Undergraduate Physiotherapy Students' Perspectives on Optimising the Curriculum for Supported Self-management Education

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ABSTRACT

Supported self-management (SSM) assists development of the skills people living with long-term conditions require to manage their health and live well. Physiotherapy students should learn how to deliver SSM but how to facilitate optimal student learning of SSM is currently not known. This mixed methods study aimed to determine, from a student perspective, how to best teach undergraduate physiotherapists to optimise their learning of the knowledge and skills in delivering SSM. Final year physiotherapy students were invited to participate in a nominal group session ($n = 17$) and then three rounds of an e-Delphi survey. Round one ($n = 33$) elicited ideas and themes for subsequent rounds, while rounds two ($n = 25$) and three ($n = 13$) measured consensus on ideas for improving the current SSM curriculum. Consensus was reached that learning SSM should be frequent, interesting, explicit, and incorporated into all years of training. Practical opportunities were favoured over theoretical learning via lectures. Learning SSM was seen as an ongoing process, important in providing person-centred care and improving health outcomes. Increasing learning opportunities that provide students with clear knowledge of SSM and a chance to practise using these skills in a real-life setting should be incorporated into entry-level physiotherapy education.

INTRODUCTION

Imposing the greatest burden on global health, long term health conditions (LTCs) linked with higher rates of multimorbidity and mortality, and lowered quality of life, present one of the largest modern healthcare challenges today (World Health Organization, 2022). As people living with a LTC spend the majority of time making health-related decisions and self-managing tasks on a daily basis, independent of a healthcare professional (HCP), self-management of health has been introduced worldwide as a health intervention (Taylor et al., 2014). Self-management is usually viewed as people living with LTCs being responsible for their health and for applying the knowledge they receive from HCPs to manage their health condition on their own (De Silva, 2011; Furler et al., 2011). Self-managing health is, however, complex and can be difficult for many individuals (Hale et al., 2022). Self-management support may be a more empowering approach, viewed by the New Zealand Ministry of Health (2016) as "a portfolio of techniques, tools, and programs to help people choose and maintain healthy behaviours; and as a fundamental transformation of the patient–caregiver relationship into a collaborative partnership" (p. 5). This statement takes the approach of a person managing their own health beyond that of "self-management" to either "self-management support" (i.e., utilising provided supportive resources) or "supported self-management" (i.e., HCPs supporting, in collaborative partnerships, people with LTCs to develop self-management skills and their confidence to use

them). Supported self-management (SSM) refers to a HCP, in a collaborative partnership, a person to develop all the skills required to self-manage their health and their confidence to use these skills. The five core self-management skills described by Lorig and Holman (2003) are "problem solving, decision making, resource utilisation, forming of a patient/health care provider partnership, and taking action" (p. 2).

Successful supported self-management (SSM) depends on integration into normal health care, and it is here the HCP plays a central role (Lorig & Holman, 2003; Taylor et al., 2014). In this approach, HCPs are not only required to provide treatment but also to use these clinical interactions to support individuals to learn the skills of self-management and their confidence or self-efficacy to apply these skills to manage and take charge of their own health condition (Bodenheimer et al., 2002; Jones et al., 2016). De Longh et al. (2015) suggest a key principle unpinning SSM is "supporting people to recognise and develop their own strengths and abilities to enable them to live independent and fulfilling lives" (p. 6). This paper focuses on the training of physiotherapy undergraduate students learning how to deliver SSM.

HCPs and people living with a LTC have positive attitudes towards SSM (Dwarswaard et al., 2016; Van Wely et al., 2019), yet implementation in practice remains limited (Elissen et al., 2013; Mudge et al., 2015). Numerous barriers prevent the widespread application of SSM (Carr et al., 2014; Figueiredo

et al., 2017) including lack of trained HCPs, suggesting that training should be focused on enabling future practitioners to better support an individual's ability to self-manage their health (Bodenheimer et al., 2002). Giving SSM a better chance of cementing itself in healthcare relies on educational institutions providing ongoing training of HCPs in this area of expertise (Bodenheimer et al., 2002). Reflecting the major challenges faced by the modern healthcare system, training HCP students how and why to support self-management is important for future healthcare (Loftus et al., 2013; McMeeken, 2007). Training in delivery of SSM is important, as SSM has been shown to improve healthcare engagement and outcomes and quality of life, while reducing costs to the healthcare system (Barlow et al., 2002; Contant et al., 2019; Tapp et al., 2018).

