ORIGINAL RESEARCH

Increasing nursing students' self-efficacy in dementia care via GPA Bathing, an online bathing education program: A quasi-experimental pre-post design

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ABSTRACT

Background and purpose: Nursing curricula rarely include formal education on dementia-specific bathing competencies. However, bathing assistance is associated with physical and emotional challenges for both caregivers and people living with dementia. Here, we evaluated the impact of Gentle Persuasive Approaches (GPA) Bathing, a program of online dementia-specific educational units, on bathing-related self-efficacy among nursing students.
Methods: A total of 517 final-year nursing students in a Canadian university completed three GPA Bathing units. Of those, 384 participants completed quantitative and qualitative measures of dementia-specific bathing self-efficacy, including Likert-type ratings and open-ended questions at both the pre- and post-intervention time points. Participants also rated their satisfaction with the units.
Results: At baseline, participants expressed feelings of fear, incompetence, and uncertainty when faced with escalating responsive behaviours during provision of bathing assistance. They named limited and basic strategies for supporting a person who was distressed during bathing. After three GPA Bathing units, statistically significant improvements were observed in participants' bathing self-efficacy scores relative to baseline. In participants' post-intervention qualitative responses, they described developing an expanding theoretical understanding of and confidence in bathing competencies and could name specific and detailed person-centred care approaches.
Conclusions: Findings suggest that three GPA Bathing units equipped a sample of fourth year nursing students with increased confidence in person-centred bathing strategies. This dementia-specific bathing education will allow the students to provide tailored, respectful, and compassionate bathing care as they encounter people living with dementia throughout their careers. Our findings support the need to embed dementia-specific bathing education into nursing curricula.

Key Words: Bathing, Dementia, ELearning, Nursing education, Responsive behaviours

1. INTRODUCTION

1.1 Background and objective

Bathing assistance, an act of helping to wash portions of or the entire body, is a core element of activities of daily living (ADLs) and one of the most complex when caring for a person living with dementia.[1] Of all personal care activities, bathing assistance leads to the most responsive behaviours and is reported as one of the most difficult activities to perform.[2–5] As a person's stage of dementia progresses, increased time and effort are required to bathe

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them.[6] When a person living with dementia has moderate and advanced cognitive impairment (e.g., altered visual perception, recognition, and balance), they may lack the context for understanding the bathing activities and thus perceive bathing assistance to be unnecessarily intrusive or as physical abuse.[4,7] Bathing also involves multiple competing and sometimes unpleasant stimuli from the environment, such as the sound of the water running, sitting on a cold and wet shower chair naked, and the differing temperature of the air and water.[4,6] Thus, for people living with dementia, bathing can be a confusing and frightening experience. These emotions are often expressed in the form of responsive behaviours, including grabbing, screaming, cursing or pushing away.[3,8] Such responsive behaviours have significant impact on healthcare providers, who can find them frustrating, challenging, and at times, frightening.[9]

Nursing staff in various healthcare settings often experience challenges when providing bathing assistance to persons with dementia and responsive behaviours, contributing to the bathing experience being difficult and potentially traumatic for both the patient and staff.[1,10] Physical and emotional challenges in bathing assistance have been well-documented in the literature. Bathing assistance has been found to be the ADL most likely to provoke patient-to-staff physical aggression.[7] In Hoeffer and colleagues'[11] study, staff observed that 41% of patients became physically or verbally aggressive at least one fourth of the time during bathing, and 16% did so at least three fourths of the time during bathing over a span of four weeks. In another study, staff surveyed in 71 facilities reported 20% of patients as difficult to bathe due to responsive behaviours.[12] In both studies, the patients who exhibited responsive behaviours the most frequently were those living with dementia. More recently, D'Hondt et al.[13] reported that healthcare providers commonly observed physical and verbal responsive behaviours during bathing assistance for patients living with dementia, including hitting, kicking, punching, yelling, and screaming.

When faced with these responsive behaviours, staff may implement physical restraints, antipsychotic medications or postpone the bathing event.[2,7] These interventions are limited and contribute to risk of harm to patients with little benefit.[2,7] Additionally, staff are often reluctant to bathe people living with dementia because it can constitute an injury risk to the patient and the staff,[2,9] in part due to limited knowledge and skill in providing dementia-specific bathing assistance. For example, a cluster randomized trial by van Achterberg and colleagues[14] found that patients living with dementia had a lower likelihood of bathing completeness than those without dementia, explained by factors such as increased time requirements to respond to responsive behaviours and lack of skills. Kobayashi and Yamamoto[6] also found that managing the responsive behaviours associated with dementia requires extra time on the part of the caregiver.

