Undergraduate nursing students integrating health literacy in clinical settings

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ARTICLE INFO

Article history:
Accepted 8 May 2012

Keywords:
Health literacy promotion
Health educator
Undergraduate nursing students
Canada

SUMMARY

Background: Analyzing students’ performance and self-criticism of their roles in promoting health literacy can inform nursing education in a social environment that expects new graduates to be health promoters.

Objectives: The pilot study reported here aimed to a) analyze students’ understanding of and sensitivity to issues of health literacy, (b) identify students’ perceptions of structural, organizational, and political barriers to the promotion of health literacy in social and health care organizations, and (c) document students’ suggestions for curriculum changes that would develop their skills and competencies as health-literacy promoters.

Design: A qualitative pilot study.

Setting: A collaborative undergraduate nursing degree program in the metropolitan area of Toronto, Canada.

Participants: Sixteen undergraduate, Year 4 nursing students.

Methods: Signed informed consent was obtained from the participants. Participation was unpaid and voluntary. Recruitment was through an email invitation sent by the School of Nursing Student Affairs Coordinator. Three, one-time individual interviews and three focus groups were conducted. All were audio-recorded. Recordings were transcribed, and the transcriptions were coded using the qualitative software ATLAS ti 6.0. The interview data were submitted to thematic analysis. Additional data were gathered from the two-page self-assessments in students’ academic portfolios.

Results: Sensitivity to health literacy was documented. Students performed best as health promoters in support-teaching hospitals. Their performance was hindered by clinical settings unsupportive of health education, absence of role models, and insufficient theoretical preparation for health teaching. Students’ sensitivity to their clients’ diversity reportedly reinforced the interconnection, in multicultural healthcare settings, between health literacy and other social determinants of health and a growing demand for educating future nurses in expanding their role also as health promoters.

Conclusions: Students recommended more socially inclusive and experiential learning initiatives related to health teaching to address education gaps in classrooms and practice.

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Introduction and Background

The socio-epidemiological relevance of health literacy as a social determinant of health (Raphael, 2009) requires nurses to update their professional knowledge, innovate within their scope of practice and generate new knowledge in the area of promotion of health literacy (Rootman, 2004). Nurses are in the privileged position of being able follow up clients’ learning related to health literacy (Zanchetta et al., 2007). A large number of individuals are at risk of low health literacy (e.g., immigrants, people with low literacy; people with intellectual, mental, hearing, and vision impairments), and it is important that nurses be skilled in promoting these peoples’ health through broadly inclusive educational initiatives. To become health literate, individuals need to mobilize their family, school, social, cultural, and professional assets, gathered over time through contact with knowledge, attitudes, and health behaviors (Kaszap and Zanchetta, 2009; Zanchetta et al., 2007; Zanchetta, 2001). Therefore, they need to be skilled in interpreting the [health-related] world (Masny and Dufresne, 2007), accessing knowledge (Barton and Hamilton, 1999), and communicating health messages (Institute of Medicine of the National Academies, 2004). Widespread low health literacy affects health and health service delivery (Canadian Council on Learning, 2007, 2008; Institute of Medicine of the National Academies, 2004; Rootman and Gordon-El-Bhibety, 2008). For these reasons, health literacy needs to be extensively introduced and further developed in nursing education curricula.

Health professionals’ lack of awareness of health literacy (Zanchetta and Poureslami, 2006) sum up with health care and community health organizations that may not fully appreciate the importance of incorporating health literacy promotion in their organizational plans and policies (Rootman et al., 2006). Because nurses provide health education as a nursing intervention, it is imperative that nursing students be educated to effectively promote health literacy—guiding their clients to...
better respond to the requirements of the health care system and in developing competence in health maintenance, self-care, and self-management (Kaszap and Zanchetta, 2009). Students can also provide socially inclusive care, by embracing health literacy as a way of promoting equitable access to health knowledge (Lolas, 2002) in all countries. This study was conducted in one of the most multicultural cities in the world, Toronto, Canada, whose population comprises 200 different ethnic groups speaking more than 140 languages (Toronto Community Foundation, 2011). The study dealt with students’ reported experiences of practicing health education in diverse and challenging settings: the city’s hospitals, community health and social centers, schools, and shelters.

