

Social Media Use Among Nurses: Literature Review

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Abstract. *Aim* The scope of the research was to increase the understanding of social media's influence among nurses while highlighting gaps in the literature and areas for further research. *Methods:* The search of PubMed database was performed in November 2015, using terms to identify peer-reviewed articles that describe the use of social media for nursing students or nurse practitioners. A systematic approach was used to retrieve papers and extract relevant data. *Results:* There were identified 23 full text articles involving social media and nurse-related terminology. The majority of the studies were interventional (n=20) that assessed social media as a teaching tool. Podcasts, Multiplayer virtual worlds and mixed social media platforms has also been assessed. *Conclusion:* Social media is used as a tool of information for nurses mainly as the means for engaging and communicating.

Keywords. Social media, nurse, nursing students, Blogging,

1. Introduction

Through online technologies, it is possible for stakeholders to share health knowledge regardless of geographical constraints, thus encouraging the advancement of knowledge in health and other fields. A literature review of online strategies for knowledge translation showed that knowledge translation is becoming a critical component of the healthcare field, and online technologies are emerging as a key facilitator of efficient and timely knowledge exchange [1].

Social media websites can be classified by Kaplan and Haenlein according to the degree of "social presence" and the degree of "media richness" they hold [2]. According to a literature review social media offers a mechanism for enhancing the education and expanding the knowledge base of students regarding privacy, ethics, health policy, professionalism, and communication, also, it assists nurses in building an earlier professional identity and connection with the profession [3].

The nursing blogosphere is continuously growing. Nurse bloggers share information about case studies of interventions or queried other healthcare professionals about experiences [4]. The blogosphere is involved in the healthcare professional's education, but pedagogical applications of blogging besides the communication of information seem to be scarce within nursing education since research on how blogging stimulates collaborative learning or enhances student engagement and learning is limited [5].

Multiplayer virtual worlds are highly accepted by students, appear to provide learning benefits that align with other models of simulation and are seen have a major place in nursing curricula [6].

The scope of the research is to understand the influence of social media and the importance of nurse's social media usage context in retrieving medical information.

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2. Methods

A systematic review followed the Preferred Reporting Items for Systemic Reviews and a Meta-Analyses (PRISMA) guideline [7] was conducted. Studies that described social media, examining relationships between participants through social media usage, stored in PubMed were analyzed.

2.1. Criteria for considering studies

Studies in English were included if they reported primary or secondary research, with analytic quantitative designs used to answer whether social media is effective for nurses use, and to provide context to attributes that may contribute to the effectiveness or lack of effectiveness of the tools being studied. This may include: interventional/experimental (engaging the nurse via social media platforms) and observational (data observing nurse's social media behaviors) studies. Social media was defined according to Kaplan and Haenlein's classification scheme [2], including: collaborative projects, blogs or microblogs, content communities, social networking sites, and virtual worlds.

The sample must have included only nurses, nursing students, nursing university staff or midwives, all social media users, all genders, age groups and participants from any racial, ethnic, cultural or religious groups will be eligible for inclusion, regardless of location.

Were excluded studies that examined mobile health (e.g., tracking or medical reference apps), and real-time exchanges mediated by technology (e.g., Skype, chat rooms) [8]. Were excluded any studies that were not available in English.

2.2. Search strategy

The PubMed database was searched by November 2015 for relevant articles using 2 search queries (Figure 1). The search was undertaken and included papers published up to then.



Figure 1. PubMed search strategy A (left-hand) and B (right hand)

2.3. Selection of studies

Data was extracted using home-made standardized forms and any duplicates were removed. In the first round of screening, titles and abstracts were screened for inclusion. Following preliminary screening, eligibility was assessed through full-text screening.

A data extraction form was developed and pilot-tested on a randomly selected subsection of studies. The data extraction form ensured that the review extracts pertinent data to provide a comprehensive synthesis of the literature regarding social media analysis of medical information usage. As per the PRISMA guidelines, data was extracted from each study that meets the inclusion criteria, including: participants; interventions; results; social media analysis methodology [7]. The extraction was done independently by the two reviewers and a consensus extracted data was analyzed.

2.4. Analysis

Qualitative, quantitative, and mixed-method data that meets the inclusion criteria for the review, including methodological rigor, credibility, and quality standards as outlined, were described and synthesized using narrative synthesis [9]. Results were presented using a number of outcome

statistics where possible to address each research question.

The narrative synthesis of evidence is expected to be reported, highlighting the key outcomes and addressing the research questions. In order to avoid potential biases, key points of difference between studies were identified.

3. Results

A total of 958 studies involving social media, medical information and nurse-related subject headings (MeSH) terminology. Studies not nurse-only-specific (e.g. patient or mixed healthcare providers), those who did not involve social media (e.g. mobile applications, e-learning modules) or those to which the full text was not available were excluded. Twenty-five studies were finally included in the analysis (Figure 2).