Without being adequately equipped to provide dementia-specific bathing assistance, nurses can develop negative attitudes towards bathing events, and they may begin to regard this patient population as "difficult" to care for.[10] Furthermore, the impact of responsive behaviours on nursing staff is immense. Nurses exposed to frequent responsive behaviours from patients report significantly lower quality of general health,[15] moderate to high burnout levels,[15–17] compassion fatigue,[17] high stress levels,[18] and distress.[19]

Research has found that the approach to bathing taken by healthcare providers can significantly impact the likelihood of responsive behaviours occurring during the bath and additional education on person-centered techniques can change the psychosocial environment under which successful bathing assistance can occur.[4,7,9] Despite best bathing practices in dementia care being well-documented in the literature,[5,7] education on bathing has often been task-oriented wherein the training centered primarily on body mechanics and safe and efficient procedures to execute the bath, which are all staff-centric endeavours.[8]

Nursing students rarely have any formal education on dementia-specific bathing interventions. Dementia education in nursing school is often delivered as an add-on or an ad hoc rather than being incorporated throughout the curriculum to systematically build concise, evidence-informed core competencies.[20] While education on traditional bathing methods (e.g. bed baths) is provided early in nursing school through skills labs,[21] the skills isand techniques learned are not easily adaptable or transferable to the dementia care context. Thus, nursing students enter clinical practice unprepared to provide dementia-specific bathing assistance, despite growing evidence that people living with dementia will be the recipients of their care within many healthcare settings.[22]

Without a standardized bathing curriculum, best practices are learned using an apprentice model whereby new staff and students rely on inconsistent and/or informal strategies. Given this gap in nursing education, here we implemented the first three units of an online dementia-specific bathing education program, Gentle Persuasive Approaches (GPA) Bathing, with a large cohort of fourth year nursing students. The aim of this implementation was to strengthen the students' knowledge, confidence, and skill in providing person-centred, evidence-informed bathing care. Program evaluation measures allowed assessment of the impact of the units on the students' self-efficacy in bathing assistance. We anticipated significant improvements in both quantitative and qualitative

measures of self-efficacy after students completed the units, relative to their baseline scores and responses.

2. METHODS

2.1 Design

A quasi-experimental pre-post design was used to evaluate the impact of the GPA Bathing units on self-efficacy in bathing assistance among final year nursing students. Online quantitative questionnaires with open-ended questions were completed by participants immediately pre- and immediately post-GPA Bathing units.

2.2 Intervention: GPA Bathing

GPA Bathing is a new eLearning program offering an up-to-date and evidence-informed curriculum focused on respectful, person-centred care approaches and strategies for bathing people living with dementia. GPA Bathing is designed to further educate professional and student healthcare providers (HCPs) who have completed GPA Basics, which has been implemented and evaluated in a variety of care sectors across Canada.[23–27] GPA introduces best practices for person-centred care approaches that include communication and relational strategies to prevent, support, and defuse expression of responsive behaviours by people living with dementia. GPA Bathing addresses the gap in education by providing HCPs and students with new hygienic care approaches for people living with dementia, who often refuse traditional bathing methods. While bathing is a component of everyday care during which responsive behaviour can occur, there are no programs that integrate philosophies, strategies, and approaches found within GPA Basics as they apply specifically to bathing care.

The GPA Bathing curriculum builds upon best practice bathing competencies identified in the literature and enhances HCPs' confidence and skills in providing bathing care. Each unit is approximately 45 minutes to one hour in length, depending on the pace of individual learner interaction. Unit 1, referred to as the GPA Bathing Foundations Unit, serves as the basis for all sequential units by providing introduction to the process for developing a personalized bathing care plan and focusing on the importance of a bathing history for tailoring the bath to preferences of the person living with dementia. Units 2 and 3 focus on application of life stories, props, visual cues/prompting and patient/family involvement to mitigate responsive behaviours during a shower and a tub bath, respectively. The focus of this study was evaluation of units 1 through 3. The remaining units (4 to 6) were under development at the time of this evaluation and were informed by the findings reported here.

