

“My Greatest Fear Is Becoming a Robot”: The Paradox of Transitioning to Nursing Practice in Lebanon

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Abstract

We investigated the challenges final-year nursing students (FYNSs) and first-year registered nurses (FYRNs) face as they transition to nursing practice in Lebanon. Our purpose was to understand the challenges of transition from the perspective of FYNS and FYRNs. We conducted focus group discussions with FYNSs and FYRNs recruited from four leading universities. Thematic analysis identified an unexpected paradox that has implications for quality of nursing care and retention of graduates. While humanoids are marketed to communicate empathically with patients, FYNSs in Lebanon struggle to resist *becoming robots*.

Keywords

robotics, trends, technology, assistive, education, nursing, empathy, coping

Introduction

Perhaps the robotic age came of age on June 24, 2011 when President Barack Obama launched the U.S. National Robotics Initiative (NRI) at Carnegie Mellon University. The NRI is a multiagency collaboration that includes the National Science Foundation, and through the National Institutes for Health (NIH), the National Institute of Nursing Research (NINR). “The mission of the National Institute of Nursing Research (NINR) is to promote and improve the health and quality of life of individuals, families, and communities” (NINR, 2016). NINR supports and conducts clinical and basic research, and research training on health and illness across the lifespan to build the scientific foundation for clinical practice, prevent disease and disability, manage and eliminate symptoms caused by illness, and improve palliative and end-of-life care.

The robotic age has made surgery less invasive, safer, and less reliant on the skills of the surgeon (Jayakumaran et al., 2017); microrobots for biomedical applications are in development (Preyer, Zhang, & Nelson, 2013); and prostheses are translating brain activity into control signals for computer cursors and robotic limbs (Gilja et al., 2012). Breakthroughs in design and functionality have made robotic assistive care a near-term reality for millions of people. More remarkable is the ability of the new wave of affordable robots to start conversations and show empathy.

A robot companion and helper around the house has been in the news recently. PEPPER has an attractive

anthropomorphic design and recognizes and responds to human emotions. Developed in France and acquired by the Japanese telecommunications giant SoftBank (Guizzo, 2014; SoftBank Robotics, n.d.), PEPPER meets and greets in Belgian hospitals (“Pepper Robot to Work in Belgian Hospitals,” 2016) and U.S. hospitals (Wild, 2016). PEPPER can be programmed in 20 languages (Hamblen, 2016) and at a cost of around US\$1,600 or US\$350 per month (Tobe, 2016) for the basic model is readily affordable for middle-income households. PEPPER has the potential to provide empathic support for people with disabilities, lonely seniors, and anyone with restricted mobility (Glaser, 2016).

The dawn of the robotic age in assistive care (Barnett, 2017; Dinglasan, 2017) is good news for directors of nursing. For a fraction of the cost of a nurse, an indefatigable humanoid can assess emotions, provide psychological first

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aid, and help with self-care 24/7 365 days a year. Sitters will no longer be required in hospitals, registered nurses (RNs) will have more time for complex care, preventable readmissions to hospital will be less frequent, and 24-hour support in the home will be as commonplace in public housing as in the leafy suburbs.

In time, robots will find their place in health care as they communicate with teams of health care providers via cloud-based applications. Health care information uploaded in real time will trigger human intervention, schedule diagnostic tests, monitor medication adherence and adverse effects, amend prescriptions, provide just-in-time patient education, and create interactive discharge plans. Robots will accompany patients home in driverless cars to ensure continuity of care, monitor postdischarge clinical management, arrange emergency or planned readmissions, and ensure the patient's medical history is readily available to users.

The brave new world of robotic personal care will transform health care systems and ease the nursing shortage. The allocation of nursing time will become more sophisticated, and nursing skills will be used where they are needed most. Skeptics might protest that robots will never be able to empathize sufficiently to provide compassionate assistance to the most vulnerable patients, but such reservations will be dismissed as a temporary problem. Robots indistinguishable from humans in recognizing and responding to human emotions, capable of dispensing compassion through naturally sounding voice synthesizers, and with delicacy of touch that rivals the human hand will soon be as familiar in the home as the flat screen television. The market for human assistive robots in Japan alone is forecast to reach JPY 404.3 billion by 2035 (Neumann, 2016). Could it be that assistive robots of the future will be more empathic and better able to provide compassionate care than the next generation of graduate nurses? Our study of the transition to nursing practice in Lebanon implies that the prospect of assistive robots outperforming nurses in providing empathic care might not be nonsensical.