Consequently, concern around whether HCP students are learning and successfully implementing SSM is evident in the literature. Attention on health care education is required to improve students' ability to confidently deliver SSM (Duprez et al., 2017). HCP students in participating New Zealand universities positively perceived SSM as an important skill and they had confidence in their skill ability, but reported limited learning opportunities in academic and clinical settings (Gudgeon et al., 2022). Thus, more in-depth opportunities for HCP students to learn and practise SSM before entering the workforce may be required (Figueiredo et al., 2017; Gudgeon et al., 2022).

Modern physiotherapy education, typically via university courses, intertwines academic and clinical practice components. Providing problem-based learning reflective of contemporary health challenges prepares future physiotherapists to work in various care settings (Loftus et al., 2013; McMeeken, 2007). Similarly, training should prepare students for real-life application. One recent review identified that SSM is taught using "emotional strategies" (i.e., having empathy for and understanding of people's experiences and of their partnerships with healthcare providers) and via "informational strategies" (i.e., bidirectional information sharing, writing care plans, setting health goals, encouraging people to utilise self-management resources) (Donnelly et al., 2020). Commonly, students learn how to deliver information and educate but are rarely taught or given opportunities to build a professional partnership as required in the delivery of SSM, lacking the "how to" expertise (Donnelly et al., 2020). More focus on facilitating student learning of "how" to deliver SSM, beyond only educating, is required (Gudgeon et al., 2022).

Past research has focused on HCP student perceptions of (Gudgeon et al., 2022) and education about (Donnelly et al., 2020; Forbes et al., 2018a, 2018b, 2018c) SMS. There is limited research exploring the development of a curriculum to enable students to learn how to apply SSM (Duprez et al., 2017; Munro et al., 2018). Importance must be placed on understanding how to optimise SSM knowledge and skills at this stage in students' education (Rochfort et al., 2018). Thus, the aim of this study was to determine, from a physiotherapy student perspective, how to best optimise their learning of the knowledge and skills required for delivery of SSM.

METHODS

Study design
This project was an exploratory sequential mixed methods study involving two phases. Actively involving students in the educational design of curricula is increasingly employed to improve teaching and learning (Bovill et al., 2016; Martens et al., 2019). In this study, final year physiotherapy students at the University of Otago were the study participants. Phase one occurred three months after the start of their final year and involved facilitated group discussions using the nominal group technique (NGT) to generate ideas on what would enhance physiotherapy students' learning of SSM. Phase two followed two months later and involved a three-round e-Delphi survey to gain consensus on informing the teaching of SSM. Initial nominal group discussion, involving physiotherapy student participants, provided the "expert knowledge" used to develop rounds of questions in the Delphi survey (Hasson et al., 2008). Items in each survey were rated to enable group consensus, then measured using quantitative analysis.

The final year of physiotherapy education at the University of Otago is clinically based and students are located across New Zealand, managed over three campuses (Dunedin, Christchurch, and Wellington). Ethics approval was obtained from the University of Otago Ethics Committee (reference: D21/087). The primary researcher was a final year Bachelor of Physiotherapy with Honours student, part of the class forming the participants of this study, and supervised by a senior physiotherapy lecturer. Thus, strategies were required to ensure the researchers were not part of direct data collection and participants remained anonymous.

Nominal group technique
Participants
Fourth year undergraduate physiotherapy students (Bachelor of Physiotherapy and Bachelor of Physiotherapy with Honours) at the University of Otago (Wellington ($n = 46$) and Christchurch ($n = 33$) campuses) were invited to take part in the nominal group session. One group per campus (thus two groups in total) was held during the students' preparation week prior to the beginning of their second 5-week clinical placement. The Dunedin campus cohort were not invited as the student researcher was part of this cohort, thus inclusion would present ethical challenges to data collection. Exclusion criteria were physiotherapy students in other years of study at the University of Otago or studying at other tertiary institutions.

