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Exploring Nursing Student Use of Instagram: Selfies and Soliloquies and #becominganurse with Evolving Digital Footprints

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A thesis submitted in partial fulfillment of the requirements for the Master of Science degree in Nursing
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Abstract

Background: The availability and adoption of social media technologies suggests that nurses, nursing students, and patients simultaneously use the same digital platforms for all manners of everyday communication. An issue within nursing education pertains to how nursing students use this form of technology during their undergraduate education and its subsequent outward professional impact on the profession.

Purpose: This study explores the ways in which nursing students use social media technology within/for nursing education.

Methodology: This study employs Kozinet's (2015) netnography, alongside elements of grounded theory and visual methodology.

Sample and setting: The study was conducted by examining pictures and text posted to Instagram, an image-based social media platform. Through purposive and theoretical sampling strategies, Instagram entries posted by 40 nursing students was analysed.

Results: Core findings that emerged from the data analysis included two top-level themes: (a) *Selfies and Soliloquies*; and, (b) *#becominganurse with an Evolving Digital Footprint*. It was found that through the use of selfies and soliloquies, nursing students described and demonstrated their former and evolving nursing personas. Further, students commonly displayed moments of assimilation into the nursing profession as they evolved as a nursing student during their time in nursing school.

Conclusions: There is a considerable lack of understanding and awareness regarding the adoption and use of social media technology among nursing students. This study provides important findings regarding how nursing students use platforms like Instagram during their education.

Lay Audience Abstract

Social media technology such as Facebook, Instagram, and TikTok, allow individuals to communicate small pieces of information to other social media users in a short period of time. In turn, users of social media can also access small pieces of information shared by other users in an instant. With this in mind, social media has vastly changed how information is shared across space and time and has therefore subsequently impacted cultural practices embedded in the daily lives of many people who have access to social media. Currently, it is largely unknown in terms of how nursing students use social media during their time in nursing school and the potential impact on nursing students and the culture of the nursing profession. Therefore, this study analyzed images and text posted on Instagram by nursing students through the use of a cultural and technocentric research methodology, netnography. The research question guiding the analysis: how and what did nursing students use Instagram for during their time in nursing school. Research findings identified two major themes: (a) that nursing students posted selfies and soliloque-type entries on Instagram, and, (b) nursing students posted entries highlighting prominent moments (e.g., struggles, excitement, accomplishments) of their journeys as they transitioned from a student to a nurse. This study indicated that students posted entries to commemorate personal successes, their pride towards being a nursing student, and the challenges that students faced while in nursing school. Images found in student entries commonly included scrub selfies, stethoscopes, and personal ID badges, suggesting that students generally perceived these items as resembling the image of a nursing student. Further research should examine how student use of social media impact future students and their attitudes towards nursing education and the nursing profession.

Acknowledgments

First and foremost, huge thank you to my supervisor Dr. Richard Booth for your guidance and mentorship throughout this journey. Without your endless words of encouragement and hours spent on providing feedback on the multiple iterations of this paper I would not have had the confidence to complete this thesis.

Thank you Patty, Kwok Hung, and Kelly for being there every step of the way. You have always reassured me that a little sweat is not going to hurt and continued to push me to achieve my goals.

Thank you Amy, Amanda, Brittany, Sara, Jessie, and Naomi for your support and providing me with unconditional love throughout the late nights.

To Instagram, thank you for contributing to the rapidly evolving nature of communication technologies. Thank you to my laptop (past and present) for battling through the multiple tabs and memory space that have been needed to analyze all the text and images gathered during this study. Thank you to the 40 anonymous nursing students for sharing your journeys through nursing school on Instagram and subsequently allowing for this study to happen.

Thank you Chris for the inspiration, reassurance, and sacrificing your laptop to help pull me through to the finish line. You inspired me to work hard and pushed me to challenge myself and overcome my fears. You helped reassure me when I doubted myself the most and reminded me of the end goal.

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Chapter 1

Background

There is a growing interest to understand the impact of social media on the nursing profession. A handful of studies within the nursing literature indicate that social media has the potential to impact elements of nursing practice. Donelle and Booth's (2012) examination of Twitter content related to health issues found that users shared information related to healthcare services, health practices, and health; the authors suggested that the representation of health and healthcare services on the Internet has the potential to impact public viewers and their health decisions and attitudes towards healthcare services. Betts, Donoghue, Aikin, Kelly, and Boudewyns (2016) reported in their study that clinicians (N=2008) currently access professional online communities to seek information related to patient issues; in addition to information seeking behaviors, a small number of participants reported of moderating discussions surrounding patient care. These findings aligned with Rolls, Hansen, Jackson, and Elliot's (2016) integrative review examining clinicians' use of social media to manage and build professional networks, seek information, and support evidence-informed practice.

Despite the affordances of social media in nursing, an issue that has emerged in relation to social media is how use of this technology can impact nurses and the nursing profession. For instance, Kelly and colleagues (2012) found that some of the most frequently viewed YouTube videos that portrayed the nurse were produced through non-healthcare related businesses and the television industry. Further, some of the produced videos reinforced both gendered and stereotypical images of nurses and illustrated nurses in sexually provocative or incompetent fashions. Girvin, Jackson, and Hutchinson's (2016) narrative review of studies examining the

portrayal of the nursing profession through social media indicated that content commonly emphasized incidents related to misconduct, negligence, and poor quality of care.

Professional conduct is another issue that has emerged in the nursing discourse related to the use of social media. More specifically, several nurse researchers have identified issues related to social media use and risk, as related to unethical or non-professional conduct (Green, 2017; Spector & Kappel, 2012). Discourse in this domain has been commonly related to isolated events whereby content posted by nurses or nursing students has been deemed unethical or violated patient rights to privacy and confidentiality (Green, 2017; Spector & Kappel, 2012). Furthermore, it has been found that students in earlier years of their nursing education programs were less likely to recognize unethical behaviours related to social media use (Smith & Knudson, 2015). For instance, Levati (2014) examined Facebook content produced by nurses in Italy and the United Kingdom and found that nurses exhibited behaviours (e.g., sharing work-related concerns, modelling unhealthy behaviours) that potentially violated codes of conduct for nurses in various countries and place themselves in positions of vulnerability. Sharing of personal content was also suggested to be a risk in relation to the blurring of nurse-patient boundaries, with potential implications falling upon the quality of nurse-patient therapeutic relationships (Ashton, 2016; Henderson & Dahnke, 2015).

To promote safe and appropriate use of social media among students and nurses, several nurse researchers encouraged implementation of social media policies to help guide practice and behavior within institutional settings (McGrath, Swift, Clark, & Bradbury-Jones, 2019; Peck, 2014; Skiba, 2009). However, given the user-generated nature of social media and ability for users to largely anonymize personal identities, various strategies to monitor adherence to social media policies is currently lacking. Thus, some nurse researchers have suggested examining

approaches to integrate social media in nursing education to mitigate issues related to misconduct while appreciating the benefits of social media within nursing (Barnable, Cunning, & Parcon, 2018; McGrath et al., 2019).

In an effort to better understand how social media is being used by nursing students, this study sought to explore the ways in which nursing students use social media technology, specifically Instagram, within and for elements of their nursing education. The research question guiding this study was: how and for what do nursing students use Instagram during their time in nursing education?

Theoretical Framework

In this study, Kozinets' (2015) netnography was employed as the overarching conceptual lens used to guide the research process. Netnography was pioneered by Robert Kozinets (1998, 2002, 2010, 2015) a researcher with a background in anthropology, business, management, and marketing research. Defined, *netnography* is both a conceptual lens and set of pragmatic, culturally-embedded qualitative research methods, to be applied when data primarily manifests from publicly available content shared through the Internet (Kozinets, 2015). The overarching purpose of netnography as a methodology is to adapt principles of ethnography and inspirations from grounded theory, to form a cultural and reflexive understanding of technologically mediated social experiences, grounded in online observations (Kozinets, 2015).

A key premise of netnography research arises from the ideal that the Internet or online context is a *place* where cultural practices form and reform, and also an *artefact* generated from cultural practices (Hine, 2000; Kozinets, 2010; Kozinets, 2015). These cultural practices and artefacts produced are assumed as having a *real* existence for people who use the Internet, and thus have the capacity to produce human and system-level effects (Kozinets, 2002; Kozinets

2010; Kozinets, 2015). Kozinets (2015) supports these notions based on his assertion that the apparent boundaries between physical and online environments are merely illusions imposed by computer and software engineers in society, arguing that both contexts can and have demonstrated their capacity to influence one another. Thus, netnography reflects a research approach where the boundaries between digital and physical locations, their properties and events are extremely blurred and commonly mutually informative.

As a conceptual lens, netnography consists of three key assumptions: (a) the online *context* is a fluid, decentralized, and unbounded terrain; (b) *individuals* who participate in online social experiences function as connected members of society; and, (c) *culture* and cultural practices are mentally constructed and destabilized patterns adapted by humans to their lives and assumed as having a *real* existence for people who use the Internet, and thus have the capacity to produce human and system-level effects.

The online context is a fluid, decentralized, and unbounded terrain. The fluidity of the online context is related to the notion of *technogenesis* – an idea that refers to the co-evolving processes between humans and technology, whereby humans select technological tools that mediate transformations of their surrounding context in pursuit of personal needs and desires, while technology also selects humans most capable of succeeding its functions (Coleman, 2010; Kozinets, 2015). Online contexts are unbounded in that it lacks geographic and temporal barriers, and humans with access to online contexts through social media technology can interact and form decentralized relationships with other individuals situated in local and transnational spaces (Kozinets, 2015). Operationalized, the online terrain is constantly changing due to technogenic processes, and the impact of these changes are ubiquitous and widespread as a result of the boundless space and non-specific locations characteristic of the online context (Kozinets, 2015).

Individuals function as connected members of sparsely knit and loosely bounded networks. Kozinets (2015) draws from Rainie and Wellman's (2012) theory of networked individualism explaining that individuals form and become part of online communities by contributing to and/or participating in interactions related to common interests. Drawing on the first tenet, individuals can access and satisfy essential human needs and desires (i.e., a sense of belonging, group association, and social acceptance) and produce, exchange, and receive information – through online interactions and complex online inter- and intra-networked communities (Kozinets, 2015). Traditionally, ethnographic studies have commonly perceived that people adopt beliefs, customs, and rituals through interactions and relationships formed with other people who share or reside in similar living spaces. Complementary of the Internet and tools to access online spaces, individuals have the capacity to interact and connect with other people outside of their immediate and surrounding physical space. As such, individuals who access online spaces are perceived as humans who function as *connected* social beings, associated with multiple networks, as opposed to members embedded within a specific geographic space.

Culture and cultural practices are mentally constructed and destabilized patterns adapted by humans to their lives. Conceptually, *culture* and *cultural practices* are defined as contextual and socially determined patterns that humans adapt to their lives (Kozinets, 2015). Individuals involved in these social spaces may perceive online social experiences as mundane or naturally occurring elements of their social lives. As a result, individuals using social media may or may not be aware of or appreciate the social effects of their online activities. These practices are produced, reinforced, and maintained largely at random, through mutually agreed upon standards; and emerge through a variety of physical and online terrains and networks,

which are all inherently unstable. Through multidimensional actions and processes, humans can adapt and contribute to their online social experiences (Kozinets, 2015).