Each GPA Bathing unit includes downloadable resources, and the learner is taken through the systematic integration of the identified tools in their resources. Each unit focuses on the application and further exploration of a different component identified above. The text and narration are supplemented by colourful, diverse visuals through images and graphics to maintain learner interest and attention. Each unit is based upon a unique care recipient in a different healthcare setting and features different formats of bathing assistance with varying levels of family involvement. Interactive elements, such as clickable images, graphics, videos and animations, within each unit allow the user to apply their learning and receive immediate feedback on their use of the principles and strategies in the scenario. GPA Bathing is the first bathing dementia education program that includes online simulated video case study scenarios, developed with oversight by an inter-professional advisory panel, that capture and demonstrate core best practice elements. These case study scenarios were filmed using trained, professional actors to preserve the privacy and dignity of people living with dementia.

2.3 Sampling

The sample was recruited from students in the final year of the Bachelor of Science in Nursing program at a large urban university in Ontario, Canada. 541 students who were enrolled in NSE417 during the fall semester of 2021 enrolled in GPA Bathing and 517 of these students completed all three GPA Bathing units, representing a 95.5% sample of the course cohort.

2.4 Ethical considerations

This project was formally designated as a program evaluation by the institutional Research Ethics Board and therefore did not require ethical review. Nevertheless, all the principles outlined by the Tri-Council Policy Statement on the Ethical Conduct for Research Involving Humans[28] were followed. Participation in the GPA Bathing units was mandatory, reflecting the nursing program's requirements; however, participation in the program evaluation was voluntary. All participants who completed the program evaluation measures provided electronic informed consent indicating that they understood that their personal information would remain anonymous to the project team members and that their data would be stored securely. Additionally, the research team members associated with the nursing school (LSM; AW) involved in this project did not teach the 4th year course within which the 3 bathing units were embedded and had no access to the learning management system through which this course was managed. Therefore, the names of any students who enrolled in the bathing course and/or volunteered to participate in its evaluation remained anonymous.

2.5 Data Collection

The evaluation of the GPA Bathing units occurred in the Fall 2021 semester (September to December 2021). Participants accessed the GPA Bathing units through a standardized email recruitment message and online link. In Fall 2021, participants were invited to review the first three GPA Bathing units and to complete program evaluation measures to evaluate the three GPA Bathing units immediately afterwards. Each unit was delivered online and was offered to participants asynchronously to be completed at their own pace. Participants had access to the units for the whole semester.

2.5.1 *Measures*

All participants were invited to provide demographic information via a questionnaire which included age, gender, level of education, previous dementia training, family members living with dementia, and previous volunteer or work experience involving people living with dementia.

The primary outcome was bathing self-efficacy in dementia care, which was assessed through the Self-Perceived Behavioural Management Self-Efficacy Profile for Bathing (SBMSEP-B). This tool is an adapted version of the SBMSEP,[26] a measure of self-efficacy in dementia care which was originally developed and reviewed by clinical experts in the field of dementia behavioural management. This tool was adapted for this evaluation to focus on bathing care in the dementia context. SBMSEP-B is a 20-item tool with a 7-point Likert-type scale, ranging from not very confident (1) to very confident (7), allowing participants to indicate their perceived level of confidence in accomplishing the clinical behaviours and tasks necessary to manage responsive behaviours expressed by patients living with dementia when providing bathing assistance. The possible range of the total score is 20 to 140, with higher scores indicating higher levels of self-efficacy.

The SBMSEP-B also includes a qualitative component, consisting of open-ended questions designed to elicit information about participants' experiences, confidence, values and practice effectiveness with dementia-related responsive behaviours in bathing care. The pretest SBMSEP-B presented three questions asking participants about their current experiences and practices when providing bathing care to patients with dementia and responsive behaviours. The post-test SBMSEP-B included three questions about if and how they will apply what they have learned and about their learning needs when it comes to supporting patients with dementia-related responsive behaviours during bathing care.

The secondary outcome was the participants' satisfaction with the GPA Bathing units which was evaluated using a satisfaction questionnaire. The satisfaction questionnaire allowed participants to indicate how well various components of the GPA Bathing units met their expectations. Participants rated on a 9-item, 7-point Likert-type scale from not very satisfied (1) ranging to very satisfied (7) regarding their level of satisfaction with the GPA Bathing units overall, the format, the design, the content, the relevance and usefulness of the resources provided, the learning activities, its practical application, the length of the units, the embedded video clips, and the impact of the video clips on their learning.