Selected Literature on Transitioning to Nursing Practice

The literature on the transition to nursing practice continues to expand as nurse educators and directors of nursing try to find solutions to the problem of workforce attrition. Recent studies have investigated the transition to practice in public health nursing (Dahl & Clancy, 2015), rural nursing practice (Lea & Cruickshank, 2015), and specialty practice (Morphet, Considine, Kent, & Plummer, 2015). Notable strategies for helping students transition include senior internships (Haleem, Manetti, Evanina, & Gallagher, 2011), instruction on avoiding compassion fatigue and how to cope with disruptive workplace behavior (Foster, Benavides-Vaello, Katz, & Eide, 2012), online modules to relieve the challenges of

practice (Baptiste & Shaefer, 2015), and training in socio-emotional learning strategies (Mellor & Gregoric, 2016). In the only large-scale study of transition to practice, Spector et al. (2015) reported that transition programs are more successful in supporting new graduates when formalized, facilitated by a trained facilitator, extended over a period of at least 9 months, include graduate reflection on learning, and engage graduates in the workplace.

Study Background, Aims, and Questions

Background. We became concerned when two graduates resigned within 6 weeks of starting work on a clinical floor and stated that they never wanted to work as nurses again. The resignations prompted us to find out why the graduates had decided to leave nursing after such a short period at the bedside. We designed a qualitative study to find out. We conducted focus group discussions with bachelor of nursing students and first-year registered nurses (FYRNs) to investigate how the transition challenges they face are influenced by classroom and clinical learning experiences. In this article, we focus on the analysis of two unexpected themes in our data: *fear of becoming a robot* and *resisting robophobia*.

Method

Our goal was to understand the challenges of transition from the point of view of students and FYRNs. We chose thematic analysis to analyze the data because despite its poorly demarcated history in the spectrum of qualitative research methods (Braun & Clark, 2006), it has the advantages of flexibility, practicality, and ready intelligibility. An additional advantage is that causal claims based on thematic analysis are transparent, open to critical scrutiny, and intelligible to participants and investigators. Moreover, the results of thematic analysis can be evaluated for credibility, transferability, dependability, and confirmability (Guba, 1981; Guba & Lincoln, 1981; Morse, Barrett, Mayan, Olsen, & Spiers, 2002).

We regarded a participant's comments as credible if they resonated with members in the same focus group discussion, as transferable if they were mentioned by participants from more than one university, as dependable if they were made by FYRNs and students, and confirmable if they were self-evidently expressions of personal experience. We probed for the reasoning behind what focus group members said to make sure our interpretations remained true to their experiences. We made sense of the data independently before developing and collectively verifying our emergent themes. Our separate focus group discussions with final-year nursing students (FYNSs) and FYRNs allowed us to trace challenges through the final undergraduate year to the first year of practice.

Design

The research was designed as a comparative multisite cross-sectional qualitative study of junior and senior undergraduate nursing students and FYRNs. University-specific focus groups were conducted for each level of participant. A total of 77 participants attended 11 focus group discussions. There were 11 rather than 12 focus group discussions because FYRNs could not be recruited at one of the universities. The authors facilitated six focus group discussions in English and five in Arabic. Only one facilitator was present at each focus group discussion. The duration of the focus group discussions was between 60 and 90 min. The focus group discussions were audio recorded on digital recorders with the prior consent of the members.

Participants

A total of 35 members took part in the four focus groups arranged for FYNSs, and 16 members attended the focus group discussions for FYRNs. The participants were aged 19 to 23 years, all were Lebanese, and one third were men. Between five and 13 members attended the four focus groups for FYNSs. One of the focus groups arranged for FYRNs was attended by only two participants. The other two FYRN focus groups were attended by five and nine members. The number of members in the focus groups we conducted is consistent with the six to 12 members recommended by Langford, Schoenfeld, and Izzo (2002) and was sufficient to clarify the research topic (Tuckett, 2004).