Netnography was adopted in this study as a research lens to explore the online interactions and artefacts produced by nursing students through their use of Instagram. Netnography has the capacity to *chronicle living life* – and thus, allow a researcher to make sense of human day-to-day events captured and accessed through online spaces. In addition to the understanding of humanity, the lens can enable an understanding of the means to attaining a sense of belonging, acceptance, and connection with, to, and through the use of social media technology and the Internet. This study attempted to develop knowledge through observations of online activities from a human perspective, through human interpretations that were inherently produced through socially constructed and technologically mediated processes (Kozinets, 2015).

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Chapter 2

Background

The widespread ubiquity and democratizing nature of social media have been viewed as both an advantage and risk to the nursing profession and post-secondary nursing education programs. *Social media*, commonly used interchangeably with the terms "social media platforms" and "social media technologies", refers to a form of Internet-based tools (e.g., Facebook, Instagram, Twitter, etc.) "…that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system" (boyd & Ellison, 2007, p.211). Such tools enable individuals to communicate, establish connections, and exchange information through Internet-enabled devices, at a global level (boyd & Ellison, 2007).

Nurses have a vital role in shaping public views toward the nursing profession. It has been argued that social media can function as an opportunity for nurses to illustrate and clarify the nursing role through online mediums (ten Hoeve, Jansen, & Roodbol, 2014). For instance, Kelly, Fealy, and Watson's (2011) study analyzed popular videos related to nursing posted to YouTube, a video-sharing social networking site. They found that several videos produced by students in nursing education programs challenged traditional stereotypes of nurses by depicting nurses as educated and competent, with different ethnic backgrounds and sexual orientations (Kelly et al. 2011). In addition to challenging stereotypes, it has also been argued that social media can be used to facilitate communication and network building among nurses and nurses and other people such as patients and healthcare professionals (Casella, Mills, & Usher, 2014).

Despite the potential affordances of social media technologies within nursing, issues regarding nursing students and their current use of social media tools have been raised in the nursing literature. Similar to other post-secondary professional education programs, such as medicine, dentistry, and pharmacy (Benetoli, Chen, & Aslani, 2015; Henry & Molnar, 2013, Kitsis et al., 2016; Nason, Byrne, Nason, & O'Connell, 2016), a range of issues related to social media and professionalism have been identified: (a) blurring of professional-personal boundaries; (b) breach of client privacy and confidentiality; and, (c) student users exhibiting behaviours deemed unprofessional according to regulatory standards and ethical guidelines (Booth, 2015; Kohtz, Gowda, Stockert, White, & Kennel, 2012; Moule, Ward, & Lockyer, 2010; Spector & Kappel, 2012; Westrick, 2016). Such issues have reportedly led to consequences including jeopardized relationships between nursing programs and healthcare organizations and generated situations where nursing students faced expulsion or legal ramifications for their actions (Westrick, 2016).

Research literature and media reports have outlined numerous examples of negative or unprofessional incidents related to nursing student social media use (De Gagne et al., 2019; Marnocha, Marnocha, & Pillow, 2015; Westrick, 2016). However, there has been little work completed to date exploring nursing students and their general, day-to-day social media use in and for their nursing education. Therefore, there appears to be a gap in nursing education research with regard to how these negative or unprofessional incidents arise. Research that exists has outlined that students in university education commonly use social media technologies as an informal means to meet personal and social needs, such as sharing of personal opinions related to academic issues with their peers (Alt, 2018; Booth, 2015; Giordano & Giordano, 2011, Gurya, 2016; Pan, Coleman, Manago, & Goodof, 2019; Sigalit, Sivia, & Michal, 2016; White, Kirwan,

Lai, Walton, & Ross, 2013). For example, White and colleagues (2013) reported that nearly half of the students enrolled in professional healthcare education programs (e.g., medicine, nursing, etc.) at one Canadian university observed other students post entries to Facebook containing vulgarity, patient/client information, or disapproving remarks of other people. In a different study, 34% (N=97) of nursing students enrolled in a Canadian undergraduate nursing program reported of a colleague posting content on Facebook that contained patient information while 100% of the study participants agreed that such actions breach patient confidentiality (Barnable, Cunning, & Parcon, 2018).

Other research within nursing education has examined social media as a pedagogical innovation to support some elements of teaching-learning within nursing education (Cordoş & Bolboacă, 2016). For instance, Tower and colleagues (2015) and Tower, Latimer, and Hewitt (2014) found that the integration of social media into nursing education promoted higher senses of resilience, self-efficacy, peer support, and learner engagement in self-regulated learning activities. However, these studies centered on nursing student use of social media technologies to meet educator-developed academic objectives, and did not explore the complex relationship of how social media is commonly used simultaneously by students in both their personal and professional lives. It has been suggested that people who use social media, and more specifically social networking sites such as Facebook, Instagram, Snapchat, and TikTok, are at greater risk of sharing information that would otherwise remain undisclosed in daily interactions outside of the online context (Baccarella et al., 2018; Fogel, & Nehmad, 2009; Kia-Keating, Santacrose, & Liu, 2017; Warfield, Hoholuk, Vincent, & Camargo, 2019). With the rapid development of social media, better understanding of the contemporary, multidimensional nature of social media use by nursing students during their education is needed (Levati, 2014). To address this knowledge gap,

this study sought to explore how and for what did nursing students use social media during their time in nursing education. More specifically, the study focused on content posted by nursing students to Instagram – an image-based social media platform that has significantly risen in popularity in recent years (Jackson & Luchner, 2018).

Literature Review

A review of social media use within professional healthcare education contexts was performed through the Scopus, Cumulative Index to Nursing and Allied Health Literature, Google Scholar, and PubMed databases. Keyword queries to identify relevant literature included the following terms: *nurs*, nursing education, healthcare education, social media, culture, online ethnograph**, *and netnograph** – terms were applied individually and in combination. Search of the databases and the ancestry method (Conn, Isaramalai, Rath, Jantarakupt, Wadhawan, & Dash, 2003) were used to identify relevant articles and grey literature in accordance to the following inclusion criterion: (a) published in the English language; (b) between 2000 to 2020; and, (c) emphasis on social media use within professional healthcare education contexts. Articles published during and after the year 2000 was selected as the term social media emerged in research studies around this time (Lomborg, 2016). Articles excluded from the literature review included unpublished articles (e.g., dissertations), studies examining social media use for continuing education and patient education, studies irrelevant to educational contexts, and studies that did not explicitly outline research methods.

The initial database search identified 1301 articles. An initial review of article titles identified 221 articles relevant to the focus of the literature review. An additional review of article abstracts identified 138 potential articles to include in the literature review. During the title and abstract review, articles were eliminated in accordance to the abovementioned exclusion

criterion. An in-depth read through of the articles identified a total of 73 articles that were subsequently included in the literature review report. The literature review was categorized into the following themes: (a) *nursing education and social media*; (b) *professionalism and social media use*; and, (c) *nursing and online culture*.

Nursing Education and Social Media

The term social media refers to various forms of tools, such as blogs, wikis, and social networking sites (e.g., Facebook, Twitter) that people can use to construct, manipulate, broadcast, and view various types of content within public and semi-private online spaces (boyd & Ellison, 2007). Research within nursing education has generally examined attitudes towards integration of social media in education as a pedagogical innovation to support some element of teaching-learning (Cordoş & Bolboacă, 2016; Ross & Myers, 2017).

Some students have expressed an interest in learning how to use social media for learning and professional development purposes (Al-Shdayfat, 2018; Price et al., 2018; Guraya, 2016; Maloney, Moss, & Illic, 2014; Smith & Lambert, 2014). However, students often added that additional training and guidance was needed to better understand the value of social media for professional purposes (Duke et al., 2017). While many students reported positive attitudes towards social media, educators and faculty members within nursing possessed mixed attitudes towards social media integration within nursing education (Duke et al., 2017). It has been suggested that nurse educators are hesitant towards examining social media and its implications on education (Fernandez-Aleman et al., 2014; Koshnood, Nouhi, & Sabzevari, 2016; Moule, Ward, & Lockyer, 2010). In one multi-site study performed in the United States of America and Canada, nurse educators identified a host of pedagogical and ethical issues, including: unclear value of social media in meeting existing curricular objectives; student access to social media;

risks related to breach of patient privacy and confidentiality; and, perceived lack of support from leadership and administration at an institutional level (Jones, Garrity, Vanderzwan, Burla de la Rocha, & Epstein, 2016). Duke and colleagues (2017) reported that social media was a convenient mode of communication for students, and that exploring student-produced content on social media was effective towards capturing the normative attitudes, beliefs, and behaviours of nursing students.

Regardless of the mixed attitudes within nursing education research, studies have been performed to evaluate the value of social media as a pedagogical innovation. As a pedagogical innovation, a variety of social media platforms have been used and tested in nursing education. Such tools included blogs, wikis, microblogs (e.g., Twitter), and social networking sites (e.g., Facebook) (Drake & Leander, 2013; Ferguson, DiGiacomo, Cholizadeh, Ferguson, & Hickman, 2017; Limoges, Nielsen, MacMaster, & Kontni, 2019; O'Conner, Joliffe, Stanmore, Renwick, & Booth, 2018; Shaw, Sperber, & Cunningham, 2016; Shellenbarger & Robb, 2013; Strickland, Adamson, McInally, Tiittanen, & Metcalfe, 2013). Most studies emphasized evaluating the value of social media to engage students in some form of collaborative knowledge building process. For instance, Shaw and colleagues' (2016) case study examined the integration of social media for information curation purposes in a graduate level health informatics course. They suggested that social media integration promoted student engagement in higher-level knowledge construction processes (i.e., analysis, synthesis, and presentation of information related to health-related topics in concise and meaningful fashions) (Shaw et al., 2016). In addition to knowledge building, other potential benefits of integrating social media in nursing education identified by researchers included opportunities for interactions between students and educators outside of physical teaching-learning spaces, development of student online collaboration skills, and cross-

cultural learning and network building among students located in different geographic regions (Ferguson et al., 2017; Garrett, & Cutting, 2012; Limoges et al., 2019; Sinclair, McLoughlin, & Warne, 2015; Strickland et al., 2013; Tubaishat, 2018).

Researchers in nursing education have also examined the value of social media as an informal peer support tool (Morley, 2014, Roland, Johnson, & Swain, 2011; Sigalit, Sivia, & Michal, 2016; Tower et al., 2015; Tower et al., 2014; Vandal et al., 2018; Warshawski, Itzhaki, & Barnoy, 2018; Watson, Cooke, & Walker, 2016). For instance, Tower, Latimer, and Hewitt (2014) integrated social media as a seven-day pre-assessment support tool for undergraduate nursing students. In this study, students posted questions and concerns and received feedback from nurse educators and other students. Overall, several students who participated in the study indicated that the support tool helped to reduce student pre-evaluation stress levels. Other researchers have reported on similar findings, suggesting that informal social media integration in nursing education can stimulate students to engage in online peer support interactions such as the sharing of school concerns and personal mastery experiences among students and their peers in the same program or outside of nursing school (Morley, 2014; Roland et al., 2011; Tower et al., 2015; Warshawski et al., 2018).

