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Implementing an interprofessional palliative care education program to speech-language therapy and dietetic students

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Implementing an interprofessional palliative care education program to speech-language therapy and dietetic students

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ABSTRACT

Palliative care education for allied health professionals has received minimal research attention. This longitudinal study followed the development of an education program for speech-language therapy (SLT) and dietetic (DT) students. The project comprised three stages. In Stage I, consenting SLT and DT graduates ($n = 9$) were interviewed 6 months after graduation exploring preparedness for working in palliative care. Interviews were transcribed, and topics were extracted through content analysis. In Stage II, a new palliative care curriculum was developed using the extant literature and gaps reported in Stage I. In Stage III, we implemented and evaluated the new curriculum. Students were surveyed before ($n = 68$) and after ($n = 42$) the new program and at 6-month post-graduation ($n = 15$) to capture student-reported changes in knowledge and confidence in palliative care. In Stage I, 10 topics were developed covering knowledge, roles, team, family-focused care, and feelings. In Stage II, a hybrid program was developed including e-learning modules, didactic lectures, and a simulated learning experience. In Stage III, student feedback demonstrated positive shifts in knowledge and confidence ratings from medians 3–6 to 5–8 (1 = none; 10 = excellent) across all domains. Gains in knowledge and confidence were consistently higher at 6-month post-graduation for final survey respondents. Mixed modality interprofessional palliative care education for allied health professionals has merit in improving knowledge, confidence, and perceived preparedness for practice.

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Introduction

Palliative care has developed substantially since its beginnings in England in the 1960s. Palliative care is appropriate for those with a diagnosis of a life-limiting, long-term condition (for example, respiratory or cardiac conditions or progressive neurological conditions) and may cover many years. End-of-life care is “an approach that improves the quality of life of patients and their families facing problems associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual” (World Health Organisation, 2020). Consistent with recent and extant research, The New Zealand Palliative Care strategy (2001) aimed to develop a system that can support a person’s choice to die at home. Twenty years later, the wish to be cared for and die at home remains common among early and end-stage patients (Nysæter et al., 2022).

Speech-language therapists (SLTs) and dietitians (DTs) have an established role in palliative care in terms of communication, swallowing, and nutritional support (Krikheli et al., 2018; Pinto et al., 2016). Dietitians have a role in nutritional assessment and planning and liaising with food services to ensure optimal patient-centered meal choices (Pinto et al., 2016). SLTs have a role in supporting communication skills and eating and drinking safety and enjoyment, upper-airway, and oral health (Krikheli et al., 2018). In the terminal phase, communicating one’s last thoughts

and communicating pain levels and comfort feeding are critical. Formalized competencies and palliative care education for these allied health professionals have received minimal research attention. Yet, there remains uncertainty for people within and outside of these professional groups about the role, skills, and knowledge that SLTs and DTs hold (Kelly et al., 2018).

A range of teaching approaches have been used to meet students’ needs with positive results in terms of knowledge and attitudes (Donne et al., 2019). Education content comprises theoretical learning on medicolegal implications, end-of-life care, professional roles and responsibilities, grief, and loss. Education packages have included self-reflection on personal experiences of death and personal cultural beliefs and professional values of human dignity, as well as self-care and resiliency. Having difficult conversations has been taught explicitly through simulation (Gilliland et al., 2012), work shadowing (Levine et al., 2017), and direct modeling (Kim et al., 2006). Other programs have included problem-based learning (McKee et al., 2013) and didactic teaching. Some student feedback has suggested that in the first instance, self-directed learning opportunities are preferred over face-to-face content to reduce the confronting nature of the topic (Mathisen et al., 2011). This has paved the way for a range of distance-learning programs worldwide including e-learning (Levine et al., 2017; Mathisen et al., 2011), video conferencing

(Ray et al., 2014), and personal learning portfolios (Gwyther & Rawlinson, 2007).