Objectives

In the pilot study we analyzed students’ actions to promote health literacy in clinical practice, students’ understanding of and sensitivity to issues of health literacy and identified students’ perceptions of structural, organizational, and political barriers to promotion of health literacy in social and health care organizations. We also documented students’ suggestions for curriculum changes that would develop their skills and competencies as health-literacy promoters.

Research Questions

Four questions guided this study: (1) how do students’ experiences in clinical settings reflect their understanding of health literacy and its interconnectedness with other social determinants of health?, (2) what are students’ perceptions of the structural, organizational, and political barriers to promotion of health literacy in social and health care organizations, and how did those perceptions influence students’ promotion of health literacy?, (3) what opportunities and challenges do students face regarding health literacy promotion?, and (4) how teaching strategies used by students did support clients’ health literacy?

Literature Review

Because health literacy is an issue of increasing social relevance in clinical settings, it is important that nursing students should be prepared to incorporate health literacy in their practice by learning how to incorporate educational interventions that respond to the contingent health-education challenges of today’s clients (Rootman, 2004). Health literacy is an intermediary between several other determinants of health (e.g., access to services, culture, gender), and it develops in association with general literacy and other types of literacy (e.g., scientific, computer, media,). Therefore, health literacy, and its promotion, has both a direct and an indirect impact on individual’s health status (Rootman, 2004). A large proportion of nurses’ clients are at risk of mistakes in self-care, because they have insufficient understanding of the complex information provided by health care professionals (Sugarman and Paasche-Orlow, 2006). As a consequence, these clients are unable to provide informed consent (Sudore et al., 2006). In the clinical context, there is little time to assess clients’ health literacy, even though such assessment can reveal new risk factors for health (Rootman et al., 2006; Weiss et al., 2005). If health professionals cannot assess clients’ health literacy, they should consider that all of their clients may have difficulty understanding the complex medical information they receive (Safeer and Keenan, 2005; Wallace et al., 2006). As a result, clients' health outcomes may be negative impacted by medication errors, with respect to medical instructions and unsafe decisions.

Nursing students are also accountable for the protection of clients' safety. To do so, they need experiential learning to expand their awareness of the ethical implications of health literacy. It is recognized that, in nursing practice, clinical supervisors must not only teach novice students using exemplary strategies but must engage students in clinical opportunities to enhance their knowledge (Little, 2006). The teaching strategies modeled by faculty or supervisors are very important in students’ performance in health-education interventions (Tang et al., 2005). In teaching, evaluation and feedback on students’ performance are critical to their growth as health educators too (Elcigil and Sari, 2008), but students’ exposure to multiple supervisors may hurt consistency in practical guidance (Zilembo and Monterosso, 2008). Another opportunity for nursing students’ self-education is interprofessional collaboration (Henderson et al., 2010), which seems to be vital for the delivery of optimal health care in in-patient settings, including educational initiatives (Russell et al., 2006).

However, in other practice locations, such as clinics and non-teaching hospitals, power differences between groups of health professionals threaten delivery of health education and ultimately hinder nursing students’ learning (Pollard, 2009). Since, in these settings, clients may prefer to get health information from physicians rather than nurses (Ramanadhan and Viswanath, 2006), this preference may either inhibit or enhance students’ motivation to apply their knowledge to design educational materials and innovative health-teaching strategies. Why nurses are not preferred as a source of health information remains poorly understood within nursing practice (Friberg et al., 2007).

Conceptual Framework

Freire’s (1973, 2003) educational philosophies of critical awareness, liberatory education, and audacity in the teacher’s role (Freire and Schor, 1986) underpinned this study. Freire’s ideas of learners’ freedom to create, learners’ courage to become liberate and their motivation to dream, as well as educators’ audacity to teach were applied with the intention to inform the understanding of the research team in relation to how students act as both health educators and learners about health literacy. We also acknowledged that these ideas were at play in clinical settings where nursing students acquire professional knowledge while struggling to occupy their own social spaces and at the same time advocating for themselves and for their clients, which may generate a sense of professional and personal empowerment (Freire, 1973).

