Environmental and Occupational Health Students' Attitudes Toward Social Media in Online Learning During the COVID-19 Pandemic

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Abstract

Background: Individuals engaged in education and health currently during the coronavirus disease 2019 (COVID-19) pandemic find it urgent to avail themselves of high-speed communication and information technology.

Objectives: This survey was conducted to investigate the attitudes of environmental and occupational health students toward Social Media (SM) use in online learning during the COVID-19 pandemic.

Methods: This was a cross-sectional study which its population consisted of 375 environmental and occupational health students studying at Kerman University of Medical Sciences, Kerman, Iran, in the academic year 2020-2021. The present study followed a quantitative design using the Social Media Attitude Scale designed by Otrar and Argin. The data were analyzed using SPSS software (version 26) and paired t-test.

Results: The participants were within the age range of 18-46 years, and 64.8% of them were female. Instagram was the most popular SM (frequency of use: 40%). Twitter (27%), Facebook (20%), and LinkedIn (13%) were placed in the next ranks. The need for sharing (61.4±14.93) was the most preferred dimension of SM. Social competence (54.23±5.17), social isolation (51.33±4.43), and relationship with teachers (40.63±9.7) were placed in the next ranks. Moreover, there was no significant difference between environmental and occupational health students' attitudes toward SM (P>0.01).

Conclusion: Medical universities can use SM for educational purposes by designing a forum for study or helping students with health skills. However, researchers should be aware of health science students' attitudes toward SM before developing such programs.

Keywords: COVID-19, Pandemics, Social Media, Medical Sciences, Students, Attitude

Background

With regards to the Coronavirus disease 2019 (COVID-19) pandemic lockdown, most forms of communication have changed from face-to-face to digital. Both teachers and students face a massive challenge with the transition to online instruction (1). Teachers must adapt to a new teaching process in virtual environments if they intend to continue teaching. The COVID-19 pandemic has been characterized by the widespread use of social media (SM) (2, 3). Individuals engaged in education and health currently find it urgent to avail themselves of high-speed communication and information technology. The World Web is most certainly of the highest speed and most feasibility in this regard. Millions of individuals worldwide use the World Web to get connected (4,5).

The SM, which use a significant volume of the World Web, greatly help individuals exchange and share information (6,7). The SM commonly refers to platforms, websites, and services that enable individuals to send and receive information, ideas, and what they pursue (8-10). In addition to forums, content blogs, microblogging services, social networks, and virtual reality sites (e.g., HumanSim and Second Life), SM make up the bulk of the World Wide Web, which also includes SM such as Facebook, Twitter, Myspace, Google Plus, and YouTube as well as Wikipedia and collaborative websites (8, 11-16). SM are growing more and more widespread in every corner of the world, facilitating individuals' lives in myriads of ways (17). The SM have altered our lives and occupations.

They have influenced the way we see, communicate, and express ourselves. Social networking sites encourage users to share their most positive characteristics (18) to get friends' virtual appraisals through likes and comments. Studies demonstrate various psychological impacts of social networking site use, such as self-expression, emotional support (19), and interpersonal communication (20). However, it involves several negative outcomes, such as degrading relationships and wasting time. The sharing of unofficial, inaccurate, or biased information also causes fake information to spread, as well as ethical and security issues arising from the display or sharing of personal information (16, 21, 22).

However, although Instagram stands as the fifth most SM platform used globally (Statista, 2020), it has not attained sufficient attention from education researchers yet. Instagram, developed in 2010, is a social networking service that lets individuals share videos and photos. The service is available to users through an application or a feature-limited web interface whose content they can edit with an array of filters. Up to 2200 text characters can go with individual posts. Instagram allows private messaging, the option to tag content with hashtags capable of being searched, the ability to carry several images or videos in a single post, and stories feature, which enables users to post content to a feed that is within reach of others for 24 hours. Posts, stories, and messages provide the opportunity to communicate with others in miscellaneous privacy and formality levels (23).

Instagram offers the chance to the users to express different dimensions of the self since the formation of one's identity is affected by reactions and feedback from others (24). Because we have the unprecedented ability to pounder upon who we are and the groups we are members of, categorization seems to be an indispensable part of living in a social world. It seemingly fulfills two psychological needs, how you belong *to* and are distinct *from* others. A shared identity paves the way for individuals to be accepted as legitimate members of a group. Meanwhile, we might try to stamp our individuality or distinctiveness inside the group or through our interaction with other groups. The impotence of belongingness or distinctiveness might differ from individual to individual, or they might be prioritized at different times and in different situations. While discussing identity, two major issues have to be taken into account, including a) how other individuals see or categorize us (and how we might categorize others) and b) how we choose to categorize or present ourselves to others (25).