In addition to the use of social media to support some element of teaching and learning within nursing education, studies have also explored the impact of guiding healthcare education students in their use of social media as a professional tool (Gazza, 2019; Gilster, Kleinschmit, Cumming, & Ronnenberg, 2020; Jackson, Gettings, & Metcalfe, 2018; Jones et al., 2016). For instance, in two studies, students were asked to create accounts on specific social media platforms and over the course of several weeks. Students were then instructed to seek and follow specific types of groups or individuals within nursing, healthcare, or other related fields (Gazza,

2019; Jones et al., 2016). In one study, students reported that using social media enabled timely access to updates on healthcare related matters (Gazza, 2019). Similarly, Jones et al. (2016) also reported benefits of guiding nursing students to follow nursing and healthcare related groups or individuals. In this study, students discovered that social media platforms offered students access to individuals who can provide support in their professional development and other information useful in their future nursing work (Jones et al., 2016). In general, studies suggested that formal instruction and encouraging healthcare students to observe social media use by other clinicians and healthcare professionals can help students develop digital professional skills and appreciate the merits of social media from a professional capacity.

While reports on social media use in education have been generally positive in nature, other work in this area have described various drawbacks and limitations of the technology as a pedagogical tool. For instance, in Ferguson et al. (2017), several students reported low levels of satisfaction towards engaging in social media use for various educational purposes after they participated in a nursing research study. Additionally, they also reported a lack of interactivity among nursing student cohorts, suggesting that students lacked effective online facilitation skills necessary to moderate online discussions (Ferguson et al., 2017). Mckay, Sanko, Shekhter, and Birnbach (2014) reported on the integration of Twitter as a one-week, supplementary teaching-learning tool. They indicated that only half of the students perceived Twitter to be useful for their learning; however, they reported high volumes of content posted to the platform containing course-related comments from students and faculty members throughout the week-long course (Mckay et al., 2014). In general, it was identified that other factors such as student social-digital skills and the types of content produced may have impacted the process of integrating social media in nursing education (Ferguson et al. 2017; O'Conner et al., 2018).

Professionalism and Social Media Use

Within nursing and professional healthcare education research, online professionalism related to student informal use of social media emerged as one commonly reported issue in the extant literature (Edge, 2017; Ferguson et al., 2016; Duke et al., 2017; Hall, Hanna, & Huey, 2013; Marnocha et al., 2015; Smith & Knudson, 2015). *Online professionalism,* also termed *e-professionalism* or *cyberprofessionalism,* refers to "the attitudes and behaviors … reflecting traditional professionalism paradigms that are manifested through digital media" (Cain & Romanelli, 2009, p.67). To date, various reports have been published that described isolated events in which nurses or nursing students had, either inadvertently or deliberately, violated professional or ethical codes through social media use (Chretien, Greysen, Chretien, & Kind, 2009; Frazier, Culley, Hein, Williams, & Tavakoli, 2014)**,** including: posting material that compromises patient privacy; use of profane or discriminatory language; posting of sexually suggestive content; depictions of public intoxication (White et al., 2013); negative or derogatory comments about patients, nursing faculty, and colleagues (Chretien, Greysen, Chretien, & Kind, 2009; Christensen, Craft, & White, 2020; de Gagne et al., 2019; Marnocha et al., 2015); or posting content to social media platforms that they likely would not want prospective employers to see (Barnable et al., 2018; Duke et al., 2017; Nyangeni, du Rand, & Rooyen, 2015).

While some research has found that students were aware that engaging in unprofessional behaviours on social media could result in negative consequences upon their professional lives (Benetoli, Chen, & Aslani, 2015; Englund, Chappy, Jambunathan, & Ghodes, 2012; Frazier et al., 2014; Henning et al., 2017; Maloney et al., 2014), other work has found that students believe what they do on social media should not impact their professional lives (Barnable et al., 2018; Guraya, 2016; Maloney et al., 2014). In a study completed by Hall et al. (2013), 40% (N=377) of

pharmacy students expressed intentions to change their social media practices once they obtained their pharmacy license, suggesting that students perceived different expectations of themselves related to their social media activities depending on their current roles. In a different study, Nyangeni and colleagues (2015) found that nursing students reported difficulties separating between their private, personal, and professional lives, and found that the myriad roles that students assumed were intertwined and inseparable. While in a third study, Smith and Knudson (2015) suggested that demographic characteristics including younger age and fewer years in nursing education were associated with a higher risk of unethical social media behaviours.

In response to current issues surrounding professionalism and social media use among nursing students, there appears to be a major emphasis on enforcing social media policies in educational institutions to assist students with their social media practices (Canadian Nurses Association, 2012; International Nurse Regulators Collaborative, 2016). For instance in several studies, researchers and educators in professional healthcare education suggested that integration of social media policies in curricula can potentially benefit students and guide their social media decisions (Frazier et al., 2014; Knott &, Wassif, 2018; Rice, 2013; Spector & Kappel, 2012; White et al., 2013). However, in a 2015 study conducted at a school of nursing in the United States of America found repeated, inappropriate social media conduct by nursing students despite the presence of social media policies and disciplinary actions employed in response to incidents (Marnocha et al., 2015). In a different study performed at a dental school in the United Kingdom, the majority of students reported being aware of the presence of social media policies (Dobson, Patel, & Neville, 2019). However, students reported mixed opinions on whether social media posts related to activities such as alcohol consumption qualified as unprofessional content (Dobson et al., 2019).

While significant work has been completed examining elements of e-professionalism in education, another related lineage of work has explored students' understanding related to social media safety and its related use. Topics including the application of privacy settings to social media accounts to limit exposure of social media activities to specific users (Duke et al., 2017; Hall et al., 2013), exhibiting careful judgement when using social media (Ferguson et al., 2016), and self-censorship of personal subjective comments (Henning et al., 2017) have been examined in the research literature. These findings suggest that some students are sensitive to the potential impact of social media use on nursing students and have employed actions to reduce the risk for negative consequences.

Nursing and Online Culture

It has been argued that the integration of social media in educational contexts requires pedagogical adaptations that take into consideration the nature of social media and the current social media practices of nursing students (Green, Wyllie, & Jackson, 2014; Gutierrez, 2012, Skiba, Conners, & Jeffries, 2008; Wang, Scown, Urquhart, & Hardman, 2014). Within nursing education, the vast majority of studies related to social media have focused on student use of social media within educator-monitored circumstances. Subsequently, the majority of studies completed in this domain have not fully appreciated the user-generated nature of social media platforms and how students use social media outside of educator-facilitated and monitored contexts (Ross & Myers, 2017). Studies examining student attitudes and behaviours related to their social media use suggest that students use social media for informal purposes (e.g., discuss academic concerns).

Within education research, it has also been suggested that social media use by students is influenced by a range of individual-level as well as cultural factors (Chen & Marcus, 2012). For

instance, Peluchette and Karl (2010) found that post-secondary students posted different types of images to Facebook depending on the type of image they attempted to portray to other users; students who intended to construct an extraverted and socially involved image of themselves on the Internet were more likely to post content that would be deemed unprofessional in workplace settings (e.g., self-portraits conveyed in sexually suggestive fashions). Thus, examining nursing student-produced social media content from a social and cultural perspective can provide a better understanding of the intersection between cultural norms and student social media behaviours. In particular, an online ethnographic examination of nursing student Instagram accounts can uncover some of the social and cultural dynamics regarding the day-to-day use of social media among nursing students.

Netnography is a set of pragmatic, culturally-embedded qualitative research methods, to be applied when data primarily manifests from publicly available content shared through the Internet (Kozinets, 2015). The overarching purpose of netnography as a methodology is to adopt principles of ethnography and inspirations from grounded theory, to form a cultural and reflexive understanding of technologically mediated social experiences (Kozinets, 2015). Netnography has been applied in nursing and other branches of research such as business (von Wallpach, Hemetsberger, & Esperson, 2017), education (Kulavuz-onal, 2015), social science (del Freshno & Peláez, 2014), and marketing (Kozinets, Valck, Wojnicki, & Wilner, 2010). Within nursing, netnography has been employed to better understand the types of online interactions that occur on the Internet for various purposes (Alang & Fomotar, 2015; Eriksson, & Salzmann-Erikson, 2013; Kirk & Milnes, 2015; Mudry & Strong, 2012). Studies commonly examined content archived to online self-help forums related to various topics such as post-partum depression among individuals who identify with homosexual preferences (Alang & Fomotar, 2015),

fatherhood (Eriksson & Salzmann-Erikson, 2013), parenting and children with chronic diseases (Kirk, & Milnes, 2015), and problem gambling behaviours (Mudry, & Strong, 2012). These studies indicated that through access to online self-help platforms, individuals use online forums to perform various actions. Participants of the online forums disclosed information related to day-to-day challenges related to specific situations and contextual factors that exacerbated personal issues (e.g., family circumstances and comorbid health conditions), provided various forms of social support (i.e., instrumental, informational, and emotional support) to other users, and shared experiences related to accessing support from healthcare services.

Researchers have also applied netnography to examine images posted to social media related to some element of nursing (Erikson, Christiansen, Holmgren, Engström, & Salzmann-Erikson, 2014; Eriksson & Salzmann-Erikson, 2016; Salzmann-Erikson, 2016). For instance, Eriksson and Salzmann-Erikson (2017) applied netnography to examine images of robots that appeared to possess caring functions in healthcare and residential settings – authors suggested that online content has the potential to impact public views towards nursing and healthcare contexts. In a different study, researchers examined the content posted on Twitter related to robots in geriatric nursing work and found that analyzing Twitter content revealed public attitudes and beliefs surrounding the use of robots in geriatric nursing work (Eriksson & Salzmann-Erikson, 2018). Researchers found that various ideas have emerged surrounding the impact of robots on nursing work and that many of the Twitter posts related to robots in geriatric nursing were situated in urban cities and resembled the appearance of science fiction representations of robotic devices (Eriksson & Salzmann-Erikson, 2018).

To date, netnography has not been applied within nursing education research. However, within other post-secondary education research, netnography has been used to examine student

social media content related to school and to form a greater understanding of student attitudes and interpretations of educational contexts and experiences (Janta, Lugosi, & Brown, 2014). For instance, Janta, Lugosi, and Brown (2014) applied netnography to examine content posted on a website specific for doctoral-level students across the world; analysis of findings suggested that experiences of loneliness prevailed among students during various stages of doctoral-level education. Thus, a cultural analysis of Instagram, one of the fastest growing image-based social media platform (in terms of popularity) (Chen, 2020; Wagner, 2015), and its use by nursing students can provide insights into how and what students use social media for in relation to nursing school.

Summary of Literature Review

Research within nursing education has generally examined attitudes towards the integration of social media in education and as a pedagogical innovation to support elements of teaching-learning within nursing education (Cordoş & Bolboacă, 2016; Ross & Myers, 2017). Some students have expressed an interest in learning how to use social media for learning and professional development purposes (Fernández-Alemán et al., 2014; Gurya, 2016; Maloney et al., 2014; Smith & Lambert, 2014); however, students often added that additional training and guidance was needed to better understand the value of social media for professional purposes (Duke et al., 2017). Research within nursing education also examined social media integration as a pedagogical innovation and suggested benefits related to collaborative and cross-cultural learning, active knowledge construction processes, and informal peer support. Studies in this area of inquiry generally included small sample sizes, were performed among nursing student cohorts located in specific educational institutions, and did not evaluate the impact of social

media use among students on their learning. Therefore, the current value of social media in nursing education remains unclear.