2.6 Data analysis

Descriptive statistics were used to characterize the demographic profile of participants, as well as responses to the study questionnaires. Total scale scores were computed to quantify the outcomes and paired t-tests were performed to examine changes in bathing self-efficacy from pretest to posttest. Cohen's d statistic was computed to estimate the effect size of the change. To evaluate the internal consistency of the SBMSEP-B, Cronbach's alphas were assessed for both pretest and posttest. The significance level for all statistical tests were set at 0.05.

Qualitative content analysis[29,30] was used to analyze the free-text responses to the open-ended questions on SBMSEP-B from participants. Open coding was applied to the extracted responses whereby codes of meaningful words and phrases were generated. Similar codes were then grouped into broader categories to identify common patterns amongst responses.

3. RESULTS

3.1 Participant demographics

444 participants provided at least some demographic information (see Table 1). The majority of participants were female (80.2%), between the age of 21-24 years old (76.8%), and had a high school diploma (50.3%) or undergraduate degree (46.3%) as their highest level of completed education. Most of the participants had volunteered or worked with older adults living with dementia (88.2%).

3.2 Quantitative results

Self-efficacy

A total of 384 out of 444 participants completed post-tests for a completion rate of 86.5%. Table 2 and Figure 1 display the results of the paired *t*-test examining pre-test and post-test scores of the SBMSEP-B. Statistically significant improvements were found in bathing self-efficacy ($p < .001$) after participating in the intervention with a large effect size (d = 1.06). The internal consistency of the SBMSEP-B was high, with a Cronbach's alpha of 0.96 for pretest and 0.99 for post-test.

Table 1. Participant characteristics at baseline

	n	Frequency	Percentage (%)
Gender	444		
Male		78	17.6
Female		356	80.2
2-Spirit		0	0
Non-Binary		5	1.1
Other		2	0.5
Prefer Not to Say		3	0.7
Age	444		
< 19 years old		0	0
19-20		50	11.3
21-24		341	76.8
25-30		40	9.0
30+		13	2.9
Volunteered or worked with older people living with dementia	442		
Yes		390	88.2
No		52	11.8
Highest level of education	443		
High school		223	50.3
Undergraduate degree		205	46.3
College diploma		9	2.0
Professional certificate		2	0.5
Other		4	0.9
Previous dementia care education*	444		
GPA Basics		379	84.4
PIECES		4	0.9
U-First!		1	0.2
Other		12	2.7
None		53	11.8
Personal caregiver experience	438		
Parent		2	0.5
Grandparent		67	15.3
Neighbour/Friend		21	4.8
Other		65	14.8
Never		283	64.6

*Participants could select more than one response

Table 2. Scores of SBMSEP-B and *t*-test results

Cronbach's Alpha	n	Time 1 (Pre-test)		Time 2 (Post-test)		*t*	df	*p*	Effect Size	95% Confidence Interval of the Difference	
		Range	Mean (SD)	Range	Mean (SD)					Lower	Upper
0.96, 0.99	348	20–140	106.07 (20.16)	60–140	125.13 (15.68)	18.62	347	< .001	1.06	21.09	16.78

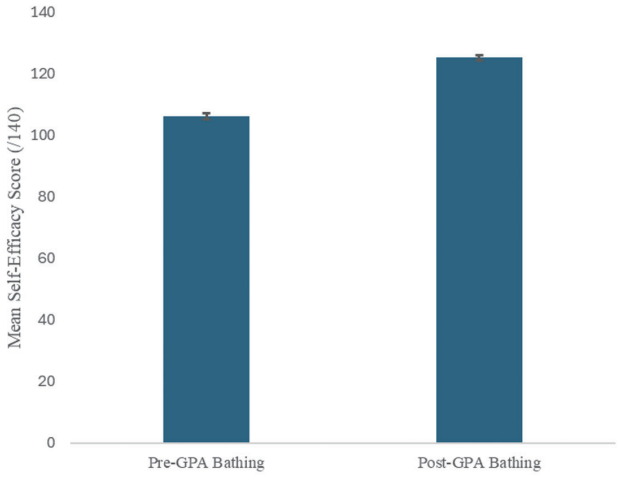

Figure 1. Mean SBMSEP-B self-efficacy scores pre-and post-GPA Bathing (n = 348). Error bars represent the standard error of mean (SEM)

3.2.1 *Satisfaction*

Participants were highly satisfied with all aspects of the three bathing units, with all but "Bathing unit length" having a mean score above six out of a maximum of seven (see Table 3).

