

Social media and nurse education: an integrative review of the literature

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Key words: Social media, nursing education

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Abstract

Introduction. *The exponential advance of social media has touched all areas of society, no exception for the professional and personal lives of healthcare people. The issue to be considered is not whether or not social media are being used, but how they are used. The line between proper and improper use, and even abuse, of social media is a subtle one. Thus, the key issue is to be aware of the tool that is being used and this should be supported with suitable training for healthcare professionals and, at an even earlier stage, for students at healthcare training institutions during their studies.*

Objective. *To describe, through an integrative review of the literature, the use of social media by teachers and students during teaching activity and practical training courses.*

Materials and methods. *An integrative review of the literature was conducted in October 2014. The literature search was performed by consulting the main biomedical databases: PubMed, CINAHL and Embase.*

Results. *The literature search brought up a total of 854 citations. 804 abstracts were excluded as they were not relevant. Of the remaining 50, 31 were excluded for not meeting the general criteria and, hence, only 19 articles were included. Two aspects emerged from the works selected: the use and potential of social media in nursing education and the ethical and professional implications of their use.*

Conclusions. *The analysis of the literature reveals two areas for further investigation: evaluating the level of moral awareness in nursing education with regards to the use of Web 2.0 communication tools and implementing teaching methods to promote the construction and development of moral reasoning in professionals.*

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Introduction

In the healthcare field, communication has an important relational role to play between professionals and the general public. This is true not only when it helps to respect the public's right to information, but also, and above all, to promote personal growth through accessible, targeted, accurate and good quality information. The relationship between professionals and the public is fundamental to respond to the continuously and rapidly evolving complex treatment needs and is one of the cornerstones of the healthcare system, alongside with information and communication (1).

Today, however, traditional communication channels are no longer sufficient. Every day, all over the world, millions of people of all ages are active on social media (2, 3). In Italy, 66.6% of people with access to the Internet are registered with Facebook (in 2010 they were only 49%), and this proportion corresponds to 41.3% of the total population of Italy and climbs to 79.7% among young people. At the end of 2010, there were more than 1,300,000 Twitter accounts. In 2012, 61.7% of people with access to the Internet were using YouTube (in 2011, the proportion was 54.5%) (4).

The exponential advance of social media has touched all areas of society, including the professional and personal lives of healthcare professionals. Not even trying to adopt these tools in the healthcare field would mean not being in step with the present world and giving up the advantages offered by these new media.

Indeed, many studies have documented the advantages of using social media in the healthcare field to encourage the exchange of experiences, particularly in the field of chronic and degenerative diseases (5-11), and for the adoption of healthy lifestyles (12-16). Many hospitals and healthcare facilities also use them to offer their services and to promote compliance with

the treatment procedures (1, 3, 17, 18). However, many nurses seem wary of using social media, such as Twitter and Facebook, in their practice (19). Twitter can be used to improve communication with patients, and it represents a relevant source of data to obtain the patient perspective on medical errors (20).

At present, there are no regulatory requirements in Italy for public authorities to be present on social media. There is, however, a strong recommendation from the Ministry of Public Administration and Simplification and the Ministry of Health to work towards the use of the new Web 2.0 technologies, and social media in particular, and to adopt tools that increase public participation while providing valuable and authoritative information (2).

For health care professionals in general, and for nurses in particular, the issue is not whether or not social media should be used, but rather how they should be used. It is important to gain a deep understanding of these tools and of their potential risks, in order to avoid an inappropriate use of them (1). The line between proper and improper use, and even abuse, of social media is very thin (3, 21, 22). Thus, the key issue is to be aware of the tool that is being used and this should be supported by suitable training for healthcare professionals and, at an even earlier stage, for students during their healthcare instruction and training (3, 21-23).

Objectives

To describe, through an integrative review of the literature, how teachers and students use the social media during teaching activity and practical training courses.