According to Freire (1973), learners should be the masters of their own education projects, which should be driven by their personal dreams, expectations, and concerns. To liberate themselves from social oppression, learners need critical consciousness. They should question their own worlds, seeking answers about the roots of their problems and, thus, analyzing power imbalances. Critical consciousness implies a high sensitivity to the human condition, which can be transformed by socially and politically engaged attitudes. This critical approach is fundamental to the learning/teaching continuum because, ultimately, all individual learning is filtered through each learner’s culture, moral identity, meaning of life, sense of social responsibility, and commitment to others. Moreover, Freire and Schor (1986) claim that educators should sustain students in their own processes of creating and re-creating knowledge to free themselves from merely assimilating transmitted knowledge. Therefore, through nursing students’ becoming aware that health literacy is a social determinant of equity in access to the health care system, we assumed that nursing students could become agents of social change to democratize access to health knowledge for their clients.

Methods

Ethical Review

The proposal of this exploratory qualitative study was reviewed and approved by the University’s Research Ethics Board.

Recruitment of Participants

All 145 students enrolled in the course “Integration of Professional Self into the Health Care System,” offered at the university site of a
Canadian collaborative nursing program involving two colleges and one university, were invited (by email) by the Student Affairs Coordinator to participate in the study. In addition to being enrolled in the course, participants had to be Year 4 undergraduate nursing students. Students who voluntarily responded to the email invitation became the sample, with a participation rate of 11%.

Data Collection Instruments

Initial structured guides for the focus groups and individual interviews were created by the research team, as well as a guide for self-review of students’ academic portfolios to gather their health-education experience in diverse clinical settings. This material was pilot tested for relevance and appropriateness by three Year 3 nursing student volunteers, who edited all documents for plain language. They all confirmed that the questions and other features of the data-collection instruments were valid, relevant, and grasped the essence of students’ experiences. The final areas of data collection used in the instruments are profiled in Table 1.

Data Collection and Analysis

Signed informed consent was obtained prior to data collection from the 16 voluntary, unpaid participants. In Fall 2008, students were offered two options: participating in a focus group or in an individual interview. Three one-time individual interviews were conducted by the sixth author, the study’s research assistant, and a Year 4 undergraduate student in the same nursing program. The three focus groups (N=13) were conducted by the first and sixth authors. The interviews and focus groups, averaging 65 and 85 min long, respectively. Sessions began with participants receiving a print copy of various definitions of health literacy (see Table 2) to stimulate their recall of its multiple definitions. All sessions were audio-recorded, the recordings were transcribed, and the transcriptions were coded by the first and sixth authors, using the qualitative software ATLAS ti 6.0.

Findings were analyzed by the first and sixth authors, according to the aims of the project, to assess nursing students’ understanding and awareness of multidimensional aspects of health literacy. Coded texts were thematically analyzed (Paillé and Mucchielli, 2008) using the following steps. First we intensively read all the transcribed texts, noting emerging themes. Second, we prepared a preliminary list of themes to guide further readings of the texts. Third, we identified analytical concepts that highlighted affinities and contradictions among themes, defined the thematic axis, and designed a thematic tree that visually depicts connections among components of the thematic groups. Fourth, we logged our reflections during readings of the texts and attempted to group the themes. Fifth, we reflected on the theme labels using the results and, finally, we tentatively answered the research questions.

Trustworthiness

It was not possible to confirm our interpretation of findings with participants, as we lost due contact with them after their graduation 6 months before completion of the study. Therefore, the research assistant, who directly participated in data collection, analysis and interpretation, was the only natural expert (Sandelowski, 1998) available. She had experienced situations similar to the participants’ in her practicum and worked in strict collaboration with the first author to collect the data, code the transcripts, and analyze the findings. She was thus able to confirm the other team members’ interpretation of the findings. In this way, accuracy, fitness, verisimilitude, and epistemological and catalytic validity (Lincoln and Denzin, 1998; Guba and Lincoln, 1989; Lincoln and Guba, 1999) were likely attained, because the final interpretation was sufficiently grounded and based on naturalistic indicators.