Procedure
Participants were invited to take part in a nominal group session (with lunch provided as an incentive to attend) via an email sent out from an administrator at the School of Physiotherapy who was not part of this study. The one-hour nominal group session took place in a classroom on each respective campus. Trained independent group facilitators from the School of Physiotherapy ran each session. There was one facilitator per group. Both were researchers with experience in facilitating groups and knowledge in SSM in health, but neither were part of the research team or part of the academic teaching of SSM. While each facilitator was known to the students as they were located on the same campus as their student group, they had

no influence over the students' academic grades. Participants completed a separate consent form upon commencement of the session and a brief survey collecting demographic data (age, gender, ethnicity, previous tertiary education). No limits were placed on the size of the group. The topic was introduced using a five-minute video filmed by a member of staff summarising the current SSM curriculum. Participants were then asked three questions: (i) What was the most valuable aspect of learning content in how SSM is currently taught? (ii) How do you think content could be delivered in a more engaging/interactive way? (iii) What would enhance your learning of SSM?

Silent generation of ideas based on answering these questions occurred with time to write down ideas provided. Individuals then shared their ideas with the group, and these were recorded on a whiteboard. When all ideas were shared, group discussion occurred to combine similar ideas into groups. Participants then received an individual ranking sheet, to rank the generated groups by priority, and these were submitted to the facilitator. The facilitator then collated individual rankings into a final list of ways of how SSM could be best taught, ranking these ways in order of importance. Both group sessions were audio recorded with participant permission to provide more in-depth information for the student researcher. The two groups' rankings were provided to the student researcher, who combined them into one ranked list and used this as a basis to develop the questions for the first round of the Delphi survey.

Delphi survey
Participants
All 133 fourth year undergraduate physiotherapy students (Bachelor of Physiotherapy and Bachelor of Physiotherapy with Honours) were invited to take part in the e-Delphi (online) survey. Inclusion was limited to the final year Physiotherapy students at the University of Otago, excluding students in other years and those studying elsewhere. The student researcher was also excluded from taking part in the e-Delphi survey.

Procedure
Survey development, such as use of the platform Qualtrics, the Likert scale construction, and the cut off limit of consensus percentage, was guided by a previous Delphi survey (Sole et al., 2019). The survey was first piloted using think-aloud feedback (Ericsson & Simon, 1993) with one potential participant to ensure general understanding and technical aspects of the survey ran smoothly. Eligible students were invited to participate via an email sent by the School's administrator. The email had a link to the online survey, which included an initial separate compulsory consent form. The following week a reminder email was sent. Each round of survey was open for two weeks, with three weeks between rounds. Online surveys were administered via the platform Qualtrics (Qualtrics, Provo, UT, USA). The same procedures for recruitment were used for each round and each round began with demographic questions (age, gender, ethnicity, previous tertiary education). As an incentive, participants at each round could volunteer to enter their contact details into a draw for a NZ$50 grocery voucher.

Round 1: The student researcher developed core questions based on the nominal group idea generation and audio recorded discussions. Round 1 had six open-ended questions and three questions requiring rating of agreement on a Likert scale (Table 1). All survey data were downloaded and transferred from Qualtrics to a Microsoft Excel Spreadsheet. Responses were manually cleaned and screened to only include fully completed responses in the analysis (minimum 95% questions completed). Survey participants remained anonymous to the researcher. Demographic data were entered into a new Excel spreadsheet and analysed descriptively (mean and ranges). Open text box answers were read and thematically analysed using template analysis (Brooks et al., 2015). This involved multiple readings of these data by the researchers to identify key characteristics. On discussion, the researchers summarised these characteristics and grouped and coded them by similarity. The finalised codes were applied to all the open text data. On further discussion, the codes were collapsed into themes, forming a final survey to be used in the following round.

Table 1

Delphi Round 1 Questions

1. Briefly explain your understanding of people supported self-management.
2. How confident would you be in supporting peoples' self-management?
3. Describe any experiences where you have had to support people's self-management.
4. What learning experiences around supported self-management have you found most useful during your physiotherapy education so far?
5. What do you like about the way supported self-management is currently taught?
6. What do you think could be changed to improve the way supported self-management is taught?
7. To what extent do you agree that the following activities would be useful?
8. Thinking outside the box, please state two or more ideas for how physiotherapy students could learn to support people self-management?