Materials and methods

An integrative review (24) of the literature was performed. The literature search was

Table 1 - Strategy for literature search

Databases	Search strategy	Limits
PubMed	“Social Media”[Mesh] OR “web 2.0” OR “social media” OR “social network*” OR twitter OR “Internet”[Majr] OR “Web Resource Appraisal Process”) AND (“Education, Nursing”[Mesh] OR “nursing education”	No limits
CINAHL	“Social Media” OR “web 2.0” OR “social media” OR “social network*” OR twitter OR “Internet” OR “Web Resource Appraisal Process”) AND (“Education, Nursing” OR “nursing education”	No limits
Embase	“Social Media” OR “web 2.0” OR “social media” OR “social network*” OR “Twitter” OR “Internet” OR “Web Resource Appraisal Process”) AND (“Education, Nursing” OR “nursing education”)	No limits

carried out in October 2014. The major biomedical databases were consulted according to a specific search strategy (Table 1).

All studies (original articles, systematic and non-systematic reviews, editorials or letters) which analysed the use of social media in nursing education were considered for the Review

The abstracts were assessed independently by two readers who chose which papers to obtain in full-text format. All full-text papers were in turn assessed independently by two readers to identify which were eligible for

the review. Discrepancies were resolved by discussion with a third reviewer and final decision was taken by him. The criteria considered for eligibility were *pertinence* and *relevance* whit our question. All documents that helped to understand the use of social media in nursing education were included. Language limit was Italian and English.

Results

As shown in the flow diagram in Figure 1, the literature search identified 854 citations. 804 abstracts were excluded as they were not relevant. Of the remaining 50, 31 were excluded and, hence, 19 articles were included (the main features of each document are shown in Tables 2 and 3).

Two main aspects emerged from the papers selected, analysed and further investigated for the purposes of our work: the use and potential of Web 2.0 tools in general, and social media in particular, in nursing education; and the ethical and professional implications of their use.

The use and potential of social media

Considering that the Web 2.0 instruments have significantly changed the way we use the Internet, Skiba (25-27) highlights the need for trainers to make efforts to move away from traditional communication

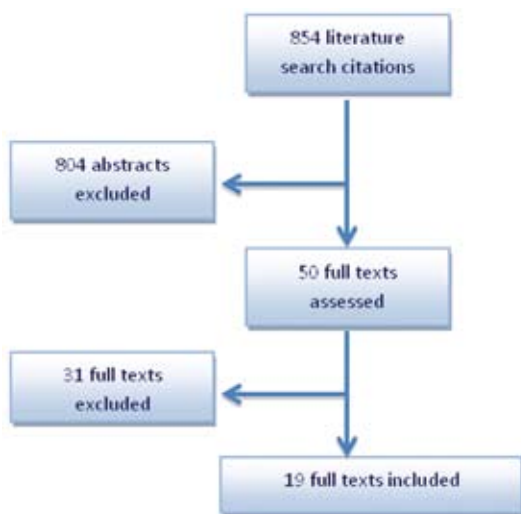


Figure 1 - Flow diagram of selection of literature.