Outside of formal educational settings, many students within nursing and professional healthcare education report using social media as an informal social tool (Guraya, 2016; Hay, Carr, Dawe, & Clark-Burg, 2017; Henning et al., 2017). As an informal social tool, students have reportedly used social media to assist with their studies, connect with their student colleagues, and occasionally vent about academic problems (Ferguson et al., 2016; Hay et al., 2017; Henning et al., 2017; Morley, 2014; Sigalit et al., 2016). Student social media practices have also raised concerns related to unethical and professionally unacceptable behaviours (Edge, 2017; Ferguson et al., 2016; Duke et al., 2017; Hall et al., 2013; Marnocha et al., 2015; Smith, & Knudson, 2015). Some researchers have suggested that these behaviours are prevalent among professional healthcare students (Chretien et al., 2009; Duke et al., 2017; Hall et al., 2017; Marnocha et al., 2015; Nyangeni et al., 2015; White et al., 2013) and reinforce the need for educational programs to adopt social media policies as a means to manage and reduce the occurrence of professionally unacceptable behaviours (Frazier et al., 2014; Rice, 2013; Spector, & Kappel, 2012; White et al., 2013).

Finally, there is a need to better understand how students use social media for nursing school while taking into consideration the unique social and cultural dynamics of online contexts accessed through social media. Social media technology, particularly social network sites, facilitate numerous interactions and enables people to access and contribute to unbounded and networked online contexts (boyd & Ellison, 2007). Within nursing education research, studies generally aimed to meet educator-established objectives or focused on specific issues related to

professionalism, and have yet to appreciate the unbounded and networked nature of online contexts accessed through social media (Green et al., 2014; Gutierrez, 2012; Wang et al., 2014).

To examine data extracted from social media platforms, a research method suitable for online data is needed. *Netnography* is a set of pragmatic, culturally-embedded qualitative research methods, to be applied when data primarily manifests from publicly available content shared through the Internet (Kozinets, 2015). Although netnography has not been widely applied within nursing education research, this research approach has been used within nursing research to examine online self-help practices (Alang & Fomotar, 2015; Eriksson & Salzmann-Erikson, 2013; Kirk & Milnes, 2015; Mudry & Strong, 2012) and nursing-related images posted on the Internet (Erikson et al., 2014; Salzmann-Erikson, 2016). In education research, netnography has been used to examine content archived to online blogs by students related to their school experiences (Janta et al., 2014). Thus, netnography is an appropriate research approach in guiding nursing education research related to social media technology.

Statement of Purpose

This study explored the ways in which nursing students use social media technology, specifically Instagram, within and for elements of their nursing education.

Research Questions

The research question guiding this study was: How and for what do nursing students use Instagram during their time in nursing education?

Methodology

Study Design

This study employed a qualitative research methodology to explore nursing students' use of an image-based social media platform, Instagram. A non-participative, naturalistic, online

ethnography method (netnography) (Kozinets, 2002, 2015) was used as the primary study approach. Netnography is a relatively new form of digital ethnographic method that takes into consideration the unique socio-digital cultural contexts present in social media environments (e.g., lack of temporal and physical boundaries) (Kozinets, 2002, 2015; Salzmann-Erikson & Eriksson, 2012). Taking into consideration the multimodal nature of Instagram (i.e., both images and narrative text), the constant comparison technique (Corbin & Strauss, 2015) and compositional interpretations of visual images (Rose, 2012) were used simultaneously during data analysis to triangulate interpretations of both visual and textual content arising from posts on Instagram.

Setting

The setting of this study was the online context, accessed through the social media platform, Instagram. Launched in 2010, Instagram is a social media platform that enables users to share photos and videos, follow other user accounts, and "like, and comment on user content (Instagram, n.d.). As of 2016, there were nearly 300 million daily active Instagram users across the world, which has surpassed other popular social media sites such as Twitter, LinkedIn, and Pinterest (Hutchinson, 2017). More recently, it has been reported that daily active Instagram users have increased to 500 million daily users (Hootsuite, 2019).

Sampling

To select eligible study participants, the following inclusion criterion was established and applied when reviewing Instagram accounts associated with the nursing education-related entries: (a) entries posted to Instagram were publicly available and the text was produced in the English language; (b) accounts revealed self-identified nursing-student role; and, (c) users self-reported first names in the archived entries or profile descriptions. To locate these Instagram

accounts, hashtags (tagging devices that students can use to organize content posted to Instagram to specific categories) related to nursing education, nursing school, or other interpretations of being a nursing student (e.g., #nursingschool, #studentnurse, #futureRN) were explored in Instagram's search function by the researcher. After an initial two-month period of sensitization to the data (June 2016 to July 2016), specific sampling strategies were applied to draw a non-representative, purposeful sample of participants for inclusion in the study. During the *purposive sampling* phase (Patton, 2002), Instagram accounts of seven students were selected for data collection and analysis. These seven students were purposefully selected by the researcher due to their high volume of archived Instagram entries related to nursing education, which were produced at regular intervals, over multi-year periods. As more data related to these seven students were collected and analyzed, *theoretical sampling* was initiated to further develop emergent concepts and themes (Corbin & Strauss, 2015; Glaser & Strauss, 1967; Kozinets, 2010, 2015; Patton, 2002). During the theoretical sampling phase, data was extracted from an additional 33 nursing student Instagram accounts. Through the combination of both purposive and theoretical sampling techniques, a thick set of interrelated constructs and relationships that described and represented the ways in which nursing students use Instagram during their time in nursing school was uncovered.

Data Collection

Once eligible students were identified, data was gathered from their Instagram accounts through an Instagram viewer platform, Websta.me. The data collection from participants' Instagram accounts was retrospective in nature and limited to only material posted during the students' self-described enrollment within nursing education. To facilitate analysis, all data used in the study was downloaded from the Internet and organized using Microsoft Excel and NVivo

11/NCapture softwares. Data downloaded from Instagram consisted of both visual (e.g., still images, emojis, and emoticons) and textual content (i.e., captions, geotags, hashtags). Data collection during the purposive sampling phase included all content archived to the students' accounts, beginning from the first entry describing some element of nursing education. During the theoretical sampling phase, targeted entries related to particular themes of interest emergent in the data analysis were collected for deeper inspection.

Data Analysis

Upon analysis of data from a purposive sample of seven students, themes and categories that emerged were explored, refined, and validated through the analysis of relevant data from 33 additional subjects in the theoretical sampling phase. The overall data analysis was guided by Kozinet's (2015) netnographic methodology in that the process included periods of researcher immersion and reflexive field notes. Immersion began with a process of sensitizing to entries annotated with nursing school-related hashtags to gain a preliminary understanding of how nursing students used Instagram related to their nursing education. Shortly after the entries were extracted from each subject, data was observed, interpreted, and analyzed. Field notes were made throughout the process, to document visual and textual interpretations of the observed data. To form visual representations of the students' Instagram activities, Rose' (2016) visual compositional method was used to guide the interpretation of still images and pictographs (i.e., emojis and emoticons) from visual content to textual descriptions. Interpretations were documented as field notes and documented for analysis in Microsoft Word Excel. For textual data, Corbin and Strauss' (2015) constant comparative technique guided a process of iterations between data collection, visual interpretations, and textual analyses, to form theoretical representations of the data. Themes were identified as they emerged from visual descriptions and

interpretations of textual data. Through theoretical sampling, concepts and themes were refined, compared, and contrasted to form higher-level abstract concepts. Codes were applied to text and descriptions of still images and pictographs, line-by-line and entry-by-entry, and organized into thematic concepts as a way to resurface, make sense of, and derive meaning from the codes. Concepts were analyzed for similarities and differences in terms of their properties and dimensions. The iterative processes ended at a point of saturation when no new concepts and insights relevant to the research purpose emerged from the data (Corbin & Strauss, 2015).

Overall, the analysis was inductive – categories and concepts were formed as they emerged from the raw data. Further, the analysis was also both a non-obtrusive and non-interactive, naturalistic observation; in that care was taken to generate observations of human activities as they occur in their natural environment without any researcher-student interactions. Due to the multimodal nature of entries posted to Instagram and lack of researcher-subject interactivity, the process encompassed a data triangulation of visual and textual data to produce a contextualized and theoretical understanding of the ways in which students used Instagram during their time in nursing education.

Approaches for creating authenticity

Authenticity in qualitative research employing netnographic methods necessitates attention to five elements Kozinets (2010, 2015): (a) rigour; (b) coherence; (c) resonance; (d) verisimilitude; and, (e) polyphony. *Rigour* is defined in netnography as the ways in which textual representations are clear, theoretical, generative, and reflexive (Kozinets, 2015, p.243-4). Rigour was pursued through researcher reflection, use of memoing, and enactment of the constant comparative technique in data analysis. *Coherence* refers to the extent in which interpretations are free from internal contradictions and represented in a unified manner (Kozinets, 2010).

Coherence was pursued by incorporating constant comparisons (Corbin, & Strauss, 2015; Glaser, & Strauss, 1967), as the *a priori* analytic method – to form a set of interrelated concepts and theoretical explanations. *Verisimilitude* refers to the ways in which textual representations simulate an objectively real world and can be evaluated based on the extent to which representations portray open, honest, and reflexive characteristics (Kozinets, 2015). This study attempted to pursue verisimilitude through naturalistic observations and the formation of contextualized representations that took into consideration the current and evolving nature of nursing education contexts. *Resonance* was defined as, "…the extent to which the netnography conveys to its readers a personalized and sensitizing connection with the online community or cultural phenomenon" (Kozinets, 2015, p.268) and was pursued through reflexive practices and evocative representations of naturalistic observations, attuned to the needs and desires of both the scientific and public audience (Kozinets, 2015). Finally, *polyphony* is described as a description of observations that is open, yet inclusive of various types of data found on social media, and was pursued through triangulation of multiple data forms (i.e., still images, text, emoticons, emojis, hashtags, and reflexive field notes) that represented experiences and interactions observed and gathered from the field site.

Ethical Considerations

Ethics approval was obtained from the Health Sciences Research Ethics Board of Western University in London, Ontario, before the initiation of this study (see Appendix A). The approved ethics proposal was supported by Instagram's Terms of Use and Privacy Policy (Instagram help center: Privacy & Safety Center, 2016), which stated:

By using our Service you understand and agree that we are providing a platform for you to post content, including photos, comments and other materials ("User Content"), to the

Service and to share User Content publicly. This means that other Users may search for, see, use, or share any of your User Content that you make publicly available through the Service, consistent with the terms and conditions of this Privacy Policy and our Terms of Use (which can be found at http://instagram.com/legal/terms). Our Policy applies to all visitors, users, and others who access the Service.

Furthermore, the following safeguards were taken to preserve the anonymity of subjects and the subjects' Instagram accounts: (a) the subjects' usernames in textual data were replaced with codes in NVivo and representation of findings; (b) identifying information (e.g., usernames and real names) were removed from the text, archived entries, and saved in separate password-encrypted spreadsheets through Microsoft Excel; (c) direct quotes and images that conveyed sensitive and personal identifying information were excluded from public reports; and, (d) and non-obtrusive observational roles were assumed to limit researcher contamination to the field site.

To respect the rights of individuals to semi-public Instagram activities, this study exclusively sought Instagram accounts and content made available to the public. On Instagram, individuals can apply privacy settings to their personal profiles, and limit their audience to specific members of the online community. *Publicly available* content refers to images, text, and other materials produced and archived on Instagram that any members of the public (including individual without pre-existing online connections) can view and access.

Findings

Content associated with nursing education were extracted from 40 Instagram accounts managed by nursing students. In this study, students tagged entries to different locations across the world, including Canada, the United States of America, Guatemala, Sweden, and the United

Kingdom. Through data analysis, categories and themes were developed from an initial entry-by-entry analysis of data extracted from seven Instagram accounts; initial themes were further examined and saturated in entries extracted from an additional 33 nursing student-managed Instagram accounts.