Focus Group Discussions

The first four authors facilitated the focus group discussions. To ensure impartiality and encourage open discussion, the authors did not facilitate focus group discussions with their own students or graduates. A total of four focus group discussions were conducted with FYNSs; two were conducted in Arabic and two English. The fifth author and four research assistants fluent in Arabic and English prepared verbatim transcripts from the digital recordings of the discussions. The translations of the Arabic transcripts were validated independently by three bilingual members of the research team (the second, third, and fourth authors).

We worked through the phases of thematic analysis described by Braun and Clarke (2006) to analyze the data:

1. *Familiarization*: We familiarized ourselves with the data by reading independently and repeatedly through the transcripts and noting initial ideas about students' experiences by underlining repeated words and phrases.
2. *Initial coding*: The research team met to discuss initial impressions of the data and to compare notes on the underlined words and phrases. We agreed as a

team on initial codes for commonly occurring expressions and statements. We worked independently on generating codes after the meeting and shared emergent codes electronically. The first author compiled the codes into an updated list to code the data. The first author worked through the coded transcripts to collate the data relevant to each code.

3. *Searching for themes*: We refined our codes and grouped them into summarizing themes taking care to identify anything unusual or unexpected. The references to *fear of becoming a robot* surprised us, so we rechecked the transcripts by hand and highlighted all references to *robots*, *fear of becoming a robot*, and similar terms. We considered the robotic motif to be important and linked the coded statements to identify a potential pattern. We noted that when participants talked about *fear of becoming a robot*, they also talked about how they avoid *becoming robots*.
4. *Reviewing themes*: After the second meeting of the research team, the first author grouped all the sections identified in the data into the two emergent themes: *fear of becoming a robot* and *resisting becoming a robot*. Exemplary statements supporting the two themes were distributed electronically to the research team. Members of the team selected those statements that best exemplified the data. Email messages were exchanged until consensus was reached.
5. *Defining and naming themes*: The themes *fear of becoming a robot* and *resisting becoming a robot* were named by paying close attention to the statements of participants. The verbatim phrases we selected to name our themes worked sufficiently well to summarize and account for the dominant story in the data. *Fear of becoming a robot* means dreading becoming like those RNs who when overwhelmed by their workload provide routine care for patients devoid of empathy. *Resisting becoming a robot* means the strategies FYNSs and FYRNs use to stave off becoming like nurses who lack empathy.
6. *Producing the report*: When writing up the findings of the study, the first author noticed the wider implications of the robot metaphor used by the focus group members. Investigation confirmed that the research team had discovered a paradox previously unreported in the literature. At a time when there is optimism about the use of empathetic assistive robots in health care, the greatest fear of our focus group members was *fear of becoming a robot*.

Ethical Approval and Considerations

The study was approved by the social and behavioral institutional review boards of the four participating universities. Undue influence to participate is a risk when faculty conduct studies on students and graduates. We protected students