Table 2 – Non evidence-based documents included in the review

First author	Title and bibliographic reference	Country	Reflections/conclusions
Bristol TJ	Twitter: Consider the Possibilities for Continuing Nursing Education <i>J Contin Educ Nurs</i> 2010; 41(5): 199-20	United States	Starting from the premise that staying connected virtually is now a mainstay of modern culture, the paper analyses Twitter and its potential applications in health care and nursing education.
Casella E, et al.	Social media and nursing practice: Changing the balance between the social and technical aspects of work <i>Collegian</i> 2014; 21(2): 121-6	Australia	The paper begins its discussion of the issue with an introduction on the development of social media, the changes they have brought to communication and the need for nurses to consider using them in their activities, in order to take advantage of their potential. The work focuses on the various ways of incorporating social media into all phases of the nursing process. In order to keep up with the times, nurses should also be using social media. This would further improve communication with patients and among professionals. Many nurses are concerned about this need to integrate social media into health care, but the nursing profession must evolve alongside the rest of society.
Green J, et al	Social networking for nurse education: Possibilities, pitfalls and pitfalls <i>Contemp Nurs</i> 2014; 47(1-2): 180-9	Australia	The paper analyses the potential of social media websites such as Facebook and their implications in nurse education. The investigation is based on the theoretical constructs that are specific to the use of Web 2.0 tools and their application to learning. The possible methods of interaction between students and teachers via social media are also considered. The advantages and disadvantages of these tools should be considered carefully before introducing them into nursing education. These tools can definitely improve communication and its reach beyond the traditional classroom, as well as interaction between teachers and students. They also stimulate collaboration and sharing and provide learning support. However, they should be carefully evaluated in pedagogical terms and with respect to learning outcomes.
Mistry V	Critical care training: using Twitter as a teaching tool <i>Br J Nurs</i> 2011; 20(20): 1292-6	United Kingdom	This paper analyses the results of a project funded by the Joint Information Systems Committee (JISC) to explore the usefulness of Twitter as a teaching tool. Overall, applying Twitter to teaching stimulated teachers and student learners to think about new forms of interactivity and teachers to better understand learning styles in a Web 2.0 context and to consider alternative methods of formative assessment. However, the usability, efficiency, effectiveness and widespread acceptance of Twitter as a teaching tool may be affected by several factors. Designing effective activities is not easy, thus it is important to consider the issues of applicability, replicability and temporal continuity.
Schmitt T, et al	Social Media Use in Nursing Education <i>OJIN: The Online Journal of Issues in Nursing</i> 2012; 17(3): Manuscript 2	United States	The exponential advance of the Internet has seen an increasing number of nurses and patients engaged in the use of social media. Nurses play a considerable role in the production and dissemination of health knowledge and information. Social media can be a platform where students can hone communication skills. Since advances in technology also affect nursing, teachers should be able to promote their use by incorporating it into training courses. Just as teachers promote the acquisition of clinical, organisational and educational skills, they should also promote the communication skills that can ensure professional, safe and effective communication in a context where most people are online. Obstacles to the use of social media on training courses continue to be related to possible breaches of privacy and professional conduct, but such risks exist regardless of the medium used. With appropriate training and supervision, they can be used properly, making the most of their potential and overcoming the obstacles to their use.

<p>Sharoff L</p>	<p>Integrating YouTube into the Nursing Curriculum <i>OJIN: The Online Journal of Issues in Nursing</i> 2011; 16(3)</p>	<p>United States</p>	<p>The use of YouTube in nurse education is undoubtedly innovative, user-friendly and easy to adapt to any course. The educational and informative potential of YouTube is yet to be developed. It is a participatory tool whose use is highly interactive and can be limitless. Its incorporation as a teaching tool is essential for digital natives and non-natives alike. However, it is important to consider the importance of teacher supervision to ensure optimal use. Nurses have always been change agents. The use of Web 2.0 tools has to be taken into consideration, given their increasing spread within society.</p>
<p>Skiba DJ (a)</p>	<p>Nursing Education 2.0: YouTube <i>Nurs Educ Perspect</i> 2007; 28(2) : 100-2</p>	<p>United States</p>	<p>These articles analyse Web 2.0 tools, their characteristics and potential for nursing education. Their exponential growth and spread cannot be ignored by trainers. The author emphasises the need to “think outside the box”, dictated by the changing scenario of communication and the evolution of communication tools, along with the need to establish methods for their use in nurse education.</p>
<p>Skiba DJ (b)</p>	<p>Nursing Education 2.0: Poke Me. Where’s Your Face in Space? <i>Nurs Educ Perspect.</i> 2007; 28(4): 214-6</p>		
<p>Skiba DJ (c)</p>	<p>Nursing Education 2.0: Are Mashups Useful for Nursing Education? <i>Nurs Educ Perspect</i>2007; 28(5): 286-8</p>		
<p>Skiba DJ (a)</p>	<p>Nursing Education 2.0: Twitter & Tweets Can You Post a Nugget of Knowledge in 140 Characters or Less? <i>Nurs Educ Perspect</i>2008; 29(2): 110-2</p>	<p>United States</p>	<p>The article starts with a number of considerations on the main methods of communication for digital natives, highlighting that members of this generation tend to communicate through instant messaging, text messages, blogs and express themselves on social networking sites and by sending tweets. E-mail is almost considered for “old people”. The focus is on the characteristics of Twitter, the way tweets work and how they are used in education and communication with students.</p>
<p>Skiba DJ (b)</p>	<p>Nursing Education 2.0: Social Networking for Professionals <i>Nurs Educ Perspect</i>2008; 29(6): 370-1</p>	<p>United States</p>	<p>Web 2.0 tools have dramatically changed how we use the Internet. Knowledge is built and exchanged; interactivity is continuous. The article is directed at educators and, after introducing a number of definitions and general information, it discusses some of the reasons for approaching Web 2.0 tools and using them in education. Social networks are similar to what are known in the world of e-learning as communities of practice. They are an important tool for socialisation, enable the development of professional networks, which are important not only for creating employment opportunities.</p>