Healthcare systems grow side by side with technological advancements, which leads to the appearance of applications, such as telemedicine (26). Telemedicine, belonging to telehealth, meaning "distant healing", is primarily concerned with the treatment and patient follow-up (World Health Organization, 2010). Telehealth gives healthcare services to individuals not close to health centers (27). The SM help individuals requiring healthcare services via the World Web and a host of websites (16).

Educated individuals can make informed health choices and use online healthcare education to benefit their health (28). Little by little, mobile health services accompanied by SM sites will become wildly popular. Most of students studying health subjects utilize social media platforms in various ways (29-31). With the SM, students have the opportunity to share, express, and exchange knowledge and information with each other in an educational setting (32). The related literature provides studies investigating teenagers' (14, 33) and university students' SM habits (34) and outlooks toward SM (4, 11, 35-37). There are no studies examining the attitudes of environmental and occupational health students toward SM. Perhaps it is not surprising that the COVID-19 pandemic led to the increased use of social media and the incorporation of group media into students' learning activities (38).

Objectives

Medical universities and institutions can use SM for educational purposes by designing a forum for study or helping students with health skills using simulation videos and exercises. However, before developing such programs, researchers should be aware of how health science students currently use SM and their attitudes toward SM applications as helpful teaching tools. Therefore, the two following research objectives lead the present study:
1. To investigate the attitudes of environmental and occupational health students toward SM
2. To find out the most frequently used SM network among environmental and occupational health students

Methods

The present cross-sectional survey was conducted on 375 environmental and occupational health students studying at Kerman University of Medical Sciences, Kerman, Iran, in the academic year 2020-2021. The inclusion criteria were being a student in the environmental and occupational health departments and voluntarily participating in the study. The students were also assured that the data would be applied only for the study objectives.

Otrar and Argin's (39) Social Media Attitude Scale, designed in 2015, was used to investigate the participants' attitudes toward SM. The questionnaire has four dimensions and 23 items, including social competence (6 items), need for sharing (8 items), relationship with teachers (3 items), and social isolation (6 items). The participants were asked to mark whether they agreed with each of the questionnaire items on a 5-option Likert scale (Never: 1 to Always: 5). The scale dimension scores were converted to a score of 0 to 100. Since all the items referring to the social isolation dimension were reversed ones, while quantifying the total score of this dimension the items for this dimension were reversely coded (39).

A pilot testing was conducted to evaluate the validity and reliability of the instrument. After receiving feedback, the structure of some items were modified due to the vague structure. Therefore, these items were structurally simplified. The overall Cronbach alpha for the Persian

translated version of Otrar and Argin's (39) Social Media Attitude Scale was 0.81, which revealed good internal consistency. Additionally, the rates of using SM platforms (i.e., Facebook, LinkedIn, Twitter, and Instagram) were recorded.

The environmental and occupational students participating in the present study were briefed on the form and goal of the research with a voluntary participation. They were required to complete the form in 20 minutes. For data collection, the permission was obtained from the dean's office and the department head. Student names were not included on the data collection forms. Informed consent was obtained from all students. Data were analyzed using SPSS software (version 26) using frequencies, percentages, mean, standard deviation, and t-tests.

Results

Totally, 402 students in the environmental and occupational health departments were eligible of whom 375 (93.2%) students agreed to participate. 64.8% of the participating students were female with the age range 18-46 years.

Instagram was the most popular SM (frequency of use: 40%) among the environmental and occupational health students. Twitter (27%), Facebook (20%), and LinkedIn (13%) were placed in the next ranks. The need for sharing (61.4±14.93) was the most preferred dimension of SM. Social competence (54.23±5.17), social isolation (51.33±4.43), and relationship with teachers (40.63±9.7) were placed in the next ranks. Moreover, students' attitudes toward SM were not different regarding the field of study (P>0.01), gender (P>0.01), and age range (P>0.01) (Table1).

Discussion

The current study investigated the attitudes of the environmental and occupational health students toward SM in online learning during the COVID-19 pandemic. It was observed that the need for sharing was the most preferred dimension of SM, and relationship with teachers was the least preferred dimension of SM. Moreover, there was no significant difference between the environmental and occupational health students' attitudes toward SM. Some researchers reported findings different from those of the current study; Avcı et al.'s survey (40) revealed that motivating creativity, improving professional development, increasing communication with co-workers, gathering knowledge, and boosting the quality of health care were the preferred dimensions of SM among medical students. Hussaina et al. (41) showed that pharmacy students used SM more for learning purposes in comparison to medical students. Guraya (42) reported that only a minority (37%) of medical and health students used SM for academic purposes.