Although the palliative care education evidence base involves a range of services delivered by a range of professionals, much of the work published focuses on doctors and nurses in hospital settings, with little attention to the education of allied health professions, or in community settings. A number of systematic reviews have summarized this literature over the years (Adriaansen & van Achterberg, 2008; Bickel-Swenson, 2007; DeCoste-Lopez et al., 2015; Donne et al., 2019; Fitzpatrick et al., 2017; Lloyd-Williams & MacLeod, 2004). By 2005, there were 31 efficacy studies in palliative care education for nurses alone covering communication, attitude to death, empathy, and pain/symptom management (Adriaansen & van Achterberg, 2008). Another 126 studies were reported up until 2015 in medical education (Fitzpatrick et al., 2017). Typically, programs in the research literature are mono-disciplinary.

A handful of studies has addressed health professional student preparedness for working with people in palliative care and end-of-life as part of broader preparations for clinical practice (Chen et al., 2015; Pieters et al., 2020). None of these studies included SLTs. While preparedness is a poorly defined concept, it broadly encompasses a sense of sufficient knowledge, skills, and confidence to start something.

This 4-year stakeholder-led implementation project was initiated in response to informal new graduate feedback from SLTs and DTs who expressed a lack of preparedness for working with people in palliative care upon graduation. By gathering detailed feedback and reflections on the existing curriculum, the team aimed to develop a new interprofessional palliative care education program and evaluate its effectiveness in preparing new graduates preparedness for working with people in palliative care in their first year of work.

Methods

This multi-stage, mixed-methods implementation study gained national and locality ethics approval (UOAHPEC 018920). All participants provided written informed consent.

The educator team (three SLTs and two DTs), who regularly provide interprofessional teaching to 2-year Masters-level, pre-registration SLT and DT students, worked together to improve the palliative care curriculum for students. The project comprised three stages. In Stage I, consenting SLT and DT graduates were interviewed 6 months after graduation to explore their perceptions of their preparedness for working with people in palliative care. Stage II developed a new palliative care curriculum using the education content reported in the literature and the gaps reported by interviewees in Stage I. Stage III implemented and evaluated a new palliative care curriculum. Two years of students was surveyed before and after the new program, and at 6-month post-graduation, to evaluate student response to the new curriculum as well as their perceptions of their preparedness for working with people in palliative care.

Stage I. Perceptions of new graduates on their preparedness for working with people in palliative care

Methods

All Masters-level SLT ($n = 20$) and DT ($n = 10$) students who graduated in 2016/2017 at The University of Auckland were invited to interview. Consenting SLT and DT graduates were interviewed 6 months after graduation by an independent researcher, who was not known to the participants or involved in their education. Semi-structured interviews ranged from 20 to 60 minutes. The interviewer asked questions about the graduates' positive and negative experience of working with people in palliative care as a student and new graduate, including supports they had available (such as supervision) and to reflect on their learning to date, including during their pre-qualifying studies. They did not specifically ask about previous curriculum. All interviews were audio-taped and transcribed verbatim by an independent researcher. Interviews were read between 2 and 5 times each by three researchers and coded and topics were developed using inductive content analysis where the researchers allowed the data to determine the topics through the coding process (Elo & Kyngas, 2008). Rigor and credibility were addressed through double-checking and final

Table 1. Aspects of learning students valued or wanted to retain or enhance.

Global topics	Sub-topics	Illustrative quotes
Clinical Education	1. More observational learning desired 2. Self-care, debrief and reflection are important	'hearing the supervisor talking helped' 'I saw my supervisor and saw it doesn't get easier with time' 'even though we have had lectures on it but you know some more practical' 'I needed more experience' 'self-care is important' 'make sure your looking after yourself um because it can be quite heart breaking'
Classroom Education	3. Theoretical learning and reading was good 4. Patient experiences would be useful 5. Emotional aspects of palliative care	'more education on what palliative care is' 'I wanted the lecturers to tell me what to do' 'hearing family experiences could be useful' 'workshops of people who have been in the situations share your different experiences' 'them [educators] talking about what the impact it has on them, very very big emotional loads hearing how they have gone through would probably normalize it'
Awareness of Supports	6. Legal protection 7. Supervision 8. Safety with protocols	'knew who to talk to' 'how to get proper guidance' 'I would ask a bit more from my supervisor in ways that I could improve' 'being patient centered and that's fine that is still ethical and that is practicing safely'

consensus of the original transcripts and final coding by all researchers. Results are presented under topics and sub-topics with illustrative quotes.