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<p>Spector N, et al</p>	<p>Guidelines for Using Electronic and Social Media: The Regulatory Perspective <i>OJIN: The Online Journal of Issues in Nursing</i> 2012; 17(3): Manuscript 1</p>	<p>United States</p>	<p>Social media are a very effective way of communicating, and this is also true for nurses, but guidelines for their appropriate use by all healthcare providers are essential. The paper addresses the issue by analysing three scenarios involving involuntary inappropriate use of social media in order to encourage reflection on the importance of guidelines. In addition to this, emphasis is also placed on the importance for institutions and professionals to define clear policies for regulating and managing conduct on social media for their organisations and training programmes. The key points to consider when developing these policies are: being proactive; having a non-restrictive attitude to social media, which should be considered an important communication tool; the need for appropriate use of social media to ensure high professional standards.</p>
<p>Topps D, et al</p>	<p>YouTube as a Platform for Publishing Clinical Skills Training Videos <i>Acad Med</i> 2013; 88: 192-7</p>	<p>United States</p>	<p>This paper describes the innovative use of YouTube as a platform for publishing teaching materials. The authors published a series of short videos for clinical teaching. The advantages of this tool were significant in terms of views (after appropriate adjustments) and technical accessibility, use, analysis and simplification.</p>

Table 3 – Evidence-based documents included in the review

First author	Title and bibliographic reference	Country	Objective:	Population under study	Nosographic criterion Diagnostic tool	Main results/conclusions
Englund H, et al	Ethical Reasoning and Online Social Media <i>Nurse Educ</i> 2012; 37(6): 242-7	United States	To assess the ethical/professional awareness of students on matters relating to the publication of clinical information on social media sites.	108 students in their first or final semester of study.	A questionnaire was used consisting of 21 items formulated according to the guidelines of the 2001 ANA Code of Ethics. Informal terminology was used intentionally along with language representative of the target population (student nurses) in order to stimulate a comparison between what can be posted on social media and the recommendations of the Code of Ethics.	Over 80% of the mainly female sample answered the questionnaire. The average age was 22.4 among first-semester students and 24.4 among final-semester students. For some items, the differences between first-semester students and those in their last semester were statistically significant (for example, there was greater awareness among final-semester students than their first-semester counterparts that clinical information should not be posted). For other items, there was uncertainty among all students about what behaviour. Social media offer many opportunities, but they are also subject to many risks and, hence, teachers should foster in their students ethical skills and values, which are essential for proper use of the Internet.
Frazier B, et al	Social Networking Policies in Nursing Education <i>CIN: Computers, Informatics, Nursing</i> 2014; 32(3): 110-7	United States	To assess the opinion of teachers and nursing students of social media, their personal, professional and ethical use and the need for policies regulating the use of social media in education.	306 individuals: 33 teachers, 236 students and 37 graduate nurses	A questionnaire was compiled for the study (sent by e-mail), consisting of 21 questions for the teachers and 20 questions for the students. A four-point Likert scale was used for ethical questions and a five-point scale was used for the other questions. Both descriptive statistics and inferential statistics were used to analyse the data.	70% of teachers use some type of social media. 90% of students use social media. Facebook was the most popularly used social media site among students and teachers alike. Most students and teachers agree that it is not appropriate to “friend” or interact with patients on social networking websites. They were also in agreement that it is unacceptable to talk about clinical experiences or work on social media sites, even if the patient’s name is not used, because the patient may still be identified through other information. They also agreed that high professional standards should be kept when using social media. Half of the students said that the issue of social media had not been addressed during their course, whereas 70% of teachers said that it had. Most students and teachers believed that it was important for universities to set out policies for conduct on social media sites.