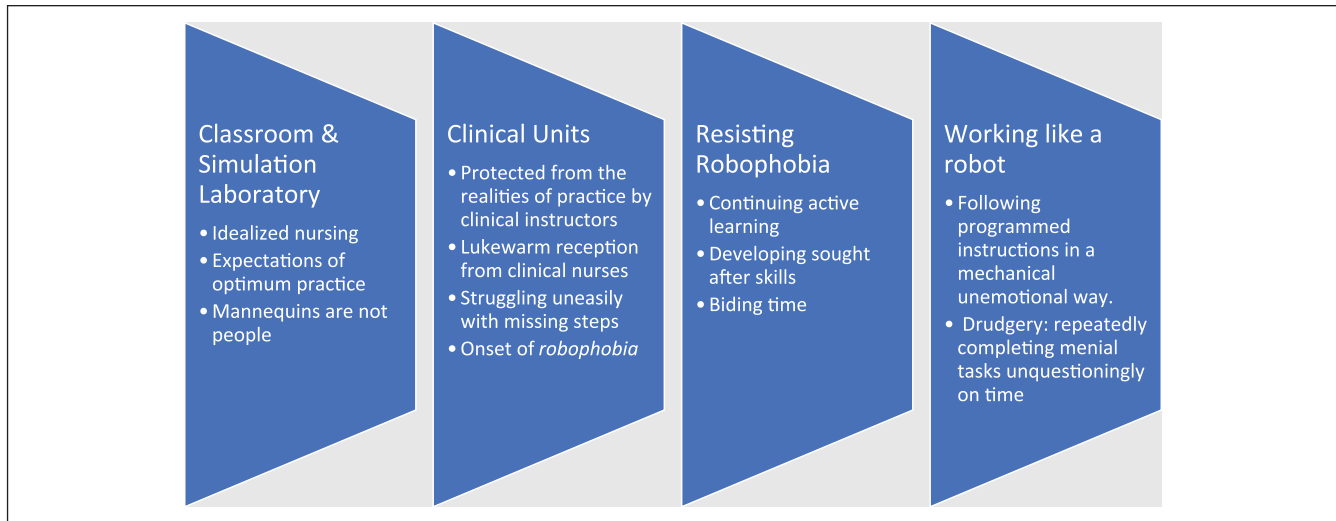


Figure 1. Conceptual structure of progressing from idealized nursing through *robophobia* to working like a robot.

Note. Links between processes omitted because progression is determined by individual differences and local circumstances and the decline into working like a robot is not certain.

from undue influence by having FYNSs and FYRNs contact us after we posted flyers announcing the study in the four universities and affiliated medical centers. Furthermore, we assigned a facilitator who did not know the participants to each focus group. We protected privacy by using pseudonyms beginning with “F” for women FYNSs and with a “W” for women FYRNs. The privacy of men was protected with pseudonyms beginning with “B” for FYNSs and “M” for FYRNs. To ensure confidentiality, transcripts were prepared and analyzed on password protected computers in private offices at the participating universities. All data sharing took place electronically from one password-protected computer to another.

Data Collection

After answering questions about the study, consenting the participants, and reminding group members of the importance of confidentiality, the facilitators posed the following questions:

Research Question 1: When patient care is discussed in the classroom, what expectations are raised about nursing practice?

Research Question 2: How well does your classroom learning reflect practice in clinical units?

Research Question 3: What was it like for you to move from learning in the classroom to learning in the clinical area?

Research Question 4: What challenges do you think you might face when you first become an RN? (Research Question 4 was rephrased for the focus group discussions with FYRNs: “What challenges are you facing in your first year of practice?”)

Findings

This article reports findings from focus group discussions with FYNSs and FYRNs. The findings from our focus group discussions with junior students will be reported separately. In a future article, we will trace the challenges of transition from the junior undergraduate year to the first year of practice as an RN. We report here on two themes: *fear of becoming a robot* and *resisting robophobia*. We clarify our second theme, *resisting robophobia*, with four subthemes that describe how students resist *becoming robots*. The strategies we describe are not mutually exclusive because withdrawal into a robotic state remains a possibility when workloads are high and nursing care on clinical floors is organized around getting work done on time. The first two subthemes describe positive strategies for *resisting robophobia*, *continuing active learning*, and *developing sought-after skills*. The third subtheme, *biding time*, describes a passive coping strategy. We use the fourth subtheme, *working like a robot*, to clarify what FYNSs and FYRNs are resisting when they *resist robophobia*. Our key finding is that when graduates are overwhelmed by the pace of work in clinical units, they are under immense pressure to *become robots*.

Figure 1 contextualizes our themes and subthemes by showing the trajectory from classroom learning to working like a robot. Throughout their undergraduate education, students are immersed in an *idealized* conception of nursing that fosters an expectation of *optimum nursing practice*. This conception of nursing is challenged by heavy workloads in clinical units and the requirement to get through routine work on time. As a result, students try to hone their clinical competencies before they graduate to protect their idealized view of nursing by remaining active learners. The paradox we see is that as humanoids are marketed to provide

emotional support for hospital patients and lonely people at home, the next generation of nurses in Lebanon is at risk for being stripped of their capacity to provide empathic care.