Results

Five SLT and four DT graduates consented to be interviewed. Content analysis resulted in eight topics, divided into three overarching themes. Graduates described learning experiences that they found beneficial or desired given hindsight (Table 1.) Most students had received some palliative care instruction, but it was not consistent across the participants. Graduates described the key points they thought relevant to working in a palliative care situation (Table 2). They discussed the insufficiency of their entry-to-practice training, as well as reflecting on clinical practicum opportunities where they had valuable learning.

Stage II. Developing a new palliative care curriculum

In 2018, the educator team conducted a literature review on approaches and content in palliative care education for health-care workers (see introduction). The educators developed a new palliative care curriculum based on the feedback from the 2017 cohort and the findings of the literature review. Four

topics were considered critical to the palliative education program: What is palliative care? Values/assumption and experiences, Professional roles and responsibilities, and Clinical competency. Learning objectives and teaching modalities were mapped to these overarching topics ensuring that knowledge, attitudes, and clinical skills could be effectively integrated into practice (Table 3).

The education program comprised two timetabled components – online self-directed, an interprofessional face-to-face day. It was included in semester 4 of the student 4-semester (2 years) courses. Prior to this, students had had clinical placements in a minimum of three practice settings which may or may not have included working with people in palliative care. Students began with up to 8h of asynchronous online learning from the Palliative Care Curriculum for Undergraduates (PCC4U) freely available resource (<http://www.pcc4u.org/>). Students were also directed to the New Zealand Ministry of Health 'Te ara whakapiri: principles and guidance last days life' document. The online content was available to students for 6 weeks prior to an interprofessional study day.

The study day began with a whole-group welcome and then small-group (maximum eight people including one staff member) introductory task where students reflected on their current knowledge of palliative care, as well as their concerns and

Table 2. Students self-reported key learnings from educational and professional experiences.

Global topics	Sub-topics	Illustrative quotes
Personal Strategies/ Philosophy	Previous experience of death Personal Reflection Religion and culture	'it is what it is. You shouldn't need to creep around it' 'the medical approach helps' 'I had a little prayer afterwards' 'I think about death a whole lot more now' 'death happens'
Client-centered	Maintain pleasures Respecting client's choices	'small pleasures like have ice-cream if you like' 'I mean, let me eat, I say'
Team	Transition of care into community from hospital Different viewpoints Trust Family as part of the team	'trust is needed' 'different viewpoints are good but communication is important'
Terminology/Definitions	Medical labels Advanced care planning	'who are we talking about? what is it? Is it a specific thing? people are treated differently because of the word' 'taboo of being "on" palliative care'
Family	Family-focused care Taking time with family Focus on interaction rather than content	'need to convince the family a student can be trusted' 'how do we say things to the family?' 'I learnt from my supervisor to <i>really</i> listen and reflect'
Roles	Client-centered care Interprofessional care Student role Changing role over time	'I could have been more interdisciplinary and had more in-depth conversations with other professionals' 'careful you aren't getting out of role' 'is it appropriate to intervene?' 'my professional role was more towards education and having that discussion around comfort feeding'
Feelings	Fear and pressure of incompetence Confidence Emotionality Discomfort Purposeful	'as a student . . . awkward would be the right word . . . sometimes lost' 'I never felt thrown in' 'always critiquing every little thing I do and maybe next time not being so negative or critical of myself' 'too much for me at times' 'not sure if I made a difference' 'it was heart breaking' 'letting people down' 'do I know what I'm doing?' 'I felt I can't do anything for them' 'privileged about making something positive happen for the patient and their family' 'I had clarity of purpose – giving pleasure in comparison to the risk adverse pathway'

Table 3. Overview of the palliative care education program.