Round 2: Participants were asked to rate their level of agreement to items or options using a five-point Likert scale to questions 1–3 (5 = extremely, 4 = very, 3 = moderately, 2 = somewhat, 1 = not at all) and for questions 4, 5, and 8 (5 = strongly agree, 4 = moderately agree, 3 = slightly agree, 2 = moderately disagree, 1 = strongly disagree). Question 6 used a 4-point Likert scale and question 7 provided multiple choice options. Data were exported for analysis and medians and percentages calculated. Consensus was determined if the item had a median of 4 or higher, and a majority (70%) of participants had rated it 4 or 5.

Round 3: The third round contained the same questions as Round 2 with removal of options that had a median consensus lower than 3 for questions 1–5 and 8. Participants were invited to re-rate their level of agreement to the resultant Round 3 questions. Response data were analysed as in Round 2.

RESULTS

Nominal group technique

Two nominal group sessions took place (*n* = 14 females, *n* = 3 males; mean age (range) 21.7 (21–27) years) (Table 2). Ranked ideas are outlined in Table 3. Overall, the highest ranked idea was that more practical SSM education is required. One participant said, "The content we get given is really good and maybe it's just the application to actual patients … could be improved or just changed" (P1, Christchurch). Participants generally had positive views towards SSM but struggled to remember what was taught and identified limited opportunities to practise applying the skills and theory, especially in a practical setting. Another participant agreed that "All of the information is … useless unless you can actually have this discussion with a patient" (P2, Christchurch). Other ideas included using activities such as UMove (a School of Physiotherapy student-led exercise class for people with long-term neurological conditions) to specifically practise or focus on SSM during placement.

Delphi survey

Three rounds of e-Delphi surveys took place. Most participants were female (78.8%) and of New Zealand European ethnicity (77.3%) and had no previous tertiary education (that may have influenced their knowledge of SSM) (Table 2). A total of 33 Round 1 survey responses were received (25% response rate), 25 Round 2 responses (19% response rate), and 13 Round 3 responses (10% response rate). Open text box questions in Round 1 were analysed and coded to identify areas of interest and questions to be used in subsequent rounds. Round 1

Table 2

Demographic Data of Participants in the Nominal Group Sessions and Each Delphi Round

Characteristic	Nominal session *n* = 17 (13%)		Delphi Round 1 *n* = 33 (25%)		Delphi Round 2 *n* = 25 (19%)		Delphi Round 3 *n* = 13 (10%)	
	n [a]	%	*n* [a]	%	*n* [a]	%	*n* [a]	%
Age (years), mean (range)	21.7 (21–27)		22.0 (20–27)		23.0 (21–26)		22.6 (21–27)	
Gender								
Female	14	82.3	25	75.8	19	76.0	11	84.6
Male	3	17.7	8	24.2	6	24.0	2	15.4
Previous tertiary qualification								
No	15	88.2	27	81.8	23	92.0	9	69.2
Yes	2	11.8	6	18.2	2	8.0	4	30.8
Ethnicity								
New Zealand/European	13	76.5	26	78.8	21	84.0	9	69.2
Māori	1	5.9	2	6.1	2	8.0	3	23.0
Chinese	2	11.8	3	9.1	2	8.0	1	7.7
Middle Eastern	0	0.0	1	3.0	0	0.0	0	0.0
Filipino	0	0.0	1	3.0	0	0.0	0	0.0
Nepalese	1	6.0	0	0.0	0	0.0	0	0.0

[a] Unless indicated otherwise.

Table 3

Nominal Group Sessions – Final Participant Combined Ranking Ideas for Each Campus Group (Ranked in Order of Importance)

Dunedin	Christchurch
1. More practical/personal the learning the better	1. Integrating SSM concepts throughout programme
2. Lab demonstrators tailor to that topic	2. Learning through doing – practical applications
3. Do activities in a lab-based setting	3. People talk about condition and self-management in front of third year class (people presentation)
4. Use UMove [a] to practise SSM	4. Case studies to include SSM
5. Assessments/grades as motivation to learning	5. Provide strategies relevant to our own practice and peoples
6. Use videos if peoples not available	6. Learning core values to apply to peoples
7. Reflecting on each other's self-management support styles as health professional students	
8. Teaching theory in parallel with practice	

Note. SSM = supported self-management.