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<p>Garrett BM, et al</p>	<p>Using social media to promote international student partnerships <i>Nurse Educ Pract</i> 2012; 12(6): 340-5</p>	<p>Canada</p>	<p>To assess the effectiveness of a partnership project through the use of social media.</p>	<p>30 students from three universities (convenience sample) in the United Kingdom and Canada</p>	<p>To analyse the impact and effectiveness of the one-year project, questionnaires, focus groups and Google Analytics were used.</p>	<p>Experience of the project was highly enjoyable and it was very effective at promoting partnerships between students.</p>
<p>Lemley T, et al</p>	<p>Web 2.0 tools in medical and nursing school curricula <i>J Med Libr Assoc</i> 2009; 97(1): 50-2</p>	<p>United States</p>	<p>To investigate actual use of Web 2.0 tools, given their potential, in medical and nursing curricula to ascertain whether or not their use has increased.</p>	<p>Medical school teachers and nursing school teachers</p>	<p>A questionnaire was used for the study. The questionnaire was sent to the DR-ED e-mail list (for medical educators (1,383 subscribers when the survey was conducted), the American Association of Colleges of Nursing (AACN) Instructional Leadership Network e-mail list, with approximately 150 subscribers, and the e-mail list of the Association of Academic Health Sciences Libraries (AAHSL), with a total of 146 AAHSL members. Descriptive statistics were used to analyse the data.</p>	<p>Thirty-six medical school teachers and 19 nursing school teachers completed the questionnaire. 53% of nursing schools and 45% of medical schools used Web 2.0 tools in their curricula. However, more medical school teachers (55%) make personal use of Web 2.0 tools than teachers from nursing schools (37%). The most common Web 2.0 tools used in both medical and nursing schools were blogs, wikis, videocasts, and podcasts.</p>
<p>Morley DA</p>	<p>Supporting student nurses in practice with additional online communication tools <i>Nurse Educ Pract</i> 2014; 14(1): 69-75</p>	<p>United Kingdom</p>	<p>To investigate the use of social media by student nurses and identify the barriers that may exist to the implementation of Web 2.0 tools in university education. Specifically, the aim was to assess support to clinical learning for first-year students during their first practice placements with the introduction of Web 2.0 communication tools (a Wiki, Facebook) alongside traditional tools (e-mail, telephone).</p>	<p>52 student nurses divided into two groups (30 and 22) were voluntarily recruited</p>	<p>The study was conducted using mixed methods (qualitative and quantitative). The sample was divided into eight e-learning groups and quantitative data regarding the use of the tools introduced (Wiki, Facebook group, email group) were collected weekly by the author for five weeks (corresponding to the duration of the clinical placement). Other data were collected through a self-administered questionnaire. The author also kept a reflective diary of issues emerging from the study.</p>	<p>The level of interaction between students and between students and the author through Web 2.0 tools (Wiki and Facebook) was very high, whereas the use of e-mail was very low. From this emerged the importance of using communication tools that students are more familiar with in order to complement the existing support mechanisms for clinical practice learning and to establish safe and effective online communication.</p>