Phase of learning (Mathisen et al., 2011)	Education experience	Curriculum content	Learning objectives
Sensitization	Online education module	Introduction to palliative care Terminology in relation to death and dying	1. Gain knowledge of context, purpose, and key terminology relating to palliative care
Personalization	Online education module	Values/assumptions/experiences	1. Reflect on own experiences of death and dying
Professionalism	Didactic talk from expert in field	Professional roles and responsibilities - legal, ethics	1. Gain knowledge of the diverse professionals involved. 2. Understand the principles of holistic assessment for symptom management 3. Acknowledge the importance of recognizing dying 4. Gather resources to support coping with grief and loss
Integration	Simulated-learning experience	Clinical/communication skills	1. Demonstrate therapeutic communication skills 2. Apply knowledge of the roles of different team members in an interprofessional team 3. Apply ethical, professional, and culturally responsive practice in a simulated palliative care case.

desires for learning. This was followed by a 2-h talk from a Palliative Care Nurse Specialist from a local Hospice, who covered the experience of death and dying and answered students' questions. In the afternoon, students worked in small interprofessional groups in a simulated learning environment. A summary of the simulation activity is presented in Table 4.

Stage III. Implementation and evaluation of a new palliative care curriculum

Methods

All SLT and DT students who were in their final semester of 2-year Masters degree at The University of Auckland in 2019 and

2020 were invited to participate ($n = 40$ SLT students and $n = 38$ DT students). Consenting students completed the 30-item Frommelt Attitudes Toward Care of the Dying Scale (FATCOD) Form B (Frommelt, 2003), a valid and reliable tool for evaluating attitudes toward end-of-life before the education program. Despite the potential for socially desirable responding, the FATCOD allowed educators to be forewarned of students with recent experiences of death and caring for a terminally ill person and attend to this appropriately. The FATCOD also provided demographic information in regard to prior experience and beliefs about death and dying.

SLT and DT students completed an anonymous online survey pre- and post-education program and again 6 months after graduation (approximately 9 months after program

Table 4. Palliative care interprofessional simulation description.

Structure	Student activity	Focus/instructions
Pre-session	Provided with written information/top tips for successful family meetings to read.	Written information available as a guide through the scenario, if needed
Introduction to scenario patient	Watched a video of a patient – Kirsty with motor neurone disease describing her disease and her worries and reflections of her deteriorating condition and of dying.	
Introduction to simulated learning scenario	Introduced to the simulated learning environment – a interdisciplinary outpatient clinic and to the patient and her case history. It was explained that a family meeting is planned to discuss 'Kirsty's' current situation.	Students informed that focus of simulation is not on clinical intervention and knowledge and rather on professional roles, communication and having difficult conversations.
Scenario – Phase 1 Interdisciplinary pre-meeting	Allocated professionals roles (SLT, DT, physiotherapist, and occupational therapist). For each role, students were provided with brief written key information about their own character.	Students were asked to maintain role unless they felt distressed or uncomfortable, but if they needed, they could pause the scenario for support. The educator could pause the scenario at appropriate points for 'pause and reflect' opportunities to allow reflective group discussions before starting the scenario again.
Scenario – Phase 2 Family meeting introductions	Family (Kirsty, Kirsty's husband, sister, or mother) and professionals meet. For each role, students were provided with brief written key information about their own character.	Educators encourages reflection and then repeating a phase for experiential learning.
Scenario – Phase 3 Family meeting sharing information and developing consensus on treatment options	Swapped roles to give them the opportunity to see the situation from another lens.	Students were encouraged to ensure all voices were heard.
Scenario – Phase 4 Family meeting wrap up	Allocated new roles to give them the opportunity to see the situation from another lens.	Students encouraged to practice comfort, console and conclude and to ensure the family does not feel abandoned or with questions unanswered.
Debrief	Each student can reflect, and speak within the group.	Small group discussion includes self-care and cultural reflections. Students then encouraged to meet and share food and drink at cafe with the whole team.

Table 5. Phase 3 student demographics (n = 62).

Demographics and experience of death and dying		Responses (n=62)
Age (years)	18–22	13
	23–27	39
	28–35	8
	36–45	1
	56–65	1
Sex		4 Male (6%)
My religious beliefs . . .	Are a strong influence on my attitude toward death and dying	18 (29%)
	Are a minor influence on my attitude toward death and dying	15 (24%)
	Do not influence my attitude toward death and dying	31 (50%)
Profession	Speech-language Therapy	39 (63%)
	Dietitian	23 (37%)
Previous education on death and dying		10 Yes (16%)
Previous experience with terminally ill persons	I have cared for terminally ill persons and their family members	17 (27%)
Previous experience of loss	I have lost someone close to me within the past year	28 (45%)
Present experience	I am presently anticipating the loss of a loved one	9 (15%)

Pre-program FATCOD scores showed great variation in attitudes toward dying among students but with most students believing giving care to a dying person would be a worthwhile experience (Table 6).

completion). Students self-rated their knowledge of palliative care, death, grief, palliative care practices, and roles on a 10-point likert scale. Students also rated their confidence in working with children, adults, and older adults who are dying on a 10-point Likert scale. Finally, students provided feedback on the education program and offered suggestions for future changes in curriculum. Findings were tallied and tabulated.