[a] UMove is a student-driven exercise clinic for people living with long term conditions.

suggestions for other practical activities were added as extra items in Round 2. Data from participants who provided contact details to enter the prize draw remained in a separate file. Each contact was allocated a number and the winner was randomly selected using a random number generator by a person independent of the researchers.

As presented in Table 4, open text box answers indicated that participants had difficulties remembering what was taught but felt they were not taught frequently enough to develop knowledge in SSM. The Round 1 responses were collated and thematically categorised as: (i) previous experiences of applying SSM, (ii) current teaching methods, (iii) the nature of learning SSM, (iv) overall experience, (v) practical opportunities, (vi) improving confidence using SSM, (vii) timing of teaching, and (viii) importance of SSM. These themes formed the questions for Round 2.

The findings from Rounds 2 and 3 are presented below in Table 5. Analysis of Round 2 and 3 data found consensus for most items and that these were important factors for learning SSM. Consensus was reached for education (79%) and exercise prescription (71%) as frequent experiences of SSM, while treatment/management plans and discharge planning both had a median rating of 3. Consensus was reached that learning SSM should be explicit, practical, integrated with other learning experiences, and frequent. However, participants' actual experience learning the how to of SSM was not memorable nor obvious. Lab activities and the lab book manual were rated the most highly as current teaching methods that helped learning about SSM, while textbook readings and lectures were rated lower. In Rounds 2 and 3, 68% and 92% of participants, respectively, voted that SSM should be taught in all years of the physiotherapy undergraduate programme. Most (85%) participants in Round 3 agreed that having more opportunities to practise SSM would improve their confidence in this area. Participants agreed that learning SSM is an ongoing process, and improves person-centred care and health outcomes. However, not all suggested practical activities reached consensus as the majority of items for question 3 had a median of 3 and less than 70% consensus. The most highly rated activity was working with peoples with LTC on placement followed by observing other health care professionals.

DISCUSSION

This study achieved its aim of determining what students perceive to be the best way to teach undergraduate physiotherapists to engage and optimise their learning of SSM. Students agreed that more practical learning opportunities in a clinical setting, such as observing other health professionals and working with people with LTCs, would be the optimal approach. Consensus was reached that education on SSM needs to be more frequent, explicit, and taught through all years of the physiotherapy degree.

Similar to a recent study of HCP students (Gudgeon et al., 2022), this study found that physiotherapy students considered that learning about SSM was valuable, important for future practice and for improving person-centred care and health outcomes, and that it is an ongoing process. While the primary focus of this study was on student perceptions of how to optimise learning of SSM, open discussion in the nominal group sessions revealed confusion around the purpose and application of SSM. Notably, students talked about having clinical experience in prescribing exercises in a primary care setting working with people with acute injury but not of other clinical experiences in the delivery of SSM, thereby limiting their understanding and learning.

Student participants considerations that SSM education needs to be more frequent, taught through all years of the physiotherapy degree, and explicit, are consistent with findings from Figueiredo et al. (2017). These authors recommended more in-depth, frequent SSM education could be incorporated into the curriculum to improve students' intention and ability to use SSM in healthcare. Further, the current study findings re-enforced those of Donnelley et al. (2020) that education needs to be provided over a greater period of time, more frequently, and with a focus on teaching students the "how to" of SSM skills such as building a person–clinician partnership (Donnelly et al., 2020).

One key theme prominent in this study was the need for more practical opportunities in SSM training. A range of ideas for practical learning were narrowed down via the e-Delphi rounds to health professional observation, working with people with LCTs, and in placement/exercise class environments.

Table 4

Responses to Delphi Round 1, Question 6: What Could Be Changed to Improve the Way Supported Self-Management is Taught?

Open text responses	Code
Don't remember being taught SSM	Not memorable/explicit
Didn't get taught SSM	
Only a brief overview	Frequency
Not taught alongside practical work	
Did not develop skills to effectively support people's self-management	
More practice required	Practical
More interactive	
Integrated with clinical practice/placement	Integration

Note. SSM = supported self-management.