Core findings that emerged from the data analysis included two top-level themes depicting how nursing students used Instagram during their time in nursing school: (a) *Selfies and Soliloquies*; and, (b) *#becominganurse with an Evolving Digital Footprint*.

Selfies and Soliloquies

This theme of selfies and soliloquies resemble *how* students used Instagram during their time in nursing school. *Selfies* are extremely close up photographic digital portraits of a user's physical appearance, usually the face and elements of the upper and lower body of a person (i.e. the torso and legs), with some form of digital effect applied to the images. Selfies function as *digitally* constructed and *hyper-focused* representations of nursing students and their physical appearance. The practice of posting selfies was normalized by students as selfies were produced and reproduced to student Instagram accounts. Selfies found in student Instagram accounts varied in terms of background environments, student attire, facial expressions/body position, photographic effects (e.g., camera angles, colour, Instagram filters), and presence or absence of other people. Variations largely functioned to suggest changes in student status relative to their current situation. For instance, one student (018) posted multiple selfies to his Instagram account that described different circumstances, including the start of a new nursing course, a positive interaction with a nurse mentor, and having recently overcome a sustained period of stress related to schoolwork (Figure 1).
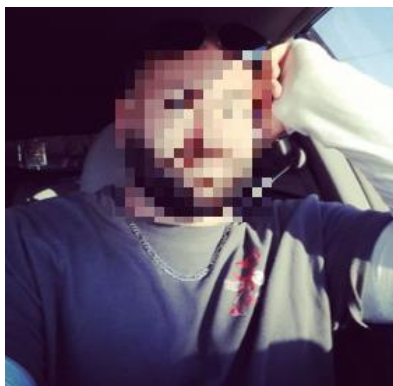
Made through this first week of complex. If the last two days of lecture were indicative of what's to come then the next seven weeks are really going to drag ass. Low-angled selfie of nursing student dressed in a long white shirt underneath a dark grey t-shirt; seated in a vehicle; the student appeared smiling, with a pair of sunglasses resting on his forehead.

Busy day in clinical but the nurse that I was working with was amazing. She was very very experienced, helpful, and more than willing to show us the ropes. They say "nurses eat their young" which for the most part is true. Then you get those few nurses that understand where you are ... Low-angle selfie of student dressed in a blue scrub top, with badges clipped to the middle of the neckline. Student appear seated in a vehicle; student appeared conveying a *neutral* face; gazing downwards towards the camera lens.

I hadn't been feeling like myself for quite some time so it's been a long time since I've posted a selfie. I'm now working on making up all the hard work and progress that I lost with the stress of school. #selfie #student #nursingstudent #nursingschool #futurenurse #futureregisterednurse #futureRN Selfie captured at a *neutral* angle; student was dressed in a black basketball jersey worn overtop a black t-shirt, and rectangular-shaped *sunglasses* worn over the eyes; the student appeared to be conveying a neutral face; seated in a vehicle with light shining through the windows.

Figure 1. Sample of nursing student selfie entries posted by Student 018.

In general, selfie images appeared to resemble nursing student personal reactions to nursing education-related situations and were commonly associated with events that students perceived as significant to themselves and potentially other Instagram users.

In addition to selfie images, nursing students in this study commonly posted entries to Instagram accounts in fashions that resembled soliloquies. According to the Oxford English dictionary (2020), the term *soliloquy* can be defined as an "instance of talking to or conversing with oneself, or of uttering one's thoughts aloud without addressing any person". Students posted soliloquy-type entries to reflect and post reactions to a range of *in-the-moment* events and situations, that occurred in the recent past. Entries often included the words "*I", "my"*, and "*me*", or "*you"*; indicating that these messages were typically relevant and related to the personal experiences and perspectives of students, and rarely addressed other Instagram users or people in direct or explicit fashions. For instance, student 009 posted an entry to Instagram, voicing a monologue containing both active concerns and resilience mechanisms (Figure 2):

> Day 2, final semester. I have a couple hundred powerpoints for our first test... Which is next week…Current inner dialogue:...You made it this far just to fail now …STFU self, you will own critical care…I voluntarily put myself into this torture…Just keep swimming.

Figure 2. Image attached to an entry posted by Student 009. Posted to the entry were two close up photographic images that focused on a white cup with a brown sleeve engraved with a coffee shop emblem and an opened textbook placed on top of a table.

Soliloquy-type entries contributed to student Instagram accounts that appeared *highly visual* and *textually contextualized* to elements of the students' surrounding contexts. The representations of contexts were subjective to student interpretations and digital techniques. For instance, Student 034 posted an entry evaluating her progress at a clinical placement rotation and also identified where the student was situated when the entry was posted to Instagram (Figure 3):

> Such a beautiful day in the city.. from the ward balcony… Managing to Swinglish my way around assisting patients with their care and actually being understood. Even when working alone. Pretty hefty wound care experience, learning how to make old sailor knot rope whiskey bottle cases, [and] lots of laughing with the awesome staff and patients... So far, it's been a fantastic placement.

Figure 3. Image attached to an entry posted by Student 034. Posted to the entry was a reverse view image (photographic shot likely captured by the student) resembling the interior portion of a "ward balcony" enclosed by a red brick wall, in the distant background was a tall yellow building with a grey shingled-rooftop and over a dozen windows running along the side of the building.

Another major component of soliloquies was the expression of *emotions*. Students applied a range of symbolic devices to their entries including punctuation marks (e.g., …, !, ?), upper and lowercase fonts, and icons (e.g., 😍 😬👏💙😁, ☺, ☹, :'(, :D, :P) to denote various emotional states. For instance, student 034 posted an entry suggesting feelings of excitement associated with a new pair of glasses and a recent opportunity to observe a medical procedure, declaring in captions, *"Ahaaa! I can see EVERYTHING!.. Today's morning colonoscopy list was especially a treat!"*, alongside an image of herself wearing a pair of glasses with a smile on her face. While excitement was one commonly noted emotion, a range of other emotional reactions were also conveyed in the student soliloquy-type entries (e.g., feelings of anxiety, aggression, contempt, and relief from stress). Student 027 projected feelings of *resentment* towards a specific post-secondary institution, "By the way, I'm graduating. I'm not going, though. Eff this school. #nursingschool #finished #graduation #ontobsn @[username of a different Instagram account]". In the entry, the student attached an image of an invitation to a graduation ceremony (Figure 4).
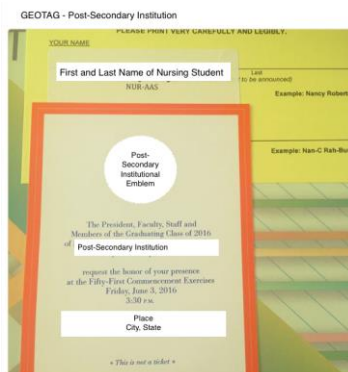
Figure 4. Image attached to an entry posted by Student 027. Posted to the entry was an image of a document addressed to the student from her respective school of nursing outlining details of an upcoming student convocation ceremony.

A different student (033) also on the cusp of graduation, posted a less abrasive reflection on a past interaction with school, indicating mixed feelings of uncertainty and happiness (Figure 5):

> Finished the last clinical shift of my nursing undergrad today, and it's a bittersweet feeling. 4 years of pain, tears, and sleepless nights, are finally coming to an end. I'm still trying to understand what I am currently feeling right now. But I must say, it feels pretty damn good!

Figure 5. Image attached to an entry posted by Student 033. Posted to the entry were four images: (1) [Last Name of Student], "RN" acronym for registered nurse, embroidered in white letters to a piece of dark blue fabric, (2) hospital

signage with left and right arrows alongside names of different fields of medicine, (3) logo on scrub tops, and (4) a cake with a sign commemorating the end of clinical placement for two people.

#becominganurse with an Evolving Digital Footprint

This theme addresses the *why* aspect of the research question, that is, why nursing students use social media during their time in nursing school. It was observed that nursing students used social media in fashions that created evolving digital footprints. Digital footprints as defined by Stephen and Mark (2007) resemble, "the digital traces each one of us leaves behind as we conduct our lives" (p. 324). In this study, the digital footprints of students appeared to map out their transition from a student to a professional nurse. This theme emerged through entries archived to student Instagram accounts over periods of two to four years (resembling average durations of nursing education programs) – textual interpretations of visual imagery were triangulated with text captions. Two sub-themes emerged related to the overarching theme of #becominganurse. The first theme is the *integration of former identity with nursing persona,* whereby students appeared to merge their previous existing roles and identities with their new nursing student identities. The second theme relates to *assimilation of students from a student to a nurse* where students outlined internal conflicts that they experienced during their time in nursing school.

Integration of a Former Identity with the Nursing Persona

Students in this study commonly constructed and embedded projections of themselves and elements related to the ideal of *becoming a nurse* during their use of Instagram. Students posted entries containing nursing student selfies, stethoscopes, and students dressed in scrub attire that appeared to validate or suggest that students were somehow affiliated with nursing school and the nursing profession.

To represent their transcendence from student to nurse, students posted selfies containing various objects and symbols that students commonly considered essential in composing the appearance of a professional nurse. One such object was an identification badge which was often found attached to nursing students. Identification badges functioned as an institutional accessory and contained information (e.g., student given and family names, nursing student title, title and emblem of nursing education program and/or acute care institution, student portrait, and occasionally a date) that suggested specific individuals were nursing students in established institutions (Figure 6). Badges contained institutional emblems and student portraits which symbolized unique and specific entities (e.g., specific institutions and nursing students). The inclusion of identification badges is therefore an important symbol that signify a nursing student's status.
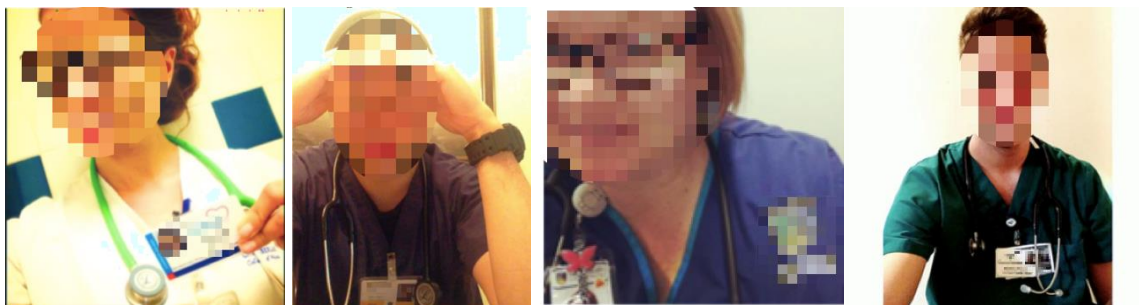
Figure 6. Sample of nursing student identification badges. #idbadge

Nursing student identification badges were often found in student images containing the student's name, the title of an academic institution or healthcare organization, and the title "nursing student". Badges functioned to identify students, their nursing student status, and their institutional affiliations.