Results

Out of 78 students who were educated, 62 completed the FATCOD and pre-education survey, 42 completed the post-education survey and 15 completed the post-6-month education survey. Students were predominantly in their 20s and female (4 males). Over 50% reported their religious beliefs were an influence on their attitude toward death and dying, and while 16% had previous education on palliative care, many had experience of caring for a terminally ill person (Table 5).

The education program was well received by students, and they gave positive and constructive feedback on the program that was useful for the educators (Table 7). After the first year of the program, a social, non-educational, gathering at the university café at the end of the study day was initiated, to allow students a place to wind down and diffuse prior to going home. Perceived knowledge and confidence ratings shifted after the training from medians of 3–6 to 5–8 (1 = none; 10 = excellent) across all domains. Positive shifts in ratings were maintained at 6-month post-graduation (Figure 1).

Discussion

We have described a postgraduate education quality improvement project focused on the preparedness of speech-language therapists and dietetic students for working in palliative care. Our students had voiced feeling ill-prepared for palliative care work, and this is similarly reflected in other professions with only 42% of US medical graduates feeling adequately prepared to provide end-of-life care on graduation in a 2015 survey (Chen et al., 2015).

Students felt ill-prepared not only in terms of formal education and knowledge of palliative care legislation in New Zealand but also in terms of their roles and responsibilities and the emotional aspects of working in the field. Interestingly, the content analysis themes that emerged from the 2016 graduates closely aligned with the curriculum components mapped out in published systematic reviews (DeCoste-Lopez et al., 2015; Donne et al., 2019; Fitzpatrick et al., 2017). This encouraged educators to develop a palliative education program that covered knowledge, attitude, interprofessional practice, and clinical communication skills. The program was designed to not only cover these content areas but also reflect published learning on effective education delivery mapped out in systematic reviews in terms of self-directed learning, didactic teaching, and simulated learning opportunities. Blended learning models with theoretical online or didactic learning as well as a practical element are common in the literature (Donne et al., 2019). The program was well received by students and students gained greater perceived knowledge and confidence after the program.

Student satisfaction

Students were positive about the education program and reported that they enjoyed both the didactic learning and the simulations. They were particularly enthusiastic about the session with the hospice specialist nurse. There is a plenty of literature that backs up this positive response to enthusiastic, knowledgeable teachers, including those out-of-discipline (Lloyd-Williams & MacLeod, 2004). Students asked for more insights from those working in palliative care and wanted to hear from people who have experienced an end-of-life situation where SLTs and DTs had been involved. They also requested more cultural support in terms of death and dying across different cultures and what they needed to know to support families adequately. Positively, 6 months after graduation, graduates who responded to the survey were still in agreement that the program had provided them with knowledge and confidence. Importantly, with some of them moving

Table 6. FATCOD scores for Phase 3 students (pre-program n = 68).