Results

In this section, first we describe the main findings that portray students’ self-identity, their educational tasks, reflections and their awareness of contextual factors that impacted their health-education efforts. Then we present the findings of the thematic analysis, according to its two analytical themes and, finally, we present our interpretation of the findings, corroborating students’ accounts of the increasing complexity of promoting health literacy for the culturally diverse population of clients in the study setting. These results may help smaller nursing programs even if they are located in less culturally diverse cities than Toronto to identify the needed support that students should have to increase the effectiveness of their work to enhance levels of health literacy of clients—particularly the less literate ones—when practicing in social and health care organizations less familiar with a multicultural clientele.

Description of Findings

Students’ Self-identification

In the focus groups, 13 students identified themselves as Canadian born (n=2), of European descent (n=3), as visible minorities (n=7), and one identified herself as a mature student. Interviews were conducted with three students whose identified themselves as

Table 2
Conceptual definitions of health literacy used as basis for data collection.

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<th>Ability to:</th>
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<tr>
<td>Access, read or listen to, process, and appraise textual, graphic, and numeric health information</td>
<td>Build new meanings from health information</td>
</tr>
<tr>
<td>Understand health messages and communicate them in users’ social environments</td>
<td>Navigate the health care system</td>
</tr>
<tr>
<td>Use textual, numerical, and graphic health information to inform decision making, reduce health risks, and enhance quality of life</td>
<td>Use health information to access health care in a medical culture that requires self-defense and health vigilance</td>
</tr>
<tr>
<td>Evaluate and communicate health information to improve one’s own and one’s family’s life</td>
<td>Solve health problems by using multiple forms of language (written, oral, visual, tactile etc.) at multiple levels (individual, family, community, world) and in multiple contexts (home, work, school)</td>
</tr>
<tr>
<td>Use all family, school, social, cultural, and professional assets gathered through continual learning (formal or informal) from regular contact with information, knowledge, attitudes, and health behaviors in all aspects of life</td>
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a Kaszap & Zanchetta (2009).
members of visible minorities. Participants represented a sample of the most multicultural population of students in a Canadian undergraduate nursing program. The findings demonstrated that the students are aware of clients' struggles with health care and social services organizations to the critical problem of health literacy in multicultural Toronto. As one student said, “So there was a language barrier. No access to internet... Low income families, they were having a difficult time even having transportation to... families who just immigrated, who didn’t know where to go or who to go to for information.” (Ana, Interview #2)

Students’ self-identity included being novices or trainees in educating clients about health. Not yet feeling fully qualified as health educators, they saw this as a less formal role: “I would be a little bit of a health educator. I think I’m a facilitator.” (John, Focus Group #1)

Students’ sensitivity to health-education issues was used as a feature to describe themselves as people who do consider and respect clients’ experiences, cultural norms, and practices; and ensuring confidentiality. Sensitivity also involved awareness of clients’ knowledge, beliefs and values and preventing their own values from interfering with culturally sensitive teaching. “I would say the language barrier and culture is the biggest thing to be aware and considerate of.” (Ana, Interview #1)

Students’ Understanding and Awareness of the Multiple Dimensions of Health Literacy

Such understanding and awareness was revealed to be strongly linked to sources of health information and influenced by health-education actions and mentoring, as explained by a participant: “There are lots of resources to inform people about their health... it depends on your connection to a community... People who have access to a computer or television may be better able to perceive the world in terms of health education or health information...” (Bethany, Focus Group #3)

Students’ knowledge of facilitators and challenges to clients’ health literacy came from their perception of factors acting synergistically to influence the effectiveness of health literacy initiatives promoted by health professionals. Table 3 displays the reported potential facilitators and challenges. Students believed that clients who have good cognitive skills and mastery of English are most likely to be aware of their level of health literacy. They also believed that others without these skills and mastery may lack confidence and have competing life priorities, thus tending to rely on health professionals as their only source of information. For these reasons, students, learning from experienced health educators seemed important to the latter group of clients. “I had to consider basically what their cultural background was first of all. Sometimes they had a language barrier, and they had a history of Alzheimer’s...” and I found that they base their knowledge on whatever they’ve been told. I found that they rely on other health professionals for what they knew.” (Ana, Interview #2)