3.3 Qualitative findings

3.3.1 *Pre-GPA bathing category #1: Feeling scared and unprepared to provide bathing care*

The majority of participants reported that when bathing older adults who displayed responsive behaviours, they experienced strong feelings that stemmed from not knowing how to respond. Some participants indicated that they were scared and concerned about the safety of themselves and the patient: "It made me feel unsafe and scared. In my first experience dealing with a dementia patient, I froze and didn't know what to do. I felt so useless" (#22715). A couple of participants also highlighted being afraid of physical injury: "They made me feel that I did not want to participate in care. That I was afraid of personal injury/attack" (#22766). Many participants used a wide range of emotional descriptors that were evoked due to their lack of knowledge and skill in addressing responsive behaviours during assisted bathing, including feeling "incompetent" (#23804), "helpless" (#23358), "unprepared" (#23470), "anxious" (#23889), "stressed" (#23201), "uncomfortable" (#22851) and "overwhelmed" (#23796). Some participants discussed feeling distressed with their limited competencies: "I also felt angry at myself for not being able to care for them easily" (#22822). One participant emphasized feeling useless as assisted bathing is a 'basic' nursing skill that they have not mastered: "It made me feel useless because I could not even do the basics and help bathe the person" (#22838).

A handful of participants highlighted how these feelings also stemmed from the pressure to complete the 'task' of assisted bathing and how managing responsive behaviours presented as a challenge for them to complete that task: "I felt helpless sometimes because I felt like I was hurting the person based on their reactions, but the task also had to be done so I couldn't just leave them unwashed" (#22822). Participants were upset when they could not complete assisted bathing as they perceived it to be a "simple task" (#23255). Some participants described their ability in recognizing the person's distress and understanding the meaning behind their behaviours, including the understanding that their attempts to provide bathing assistance is a likely cause for the person's responses: "I empathized with these patients. It can be extremely scary when all of these people are trying to bathe you all of a sudden and you do not know what is going on" (#23192). However, most participants expressed feeling some degree of moral distress and often stated that they did not know how to proceed in a manner that is considered appropriate, respectful, and safe: "It made me feel sad for the resident and I didn't know how to make them feel okay" (#23512).

Table 3. Satisfaction questionnaire

Instrument Item	n	Mean out of 7	Standard Deviation
Bathing unit overall	350	6.17	0.97
Online format	348	6.16	1.04
Bathing unit design	350	6.19	0.94
Bathing unit content	348	6.23	0.94
Relevance and usefulness of Bathing unit downloadable resources	348	6.15	1.01
Bathing unit activities	346	6.15	0.96
Bathing unit had practical application	347	6.17	1.05
Bathing unit length	350	5.86	1.30
Videos overall	349	6.14	1.05
Videos' impact on learning	344	6.15	1.06

3.3.2 *Pre-GPA Bathing Category #2: Applying general non-dementia-specific bathing approaches*

The strategies that most participants described using to address responsive behaviours were basic approaches that reflected general person-centered and communication-based principles. Many participants described "speaking in a calm and slow manner" (#23762), using a "slow pace" (#23836), using a "gentle, respectful tone" (#24114), "explaining what you are doing throughout the process" (#23644), and "encouraging patient to participate" (#23935). A handful of participants also identified using "redirection" (#22851), "reorientation" (#23192) and "distraction" (#23340) as strategies without elaborating on how they would do so. Other strategies that participants stated include "ask for help or work in pairs" (#24023), "back off momentarily and come back at a later time" (#22766), "stepped away from the patient for moments for them to calm down" (#22596) as well as promoting "choices" (#23782), "preferences" (#23937) and "privacy" (#23073). Notably, theoretical best bathing practice competency language was not used to describe strategies in most instances.