FATCOD Question	n*	Strongly disagree	Disagree	Uncertain	Agree	Strongly Agree
1. Giving care to the dying person is a worthwhile experience.	66	0	0	5	15	46
2. Death is not the worst thing that can happen to a person.	63	0	12	17	22	12
3. I would be uncomfortable talking about impending death with the dying person.	67	3	10	20	34	0
4. Caring for the patients' family should continue throughout the period of grief and bereavement.	68	0	1	3	18	46
5. I would not want to care for a dying person.	66	17	34	11	4	0
6. The nonfamily caregivers should not be the one to talk about death with the dying person.	65	6	35	19	2	3
7. The length of time required giving care to a dying person would frustrate me.	64	20	32	10	1	1
8. I would be upset when the dying person I was caring for gave up hope of getting better.	66	5	11	28	17	5
9. It is difficult to form a close relationship with the dying person.	66	19	29	15	3	0
10. There are times when the dying person welcomes death.	66	0	0	3	37	26
11. When a patient asks, "Am I dying?" I think it is best to change the subject to something cheerful.	66	26	34	6	0	0
12. The family should be involved in the physical care of the dying person.	64	2	4	28	21	9
13. I would hope the person I'm caring for dies when I am not present.	66	5	22	31	7	1
14. I am afraid to become friends with a dying person.	66	16	32	9	9	0
15. I would feel like running away when the person actually died.	67	10	23	25	7	2
16. Families need emotional support to accept the behaviour changes of the dying person.	65	0	0	2	28	35
17. As a patient nears death, the nonfamily caregiver should withdraw from his/her involvement with the patient.	65	14	35	14	1	1
18. Families should be concerned about helping their dying member make the best of his/her remaining life.	65	2	5	8	35	15
19. The dying person should not be allowed to make decisions about his/her physical care.	65	35	23	4	0	3
20. Families should maintain as normal an environment as possible for their dying member.	64	0	2	25	26	11
21. It is beneficial for the dying person to verbalize his/her feelings.	66	0	0	5	25	36
22. Care should extend to the family of the dying person.	65	0	0	3	23	39
23. Caregivers should permit dying persons to have flexible visiting schedules.	34	0	0	9	8	17
24. The dying person and his/her family should be the in-charge decision-makers.	66	0	3	4	34	25
25. Addiction to pain relieving medication should not be a concern when dealing with a dying person.	66	0	4	26	27	9
26. I would be uncomfortable if I entered the room of a terminally ill person and found him/her crying.	65	5	22	18	18	2
27. Dying persons should be given honest answers about their condition.	66	0	0	4	36	26
28. Educating families about death and dying is not a nonfamily caregiver responsibility.	65	18	30	12	5	0
29. Family members who stay close to a dying person often interfere with the professional's job with the patient.	64	14	29	13	6	2
30. It is possible for nonfamily caregivers to help patients prepare for death.	63	0	0	1	38	24

* note varying numbers per question as some students skipped some questions..

Table 7. Education program feedback from students.

Education content (1=do not agree, 5=agree)		Immediately post- (Median (Range))	6-months post-
This education program was well organized		4 (3–5)	-
The content was appropriate		5 (2–5)	-
The overall standard of instruction was high		5 (3–5)	-
The course was highly realistic		4 (2–5)	-
The following components of the course were very useful	Online module	4 (1–5)	3.4 (1–5)
	Talk from Hospice	5 (2–5)	4.5 (3–5)
	Simulations/role-plays	5 (2–5)	4 (2–5)
	Simulation reflective discussions	5 (2–5)	4.5 (3–5)
How suitable do you think simulation training will be/is for teaching how to work with someone who is dying? (1 = not at all, 10 = very much so)		8 (4–10)	8 (6–10)
Qualitative content	Illustrative quotes – immediately post	Illustrative quotes – 6 months post	
What did you like most about the day?	‘the scenarios. I feel a lot more confident about how to approach this topic with clients’ ‘the talk from the hospice nurse as she has real experience’ ‘how the simulations got us to practice our skills (not be afraid to try things) due to the comfortable environment’ ‘taking theory and being able to practice and then reflect immediately’ ‘getting more comfortable talking about death and dying’	‘The simulations and conversations made it more real. No one is going to be fully confident due to the nature of the topic but the practical situations helped confidence’ ‘The role plays and that it was interdisciplinary’ ‘The supportive environment in which we learned the content in’ ‘. I liked that it included both self-reflection and an emphasis on MDT roles/approach. It was great having students from other disciplines join us.’	
What did you like least about the day?	‘the online prep modules took far too long and were unrealistic for Masters students who are busy’ ‘that out of necessity it had to touch on very raw emotions’ ‘I felt it could touch more on culture’ ‘not enough discussions around grief and bereavement’	‘online module – I have zero memory of the online memory’ ‘feeling vulnerable as it was a subject that meant my emotions were on the surface’ ‘I thought it was all great.’	
If you were to teach the course, what would you do differently?	‘I did not enjoy the nurse’s te whare tapa wha demonstration. She warned that it would be really confronting and it was! The exercise felt uncomfortable as I do not like to purposely imagine what if scenarios especially regarding my own death’ ‘since it was over a whole day, I might arrange something light-hearted and fun for the two professions to join in together to redirect difficult emotions before the afternoon session’ ‘provide tough questions that the students have to practice answering in the simulations. Perhaps ask someone to come in and share their palliative care story/experience and their interactions with the SLTs/DT’	‘more paediatric content’ ‘more open discussion time to explore thoughts’ ‘more time in simulation’ ‘more external speakers who can share their perspectives’	
What do you feel you will do differently having participated in this training day?	‘be more confident in a room with a dying person’ ‘more holistic with this population’ ‘be more prepared’ ‘be more willing to engage and list to difficult conversations’ ‘communicate with empathy’	N/A	