Usher K, et al	Australian health professions student use of social media <i>Collegian</i> (2014); 21(2): 95-101	Australia	To assess the use of social media by students in health care professions in their first and final years and their preferences when researching information.	637 first-year students and 451 in the semester of their final year from twelve Australian universities	Online survey with three areas of investigation: (1) health profession students' social media preferences; (2) student activity on social media sites; (3) utilization of links as a source of information or learning. The survey questions were as follows: Do you use Facebook or Twitter? Do you make decisions based on ads you hear or read in the media? Have you ever clicked on a Facebook or Twitter ad to learn more about something, e.g., an educational programme? Which of the following (radio, newspaper, magazines, journals, online media, television) is your primary source of information?	82% of the sample were women and 18% were men in both first-year and final-year groups. The mean age was 27 years for students in their first year and 28 years for those in their final year. The most represented health professions were nursing (54.9%), doctors (8.6%) and midwifery (8.5%). Facebook was used by over 90% of students in both years. Their use was greater in the 16-25 age group, with usage lowering as age increased. Twitter was used less by both groups. Both social media sites were used to get information and make decisions as well as learning more about a topic. The primary source of information for both groups of students was online media (52% of first-year students and 50% of students in their final year).
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models and to implement effective methods for using Web. 2.0 in nursing education.

An article by Lemley et al (28), analysing the actual use of Web 2.0 instruments by nursing and medical school teachers where there was a concrete opportunity to do so, highlighted that 53% of nursing school teachers and 45% of medical school teachers used Web 2.0 instruments in their study curricula. The most used instruments by teachers from both types of schools, although with different percentages, were blogs, wikis, videocasts and podcasts.

Bristol (29) states that staying virtually connected is now a mainstay of modern culture.

According to Skiba (30), information is not only transmitted but is also exchanged, new knowledge is generated, interaction between people is continuous and new relationship networks are built.

On the basis of these criteria, there are three important reasons why professionals and trainers should become familiar with these tools and consider seriously how to use them. As to the first reason, social media are somewhat similar in terms of characteristics and structure to what is known in e-learning as “communities of practice”; the second reason is that social media are important places for socialisation, widely used by young people. It is, however, important to direct students to present themselves in a manner that is proper and suitable to virtual spaces, advising them on how to build their online profiles; the third reason concerns the opportunity that students should attempt to build a professional network, as well as to exchange knowledge, in order to create employment opportunities and to describe/share personal training paths.

According to Garrett et al (31), social media can also be effective for promoting international partnership projects among students. They provide a space where students learn from each other, synergies are facilitated, interaction increases, the

exchange of ideas and learning experiences and discussion on different topics and from different points of view are all possible thanks to the informal nature of Web 2.0 tools. For trainers, they can provide an educational context in which partnerships between students improves, benefiting from their power of dissemination and their low cost.

Green et al (32) emphasize that the educational potential of Web 2.0 tools, and social media in particular, can be elevated, if their advantages and disadvantages are carefully addressed before their introduction to nursing education. Social media extend communication beyond the classroom, the traditional place of learning; they ameliorate collaboration and sharing between students and interaction between students and teachers.

A recent study by Morley (33) investigated the support for clinical learning given to first-year students entering placements for the first time, in addition to traditional tools (e-mail, telephone), by Facebook and a Wiki. The level of interaction between students through these Web 2.0 tools was very high, whereas the use of e-mail was low. The author underlines the importance of using communication tools that students are more familiar with, not only to integrate traditional methods and to support learning, but also to promote more effective and safe online communication.

Usher et al, (34) assessed the use of social media by students in health care professions (MD, nurses, midwives, paramedics) in their first and final years and their preferences for the research of information. Over 90% of the sample involved in the study, 637 students (82% women, 54.9% nurses), aged on average 27 to 28 years, used Facebook, followed by Twitter. For Skiba (35), the generation of digital natives communicates with instant messaging, blogging, tweets and social media in general. E-mail is almost considered a medium for people from older generations. According to

Schmitt et al (36), for students, social media can represent a platform where new communication skills can be learned. In addition to clinical, educational and organisational skills, educators should also be capable of facilitating the acquisition and development of communication skills to ensure appropriate and effective professional communication, since more and more people are gaining access to and interacting on the Internet. Given the potential of social media, Casella et al (37) emphasise the importance of assessing whether they should be employed as communication tools at all stages of the nursing process and, more generally, in the patient care process. This would further improve communication between patients and professionals.