Table 5

Ratings and Agreement by Participants for the Importance of Items on Learning Supported Self-management for Delphi Rounds 2 and 3

Questions 1–6, 8	Delphi Round 2		Delphi Round 3	
	Median	Agreement %	Median	Agreement %
1. Throughout your physiotherapy degree how frequently have you experienced supporting people's self-management during:				
Clinical placement	3	26.9	–	–
Discharge planning	4	53.8	3	42.8
Treatment/management plans	4	61.5	4	57.1
Educating peoples	4	76.9	4	78.6
Community settings	3	30.8	–	–
Exercise prescription	4	53.8	4	71.4
Lab simulation	2	3.9	–	–
2. Rate how well the following teaching methods helped you learn about supported self-management throughout your physiotherapy education:				
Lecture	2	15.4	2	15.4
Handouts	2	11.5	2	7.7
Lab manual	3	23.0	3	15.4
Textbook readings	2	7.7	1	0.0
Lab activities	3.5	50.0	3	38.5
3. Rate how well the following practical activities/opportunities would help with your learning to support people self-management:				
People-physio session in front of class	3	30.8	–	–
Role play with other students	2.5	7.7	–	–
Assessment on supported self-management	3	12.2	–	–
Watching videos	3	30.8	–	–
UMove [a] – working with people to support their self-management	4	76.9	3	46.2
Case studies	3	34.6	–	–
Worksheet handouts	2	76.9	–	–
Working with long-term condition peoples on placement	4	76.9	4	69.2
Learning how to apply self-management strategies to our own lives	3	42.3	–	–
Observing other health professionals	4	76.9	4	53.8
Workshop training course	4	65.4	3	30.8
Interactive labs	4	53.8	3	38.5
Activity: Practising on family/friends	2.5	19.2	–	–
Self-reflection	3	15.4	–	–
Supervisor demonstration	4	57.7	2	30.8
Home visits	4	50.0	3	23.1
Practical summary booklet	3	34.6	–	–
4. Learning how to support people's self-management should be:				
Obvious	4	57.7	4	92.3
Practical	4	88.0	5	92.3
Theoretical	3	30.8	–	–
Collaborative	5	100.0	5	92.3
Integrated with other learning experiences	4	76.9	5	92.3
Frequent	4	92.3	5	92.3
5. The overall experience of learning supported self-management was:				
Obvious	2	11.5	3	15.4
Interesting	3	23.1	3	30.8
Memorable	3	23.1	2	15.4
Enough	2	11.5	2	15.4
Practical	3	23.0	3	30.8
Valuable	3	38.5	3	46.2

Questions 1–6, 8	Delphi Round 2		Delphi Round 3	
	Median	Agreement %	Median	Agreement %
6. Your confidence to use supported self-management would improve if you:				
Understood it better	4	53.8	4	69.2
Practised it more in class	3	42.3	–	–
Had more opportunities to practise with people	4	92.3	4	84.6
Had a supportive supervisor on placement	4	88.5	4	69.2
8. Learning how to support people's self-management is:				
Important for my future practice as a physio	5	100	5	100
An ongoing process	5	100	5	100
Improves people-centred care	5	100	5	100

Note: [a] UMove is a student-driven exercise clinic for people living with long term conditions.

Students reported that having more opportunities to practise SSM would improve their confidence to use it. The majority of ideas generated by the nominal groups centred around practical learning rather than informational or theoretical learning. These ideas support findings from Munro et al. (2018), that a curriculum that encourages clinical reflection, observation, and then practice, may be more effective than traditional theoretically based teaching. Similarly, Forbes et al. (2018a, 2018b) concluded that opportunities in undergraduate physiotherapy education such as observation, practising the skill, and receiving feedback contributed to new-graduates' self-efficacy in delivering health education. HCP students favouring practical learning over theoretical is a common theme in the literature, with physiotherapy students' preferred learning style centred around active participation in practical activities (Stander et al., 2019). However, the role of theoretical knowledge should not be undervalued, as the theoretical components underpin the basis of practical work and real-life practice (Korpi et al., 2017).