Theme 1. Fear of Becoming a Robot (Robophobia)

We were intrigued to find a concern among FYNSs and FYRNs that we had not read about in the literature. FYNSs and FYRNs in our sample were anxious to resist the pressures that encourage overly instrumental and depersonalized approaches to nursing practice. This concern was expressed to us in different ways, but the common theme is characterized in the following statement:

My greatest fear is becoming a robot on the floor because I really have goals to reach and if I become a robot I guess I will become static. That's my biggest fear, becoming just another registered nurse with a BSN. I don't like that at all. (Basr, FYNS, P1)

We begin our analysis of P1's statement by considering what "robot" means in everyday usage. Perhaps the most general conception of a robot is a machine that completes complex tasks automatically according to a set of programmed instructions. Applied to a person, a robot is someone who acts in a mechanical or unemotional way, rather like a puppet controlled by a puppeteer. An older usage with similar connotations is the "drudge" who works hard on menial routine tasks. To bring out these meanings, we present our findings in a structured way that shows not only the importance of what our participants said but also the process through which robophobia became an issue for them.

Classroom learning is the starting point for our clarification of robophobia. The following remark orients the discussion:

Most of the time in class, we concentrate on information, theories, and the ideal way we should work in the hospital. We spend all night writing one care plan, but when we go to the hospital, we must work the way the nurses do, which is a shock because we cannot work in an ideal way whether we want to or not. (Fadl, FYNS, P2)

Here it is important to notice the ideal conception of nursing encouraged in the classroom, the time devoted to preparing for practice, and the difference between exemplar care plans and the realities of practice.

More concretely,

We learn protocols in class that are the best ways to do something, whether a procedure or how to communicate with patients. On the floor, we see so many shortcuts that we start to forget what we have learned. You start moving with the flow of the floor. You do the shortcuts even though you know they are not right. It's easier and less time consuming. (Faith, FYNS, P3)

Accordingly, the socialization of students into work practices on clinical floors involves gaining familiarity with the shortcuts necessary to save time. The process involves learning not only which shortcuts to take but also how to justify taking them.

We are taught ideals in the classroom and how to apply them in the best way possible way. But when we are in the hospital, there's a lot to focus on and we don't have time for everything. During training, we are accompanied, by clinical instructors from the school and we try to practice ideally. But in the hospital, we have preceptors from the units and they work according to how things are done. (Wadi, FYRN, P4)

The following statement brings out a crucial difference:

In class, you always use your critical thinking skills. For example, they give you a case study and you think about it before responding. On the floor, the case is given to you and you are told what to do. Basically, you're just applying orders without thinking. (Bina, FYNS, P5)

The difference between classroom instruction and the realities of practice is apparent from early experiences as an undergraduate.

When we first joined the hospital, we were shocked. We could not believe they could be so disorganized and did not follow the protocols we were learning. With time, we started to see that there is no way to do nursing without missing steps. The RNs were so overwhelmed with work, they didn't have time to eat. No wonder they didn't follow protocols. Imagine the state they would be in if they did. I used to be mad at those RNs, but now I respect them. You must go fast to get through the work. (Mahad, FYRN, P6)

The challenge for students is to cope emotionally with how they must do things in the clinical setting.

You are always challenged emotionally by the way you have to care for patients. It's not safe because you are just doing tasks such as giving out medications. Some RNs don't even assess the patient before giving the medication. It's not safe! (Fiya, FYNS, P7)

FYRNs try to navigate between how they would like to care for patients and the "missing steps" necessary to keep up with the pace of work required on the units. When they are slow because they are still learning how to do procedures, FYRNs are pressured to get through the work. "It takes me an hour to assess a patient. The RN says this is bad time management because by 8:00 a.m. I should have charted the assessments and finished the medications" (Muin, FYRN, P8).

RNs differ from FYNSs and FYRNs in their approach to delivering care. The RN gives priority to efficiency and effective use of time, whereas for students and new

graduates, reasoning and following procedural steps is more important. FYNSs and FYRNs try to think about what they are doing. When they do, RNs regard them as wasting time. Farid (P9) commented,

I can't always know why we are giving a medication, but I don't have time to look it up. I usually ask the RN because she may have more information, but not always. If I am really stuck, I go ask the intern.

In the classroom, students are encouraged to find out for themselves, but this is not always practicable in busy clinical areas. Of more concern is that RNs do not always know about the medications they give to patients. When this occurs, administering medications becomes a task done without thinking. What matters is giving the medication, not what the medication is given for or its possible adverse effects. When nursing activities are separated from the knowledge that justifies them, nurses become drudges who merely perform tasks without thinking about what they are doing.