Several authors analysed the applicability of some social media, Twitter and YouTube *in primis*, to nursing education. Mistry (38), Bristol (29), Skiba (35) focused on Twitter and the function of tweets and the ways they can be used to communicate with students. In the analysis of the results of a project funded by the Joint Information Systems Committee (JISC), Mistry (38) points out how Twitter stimulated both students and teachers to think about new forms of interactivity and the latter, in particular, to identify new methods of formative assessment and better learning styles in a Web 2.0 context.

Sharoff (39) and Topps et al, (40), on the other hand, describe the innovative use of YouTube for teachers as a platform for publishing teaching material. The authors believe that this tool, which is easy to use for digital natives and non-natives alike, has great educational and informative potential, in terms of participation and interaction, but that, in order to be optimal, its use should be supervised by a teacher.

The ethical and professional implications of the use of social media

Spector et al (23) focused on the need to define guidelines for appropriate use of social

media by healthcare workers. To encourage reflection on this important aspect, the authors begin by analysing three episodes of inappropriate, albeit involuntarily so, use of social media: comments posted on a blog by a nurse on the treatment of a disabled child; an e-mail containing a photo of a hospital patient; a photo of a child cancer patient posted on Facebook by a student nurse to make a point about courage when dealing with disease.

According to the authors, institutions and professionals have a responsibility to define and implement clear policies for regulating and managing conduct on social media within their organisations and in their training. The key points that should guide their definition are: the approach should be proactive; attitudes to these communication tools should not be restrictive; appropriate use should guarantee high professional standards even online.

Frazier et al (21) assessed opinions of social media and their personal, professional and ethical use by student nurses and teachers in relation to Kohlberg's theory. The study conducted by the authors using a questionnaire involved 33 teachers, 236 students and 37 graduate nurses. 70% of teachers and 90% of students used social media, with Facebook being the most popularly used. Students and staff agreed that it is not acceptable to "friend" or interact with patients on social networking websites. They were also in agreement that it is inappropriate to talk about clinical experiences, even if the patient's name is not used, because the patient may still be identified through other information. 70% of teachers reported that they had discussed social media issues during their courses, whereas 50% of students stated that this had not happened. Both teachers and students indicated that professional standards should be kept high even online and that universities should set out policies for conduct.

Englund et al (22) also investigated the ethical awareness of students on matters relating to the publication of clinical information on social media sites. 108 students in their first or final semester took part in the study. Students were mostly women with an average age of 22 in the first semester group and 24 in the final semester group. Respondents manifested differences in awareness of the inappropriateness of posting clinical information and also uncertainty about the most suitable conduct to adopt when using social media.

There are certainly many communication opportunities provided by social media but there are just as many risks, if they are not used properly. For this reason, according to the authors, it is essential for educators to help students develop the necessary ethical skills and values to use these tools appropriately.

Discussion

The use of social media as a training tool in nursing education is recommended to support clinical learning, communication, connection, exchange and partnerships (25-27, 30-32, 35-37). Some authors have already evaluated and demonstrated this (28, 33, 34).

Two main thematic focuses emerge from the results of the review, as analysed below.

The first concerns communication tools and how they are used to take full advantage of their potential and get the best results in training (35, 37-40). When choosing tools, in addition to taking account of their usability, specific potential and purpose, it is also important to consider those that students are more familiar with, in order to facilitate safe and effective online communication (33).

In concrete terms, as already mentioned, the main advantages of using social media in education are: learning support,

communication among students and between students and teachers, acquisition of new communication skills to be used in relations with patients. This orientation is also due to the increasing use of these tools in the health sector (1, 3, 5-18).

The second and extremely innovative theme to come out of the literature review concerns the ethical/professional principles that should be the basis for use of social media. On the one hand, there is a focus on professional aspects (21, 23), that is, the need to define clear and shared guidelines for appropriate use of social media by organisations, health workers, professionals and trainers. Organisations should regulate the use of these tools in professional contexts with specific policies and procedures. Professionals are required to maintain high levels of confidentiality with patient information, regardless of the method or tools used. Appropriate use of social media is a shared responsibility. Health workers have a professional, ethical and legal responsibility to be aware of the impact on care. Trainers should include policies on the use of social media in their curricula and teach students to use them appropriately from the very start of their courses, promoting discussion and analysis on the subjects of confidentiality, privacy and professionalism (41).