3.3.3 *Post-GPA Bathing Category #1: Developing best bathing practice competencies*

After completing the GPA Bathing units, participant responses reflected a newfound expansion in theoretical understanding of bathing competencies. Specific competencies were named and described in some detail in the post-GPA Bathing responses, as compared to the very general person-centred, communication-based strategies they identified in their pre-GPA Bathing strategies. Participants also indicated an increased confidence in their use of non-bathing-specific person-centred strategies taught in GPA Basics, such as Stop & Go. Significantly, a profound shift in participants' perspective on patient care was evident – going from task-oriented to person-centered care:

"Ensuring the patient's needs and preferences remain priority over task completion." –#23422

"Making a bathing care plan and making bathing an enjoyable and comfortable experience, not just a task to be checked off." –#22645

Many participants gained new insight into the importance of developing a personalized bathing care plan and reported that they now plan to use the tools and resources from the GPA Bathing units to systematically organize, implement, and document the person-centred strategies:

"I would like to use the resources provided by the GPA in regards to creating an individualized bathing plan for my clients with dementia. I find the bathing history and IBEPP to be very useful tools." –#23025

"I will most likely implement the IBEPP and the Individualized GPA Bathing History and refer to it prior to each bath to ensure I am well equipped to handle any disruptive behaviours or discomfort expressed by the client." –#22542

Participants also learned the strategy of applying preferences using props or personalized items and cues as a method to promote a positive bathing experience for the patient:

"Incorporating things that are meaningful to the client such as music, using their favourite shower gel and bath robe." –#22727

"Incorporating personalized items and experiences (i.e. music, photos/memories/language, names of family) into the bathing experience." –#24114

Furthermore, participants stated that they now had a deeper understanding of the importance of collaborating with family members to gather the person's detailed bathing history and involving them in the bathing process:

"I will definitely have the family more involved in curating a bathing plan for my clients." –#23369

"Incorporating family more in determining ideal bathing routines for patients will be something I strive to implement in my practice." –#23815

3.3.4 *Post-GPA Bathing Category #2: Understanding the value of best bathing practice competencies*

The GPA Bathing units supported participants to better understand the "realities of bathing" (#28194) and how to apply the GPA strategies in practice, leading to them feeling "much more prepared with regard to bathing" (#28216). For participants, they underscored how these competencies are fundamental and essential as they enter professional practice given the increasing numbers of people living with dementia: "As dementia is becoming increasingly 'common', it's very important for me to learn the fundamental therapeutic techniques" (#28647). Participants asserted that these competencies are applicable and "transferable to all practice settings" (#28682) "even outside of the LTC [long-term care] setting" (#28455) and further recommended that this program to be integrated earlier in the nursing curriculum, such as "first-year nursing" (#28194).

4. Discussion

We have introduced a novel online dementia-specific bathing educational curriculum, GPA Bathing, to a sample of final-year undergraduate nursing students. Our quantitative findings demonstrated that relative to baseline, GPA Bathing significantly enhanced the students' self-efficacy in providing bathing assistance to people living with dementia. Moreover, the participants' written qualitative reflections on their past experiences in assisting with bathing and on their learning needs established both that formal instruction on bathing

in dementia care is necessary for nursing students and that GPA Bathing has equipped them with practical and evidence-informed strategies that they can use in their clinical practice.

4.1 Impact of dementia-specific education on self-efficacy and competence

Our observed enhancement of students' quantitative self-efficacy scores for bathing in the context of dementia suggests that targeted educational interventions, such as GPA Bathing, can provide students with a feeling of preparedness for providing best practice bathing care. These findings are in line with previous evaluations showing significant improvements in care providers' self-efficacy and knowledge of dementia care after completing structured dementia educational interventions.[23,26] Although changes in self-efficacy in previous evaluations have been shown to persist for at least a period of six to eight weeks, additional research is required to determine the longer-term sustainability of these effects in the current sample of nursing students and whether these improvements in self-efficacy are translated into changes in approaches to bathing care. Additionally, future research is needed to examine the impact of care provider education on observable changes in care practice and bathing outcomes for people living with dementia, such as reduced distress and/or responsive behaviours during bathing.

In the present evaluation, participants' baseline qualitative responses provided general descriptions of best practice surrounding responsive behaviours which lacked precise dementia-specific interventions in assisted bathing. In keeping with the significant quantitative self-efficacy results, qualitative findings after GPA Bathing demonstrated that participants developed an expansion in theoretical understanding of and self-efficacy in bathing competencies and person-centred care approaches. Our study findings have implications on the way we approach both student and staff training.