Another symbol often included in nursing student selfies were *stethoscopes*, which were often found hanging down the necks of nursing students or set aside in a box (Figure 7). It appeared that the possession of a stethoscope was associated with a sense of pride among nursing

students. The significance of possessing a stethoscope was indicated by one student (013) who posted an image of an orange stethoscope hanging down from a person's neck, and stated in the caption, "*My* [name of stethoscope brand] *stethoscope* is one of my most *prized possessions* as a nursing student". The significance of owning a stethoscope was qualified by a different student (026), who stated, "Some girls want a diamond from [name of jewelry brand]…I'd rather have a stethoscope from [stethoscope brand] … #truestory #stethoscope #doin[g]me *#selfsufficiency* #education #nursing #bsn". This passage suggests that the student perceived a sense of superiority characterized by *self-adequacy, independence,* and *intellect* over other young female individuals due to her preference for a stethoscope over expensive jewelry. Finally, a third student (018) referenced the statement, "a brand new set of... stethoscope and trauma sheers" and an image of two boxes that appeared to contain a stethoscope and set of medical scissors, to the epithetical quote "...bigger and better things…", suggesting that the possession of a stethoscope and other medical instruments represent *future* performative capacities.

Figure 7. Sample images of nursing student stethoscopes #showmeyourstethoscopes
Student stethoscopes were found hanging down from student necks, stored in personal pouches, boxes, or hung on a wall. Variations between student stethoscopes are found in the *colour* of the rubber tubing and *brand* of student stethoscopes, indicating that students distinguished themselves from other people through the colour and brand of their stethoscopes.

Similar to stethoscopes, images of *scrubs* also appeared to connote some form of affiliation with the healthcare profession and specific institutions (Figure 8). Students in the early years of their nursing education generally described scrubs as symbolizing an exciting experience. For instance, student 023 posted an image of herself dressed in a green scrub top posing with two thumbs up and smiling (refer to first image on the far left in Figure 8), in captions the student exclaimed, "I finally got my scrubs!! Feelin' pretty *official* while simultaneously reppin [name of post-secondary institution] #nurse #nursingstudent #nursingschool #fitmom #fitnursingstudent #momswholift #momswhorun #scrubs #[name of post-secondary institution] #college #studentlife". Similar to identification badges, scrub attire often contained institutional emblems displaying a nursing student's affiliation with specific nursing schools. As demonstrated by a different student (Student 026), students internalized a sense of *belongingness* related to the uniformity of scrub attire: "It's gettin *real*!!! Got my uniform scrubs today!!! I'M SO EXCITED!!!! #finalcountdown #scrubs #scrublife #onemonth #nurse #rn #dreams #holycrap #dreamscometrue #instagood". In addition to belongingness, it appeared that scrub attire also engendered a sense of emancipation, as demonstrated by a third student (Student 039) who posted an image of himself posing in school scrubs, while posting in the entry caption, "Long day in #clinical #orientation... Felt good wearing scrubs today. It's kind of *empowering*. Scrubs have a totally different meaning for me now…#excited #futuremurse #futurenurse #nursingstudent."

Figure 8. Sample images of nursing student scrubs. #scrubselfie

Scrub attire resembled personal protective equipment that implied some element of cleanliness and protection of students from their surrounding space and vice versa. Nursing student scrub attire contained nursing school trademark (pixelated and omitted from the above images), and often specific colours; variations are found in the design of scrub attire, school trademarks, and colour of student scrub attire.

In addition to adopting the appearance of a nursing student, it was common to see students outline circumstances related to academic progress and the emergence of social/professional relationships as they evolved from a student to a nurse. *Academic progress* was shown through images of student grades, documents, people expressing feelings of excitement, and celebratory events alongside captions detailing how students had first formed their social relationships, and in some instances, exceeded academic expectations outlined by nursing education programs (Figure 9). For instance, student 013 posted a screenshot containing text and numbers resembling the school term grades, academic status ("Dean's List"), and a table resembling different courses and numeric grades to an entry. The significance of the achievement was validated through the caption, "Well, it's official. First semester of nursing school done. Up next are med-surge and ob/peds. Lord help me next semester! #StudentNurse #NursingSchool #GetThoseGrades #FourPointO #StudyHard #RN #BSN". While a different student (020) posted a closeup image of herself smiling, dressed in a scrub top, suggesting a sense of accomplishment related to a recent student-patient interaction, "Finally a good day in critical

care! spent some time down in the cathlab and I even caught something pretty major in my p[atien]t… I think I saved a life… this is becoming real…nursing school…nursing student #[Name of Nursing School]".

Figure 9. Sample of images attached to entries related to academic progress.

The ideal of becoming a nurse was also characterized by the formation of relationships between students and other nursing colleagues (i.e., nursing students, nurses, and other members of the nursing profession). This type of relationship was commonly associated with the #nursingstudentfamily tag. These nursing student families were illustrated as *exclusive* to "nursing students", and appeared *localized* and *geotagged* to specific people enrolled in the same class and nursing education program. For example, student 017 posted an image of herself smiling and surrounded by other individuals, also smiling, while dressed in scrub attire in an enclosed space (with indiscriminate posters attached to the walls in the background) and exclaimed, "…amazing people and instructor! …think I have finally found my passion! …looking forward to becoming a OB nurse!" (Figure 10). Juxtaposed to images, students often described the quality and nature of nursing student relationships as opposed to personal identities of people, suggesting that the significance of images were not to identify certain people, but rather to suggest that students were somehow associated with people related to the nursing profession. Images posted to "nursing student families" and other related terms (e.g., nursing

student sisters) portrayed students situated in close proximity to other people and displayed

students building some form of connection with nursing students. Furthermore, nursing student

families were described as moral support and vital for student "survival" of nursing school.

Figure 10. Image attached to an entry posted by Student 017. Image of multiple individuals, smiling, dressed in

scrub attire, smiling, positioned nearby other people (some people with their hands rested on the shoulder of another

person), while situated in an enclosed indoor space (with partial elements of different items conveyed in the

background; posters with indiscriminate text and diagrams attached the walls and a white board).

Learning and practicing to become a nurse was often portrayed as one of several

identities, or roles, that students possessed in their lives. Many students posted a significant

amount of Instagram entries about becoming a nurse, suggesting that the role consumes a major

part of their lives. Contemporaneously, nursing students also held other roles and posted content

associated with other former and current roles, such as being a spouse, parent, employee of an

organization, or entrepreneur. As posted by student 008:

> This is my id badge clip. I find this saying [referring to an image of a circular 'clip' with
>
> the words 'Keep calm and nurse on" printed on top] very pertinent. I am currently [a]
>
> nursing student, while working as a medical assistant in a pediatric office. There are days
>
> that I find it hard to keep calm, but other days, I have no problem keeping calm. So I

wear this as a reminder to keep moving forward. Let the past be the past and the let future

happen. #futureRN #futureBSN #futurenurse #stress #college

Similarly, a different student (025) highlighted how skills learned in recent nursing training was

applied in her personal life, aiding her in the role of being a parent. In the entry, the student

posted a close up image of an ear alongside captions containing excitement and a sense of

accomplishment (Figure 11):

> Nurse Mom to the rescue! My now 10 year old apparently hasn't learned not to put things
>
> in his ears! Today he put a broken eraser and of course it got stuck! Good thing I knew
>
> exactly what to do!!! Ear lavage!!! Hahaha #boylife #boymom #momlife
>
> #ILearnedSomethingInSchool #nursingschool #nursingstudent

Figure 11. Image attached to an entry posted by Student 025. Close-up image of an ear and an eraser that the student removed from her son's ear.

As students evolved from nursing student to nurse, their separate roles and identities

merged as students applied nursing-related concepts to describe circumstances unrelated to

school engagements. For instance, student 005 posted (Figure 12):

> Self-care is key to preventing unnecessary stress and burnout. think intradermal just hurts
>
> the least…Squeezed in an amazing acupuncture session today during my lunch break.

These are just a few of the needles that will hopefully make me PMS a little less this month. So grateful my school values acupuncture and subsidizes it so that I can afford to go

Figure 12. Image attached to an entry posted by Student 005. Close up shot of a person during an acupuncture session.

As such, boundaries between personal and professional elements of the students' lives were blurred as students embedded content unrelated to nursing to their personal Instagram accounts between and among entries related to nursing education.

Assimilation from a Student to a Nurse

The process of assimilation resembled students attempting to evolve their existing identities to their new nursing persona. As can be expected, this transformation is met with a lot of internal conflicts. One typical way that we see this on Instagram is through entries tagged to the hashtag #nursingschoolproblems, where the students voiced a host of concerns. For instance, one common concern found in entries tagged to the #nursingschoolproblems relates to the amount of knowledge and content that students feel they are expected to consume during their nursing training. In one post, student 025 posted an image of nursing textbooks and added a comment highlighting the degree to which school work consumed their lives, posting in captions,

"Sometimes you gotta study while Lil'Man watches Netflix and call it quality time… Reading my Psych chapters for next week! Can hardly believe there's only 2 weeks left before finals this session! Bring it on!...#nursingschool #nursingstudent #momforlife #qualitytime".

Common concerns tagged to #nursingschoolproblems often related to workload where students described feeling separated from aspects of their personal lives or feelings of mental and physical exhaustion. For instance, student 009 posted an image of her school work alongside captions containing active concerns, "Read the book, rewrite your notes, freak out that you are going to forget everything, repeat. Not enough [coffee brand] in the world 😭 #6moremonths #nursingschool #nursingschoolproblems #nursingstudent #nursingstudentproblems #nursingstudents #starbucks #study #studying". A different student (011), posted a similar image of school work and highlighted in captions feelings of exhaustion, "One more week and the HESI....UHG! #nursinghumor #nursingstudent #futurern #nursingstudentproblems #hesi #help #teamnosleep #igers #instadaily 🙈📚✏️🔜". Finally, in a third example, student 025 posted an animation of a person throwing papers up in the air and captioned to the image hashtags suggesting feelings of mental exhaustion and isolation from friends and family, "#nursingschool #nursingstudent #testweek #stuDYING #nusingschoolfridaynight #nosociallife".

To further qualify the extent to which students experienced internal conflicts, students posted entries related to "self-care", social support, and caffeine/alcohol products (i.e., *coffee*, ☕ "bad food*",* and alcohol) – factors that students suggested as *promoting* their capacity to manage the student workload (Figure 13). These entries functioned to highlight the extent in which additional supports were necessary to mitigate adverse effects associated with schoolwork. In an entry posted by student 013, an image containing a cup of coffee was observed alongside

captions, "I feel like I have gone through an emotional ringer today. Sat in traffic to come to school and now studying for quiz for tonight. At this point, my blood type is coffee ;) #studentnurselife #nursingschool #futurenurse #term3 #ilovenursing #studytime #sleepdeprivation #theoryday #coffeetime #caffeinethewonderdrug #ilovecoffee." Similarly, a different student (030) posted an image of a water bottle and coffee, captioned to the image the student highlighted feelings of exhaustion stating, "Doing some pharmacology studying! This coffee is giving me life." While a third student (003) rationalized drinking a beer with a difficult training day posting in captions, "It was a long day at nursing school. #day49 #nurseintheworks15 #onlyonebeer #clinicalsstartat645am" alongside an image of a beer can. In a different entry, the same student more explicitly described alcohol as a form of "stress relief", qualifying an image of a wine glass settled on top of a stack of books with captions containing feelings of gratitude, "Post psych clinical Friday night. Serious stress relief time. Thankful for a good home #day163 #30daysofthanksgiving #nurseintheworks15 #cookbooks #wine".
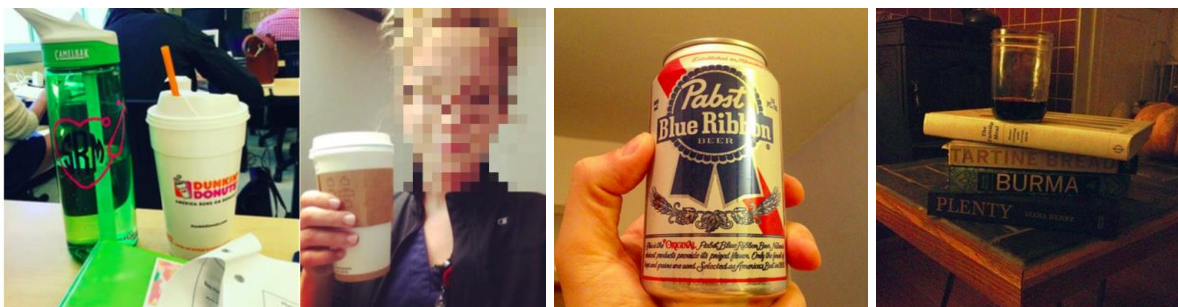
Figure 13. Images of centered coffee and alcohol.