The environmental and occupational health students in the present study used Instagram the most, which is reported in Terzi et al.'s (43) study among nursery and midwifery students. Nevertheless, in another study, SM applications were in the following order concerning their frequency of use: Facebook (99%) (39), Twitter (5.8%), and Instagram (1.8%) (44). Instagram comes last according to this ranking. In other studies examining how frequently nursing students used SM, it was observed that Facebook was the most preferred platform of SM (30, 45). Several studies have shown that Facebook stands as the most frequently used SM platform (8, 10, 45). Using Facebook, the users can start new relations, share knowledge, opinions, and photos openly and freely (46). Moreover, it has been claimed that extroverts' tendency to share everything publicly is the reason of high frequency of Facebook use (8). On the other hand, Facebook can enhance students' field-related knowledge inside and out of the classroom contexts. Facebook provides students with the opportunity to receive and send field-related topics (47).

The current study demonstrated that environmental and occupational health students used SM for sharing, social competence, social isolation, and relationship with teachers (Table 1). In line with the present study, other studies examining students with different preferences also showed the positive attitudes of the students toward SM (14, 48, 49). SM provide a fruitful field for nursing requirements and nursing education (30, 45, 50, 51).

Table 1. Comparison of Attitudes toward Dimensions of Social Media Based on the Field of Study, Gender, and Age Range

Variables		Social competence Mean (SD)	Need for sharing Mean (SD)	Relationship with teachers Mean (SD)	Social isolation Mean (SD)
Field of study	Occupational health	26.53 (2)	32.73 (6.67)	20.67 (3.67)	26.48 (2.13)
	Environmental health	27.7 (3.17)	28.67 (8.27)	19.97 (6.03)	24.85 (2.3)
	P-value	0.59	0.48	0.55	0.62
Gender	Female	50.67 (24.83)	75 (18.2)	29.25 (15.75)	48.7 (17.7)
	Male	49.93 (25.73)	74.07 (21.93)	28.13 (13.63)	47.03 (16.6)
	P-value	0.48	0.39	0.31	0.52
Age group	18-30	52.2 (22.07)	68.3 (15.88)	44 (18.07)	48.67 (16.27)
	30-46	48.67 (20.33)	66.13 (14.45)	42.87 (16.73)	45.4 (15.27)
	P-value	0.69	0.09	0.20	0.27

SD, standard deviation

Humans are social beings, so the need for interpersonal sharing is a basic requirement among them. The SM help humans receive information, have access to a variety of materials, and share their experiences with others (12, 48).

Utilizing, asking questions of, and utilizing others› knowledge is how SMs assist individuals in developing problem-solving skills (36). The positive use of SM is the social interaction between teacher and students (52), which provides great opportunities to promote learning activities, new information, learning experiences, and academic outcomes. In line with the findings of the present study, a study carried out by Aküzüm and Saraçoğlu (53) confirmed students' unwillingness to use SM for having relationships with teachers. The findings of another study examining students' attitudes toward SM in a different way showed that nursing students viewed SM positively both professionally and academically (5). The application of SM was also pointed out to be positive by nursing students (50). Engaging students in active learning leads to more successful academic performance (54). Because of its effectiveness in engaging students, providing feedback, and enabling collaboration, the integration of SM with classroom teaching should be welcomed by medical education (32).

Conclusion

In brief, environmental and occupational health students studying at Kerman University of Medical Sciences used SM during the COVID-19 pandemic lockdown for sharing things, social competence, social isolation, and relationship with teachers. Side by side with technological developments, SM platforms are growing more wildly in healthcare services used for medical applications and education. The healthcare industry can take advantage of SM to teach health skills by developing a forum for study or using simulation videos and exercises for students. It is important for researchers, however, to understand the current uses of SM and attitudes toward it among health science students before developing such programs. Despite the limitations of this study, the results may add to the existing research in related literature. However, the results need to be interpreted with care. Qualitative methods such as focus groups could also be used to examine students› SM habits. In addition, the environmental and occupational students in the present study came from only one university, which limited the generalizability of its findings. It is therefore important to consider a broad spectrum of learners.

Acknowledgments

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