In addition to client-related factors, professional-related factors may jeopardize health-education initiatives: limited time for health professionals to teach clients in fast-paced clinical environments; lack of up-to-date, easy-to-read, health-education materials; clients’ unwillingness to participate in health learning activities due to their perception of nursing students as novices; and, finally, students’ own negative perceptions about clients’ inexperience working with students as health educators. Acknowledgment of the aforementioned factors constituted the core of students’ learning about the promotion of health literacy in clinical contexts. For students, it was also necessary to find ways to incorporate theoretical knowledge and to use abilities and skills in ways that harmonized with clients’ profile and practice-related contingencies, as presented above.

Students were aware of multiple aspects of the health-education context (see Table 4). Although students believed that providing information is a key to both promoting health, they revealed that information provision is sometimes neglected by health professionals. Fast-paced healthcare environments of facilities allowed very few opportunities for assessing clients’ health literacy or readiness to learn. In these settings, more value was placed on timely completion of tasks rather than health education. In addition to time constraints, lack of educational resources constrained health education.

According to students, health professionals’ attitudes towards health education were the most important factor in their future health educator role. When students decoded complex information in presenting it to their clients and filled gaps in already available information, clients benefited from better access to health information from health professionals. Students’ use of their expertise to deal with hard-to-teach clients – despite being sensitive to the difficulties that clients from many cultures had in understanding health

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<th>Table 3</th>
<th>Client-related factors influencing effectiveness of health literacy initiatives.</th>
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<tr>
<td><strong>Potential facilitators</strong></td>
<td><strong>Potential challenges</strong></td>
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<tr>
<td>Possibility of clients applying new health information to other life domains.</td>
<td>Dealing simultaneously with multiple, formal and informal sources of health information.</td>
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<tr>
<td>Clients’ habits of sharing health information, resources, and experience.</td>
<td>Relying heavily on health professionals for health information.</td>
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<tr>
<td>Mastery of English, which facilitates independent health-information seeking and confidence in asking questions.</td>
<td>Lack of initiative to seek health advisors in personal social networks.</td>
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<td>High income, good education, and a strong social network to provide health information and advocate for clients’ rights.</td>
<td>Accented speech undermining confidence as independent health-information seekers.</td>
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<tr>
<td>The practice of clients applying new health knowledge that empowers them to make informed decisions.</td>
<td>Inability to deal with health information entirely in English.</td>
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1 Pseudonyms are used to identify quotes.
The Scope of Health Teaching Practice

Students who reported competence in health teaching expressed high confidence in it due to frequent health teaching opportunities during practice. They reported being able to select teaching methods appropriate to clients’ age, knowledge, education levels, and cultural backgrounds. Students’ experiences corroborated the idea that nurses who are effective health educators collaborate with clients through actively listening and ensuring an environment conducive to learning.

I know how to understand what the client’s needs are and their particular wants and needs. I’m able to basically assess what they do and do not know, how they’re going to be able to learn, based on like…if it’s verbal or if it should be through, like different tactile simulation. (Ana, Interview #2)

Challenges and Opportunities to Promoting Health Literacy in Clinical Practice

Clinical practice in social and health care organizations were rich in structural, organizational, and political challenges to students’ attempts to promote clients’ health literacy. Students observed physicians and nurses giving health information rapidly or waiting for family members to translate instructions and even, when translation was unavailable, discharging clients without instructing them about medication use. Other challenges for students surfaced in nonteaching hospitals and community settings, such as clients who may have required special teaching strategies that students seemed unfamiliar with and did not master. Nevertheless, students observed increased participation in treatments and adoption of preventive behaviors after they created education materials. In addition, organizations for which students created health materials, particularly hospitals, eagerly accepted them to support health teaching for their clientele. This eager acceptance suggests that creation of educational materials would facilitate health education in hospitals.

The challenges in and opportunities to promote clients’ health literacy in clinical settings revealed a consensus among students that teaching hospitals and community health organizations were the most suitable settings for expanding students’ health teaching and mentoring skills, due to their orientation to teaching and learning, the presence and availability for students’ use of high-quality educational resources, constant support from medical staff, and participation in hospital rounds and workshops that allowed students to network with other health professionals and thus enhance their learning. In both community health and social settings, the fewer time constraints allow clients to be more comfortable asking questions, the multidisciplinary teams are approachable and provide more support than hospital based professionals for students to ask questions and share their thoughts about client care.