Another way that we see their struggle with their transformation is with *confusion* over the purpose of specific aspects of their nursing training. For instance, *simulated settings* were commonly described as spaces where students "hung out" or "practiced" performing clinical skills through interactions with "cute" (025) or "creepy…fake and racially ambiguous …"(003)

high fidelity mannequins (Figure 14). For instance, student 025 asserted feelings of frustrations

related to practicing a specific skill during simulation practice:

> We learned medication administration this week! I find it *hilarious* that in MA school we
>
> were allowed, no, we HAD to practice on each other. We learned every technique - IM,
>
> SC and even transdermal injections. But in nursing school, where we *aren't allowed* to,
>
> even though it's a much higher degree and competency requirement!!!

Figure 14. Images of Simulation lab and students "hanging out".

In addition to simulation lab, students also suggested that school problems pervaded in

classroom settings – although technically associated with #nursingschoolproblems, content

posted in these entries resembled images and ideas irrelevant and unrelated to nursing and further

exposed personal and private content related to nursing students to other Instagram viewers. For

instance, student 032 posted an image of a classroom setting alongside captions highlighting

feelings of *boredom*, "…sitting in class. I checked my watch 5 hours ago and it was 10 am and

now it's 10:10!!! …nursing school…time stands still in the classroom".

While uncommon, some students posted entries describing conflicts with nurse mentors,

suggesting that interactions were perceived as somehow undesirable or inadequate in meeting the

learning needs of nursing students. In comparison, these conflicts appeared more personal to

specific nursing students. Further, unlike previous entries, these entries highlighting conflicts

between students and other people contained animated images that did not identify specific people. For instance, student 015 projected feelings of resentment related to a recent interaction with a clinical instructor stating (Figure 15):

Rough morning at clinicals. I am assigned to a nurse who wants nothing to do with me. A clinical instructor who is no help and lazy. But I'm thankful to have a great patient. That is why I'm becoming a nurse. To care for patients. So today I'm on my own and I'll be the best damn solo student nurse in spite of [the] negative lack of support. Whatever, I got this. #studentnurselife #term2 #clinicals #igotthis #whatever #imhardcore

Figure 15. Image attached to an entry posted by Student 015. The caption was posted alongside an animated image of a bandage with text underneath stating, "nurses make it better" (with an emphasis on the word *nurses* in large black font).

Despite the prevalence of challenges associated with nursing school, the process of assimilation also appeared to generate positive feelings in nursing students such as feelings of gratitude and accomplishment. These students generally indicated that confronting school demands and the associated consequences are somehow worthy of student efforts as student 026 stated in captions (Figure 16):

The social absences…are sacrifices I'm willing to make …It's one of the most difficult things to watch your loved ones live life accordingly while you're stuck in a classroom, a

box, a prisoner in your own home, wandering the road less traveled often by

yourself...there are memories, moments, laughter, love, friendships that you lose and can't

get back

Figure 16. Image attached to an entry posted by Student 026. Image of student 026 dressed in scrubs embedded with text "11 months and 15 days until nursing school finish line".

Similarly, a handful of students appeared to experience glimmers of joy and excitement related

to interactions with specific elements of nursing school. Student 039 highlighted feelings of

excitement related to a recent interaction during a clinical placement experience (Figure 17):

…the #or was amazing! Seeing those #obstetricians #gynaecologist #anesthesiologist and

#ornurse do their thing was AMAZING! So much for taking selfies in our OR #scrubs in

the made up change room, it just looks like blue v-necks haha! [name of a nursing student

colleage] you are hilarious and fun to work with! #nursing #nursingschool

#nursingstudent #futurenurse #futuremurse …#murse #laboranddelivery #latepost.

Figure 17. Image attached to an entry posted by Student 039. High-angle close up head shots of two students dressed in scrub attire. Individuals appeared to be smiling in the image suggesting that students experienced some degree of excitement related to their recent interaction.

However, as mentioned already these feelings of joy and excitement appeared to be perfunctory in nature and were often embedded in what many students referred to as the "reality of nursing school" involving students attempting to meet multiple and competing demands. The student (039) in the recent example posted a later entry containing a selfie image of the student posing alongside another individual while situated in front of a desk. Alongside the image, the student posted captions containing active concerns and resilience mechanisms, "#study #buddy #nursing #finals #exam #cram #doom #doomsday #scary #pharmacology exam will cause all our cells to undergo #apoptosis lol! #indian #filipino #futuremurse #mursing #mursingstudent #nursingstudent #nursingschool".

Discussion

This thesis explored how and what nursing students use Instagram for during their time in nursing school. Two themes emerged from this investigation of Instagram posts from 40 students. The first theme was selfies and soliloquies where we found that nursing students largely posted *selfie images* and *soliloquy-type entries* to their Instagram accounts. The second

theme, *#becominganurse with evolving digital footprints* resembles what nursing students used Instagram for during their time in nursing school. Students contributed to their digital footprints as they used Instagram during the processes of integration and assimilation. They produced selfies and soliloquy-type entries during these processes as a medium to highlight their internal conflicts and merge their existing and university/professional identities. In so doing, nursing students tell the stories of their transition from a student to a nurse through the entries posted to their individual Instagram accounts. This latter theme is comprised of two subthemes: *integration of former identity with nursing persona* and *assimilation from a student to a nurse*. Integration of former identity with a nursing persona is qualified by images of student scrubs, stethoscopes, and identification badges and entries highlighting student academic progress indicating an expansion of knowledge or skills and intermingling of existing and university/nursing identities. Assimilation from a student to a nurse describes entries that students posted to Instagram highlighting their response to interactions with specific elements of nursing school. In this theme we observed students posting images of schoolwork and environments that stimulated students to feel overwhelmed, confused, or some form of internal conflicts related to recent interactions with specific elements of nursing school.

These themes are interrelated as it was found that through the use of selfies and soliloquies students integrated their former and evolving nursing personas and demonstrated that students were assimilating from students to nurses during their time in nursing school. It would seem that photo-sharing through Instagram resemble shifts in society related to memorialization practices transitioning from formal and institutionalized traditions towards informal and personalized conversational dialect (Gibbs, Meese, Arnold, Nansen, & Carter, 2015).

Soliloquy-type entries appear to allow students to post their thoughts and feelings most salient to students during various interactions with nursing school. Though perfunctory and seemingly abstract in nature, students are able to post entries highlighting these thoughts and feelings without *saying much.* That is, students appear to create and evolve a story involving their journey through snapshots and captions that described their recent interactions with nursing school in very brief and abstract fashions. Further, students are able to post and normalize the feelings as a resilience mechanism without adequately addressing and understanding the underlying source of distress. Based on this understanding, it is valuable to explore what nursing students are saying in terms of their attitudes and beliefs towards specific aspects of nursing training. As outlined in previous work, unresolved or misappropriated internal conflicts can function as a barrier to student growth and development (Moscaritolo, 2009). Consequently, it has also been found that nursing student attrition has been associated with unresolved conflicts that arise when there is a dissonance between student perceptions of nursing and nursing training prior to and after interactions with specific elements of nursing training (ten Hoeve, Castelein, Jansen, & Roodbol, 2017).

In addition to the processes of assimilation and integration, it seems that as students posted these entries to Instagram, more often than not, other Instagram users reinforce and endorsed student attitudes in fashions that appear generally sympathetic in nature. For instance, student 033 posted an image of herself alongside three separate images containing text suggesting the student's affiliation with multiple identities including, veterinary assistant, employee of a nursing care agency, and student of a post-secondary nursing education program. Captioned to the image the student stated, "My life in a nutshell... 3 jobs+placement=4 jobs+school. What is life? Would rather be tired than be broke! #veterinaryassistant #vetassistant

#nursingstudent #studentnurse #receptionist #psw #workaholic". In response to the student entry, other Instagram users posted remarks of endorsement to the entry such as "superwoman" and "…atta girl :p". Various forms of brief remarks of reinforcement were often found in the student entries suggesting the possibility for the use of social media platforms such as Instagram to contribute to some form of ephemeral and existential feeling of moral support from other people. Thus, it appears that the forms of interactions that emerge from student use of Instagram as they appear online can further reinforce student attitudes towards nursing and nursing training. The interactions also seem to encourage the ways in which students choose to manage the internal conflicts that they experience during their transitions from a student to a nurse. Further, the responses from other Instagram users appear rather informal and supportive rather than constructive or resembling quality mentorship-type responses.

Students who constructed images of themselves becoming a nurse posted entries that resembled individuals looking like a healthcare clinician and actively developing or have successfully developed specific types of knowledge or skill somehow related to nursing and healthcare. Images of people dressed in scrub attire, stethoscopes, and name badges to resemble student perceived images of themselves as an individual transitioning towards being a nurse are consistent with Finn, Garner, and Sawdon's (2010) report on the perception of professionalism among undergraduate medical students in the United Kingdom: students felt that donning attire commonly worn by physicians in workplace settings would allow other people to see students as professional individuals and also stimulate students to somehow change their behaviours. In a different article, Morley and Jackson (2017) describe such contributions as the "art of nursing" (p. 347), which refers to actions that contribute to an environment where patients are able to heal and maximize their health. In this environment, the image of a nurse and patient attitudes

towards nurses are fundamental towards building health promoting contexts. This aesthetic aspect of nursing was apparent in the images that students posted to their images in that they attempted to portray their affiliations with the profession through images that students perceived as symbolizing nursing.

Limitations

There are limitations to this study, including two significant areas that should be discussed. First, this study attempted to address the question of why nursing students used Instagram during their time in nursing school by analyzing their online Instagram activities. However, analyzing nursing student Instagram entries did not fully uncover the underlying intentions of their posting activities. The only way to understand these intentions is through participant interviews and inquiring students on their underlying intentions and thought processes at the time of an entry posting. However, it is noteworthy to add that there is a difference between what people *say* they do and what they *actually* do. By focusing on understanding why nursing students use Instagram during their time in nursing school through the analysis of nursing student Instagram entries, some understanding was uncovered related to how the public may view the underlying intentions of nursing student Instagram use. For instance, several students appeared to utilize the hashtag #nursingstudentproblems and express internal conflicts with humour and laughter. Perhaps students may have intended to help themselves overcome or reduce anxiety levels associated with a difficult situation. However, the frequent entries related to the hashtag #nursingstudentproblems appeared to normalize internal conflicts as something that students should just expect to encounter and accept as a typical nursing school interaction. In some cases, the humour can also suggest that students were attempting to criticise aspects of nursing school.

