Future Rehabilitation Professionals' Intentions to Use Self-Management Support: Helping Students to Help Patients

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ABSTRACT

Purpose: We evaluated whether education in self-management support (SMS) increases future clinicians' intentions to use a new way of delivering rehabilitation services. **Methods:** A convenience sample of 10 students took a 5-week theoretical course, followed by 6 weeks spent assessing patients, establishing treatment plans, and monitoring their performance by telephone. Focus groups were held before and after the educational modules, with deductive mapping of themes to the Theory of Planned Behaviour and inductive analysis of additional themes. **Results:** Five themes and 22 sub-categories emerged from the deductive-inductive focus group content analysis. After participating in the educational modules, students reported gaining knowledge about SMS and highlighted the lack of similar preparation during their academic courses. Nonetheless, they were hesitant to adopt SMS. **Conclusion:** Future clinicians gained knowledge and skills after being exposed to SMS courses, but their intention to adopt SMS in their future daily practice remained low. We also noted a lack of formal training in SMS in the academic setting. The findings from this study support incorporating SMS training into the curriculum, but to increase students' intention to use SMS as part of patient care, training may need to be in more depth than it was in the modules we used.

Key Words: education; occupational therapists; self-care; students.

RÉSUMÉ

Objectif : nous avons évalué si la formation en soutien à l'autogestion (SAG) augmente l'intention des futurs cliniciens d'utiliser une nouvelle manière de prodiguer des services de réadaptation. **Méthode :** un échantillon de commodité de 10 étudiants ont suivi un cours théorique de 5 semaines, suivi d'un volet pratique de 6 semaines au cours duquel ils ont évalué des patients, déterminé leur plan de traitement et fait un suivi de leur progression par téléphone. Les groupes de discussion ont menés avant et après les modules éducatifs, avec une schématisation déductive de thèmes basée sur la théorie du comportement planifié et une analyse inductive de thèmes additionnels. **Résultats :** cinq thèmes et 22 sous-catégories ont émergé de l'analyse du contenu des discussions. Après avoir participé aux modules éducatifs, les étudiants ont indiqué avoir acquis des connaissances relatives au SAG et ont souligné l'absence de préparation similaire dans leurs cours universitaires. Néanmoins, ils étaient hésitants à adopter le SAG. **Conclusion :** les futurs cliniciens ont acquis des connaissances et des compétences après avoir suivi les cours sur le SAG. Cependant, leur intention d'adopter le SAG dans leur pratique quotidienne future reste faible. Nous avons aussi constaté une absence de formation en SAG dans le milieu universitaire. Les conclusions de cette étude justifient l'intégration au curriculum d'une formation en SAG. Afin d'augmenter l'intention des étudiants d'adopter le SAG, il y aurait cependant peut-être lieu d'approfondir la formation par rapport aux modules que nous avons utilisés.

In an attempt to address the needs of individuals with chronic diseases, a new way of delivering care was developed in the late 1980s.^{1,2} The Chronic Care Model (CCM) and Integrated Care are concepts used in managing chronic disease; the former is defined as a framework for integrating care, and the latter is a method of delivering that care.^{3,4} Nonetheless, they have similar principles, including self-management support (SMS).

The term *self-management* can be defined as “taking responsibility for one's own behaviour and well-being,” whereas SMS is defined as “programs designed to teach people with chronic illness a healthy way to live with the disease.”^{5(p.1)} These programmes teach skills such as problem solving, decision making, health literacy, and communication. Furthermore, they help patients develop short- and long-term health goals that they carry out

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using action plans.^{5,6} Such an approach favours patient-centred care because how disease manifests itself and the resulting treatment goals are unique to each patient.^{5,6}

Unfortunately, similar educational programmes tailored to future health care professionals (HCPs) are lacking.^{7,8} Research has revealed a fundamental gap in student learning of SMS across many health professions.^{9–14} If HCPs are not equipped with the necessary skills to guide their patients, patients might not adhere to their programmes.

To address this gap, it has been suggested that education about this aspect of care be incorporated into professional educational programmes.^{7–9,14–16} In pursuit of this objective, several academic medical centres across the United States adopted a national initiative aimed at incorporating CCM programmes; this initiative has shown promising results and inspired further initiatives.^{7–9,17} On a smaller scale, incorporating SMS into educational curricula has been successful in improving students' knowledge of SMS.^{14,18} Another study evaluating web-based SMS training for medical residents found an increase in professional beliefs and confidence in the use of SMS.¹⁹

The aim of our study, therefore, was to evaluate whether theoretical and practical educational modules on SMS produce meaningful changes in future clinicians' intentions to use SMS as an alternative way to deliver rehabilitation services.

METHODS

Study design

This qualitative study was embedded in a randomized controlled trial (RCT) designed to test the efficacy of SMS in promoting physical function among recently hospitalized older adults. The RCT was designed to involve students in the professional Master of Science in Physical Therapy and Occupational Therapy program at McGill University in Montreal as case managers. More infor-

mation concerning this RCT can be found at <https://clinicaltrials.gov>, with the identifier NCT01593345.