The drudgery of routine tasks contradicts the idealized view of nursing encouraged in the classroom. FYNSs and FYRNs try hard to resist, but the pressures to become a drudge are strong. The process begins with undermining the personal identity of students and extends to how FYRNs are assessed: "When you go to the floor, you are made to understand that you are not important as a person. If you are not strong in practical skills you are not welcome" (Fazia, FYNS.). Similarly, "Assessment of our abilities is subjective and designed to bring us down rather than to motivate us. They assess our personality, our ability to fit in, how we cope with the workload, not the quality of our performance" (P6). Such pressures encourage FYNSs and FYRNs to work without objection or complaint. Consequently, they become caught up in activities carried out with little thought and no emotional connection with patients: "Frustration is a big fear of mine because I love to take care of patients and to talk with them. But the organization and the unit I work in doesn't suit my beliefs. It's too robotic let's say" (Bahar, FYNS, P10).

Establishing a connection with patients is one of the more challenging aspects of learning to be a nurse; a process that can be made more daunting by the organization of nursing curricula. Although students are instructed in optimum ways of caring for patients in the classroom, they complain of not having enough opportunities to learn how to talk to patients: "It is really hard when it comes to communication. Talking to patients is not something that can be practiced in the simulation laboratory. You can't talk to the mannequins as if they are human beings" (P3). P10 concurred, "It is something really challenging when you see that this is a human being next to you; not mannequin, but a real soul. A mannequin is not a person."

FYNSs portray the transition to practice as socialization into an idealistic view of nursing in the classroom and into routine practices on clinical units. RNs pressure students and FYRNs to keep up with the pace of work required on the units. FYNSs and FYRNs remain committed to caring

for patients in the ways they learned in the classroom, but they feel unwelcome in the units if they cannot get through work on time. By using the simulation laboratory to help students learn to communicate with patients, clinical instructors unwittingly make it more difficult for them to talk with patients. Consequently, students are reticent about approaching patients because they are not sure what to say to them. The differences in emphasis in the classroom and on the clinical floors come as a shock to students. They respond by trying to apply what they were taught, while remaining vulnerable to mundane routines that rob them of their individuality and prompt robophobia.

Theme 2. Resisting Robophobia

Those FYRNs who identify with the ideals of the nursing classroom have some protection from robophobia as summed up in a comment made by Wafia (FYRN, P11): "Loving nursing keeps you going." FYRNs who *love nursing* develop active coping strategies to resist robophobia and strive to stay true to their beliefs about nursing. We leave open the possibility that some students come to nursing with well-developed value systems that privilege compassion and helping others, while others develop such commitments during undergraduate education. For completeness, we accept that some students may come to nursing with few developed commitments, and that others come with an affinity to caring for others that they somehow lose as a result of or despite their university education.

Subtheme 2.1. Continuing active learning. FYRNs who "love nursing" "try to think positively and don't react to negative criticism [from RNs]" (P11). Whatever the situation, they try to "react positively to feedback and stay constructive" (Wasqas, FYRN, P13). As a new RN, they accept responsibility for their learning and "seek information" (Warda, FYRN, P14) as needed. They know where their knowledge stops and ask for help when they do not know.

Subtheme 2.2. Developing sought-after skills. At the poorest resourced hospital with the heaviest workloads in our sample, FYRNs adapt by working as hard as they can to "develop knowledge and skills" (P8) to improve their prospects for employment at another hospital (P8). The more ambitious of the FYRNs realize that the experience they are gaining is not on a par with better resourced medical centers, but they understand that they cannot move on until they are able to demonstrate competencies required to work at a hospital with higher standards.

Subtheme 2.3. Biding time. FYRNs who are ambivalent about nursing *bide time* to see how things work out. They either set themselves the goal of "leaving the bedside as soon as possible," or wait for other career opportunities that do not involve "sacrificing a personal life" (Wabisa, FYRN, P12).

For some FYRNs, completion of a master of science in nursing degree is an option for “filling in time while waiting to see what happens” (P4). Enrolling in a master of science in nursing program is a “step toward promotion” (P12). Graduate study is also a way of overcoming boredom by “updating knowledge and learning new perspectives” (P12).