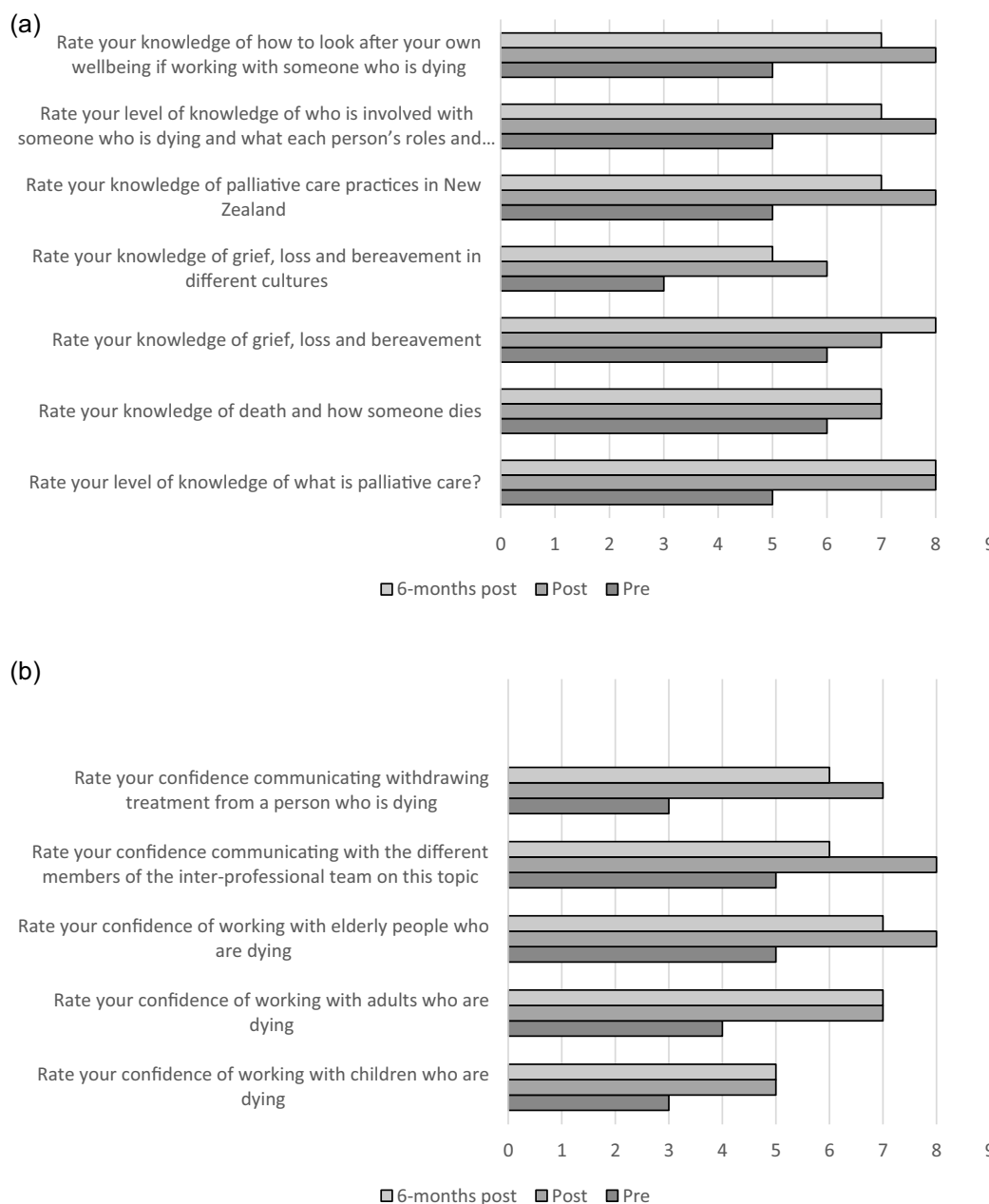


Figure 1. Student self-rating of (a) knowledge and (b) confidence over time.

into pediatric practice, they reflected that pediatric care advice would also be beneficial. A recent scoping review explored the role of SLT in pediatric palliative care, and the authors conclude that there is an absence of guidance in this area (Krikheli et al., 2018). Educators should consider content relating to age and culture in developing education programs for allied health professionals where the range of populations and workplaces is so broad from acute hospitals, communities, aged care to specialist school settings.

Student preparedness for working with people in palliative care

The use of the FATCOD was imperative to gain some insight into the attitudes and experiences of the student cohort prior to the training day. Due to ethics concerns

about time taken to complete the FATCOD, students were not asked to repeat the measure post-program. Many of the students in these allied health clinical programs came with personal experiences of death, religious and cultural influences on their beliefs about dying, and their FATCOD scores display an overall positive attitude toward the value of working in this area. Students valued the role of family in end-of-life care and felt strongly that conversations about dying should be openly discussed rather than avoided. Students demonstrated less concordant ratings on topics related to their own emotional response to being involved in end-of-life, and this is perhaps not surprising in two professions where many may not have a desire to work in acute healthcare and may be considering a career in speech and language therapy in mainstream schools or corporate nutritional advisors for food companies.

Educators are recommended to remain cognizant of the students' experiences of death and dying throughout these sensitive aspects of education and have additional staff present to support upset or distressed students throughout the day and to provide opportunity to debrief formally and causally.

Knowledge and confidence scores increased post-program and, as predicted, dropped slightly at 6 months of follow-up. However, the sustained increase above the baseline measure suggests that for two cohorts of students, the palliative care education program was effective in increasing their knowledge and confidence.

Limitations and future directions