The second major limitation relates to the methodology used to perform this study. The use of netnography was another limitation as it required researchers to specifically focus on textual data which meant that images needed to be transcribed into text before analysis. This also meant that findings were potentially impacted by what the researchers in this study are drawn to see. However, the use of netnography helped guide researchers through the process of analyzing, synthesizing, organizing, and presenting data extracted, including approaches to qualitative rigour.

Conclusion

This study explored how and what nursing students use Instagram for during their time in nursing school. Two themes emerged from our investigation of Instagram posts from 40 students. The first theme was *Selfies and Soliloquies* where we found that nursing students largely posted *selfie images* and *soliloquy-type entries* to their Instagram accounts. The second theme, *#becominganurse with Evolving Digital Footprints* resembles what nursing students used Instagram for during their time in nursing school. We found that through the use of selfies and soliloquies students integrated their former and evolving nursing personas and displayed moments in which students appeared to assimilate from students to nurses during their time in nursing school. Finally, this study provided researchers with insight on how to analyze social media content from a research perspective and also uncovered the potential benefits of employing netnography as a methodology in nursing education research to guide the analysis of social media content. Further research should focus on examining how student use of social media can benefit students in terms of their processes of integration and assimilation during their time in nursing school.

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Chapter 3

The purpose of this study was to examine how and what nursing students use Instagram for during their time in nursing school. Two themes emerged from this study: (a) *Selfies and Soliloquies*; and, (b) *#becominganurse with Evolving Digital Footprints*. It was found that students posted soliloquy-type entries and selfies to their Instagram accounts. Soliloquy-type entries appeared to reflect and display student reactions to a range of *in-the-moment* events and situations, that occurred in the recent past. Entries often included the words "*I", "my"*, and "*me*", or "*you"*; indicating that these messages were typically relevant and related to the personal experiences and perspectives of students, and rarely addressed other Instagram users or people in direct or explicit fashions. Selfies resembled images of students positioned in different contexts such students preparing for some aspect of nursing school or having had recently experienced an emotional interaction during their nursing training.

Second, it was found that students used social media to *#becomeanurse with Evolving Digital Footprints*. In this second theme, students posted in fashions that integrated their former identity with the nursing persona. It was found that nursing students posted entries containing images with stethoscopes and scrub attire. Entries suggested that nursing students were progressing through their nursing programs and forming connections with other nursing students. Further, students posted entries suggesting that students were assimilating from a nursing student to a nurse. In this theme, nursing students posted entries highlighting their challenges and concerns associated with recent interactions with specific elements of nursing school. Challenges and concerns were commonly associated with nursing students describing their struggles with their transformations from a student to a nurse.

Implications for Nursing Education

From a nursing education perspective, this study revealed insight into how students understand and reflect on their experiences assuming nursing student roles through the use of the image-based social media platform Instagram. Exploring nursing student Instagram activities uncovered patterns of social media use and potential reasons why nursing students use social media such as Instagram during their time in nursing school. In this study, it was observed that students attempted to project their understanding of nursing work by posting images of various clinical tools, namely stethoscopes and scrubs, and describing aspects of their nursing training to the hashtag #nursingschool. These artefacts ultimately became a part of nursing students and their online identity. These findings aligned with Alharbi, Kuhn, and Morphet's (2020) study conducted in Saudi Arabia that analyzed how social media usage impacted nursing student development of a professional identity. Through interviews with nursing students, authors found that students accessed social media to gain insight on the nursing identity and found social media helpful in identifying with the nursing profession (Alharbi, Kuhn, & Morphet, 2020). Thus, it appears that social media can help students develop a sense of belonging within the nursing profession, which is valuable as it has been discussed that professional identity contributes to greater role satisfaction and resilience in nurses (Browne, Wall, Batt, & Bennett, 2018).

Another implication of this study relates to how student Instagram entries differ from what nursing schools encourage in relation to online professionalism. As demonstrated in the study findings, student entries appeared largely personal and informal in nature. For instance, all nursing students posted entries highlighting the demanding nature of nursing school and how workload has impacted various aspects of their lives. Some students outlined their confusion towards the integration of high-fidelity mannequins in their nursing training. While these sorts of memorialization practices appear important for students to share on Instagram, alternatively

these behaviours have the potential to impact the view that other people hold towards nursing students. In comparison, current guidelines advocate for professionalism such as student engagement, preventing the blurring of boundaries between personal and professional lives, and political advocacy (CNA, 2012). Thus, it appears that a more integrated and strategic approach to guiding students in their social media use is necessary within nursing education curricula (Jones et al., 2016; Shaw, Sperber, & Cunningham, 2016). In general, integration of social media in nursing education remains a work in progress and requires consideration for student teaching-learning needs, student expectations, and how students use social media during their time in nursing school (Steven & Nies, 2018).

Implications for Nursing Practice

In this study, it was found that students used Instagram as a means for self-expression. For example, students displayed their pride over becoming a nurse and posted content displaying their excitement towards the idea of transitioning from a student to a nurse on Instagram. This was found in content posted by students in both the early and later years of their nursing training. Therefore, it is likely that such practices of self-expression and self-branding will continue as students graduate from nursing school and work as nurses. However, while there were aspects of student Instagram use suggestive of positive or self-promoting practices, there were also content posted by students that potentially can impact their relationship building with others in the future. For instance, content in which students appeared disengaged from aspects of their nursing training can impact the development of trust between nursing students and their future patients and workplace settings. In a study by psychology researchers, it was found that in some cases online personal information discovered by clients impacted their offline relationship with their psychotherapists (Kolmes, & Taube, 2016). In addition to how students develop their presence

on social media, the publicly accessible nature of social media content suggests that how students present themselves online can impact the relationships that students build with other members of the healthcare profession and other nurses (Aylott, 2011). In general, guidance through formal instruction or role modelling within nursing education can promote student use of social media in more constructive and progressive fashions (Gazza, 2019; Jones et al., 2016).

In addition to their personal online image, students may also impact the online branding of the nursing profession. Through content posted by students, the nursing profession appeared undefined and unclear in terms of its differentiation from other healthcare disciplines. Students frequently associated images of themselves dressed in scrub attire, stethoscopes, and clinical skills and spaces with the hashtags #nursing and #nursingschool. While these items predominantly represent the clinical aspect of nursing work, other types of nursing work such as healthcare leadership, research, health promotion, and political advocacy appeared underrepresented. This is a concern as an unclear image of the nursing profession impacts public understanding of the nursing role, its value within healthcare, and potentially, the credibility of nursing work (Dominiak, 2004). From a leadership perspective, nursing students and nurses using Instagram have the opportunity to transform the nursing image and use social media as a way to optimize and expand the visibility of the nursing role (Guo, Tay, & Litchman, 2019; ten Hoeve, Jansen, & Roodbol, 2013; Trepanier & Gooch, 2014).

Implications for Nursing Policy

Many existing policies currently urge nurses to separate their personal and professional lives particularly when posting content on social media platforms (National Council of State Boards of Nursing, 2018). However, findings from this study suggest that personal and professional lives are inseparable. Findings were corroborated in a recent study by Kerr, Booth,

and Jackson (2020), who reported that microcelebrity nurses also posted content on Instagram highlighting the impact of their nursing work on a personal level. Policies within healthcare and nursing education should provide guidelines that enable nurses and nursing students to include aspects of their personal and professional lives on social media in ways that can benefit as oppose to hinder their nursing work, the nursing profession, and their future ability to secure employment (Ahlqvist, Farthing, & Mennie, 2018). For instance, the Registered Nurses Association of Ontario (n.d.) published a set of guidelines called "Social Media Tips and Tricks" outlining specific strategies to apply when using commonly accessed social media sites (i.e., Twitter, Facebook, and Instagram). An example of such a strategy included "use direct messaging for private matters". For future development of these guidelines, it would be helpful if these documents provided examples demonstrating how to apply these recommendations to support practice.

In addition to guiding students on how social media can be used at both personal and professional levels, revisions to social media policies should also consider the expanding functionalities of social media technology. This study examined student use of Instagram, an image-based social media platform whereby each post that students produced contained at least an image. In these images, it was apparent that students inherently included aspects of their surrounding environments such as clinical practice settings and learning spaces. However, more recently, social media platforms such as TikTok have gained popularity whereby short videos, as opposed to images, are the main type of content produced by its users (Herrman, 2019). Contrary to YouTube a video-based social media platform, platforms such as TikTok contain a variety of built-in tools such as filters and music repertoires, that allows users to fully and easily participate in the creation, editing, and sharing of short videos. Further work will be required to respond to

these newer types of social media in terms of policy revision, proactive awareness for nurse educators, and implications related to student use during formal education (Scott & Goode, 2020).

Conclusion

Nursing students are actively using social media for self-expression during their time in nursing school. These practices are produced through the posting of selfies and soliloquy-type entries. Social media use appears largely personal in nature and has the potential to impact the online image of nursing students and the nursing brand as portrayed online. Current integration related to social media within nursing education is largely related to the implementation of policies and guidelines or using social media to meet some form of educational objective. It is apparent that policies and guidelines should be reviewed and revised to actively address how students use contemporary social media platforms and the ever-evolving nature of social media technologies.

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Appendix A

Western University Ethics Approval

Western Research — Research Ethics

Western University Health Science Research Ethics Board
HSREB Delegated Initial Approval Notice

Principal Investigator: Dr. Richard Booth
Department & Institution: Health Sciences\Nursing, Western University

Review Type: Delegated
HSREB File Number: 108189
Study Title: Exploring nursing students' use of social media technology within/for nursing education.

HSREB Initial Approval Date: July 25, 2016
HSREB Expiry Date: July 21, 2017

Documents Approved and/or Received for Information:

Document Name	Comments	Version Date
Western University Protocol	Received Jul 13, 2016	

The Western University Health Science Research Ethics Board (HSREB) has reviewed and approved the above named study, as of the HSREB Initial Approval Date noted above.

HSREB approval for this study remains valid until the HSREB Expiry Date noted above, conditional to timely submission and acceptance of HSREB Continuing Ethics Review.

The Western University HSREB operates in compliance with the Tri-Council Policy Statement Ethical Conduct for Research Involving Humans (TCPS2), the International Conference on Harmonization of Technical Requirements for Registration of Pharmaceuticals for Human Use Guideline for Good Clinical Practice Practices (ICH E6 R1), the Ontario Personal Health Information Protection Act (PHIPA, 2004), Part 4 of the Natural Health Product Regulations, Health Canada Medical Device Regulations and Part C, Division 5, of the Food and Drug Regulations of Health Canada.

Members of the HSREB who are named as Investigators in research studies do not participate in discussions related to, nor vote on such studies when they are presented to the REB.

The HSREB is registered with the U.S. Department of Health & Human Services under the IRB registration number IRB 00000940.

Ethics Officer, on behalf of Dr. Joseph Gilbert, HSREB Chair

Ethics Officer: Erika Basile ___ Nicole Kaniki ___ Grace Kelly ___ Karelyn Harris ___ Vikki Tran ___ Karen Gopaul _✓_

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Appendix B

Curriculum Vitae

Name   Kingsley Au

Post-Secondary Education   Bachelor of Science in Nursing

Related Work Experience   Registered Nurse
                                   Yee Hong Centre for Geriatric Care
                                   2018-Present

                                   Teaching Assistant
                                   2014-2016

                                   Graduate Research Assistant
                                   2014-2015

Professional Associations   Member, College of Nurses of Ontario

                                   Member, Registered Nurses Association of Ontario

                                   Member, Sigma Theta Tau International, Iota Omicron
                                   Chapter