resources to fulfill what I have learned in class.	Disagree	57	13.7%	136	21.1%	193	18.2%	<0.001*
	Strongly disagree	21	5.1%	51	7.9%	72	6.8%	
	Agree	169	40.7%	268	41.6%	437	41.2%	
	Strongly agree	168	40.5%	190	29.5%	358	33.8%	
I would not perform well academically even if I stopped using social media.	Disagree	182	43.9%	225	34.9%	407	38.4%	0.022*
	Strongly disagree	82	19.8%	131	20.3%	213	20.1%	
	Agree	102	24.6%	193	29.9%	295	27.8%	
	Strongly agree	49	11.8%	96	14.9%	145	13.7%	

*Significant at $p < 0.05$.

students ($p < 0.001$). On the other hand, non-medical students showed a significantly higher agreement that participation in academic discussions on social media improved their academic performance ($p = 0.016$)

Discussion

Social media usage is currently one of the most common activities among children, adolescents, and adults. Social media provides an easy way of entertainment and communication, in addition to accessing up-to-date information and news [15]. This is the first study that explores the effect of social media on the academic performance of university students in the Qassim region, Saudi Arabia. The study included 1,060 participants constituting all university students belonging to six medical (medicine and pharmacy) and non-medical (engineering and science and arts) colleges. In the present study, the prevalence of social media use among the study participants was 99.5%. This finding coincides with Perrin [16], who stated that the use of social media among American adults aged 18-29 years, who represent a high percentage of university students, rose from 12% in 2005 to 90% in 2015. Another survey from Turkey reported 93.4% prevalence among medical students [17]. A much higher (100%) prevalence was reported

among second-year medical students in Iraq [18]. The reported high prevalence is attributed to the embedded use of social media among the young generation's lifestyle, as well as the current common use of social media as a method of communication between the college administration and the students[19]. In this survey, the study participants indicated common use of Twitter (12.0%) and Snapchat (10.9%), followed by YouTube (7.9%) and WhatsApp (7.3%). Multiuse of more than one type was the most frequent (57.9%). A similar study reported that Twitter was the most popular social network, followed by Facebook among Saudi students [20]. Females have empirically been shown to be more interested in using social media than males [21]. However, the present study attained a different result; it shows that there are no gender-related differences regarding using social media. The majority (81.7%) of study participants believed that younger generations are the most active users of social media. This agrees with Andreassen et al. [22], who demonstrated an addictive use of social media among youth. The present study demonstrated significant differences between medical and non-medical students in using social media. Multitasking of social media for many purposes, including chatting, communicating with professors and students, uploading images, and downloading audio or

video content, blogging, and conducting research and surveys, was more prominent among medical students, whereas the time spent on social media was comparable in both groups.

In the current study, there was a link between the type of social media used and the academic performance of the students. Students with a high GPA (4-4.5) reported greater use of WhatsApp and YouTube, whereas using Snapchat and Twitter was significantly associated with a lower GPA of 3.5-4. In accordance with this finding, an earlier study showed that Facebook users reported a lower GPA and fewer hours of studying [23]. Another study demonstrated that students with low GPA are more active on Facebook than students with a high GPA. They attributed this to a fact that students facing academic or social problems turn to Facebook as a way of distraction from the confronted difficulties [24]. Alternatively, there was no significant association between GPA and the frequency of daily social media use by medical students at King Saud University [25]. There is considerable debate regarding the impact of social media on the student's academic performance. Conflicting effects on college students have been reported. Therefore, over-generalizations regarding the impact of social media are not justified [26]. Interestingly, the majority of students realized that excessive use of social media affected their academic life (77.1%) and their lifestyle (64.6.1%). They reported that social media distracted them from college (69.9%). Similarly, Alwagait et al. [20] investigated the role of social media on the academic performance of 108 Saudi students. Sixty percent of the respondents reported that the excessive use of social media had a negative impact on their performance. Furthermore, the majority of senior high school students in Ghana attributed their low grades to the use of social media [27]. Another study included tertiary students in Ghana who reported adverse impacts of WhatsApp on their performance. They attributed this to a lack of concentration during lecture times and difficulty in balancing between online activities and academic preparation [28].

The positive impact of social media on academic performance was recognized by a high percentage of study participants. There was an agreement that participation in academic discussions on social media improved their academic performance (53.3%), helped them to spread knowledge among their classmates (62.2%), and improved their grades through using social media for research purposes (73.2%) and to fulfill what they have learned in class (75%). Similarly, the majority of participants from the Nile University, Egypt, indicated using social media in sharing information with classmates, following the latest developments in their field through social media [29]. On the other hand, a higher percentage (88.58%) of medical students in India believed that social media usage has a positive impact on their academic performance [30]. Furthermore,

Dumpit and Fernandez [32] suggested that social media use encourages independent self-directed learning again and the active production of knowledge. Thus, it is obvious that the wise use of social media for educational and constructive purposes has a positive influence on students' academic performance. On the other hand, improper use can affect students' academic performance negatively.

There were some differences between medical and non-medical students regarding their recognition of the impact of social media. Awareness of negative effects on the student's lifestyle and distraction from colleges was more significantly higher among medical students. Furthermore, the reported positive impact of social media by medical students was mainly linked to using these media for research purposes, while non-medical students mainly improved their academic performance through participation in academic discussions. On the other hand, medical students in King Saud University identified entertainment (95.8%), staying up-to-date with news (88.3%), and socializing (85.5%) as the main reasons for using social media, while using for academic studies was much lower (40%) [25].

Conclusion

Social media usage for academic purposes is high among Qassim University students. Most students are aware of its positive as well as negative influences on their academic performance. Positive effects include using social media for research purposes and communication with their classmates, while distraction from college and changing their lifestyle represented the main negative drawbacks. Significant differences in the behavior of students from medical and non-medical colleges were identified

List of Abbreviations

GPA Grade point average

Conflict of interest

The authors declare that there is no conflict of interest regarding the publication of this article.

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None.

Consent to participate

Informed consent was signed by all the participants.

Ethical Approval

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