4.2 Addressing responsive behaviours and moving beyond task-oriented care

Negative attitudes are likely to accrue if students do not know how to cope with responsive behaviours to which they are exposed during assisted bathing. The qualitative findings showed that participants experienced significant distress when trying to provide assisted bathing to people living with dementia. Participants also described safety concerns, particularly emphasizing the risk of injury to the patient and themselves. Our findings align with existing research wherein healthcare staff often worry about the risk of injury when providing bathing assistance, stemming from lack of education on how to respond to responsive behaviours.[2,9] Participants described how the GPA Bathing units supported them to develop dementia-specific bathing competencies in order to enact person-centred approaches to responsive behaviours. The majority of participants explicitly mentioned the "Stop & Go" technique as a method to acknowledge the patient's distress by purposefully pausing during the assisted bathing interaction to provide a moment of interruption to a feeling of personal space invasion, resulting in immediate relief of stress and upset for both the patient and care provider. Pre-GPA Bathing responses involved 're-approaching' the patient after leaving them alone for a period. This strategy suggests that the patient has the capacity to 'calm down', that time and absence of the care provider can de-escalate responsive behaviours, and that the onus is on the patient to manage their responsive behaviours on their own. Instead, the Stop & Go technique is a purposeful intervention that does not include leaving the patient but rather provides a short break for the care provider to support de-escalation. Stigmatizing literature often label responsive behaviours as 'bathing resistance' or 'resistance to bathing', implying that the origin of the behaviour is solely within the older person or perhaps a pathology of the disease, rather within the realm of responsible, person-centred practice approaches. GPA strategies such as the Stop & Go technique emphasize that the onus is on the care provider to support de-escalation as part of their clinical responsibility.

Our qualitative findings show that participants often define gerontological nursing competencies, such as assisted bathing for people living with dementia, based on tasks. A task-based focus devalues the critical thinking and consideration of evidence associated with caring for older adults. Nurses and nursing students frequently fall into the trap of delineating their practice in terms of tasks and time which results in a lack of appreciation of the full breadth of nurses' knowledge and scope of practice capabilities.[31] This is the case especially in the dementia care context; a perspective that working with older people is hard physical work and requires less thinking and skills exists within the nursing profession, and this perspective is often first fostered during nursing school.[32,33] Assisted bathing in the dementia context is far too complex to be reduced to a task; rather, it is a competency that requires a combination of knowledge, skills, and judgment. Priority is often placed on the outcome of the bathing rather than the quality of the bathing experience as a process. Studies have shown that there are concerning gaps in many nursing curricula wherein educational content has minimal focus on older people and instead, focuses on skills without preparing students for the complexity of caring for older people.[32,34] For example, nursing students have reported requiring more preparation on managing responsive behaviours and communicating with older adults living with

dementia.[32]

Research has shown that gaining more knowledge about older adults is a key factor in reducing negative attitudes and ageism among nurses.[35,36] Without adequate education, nursing students may continue to perpetuate stigmas associated with gerontological nursing, such as viewing caring for older adults as "heavy", "dirty work" and "low-status".[32,34,37] There is a considerable body of work reporting that caring for older adults is a domain that is viewed negatively among nursing students due to the perception that highly scientific skills and care approaches are not required, making it the least preferred area of practice among nursing students.[38–42] These findings are concerning, considering the growing ageing population, and they further highlight the urgent need for educational interventions beginning at nursing schools.

4.3 Educational implications for nursing curricula

Our teaching and learning strategies need to reflect the complexity of assisted bathing in the dementia context. The present evaluation demonstrates that the first three GPA Bathing eLearning units are promising to include in nursing programs so nursing students can develop the necessary entry-to-practice competencies to care for older adults.[43] Participant feedback confirms that online learning, which includes scenario-based videos, contributes to nursing students acquiring competency-based bathing knowledge that can be applied to the care of older persons experiencing dementia in a variety of clinical practice settings. This is particularly important given student learners are not acquiring this best practice bathing knowledge during their undergraduate education and are still expected to enter the field equipped to function safely and successfully when providing care for older people.