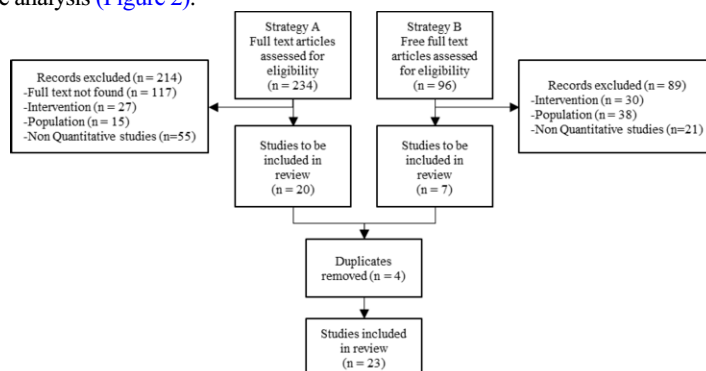


Figure 2. PRISMA flow diagram of selection procedure Strategy A and B

The largest number of original research studies were published in 2013 and 2014 (21.74% – 95%CI [8.88-43.29]).

Podcasts (34.78% – 95%CI [17.58-56.33]), Multiplayer virtual worlds (26.09% – 95%CI [8.88-47.64]), mixed social media platforms (17.39% – 95%CI [4.54-38.94]), Blogs (13.04% – 95%CI [4.54-34.59]) were the social media platforms identified as being used most. Facebook and wikis were used in one research each.

The highest percent of studies addressed nursing students (73.91% – 95%CI [52.36-91.12]).

Percentage of interventional proved significantly higher compared to the percentage of observational studies ($Z=-8.4264$, $p<0.0001$).

The investigated samples varied from 7 to 676 with a median of 31.5 (IQR (31.5-152.25)) for interventional studies and the sample size varied from 52 to 665 with a median of 276.5 (IQR (276.5-595.75)) for observational studies; the difference not being statistically significant (Mann Whitney test: statistic = -1.4133, $p=0.1576$).

4. Discussion

Over time, with the emerging of social media, nurse faculties were no longer considered to be the gatekeepers of all nursing content [10]. The majority of the studies in this systematic review were interventional, despite the gap of this type of articles that was previously highlighted by the literature [6]. As most of the studies were addressing students, the outcomes assessed were the results of training through social media platforms.

Podcasts, used as teaching method among nursing students were rated as being helpful learning tools [11,12], especially for students with long-distance commutes or by students with

English as Second Language, studying in English speaking countries [13], and were associated with improved exam performance [11]. The use of podcasts was found to be consistent with the learning styles of nurses and was a demonstrated and valuable educational resource to review, reinforce, and clarify difficult concepts [14].

The papers addressing nursing students and virtual social worlds showed that synchronous online learning had the potential to increase student engagement, which could facilitate learning [15,16], independent of race and ethnicity [17]. A study [18] performed on nurses suggested a potential benefit in using peer storytelling sessions in a Virtual Social World to facilitate emotion expressing. The findings of this review are in line with previous observations [6].

Adding to what was already known about blogs [4,5], it was shown that the use of blogs could support international educational partnerships and the globalization of the curricula [19] and provided the opportunity to enable nursing students to engage in writing reflection, feedback, and having more interactions with others [20]. The observational studies were used to better understand how social media was used.

Among nurses [21] and nursing students [22], there were identified concerns regarding the adoption of Web 2.0 tools like: usefulness, advantages, compatibility, technology availability, resource facilitating conditions and peer, hospital, and senior management attitude.

Among the nursing teaching staff, efforts were made to confront the new challenges posed by social networks to train the professionals. It was demonstrated to be fundamental the staff's skills in managing these tools [23].

The strengths of the paper lie in the comprehensive and systematic approach of the literature review. Nevertheless, there are limitations to this systematic review that warrant considering. First, it is possible that, despite the attempts to capture all pertinent articles through the use of numerous carefully selected search terms, some relevant studies may have unintentionally been excluded. It is possible that studies pertinent to this review may have been missed as a result of keywords used in the article selection process. Secondly, another potential limitation of the study is the deliberate and detailed approach to reviewing only full-text articles, may have excluded relevant articles. However, trends for use of social media within nurses and nursing students were observed, as described above.

Understanding how nurses and nurses-to-be use social media can enable the development of new online-friendly engaging tools. Further exploration and development of these strategies into building effective knowledge platforms that can positively impact the sharing process is warranted.

5. Conclusions

Most studies done to date have been interventional, examining the engagement through social media and the resulting implications.

Although many institutions remain timid about the use of social media, this review demonstrates that social media is being used for a variety of purposes and in a number of different ways to engage and educate nurses and they seem to happily accept them educational tools. Nursing faculties should elaborate guidelines based on matching the technology used by students to the level of access, and faculty staff competences. When elaborating such guidelines, it should be taken into account the Nursing National and International Organizations' already existing guidelines on professional usage and privacy issues.

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