We sought to involve all final year students in this study. The online e-Delphi allowed students from dispersed geographical locations to be involved in the study and multiple opportunities were provided to encourage maximal student involvement. Despite these strategies, the response rate for the first round was 25% and reduced with subsequent rounds, and most participants were female and of New Zealand European ethnicity. Few participants were Māori (3 out of a possible 17), and none were of Pacific Island heritage (out of a possible 5). Therefore, the findings are not culturally representative of the New Zealand population (in 2018, 70% European, 16.5% Māori, and 8% Pacific (Stats NZ, 2019)). As participants were exclusively in their final year at the University of Otago, in New Zealand, the external validity of the findings may be limited, as physiotherapy students from other educational institutions and countries were not included. Different curricula, varying tertiary educators, and health and cultural contexts may provide different experiences for students. Exploring students' and educators' perceptions of teaching SSM from a wider geographical and cultural array is thus important, and future studies should evaluate wider viewpoints of improving the teaching of SSM. Why far less Māori, and no Pacific Island, students participated in our study is not known. However, one

reason could be that self-management of health is of itself a cultural artefact, largely driven by white Western, neoliberal philosophies (Wilson et al., 2022), and for many cultural groups that value collectivism, such as Māori and Pacific Island cultures, "self"-management may be incongruent with their ways of being. This concept suggests that culture not only possibly impacts on how we teach SSM but that the concept in itself needs further in-depth exploration and understanding in a country such as New Zealand.

The e-Delphi technique has been used before to improve healthcare and medical education processes (Salihu et al., 2019) and is considered a valuable method of producing ideas that lack empirical evidence such as optimising a curriculum to teach students to deliver SSM. There are several limitations, however, with this technique. To avoid a neutral option, the design of the Likert scale varied depending on the nature of the question. While this pragmatic decision is common in Delphi studies, and is based on the study aim, it has been criticised for potentially influencing test-retest reliability (Lange et al., 2020). The survey became custom developed in the process and was not psychometrically evaluated. While the information collected is valuable and provides a good knowledge base for future curriculum development, it may be a difficult method to reproduce. A further limitation of the current study was that the response rate was low. This rate was under the 70% threshold considered good in previous rehabilitation studies (Sumsion, 1998) and below the 44% average online response rate reported in education-related research (Wu et al., 2022). Our low response rate could be due to the frequent low response rates of course evaluation by students at the University of Otago, epitomised by the summary of evaluation data (2018–2021) from a health interprofessional education programme in this university, which ranged from 10 to 16% (Morgan & Anakin, 2021). Further, participating students may have been experiencing online fatigue, as this study took place during the COVID pandemic and the New Zealand government mandated lockdowns in 2020. Another limitation of the NGT is its inflexibility, as the focus is on one question or topic, unlike interview methods that may have allowed for more in-depth discussion. However, it encourages group collaboration and ensures each participant gets to contribute their ideas.

From the findings of this study, it is suggested that the curriculum is reviewed to ensure students receive more opportunities to learn and practise applying SSM skills and knowledge, thereby improving their self-efficacy and ability to deliver SSM in the clinical setting. Suggestions include incorporating activities such as observing competent health professionals role modelling SSM and using clinical opportunities such as placement or exercise classes to work with people with LTCs more frequently. Future research is then recommended to evaluate these changes and their impact on students' ability to deliver SSM. Furthermore, as part of the evolution of this study, that further research is undertaken using co-creation methodology to design curriculum content that is then evaluated to measure the impact on students' ability to deliver SMM.

CONCLUSION

Physiotherapy students value learning SSM but agreed that their training was not obvious and lacked clinical learning opportunities, and this impacted on their confidence to apply SSM in practice. Confusion around what was taught and thus the purpose and application of SSM, revealed unclear conceptions that SSM extended beyond the context of acute care. Students agreed training needs to be more explicit, frequent, and practical with opportunities such as health professional observation, working with people living with LTCs, and in clinical placement settings to develop skills alongside theoretical knowledge to improve application in future practice. It is recommended that SSM education is more frequently integrated and incorporated into all years of the physiotherapy degree, to train the future physiotherapy workforce to improve the implementation of SSM and ultimately improve healthcare.

KEY POINTS

1. Supported self-management (SSM) refers to a healthcare professional supporting, in a collaborative partnership, a person to develop all the skills required to self-manage their health and confidence to use these skills. SSM thus goes beyond only educating a person about how to manage their health condition.

2. Physiotherapy students value learning about SSM.

3. Students want training in SSM to be more explicit, frequent, and include clinical opportunities to practise applying SSM to grow their confidence in its application.

4. SSM education should be more frequently integrated and incorporated into all years of the physiotherapy degree programme.

5. Training the future physiotherapy workforce to improve the implementation of SSM and ultimately improve people and health care is important.

DISCLOSURES

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