When we were in community last year…basically what they do is pure education, pure teaching…teaching hospitals that really help teach us how to teach others. I guess there are teaching opportunities in the community more than clinical setting. (Irene, Focus Group #1)

Other clinical-practice settings had multiple challenges; for example, in elementary/high schools, lack of health-promotion information about topics of interest to students. In medical clinics, there was limited time for nurses to do health teaching. In nonteaching hospitals, because health education is not a priority, time constraints prevent one-on-one teaching with clients. In addition, limited resources for teaching non-English-speaking clients inhibit systemic health-education initiatives. In long-term-care facilities, clients underestimate students’ skills and knowledge and are thus reluctant to participate in students’ health-teaching initiatives. Finally, in community social centers, supervision by professionals other than nurses undermined students’ efforts to promote health literacy.

Table 5 summarizes students’ self-reported performance in health teaching, through the self-review of their academic portfolios. It is evident that students relied solely on written and oral presentation and did not use information technology or visual aids (e.g., pictograms). This reliance excluded the needs of low-literate and illiterate clients, did not use information technology or visual aids (e.g., pictograms). Health-promotion advertisements do not balance the three levels of health prevention – information about health promotion is abundant but poorly used.

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Building Self-confidence as Future Nurses Who Provide Health Education

Students benefited personally and professionally as their nursing roles as health educators expanded. Their confidence increased when clients understood the health information they provided. Students felt less like outsiders and more like valuable members of interdisciplinary teams. To further improve their teaching skills, students sought constructive criticism from clients, supervisors, and others whose opinions they valued.

I'm working closely with the different interdisciplinary teams...and have been networking and they're approachable...very encouraging and empowering. (Marcia, Focus Group #1)

That students valued their nursing role as health educators was evident in their approaches making a difference, not only in clients’ health, but also in their overall wellbeing and preparedness to learn. Students actively listened to their clients, demonstrated empathy, and established meaningful nurse–client educational relationships. The positive feedback that students received from nurses, faculty advisors, and colleagues consolidated their sense of personal empowerment. Another relevant contribution to their professional confidence was the brief preparation in the clinical setting they had before their very first teaching experiences in clinical practice. For this reason, students recommended a change to nursing curricula the inclusion of a course on health education, available in all years of the program. Such a course would incorporate the following content: learning theories, health literacy, information delivery, assessment of clients’ need for information and readiness to learn, teaching strategies, preparing a teaching plan, creating effective education materials, technical aspects of presentations, facilitating workshops, and use of visual and audiovisual media.

Students unanimously recommended creating health-teaching simulations in all nursing courses, so that the topic of health teaching varies. This would involve students teaching fictional clients, played either by professional actors or students in small groups or pairs. Students also emphasized that students must continuously engage in professional development to become effective as nurses who provide health education, updating their knowledge of nursing issues by participating in conferences and workshops, and by reading scholarly journals, textbooks, and newspapers. These recommendations will help students become effective health educators within unfavorable and unpredictable professional contexts.

In sum, three major factors jeopardized students' performance as nurse/health educators: unaccommodating clinical and community settings to develop health teaching activities, absence of role models, and insufficient theoretical preparation for health teaching. Despite these limiting factors, students did experience some success as health educators, due to their high levels of motivation and critical sensitivity toward health literacy: their ability to explore information sources, to recall, and transfer knowledge; and their creativity in person-to-person teaching.

Thematic Analysis

The following section introduces the two major themes that emerged from our thematic analysis: students' awareness of challenges to becoming effective health educator nurses, and their sensitivity to health literacy within a critical perspective.