Subtheme 2.4. Working like a robot. For FYRNs for whom nursing is a job rather than a vocation, who were never particularly attracted to the ideals of the nursing classroom, and who are interested in advancement, but not necessarily motivated to pursue graduate studies, the default coping strategy is to succumb to the clock-driven routines of the clinical units. Graduates “become robots” if they “become static” (P1) by unquestioningly accepting incorporation into task-centered routines. Incorporation into task-centered routines involves learning which steps to miss out to complete routine tasks on time. Completing tasks on time requires “uncritically following orders” (P5). When “quality of work takes second place to keeping up with the pace of work” (P6), nursing care becomes doubly depersonalized. Individuality is stripped from the nurse as much as from the patient with the result that neither has the status of a “real person” with a “soul” (Badir, FYNS). The nurse has become a drudge, and the patient has been reduced to site for the completion of tasks. Critical thinking and emotions are suppressed the better to complete tasks on time.

Discussion

We are perturbed by the answers to our focus group questions. In the classroom, expectations are raised about providing *idealistic* and *optimum* nursing care (Question 1). Students find transitioning to practice challenging because there is a stark difference between what they learn and how nursing is practiced on the clinical floors (Question 2). FYNSs and FYRNs need time to learn how to talk to patients and how to do procedures, but they are pressured to meet the task-centered expectations of experienced RNs (Question 3). The fear of becoming a robot is a source of deep anxiety, and the risk increases when students become FYRNs (Question 4). Robophobia is the fear of becoming mechanical, lacking in empathy, and reduced to drudgery by overwhelming workload and time pressures. The result is a paradox not previously mentioned in the literature. At a time when humanoids are marketed to provide empathetic companionship and assistive care, FYNSs and FYRNs fear being reduced to unthinking drudges by workplace pressures that threaten to destroy their compassion and commitment to providing optimum care.

Our findings align with current literature on such topics as moral distress (Oh & Gastmans, 2015; Wallis, 2015), compassion fatigue (Davin & Thistlethwaite, 2016; Michalec, Diefenbeck, & Mahoney, 2013), the nursing shortage (Bogossian, Winters-Chang, & Tuckett, 2014; Bowles & Candela, 2005), and nurse engagement (Bargagliotti, 2012; Freney & Tiernan, 2009). What is new

is our call for investigation of the process whereby nurses retreat into a robotic state in response to workplace pressures despite their sometimes strong initial inclinations to provide empathic and compassionate care. Our data suggest that the stresses of nursing work, especially for FYRNs, encourage graduates to leave the workforce. As FYNSs become disillusioned and FYRNs become overwhelmed, they consider leaving if they cannot see a career path that will take them away from the bedside. As indirect care roles (case manager, nurse navigator, quality officer, infection control nurse, patient affairs officer, nurse navigator, clinical trials coordinator, data analyst) proliferate, leaving the bedside is a realistic alternative to leaving the nursing workforce for nurses in Lebanon but only for those nurses who are willing to *bide time*. Whereas some FYRNs retain a commitment to *active learning*, others adopt strategies that affect quality of care. When alternative work is available, overwhelmed nurses leave nursing and add to the nursing shortage. If there are no jobs with better hours and, preferably more pay, FYRNs stay at the bedside and, resist the robotic culture in which they work. In the medical centers with most workload pressures, FYRNs respond by *developing sought-after skills* that will impress a new employer. Inevitably, some FYRNs will become worn down and succumb to workplace pressures. Despite their best efforts, they will become robots.

Engagement is the vogue term for describing nurse satisfaction and commitment to nursing work. In the literature, engagement is defined as the opposite of burnout (Freney & Tiernan, 2009), and a distinction is made between commitment to the employing organization and commitment to the profession of nursing (Dempsey & Reilly, 2016). Commitment to the patient, the *raison d'être* of nursing, is missing from these conceptions. It is easy to say that commitment to nursing includes commitment to the patient, but our data suggest that the robot-like behavior that nurses adopt in response to situational demands is dreaded by students and resisted for as long as possible by FYRNs. Regrettably, FYRNs must overcome their affinity with patients in too many clinical settings if they are to survive as nurses. Not every FYRN faces this dilemma, and not all are at risk for leaving their employer or the nursing profession, but our data highlight a hidden aspect of the nursing shortage. Nurses who are present to the everyday tasks of nursing but absent to their patients empathically cannot provide compassionate care. This hidden aspect of the nursing shortage requires more investigation because it affects patient safety and quality of care.