Similarly, there is a focus on ethical awareness and hence on building moral development (21, 22). According to Kohlberg (42) there are six stages of moral development: (1) reward/punishment, (2) individualism and instrumental purpose, (3) good boy/girl, (4) law and order, (5) social contract, (6) conscience and universal principles (42). A longitudinal study conducted on the basis of and inspired by Kohlberg's theory showed that moral development is strongly linked to age, education and IQ. However, the school experience tends to favour a predominance of stages 1 and 4 (reward/punishment and law and order) (21). The sharing of ethical and moral values in an educational context

is seen as equivalent to teaching ethics.

The literature review provides much material for thought and analysis, but it has its limitations, such as several documents included are not studies, but editorials or letters. The innovativeness and methodological complexity of the topic are probably the reasons for the small number of studies available in the literature.

Conclusions

The use of Web 2.0 tools in general, and of social media in particular, is no longer under debate. The exponential and unstoppable advance of the Internet has led to a revolution in the field of communications to which no one can remain indifferent, without remaining stuck in the past (43). The opportunities provided by social media are manifold: they improve communication with the public and enable the real-time and rapid dissemination of messages and awareness campaigns; they facilitate the dissemination and discussion of good care practices, health education and research; they enable the construction of a reliable reference network on the issues of health and the sharing of experiences; they increase professional connections and can act as an educational tool for students and teachers (41, 44-48).

Definition of a training policy to guide and direct the proper use of social media is fundamental to improve a correct use of social media. Students must be aware of their responsibilities when using these communication tools and should be involved in discussions looking into the ethical aspects of their use (21, 41).

In conclusion, the analysis of the literature highlights two areas for further investigations: evaluating the level of moral awareness in nursing education with regard to the use of Web 2.0 communication tools; and implementing teaching methods to

promote the construction and development of moral reasoning in professionals.

Riassunto

Social media e formazione infermieristica: revisione integrativa della letteratura

Introduzione. Lo sviluppo esponenziale e trasversale dei social media coinvolge inevitabilmente anche i professionisti della salute sia a livello personale sia a livello professionale. La questione da affrontare non riguarda l'uso o meno dei social media ma piuttosto le modalità d'uso. Il confine tra un corretto e uno scorretto uso, o addirittura abuso, dei social media è sottile. L'elemento chiave è avere quindi consapevolezza dello strumento che si utilizza e ciò dovrebbe essere sostenuto da un'adeguata formazione dei professionisti della salute ma anche, ancor prima degli studenti delle facoltà sanitarie durante il loro percorso di studio.

Obiettivo. Descrivere attraverso una revisione integrativa della letteratura l'utilizzo dei social media nei percorsi formativi da parte dei docenti e degli studenti.

Materiali e metodi. È stata effettuata una revisione integrativa della letteratura nel mese di ottobre 2014. La ricerca della letteratura è stata effettuata consultando le principali banche dati biomediche: PubMed Cinhal e Embase.

Risultati. La ricerca bibliografica ha individuato 854 citazioni; 804 abstract sono stati esclusi in quanto non pertinenti. Dei 50 rimanenti 31 sono stati esclusi, in quanto non rispondenti ai criteri generali, pertanto soltanto 19 articoli sono stati inclusi: 6 documenti evidence based e 13 documenti non evidence based. Dai lavori selezionati emergono due aspetti: l'uso e le potenzialità dei social media nella formazione infermieristica e le implicazioni etico/deontologiche e professionali sottese al loro utilizzo.

Conclusioni. Il confronto con la letteratura evidenzia due prospettive di approfondimento. Rilevare il livello di consapevolezza morale nel percorso formativo infermieristico rispetto all'uso degli strumenti di comunicazione web 2.0 e implementare metodologie didattiche atte a promuovere la costruzione e lo sviluppo del pensiero morale nel professionista.

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