There is no consensus in the literature related to when gerontological content should be introduced and how many times the content should be revisited throughout the nursing program. Our evaluation showed that not being adequately prepared at the senior level evoked strong emotions and distress among nursing students, suggesting that introducing these entry-to-practice competencies in the senior year is too late. Thus, educators have the ethical and pedagogical obligation to equip students with the skills and knowledge to care for older adults living with dementia early in their programs so the content can be applied in their clinical practicums. This way, learning does not occur just by "trial and error" within clinical practice. Instead, learning is scaffolded so that students can first master basic information and then build to more complex thinking and skills in dementia care. Considering the increasing numbers of people living with dementia worldwide[22] and that contact with people living with dementia often occurs during students' clinical practicums in their first year of study,[44] we believe that every nursing student should have dementia-specific bathing education embedded starting from first year of nursing school.

4.4 Shared responsibility of educational institutions and healthcare organizations

The findings of this evaluation identify the importance of shared responsibility for educational institutions and healthcare organizations such as hospitals and long-term care homes to disseminate evidence-informed knowledge about dementia-specific bathing practices. Education programs should incorporate dementia bathing skills to prepare formal caregivers with entry-to-practice competencies prior to graduation. Healthcare organizations also need to provide education opportunities for healthcare providers to develop and reinforce the essential competencies necessary for person-centered bathing care when caring for patients living with dementia.[4] Healthcare organizations can support continuing competence for bathing practices through inclusion of the GPA Bathing units in new hire orientation and annual education skills review programs. In-house educators can use the case studies to reinforce best bathing practices during team huddles and point-of-care coaching activities. We emphasize that the fully online eLearning component was effective in enhancing self-efficacy and can continue to serve as an accessible and convenient approach to meet the growing demand for virtual learning post-pandemic.

4.5 Limitations

The study only included students from a single university in Ontario, Canada, limiting the generalizability of the findings to other contexts and settings. Additionally, the absence of a control group weakens causal inference, as improvements in self-efficacy cannot be definitively attributed to GPA Bathing alone. Reliance on self-reported data introduces the possibility of social desirability bias, as students may have presented themselves more favourably regarding their increase in confidence; incorporating observational or performance-based assessments in future studies would strengthen the evidence base. Furthermore, since the outcomes were self-reported, it remains uncertain whether the reported increase in confidence translated into actual changes in nursing practice. Lastly, the change in confidence levels were measured only once, immediately after the intervention, without longitudinal follow-up. Thus, the long-term sustainability of the reported effects remains unknown.

While this evaluation demonstrated that the GPA Bathing units increased nursing students' self-efficacy in bathing care, further research is needed to investigate their effectiveness on healthcare provider and patient care outcomes. In this project, the focus was on evaluating the first three GPA Bathing units and using the findings to inform the development of the remaining three units. Since then, we have completed the development of all six bathing units and have been actively conducting additional research to better understand the impact of the full GPA bathing curriculum on healthcare providers' self-efficacy and patient care outcomes. For instance, in 2024, we collaborated with several long-term care homes across Canada to conduct small-scale implementation projects. These initiatives aimed to evaluate the effectiveness of the GPA Bathing curriculum in enhancing nurses' self-efficacy in bathing care and to explore key considerations for implementing this educational intervention in long-term care settings.

5. Conclusion

As the largest group of frontline healthcare professionals in Canada and globally, nurses need to be well-prepared to effectively care for the growing number of individuals living with dementia. Our evaluation of three GPA Bathing units among final-year nursing students found that these eLearning units can enhance their self-efficacy in providing bathing care for persons with dementia and responsive behaviors. Based on these findings, we recommend integrating dementia-specific content throughout all years of undergraduate nursing education to ensure dementia care competencies are continuously reinforced. This approach will help ensure that graduating students meet the entry-to-practice gerontological care competencies.[43] Additionally, we encourage healthcare organizations to incorporate this form of education into orientation programs and ongoing skills refresher initiatives, supporting healthcare providers in delivering high-quality, person-centered dementia care.

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Authors contributions

AW, VM, and LSM were equally involved in the evaluation design. AW and VM were responsible for data collection, and AW conducted the quantitative and qualitative analyses. AW drafted the manuscript, and VM and LSM provided feedback and revisions. All authors read and approved the final manuscript.

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The authors declare that they have no financial or personal conflicts of interest relating to this work.

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Obtained.

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Data availability statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

Data sharing statement

No additional data are available.

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