Empowerment (Adams & Bond, 2000; Cicolini, Comparcini, & Simonetti, 2014) is another construct that helps in understanding *fear of becoming a robot*. In the literature, empowerment is depicted as a psychological experience and relationship to management that together or independently influence motivation (Boamah, Laschinger, Wong & Clarke, 2017; Spreitzer, 1995). Robotic nurses are disempowered because they cut off

their emotions and work mechanistically in the interests of getting through their work. Devoid of responsiveness and a sense of shared humanity, they function with little conscious thought until something unexpected happens. Deterioration in a patient's condition, a missing piece of equipment, an imposed change in priorities, or a troublesome relative might interrupt the internalized work routine, but the program will default to routine care when the outage is over. In the robotic state feared by our informants, the nurse's relationship with self, with personal values, with authentic emotional experience is stifled to function by the clock. To act robotically is to act automatically, instrumentally, and in a depersonalized way blind to the humanity the nurse shares with the patient.

Limitations

The transition to nursing practice continues throughout undergraduate education and ends after one or more years of clinical practice. Our cross-sectional study could not investigate the experiences of students and FYRNs over time. The lack of longitudinal data leaves open the question of when FYNSs and FYRNs need more support as they transition to practice. We leave unaddressed differences in the four programs and university-specific factors that affect the transition to practice. Another limitation is that we did not collect data from faculty, clinical instructors, bedside nurses, or nurse managers. Their perspectives would have allowed us to develop a more comprehensive understanding of the transition to nursing practice. The causes and practice implications of robophobia needs more investigation if FYNSs and FYRNs are to transition to practice with their ideals and commitment to optimum care intact. We need to understand as well why some nurses maintain their commitment to nursing ideals and excel in patient care. We know many excellent nurses of whom the profession can be proud. We hope in due course to document their achievements and to explain how they have avoided *becoming robots*.

Implications

Our findings have implications for the organization of baccalaureate nursing education in Lebanon. If students at four of the leading universities in the country struggle to apply what they learn in the classroom, and new graduates struggle to use what they learned at university, research is required to determine the prevalence of task-centered care and its causes. Meanwhile, faculty, clinical instructors, directors of nursing, and RNs should consider developing guidelines for the selection of clinical placements and deployment of FYRNs. Guidance could include recommendations on staffing levels, patient to nurse ratios, scope of nursing practice, deployment of clinical instructors, and involvement of RNs in guiding and providing feedback to students. Furthermore, we encourage directors of nursing and hospital management to review nurse

staffing levels, patient safety, and quality of care. We acknowledge that most RNs provide safe and effective nursing care but are concerned about the minority who practice nursing robotically. As well as being concerned about the robotic approaches to nursing care, we are troubled by the impact of consistently high workloads on the health of the nursing workforce. Within our schools, we intend to promote more emphasis on the practicability of what students learn.

Conclusion

Classroom instruction strips nursing practice of work pressures, team dynamics, and status differences; fosters idealism; and unrealistically promotes optimum practice. The simulation laboratory no less than the nursing classroom functions as a protective bubble devoid of real patients and the demands of everyday practice. Clinical instructors expand the bubble of protection to clinical areas by overly protecting students from work pressures and the realities of nursing care. Students graduate without the confidence to talk to patients and unable to function as beginning practitioners because of insufficient preparation for the realities of practice. Reality challenges classroom illusions as students gain experience in clinical units and transition to practice as graduates. Eventually, the bubble bursts and explodes the illusion of optimal practice. FYRNs are shocked and either leave nursing or resolve to get away from bedside nursing as soon as possible. Some FYRNs hold on to their personal values despite the robophobia that develops in response to high workloads and criticism for "taking too long" to complete tasks. FYRNs may respond by remaining active learners or by developing in-demand clinical skills, but the ideals learned in the classroom remain under threat because after a period of orientation, new graduates are left to cope as best they can with resisting the robonursing that is their greatest fear. Unless overwhelming workloads in clinical units are addressed, robots with enhanced functionality may well provide more empathic assistance to patients than the RNs of the future.

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