First Analytical Theme: Awareness of Challenges to Becoming Effective Health Educators

Students' awareness of how to become effective health educators was revealed to be critical to their self-confidence in promoting clients' health literacy, considering students’ minimal formal training in health education. Therefore, practice supervisors could model this professional role (Hanson and Stervig, 2008). Throughout data collection for the study, students disclosed that they reflected on the limited effectiveness of simply transmitting health-related information instead of transferring the information to their clients' life experiences outside the health care system. New learning moments were created by the opportunity to share these reflections with colleagues and researchers during the study, as well as looking for the rationales behind their past educational initiatives in reviewing their own academic portfolios. Despite evidence of some inappropriate teaching activities in our small sample of students, they were able to create teaching activities and implement them. Their recommendations for changes in nursing curricula revealed an awareness of instrumental knowledge that would enable students to innovate in future educational interventions. Furthermore, their recommendations revealed new avenues for professional education. Implementing these recommendations will enable students to expand the confidence, cognitive skills, clinical performance, and critical thinking skills they acquired through high-fidelity simulations (Brannan et al., 2008; Hawkins et al., 2008; Moule et al., 2008; Rothgeb, 2008; Starkweather and Kardong-Edgren, 2008) in the practice laboratory.

Second Analytical Theme: Students' Sensitivity to Understanding Health Literacy within a Critical Perspective

Students' sensitivity may have resulted from the philosophical underpinning of our nursing curriculum. Throughout the four years of our nursing program and more intensively in their practice, students had opportunities to experience and reflect on situations using principles of social justice, social inclusion, and critical social theory. They experienced Freire's educational philosophy in their efforts to raise clients' critical awareness about their own health knowledge, which, in turn, helped students to realize that health literacy cannot in fact be conceptualized only within a cognitive perspective (i.e., assessing and measuring how much medical information a client has). Because students took a critical perspective in attempting to incorporate their clients' broader life contexts into their health teaching, most of their pedagogy was spontaneous efforts to prepare clients for learning about health issues. Moreover, because most students in our program belong to multicultural populations, they are in a very privileged position to recognize, and value, the unsolved issues faced by ethnic minorities. Interestingly, despite this cultural proximity to their clients, students did not report learning from them; teaching was unidirectional. In reviewing their practices, students affirmed that their clients learned how to understand the language of medical knowledge and how to harmonize the health information they gathered with their own cultural understanding of health and illness. Students had thus adopted a pedagogical approach that reduced clients' dependence on others to interpret medical knowledge and divert this dependence into reflection and action (Freire, 1973, 2003). In other words, they planted the seeds for their clients' self-directed health literacy, for them to become autonomous and engaged in health care, as the health care system current expects Canadians to be.

Discussion

The study's findings point to new avenues for rethinking health literacy within nursing curricula, as well as supporting future interprofessional educational initiatives to address issues of health literacy within a multiculturally competent perspective. Students' experiences in clinical settings revealed their understanding of health literacy and its interconnection with other social determinants of health. They were able to understand health literacy through the lenses of multiculturalism and dialogue between ethnocultural groups about health due to their familiarity with the complex differences in health knowledge, worldviews, and understandings of health among clients. Students' academic portfolios revealed their awareness of the interconnection among multiple social determinants of health and health literacy, as well as hindrances posed by cultural beliefs, cultural stigma (Rootman and Gordon-El-Bihbety, 2008), poverty and social exclusion (Soulet, 2008).
Students demonstrated awareness of structural, organizational, and political barriers to promotion of health literacy in social and health care organizations and how these barriers limit their ability to use such nontraditional teaching methods in their nursing roles as health educators. They were somehow aware of effectiveness of combined written and verbal instructions at the moment of hospital discharge (Johnson and Sandford, 2005), as was the use of pictures to improve the outcomes of health communication with low-literacy/illiterate clients (Houts et al., 2006). The aforementioned barriers may explain why students overly relied on printed educational materials (Scheckel et al., 2010), neglecting the low literacy levels, and illiteracy, of a large number of clients. Even when some clients had reported seeking information from the media and on the Internet, indicating motivation to improve the quality of their decision making (Dutta-Bergman, 2005), students failed to acknowledge these missed opportunities to enhance their clients’ health literacy. In addition, students did not have health-teaching simulations in the nursing curriculum. Such simulations could develop students’ efficacy in health teaching, as well as their skills in implementing, and evaluating it (Goldenberg et al., 2005).