As a clinical education research project conducted as part of the ongoing curriculum, the impact of other aspects of clinical and academic education cannot be ruled out. Survey response rates reduced across time and possibly those with a more positive attitude toward the program, or ongoing links with palliative care, were more motivated to respond, particularly at 6 months resulting in response bias. It would have been beneficial to repeat the FATCOD post-program to gather more detailed information about attitudes at follow-up. More controlled studies in a busy clinical training program are difficult to conduct as students' learning needs to be prioritized. Future studies should explore the carry-over of knowledge and skills into clinical practice by assessing students' competency in practice. Feedback from clinical tutors and patients and their families would add insight to the level of competency developed.

Implications

- (1) Self-study, reflection, didactic teaching, and simulation/role-play within a supportive, safe learning environment resulted in positive gains in preparedness for working with people in palliative care.
- (2) Positive student evaluations of the program at post-graduation follow-up in the workplace.
- (3) Mapping curriculum development to evidence-based scientific literature and to student feedback ensured curriculum met the needs of students.

Conclusion

Palliative care situations are common for speech-language therapists and dietitians, and they play an important role in early discussions and decisions regarding nutrition. This longitudinal study followed the development of an education program for speech-language therapists and dietitian students. Staff developed the program interprofessionally and incorporated student and graduate feedback. Students were positive about the program and perceived themselves more knowledgeable and confident in working with people in palliative care. Gains in knowledge and confidence were maintained at 6 months for those who responded to the final survey. Mapping curriculum development to evidence-based scientific

literature and student feedback ensured curriculum met the needs of students. Modality of education materials should be considered with a particular focus on the efficacy of immersive education modalities such as role-play and simulated learning opportunities to ensure knowledge and skills are transferred into clinical competency.

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Author contributions

All authors planned, conducted, and reported the work. All these contributors gave their final approval of the version to be published and agree to be accountable for the accuracy and integrity of the work.

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