In their attempts at health teaching within the limitations in their practice placements, students provoked awareness among community partner organizations about the benefits of nurses’ roles as health educators. In taking on these roles, students are countering what Hills et al. (2006) denounce as the contradiction between Canadian nursing education and practice. According to these authors, in public health practice, nurses most often apply their managerial skills and knowledge to program planning and evaluation rather than to promoting health literacy as a route to clients’ autonomy, as they are trained to do in nursing education. Students’ recommendations for the nursing curriculum reflect their awareness of this contradiction.

Special attention should be given to students’ recommendation that they work with educational simulations, not only to be better prepared for educational interventions but to enhance effective interactions with clients in teaching–learning context. The findings corroborate that recommendation and also highlight the urgent need of students to be educated in the use of socially inclusive teaching technology. With this skill, students can respond to specific health education of clients with conditions that may hinder their learning. Moreover, the findings reiterate the relevance of nursing program managers critically reviewing the lack of support for experiential learning on health education in practice environments. Finally, there is a disturbing silence in the findings: no faculty member or clinical supervisor was reported to be an inspiring role model or health-educator mentor. This silence should lead nurse educators in classrooms and clinical settings to reflect on the effectiveness of our contribution to a new generation of nurses, who are expected to respond in a more socially engaged way to the increasing vulnerability of populations across nations.

How to produce changes in our educational practice should not only be the objective of further research; nurse educators should also talk openly about our commitment to creating healthy learning environments that save the very fast-paced work environment for junior nurses (Embree and White, 2010; Johnston et al., 2009) that results from current staff shortages, as reported by students. Canadian studies on empowerment in work environments confirm students’ reports (Laschinger et al., 2010, 2009). Vessey et al. (2009) advise nursing educators to teach students skills to deal with adverse work environments. Personal and professional empowerment of nursing students should be also the ultimate educational goal (Bradbury-Jones et al., 2007). Empowerment will also enable students to become effective advocates for vulnerable clients.

**Study Limitations**

The participation rate in this qualitative pilot study was low (11%), and as this was a pilot study the experiences of students enrolled at the program college sites were not explored. Their experiences may be somewhat different from the students at the university site. Study findings reveal the perspectives of nursing students alone in relation to their role as health educators. We did not explore faculty and clinical supervisors’ perspectives on health education in clinical settings, nor their accounts of students’ performance. Nor did we explore the perspectives of students’ clients. The cultural diversity of both students and their clientele may limit the transferability of our findings to nursing education programs in less diverse cultural settings.

**Conclusion**

Despite their theoretical preparation prior to clinical practice, students’ accounts disclosed how difficult it is to act as health educators in social and health organizations. It is important that nursing educators design innovative educational initiatives to ensure that threats to students’ effective performance as health educators actually stimulate students’ creativity and audacity to teach. How nursing faculty can prepare students to develop their inner potential as health educators in such challenging contexts remains a question to be answered. As advocates for clients, student awareness of promotion of health literacy is key to clients’ ability to use health knowledge. Therefore, they should be able to fearlessly teach to promote health equity. Students’ recommendations for enhancing their education remind the need of update programs to create enthusiastic context for broad development of their teaching skills.

The study’s main contribution to the literature addressing issues of health literacy is this: in multicultural host societies, equity in health literacy relies also on the socialization and ability of students within multidisciplinary teams to promote health education, despite organizations’ lack of attention to health literacy. Nursing students should advocate for their clients’ access to health information they can understand having more opportunities to master the variety of health teaching methods.

Future studies may explore the mobilization of nursing students’ nonacademic assets (e.g., artistic skills) to encourage health-education innovations. Educational materials created by students that are socially inclusive and culturally sensitive are other potent topics for research. Such inquiries will document the unique contribution of nursing students in promoting a highly health-literate society.

**Funding**

Ryerson University, Faculty of Community Services Learning & Teaching Seed Grant and Writing Week Initiative.

**Acknowledgments**

The authors thank Dr. LaRon Nelson, Dr. Nancy Latimer and Prof. Carmen James Henry for reviewing an early draft of the manuscript, and Ms. Margaret Oldfield for editing the manuscript.

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