A qualitative approach, using focus groups at two time points, was used to evaluate the impact of educational and practical modules on SMS in changing the knowledge, skills, and attitudes of future clinicians. Ethics approval was granted by the McGill University Health Centre Genetic and Population Research Ethics Committee.

Participants

All students enrolled in the professional Master's in Physical Therapy and Occupational Therapy program at McGill University are required to participate in a research experience, and every year, at the beginning of the program, a list of projects is presented to students. Those choosing to be involved in the above-mentioned RCT were the convenience sample for this study ($n = 10$). The students' academic supervisor introduced them to the researcher, who obtained consent. Participants were blinded to the researcher's hypothesis that they would increase their intention to use SMS after taking the educational and practical modules.

Educational and practical modules

The SMS educational module consisted of five weekly sessions of 2 hours each. This module was taught by a physiotherapist with 9 years of experience in rehabilitation of chronic conditions and theoretical knowledge regarding the Chronic Disease Self-Management Program. The practical module, led by the same physiotherapist, lasted 6 weeks and consisted of assessing a patient, establishing the treatment plan, and monitoring the patient by telephone every 2 weeks. This last task was performed by the students. Each student followed 1–2 participants and the duration of the interaction with each patient varied according to the patient's condition. Figure 1 illustrates both modules. Similar educational approaches exist for medical and pharmaceutical programmes.^{8,14}

Focus group 1 Educational Module (Wk 1–5)				
Week 1	Week 2	Week 3	Week 4	Week 5
<ul style="list-style-type: none"> • SMS history • SMS types 	<ul style="list-style-type: none"> • SMS skills • SMS-related outcome and measures 	<ul style="list-style-type: none"> • SMS barriers • SMS facilitators 	<ul style="list-style-type: none"> • SMS effectiveness • Appraisal of literature 	<ul style="list-style-type: none"> • Communication skills • Setting goals and action plans

Focus group 2 Practical Module (Wk 6–11)		
Student observing a physiotherapist	Student observing a physiotherapist	Practice by the student
<ul style="list-style-type: none"> • Assessing the patient • Establishing goals and action plan with the patient 	<ul style="list-style-type: none"> • Teaching SMS to the patient 	<ul style="list-style-type: none"> • Following up with the patient by telephone every two weeks to adjust goals and action plans

Figure 1 Flowchart of educational and practical modules
SMS = self-management support.

Data collection

The researcher (SF) had conducted other focus groups before and so performed the role of moderator, conducting two 1-hour focus groups in an environment that was familiar to the students. The focus groups were held before and after the educational modules to capture change toward SMS. All 10 students attended both focus groups.

The authors created the focus group questions (see the Appendix) using the Theory of Planned Behaviour (TPB), a social cognitive theory that advocates that the strength of the intention to perform a target behaviour determines behavioural change. Our questions had been tested earlier for readability, using a different sample. The final script comprised five questions and multiple probe questions. The same set of questions, in the same order, was used in both focus groups. A sixth question was added for the second focus group to gain further insight into the participants' perceptions of and beliefs about SMS. This question was not used in the first focus group because participants had not yet been exposed to SMS. The moderator started each focus group by explaining its purpose and encouraging the students to participate. At the beginning of each focus group, the moderator aimed for a "structured eavesdropping" scenario, in which participants lead the discussion. When the moderator noticed that students were quiet, to ensure that no further ideas would be expressed and that all participants had equal opportunity to express their opinions, the moderator adopted an interviewer style, urging the students to continue their discussion until no new ideas were presented. A research assistant (whom the participants did not know) took notes and recorded the discussion. All information was transcribed verbatim.

Data analysis

A deductive–inductive content analysis was performed on the focus group data.^{20,21} First, the data were organized deductively into three themes according to TPB analysis: that intention relates directly to (1) attitude toward the behaviour (whether a person is willing to change the behaviour), (2) subjective norms (how much social pressure a person feels to change the behaviour), and (3) perceived behavioural control (whether a person feels in control of performing the target behaviour). As a second step, data that did not fall into these three themes were grouped into additional themes and added to the final framework using an inductive approach.^{20,21} This theoretical framework elaborates on the Theory of Reasoned Action and TPB.^{22,23}

RESULTS

Those who participated in the modules had a mean age of 25 (SD 1) years, and most were women (80%). Attendance reached 100%. During the practical module, each student followed up with at least one patient for an average of 4 weeks (range 2–6 wk).

The main findings were organized according to TPB and mapped to themes: attitudes, subjective norms, perceived behavioural control, and behavioural intentions. One additional theme (academic preparation) emerged from the analysis. Each theme was further subdivided to deeply explore its single constituents. These five themes are discussed in the following sections, and perspectives and comments from students before and after attending the educational and practical modules are provided. Table 1 also presents the themes and subcategories.

Table 1 Themes and Subcategories That Emerged during the Focus Groups

Theme	Before attending the educational and practical modules	After attending the educational and practical modules
Attitudes	Awareness of need for individualized care Positive outcomes	Awareness of need for individualized care Positive outcomes Negative outcomes
Subjective norms	Social desirability Favourable stakeholders (government and caregivers)	Favourable stakeholders (health care institutions) Opposing stakeholders (patients and family members)
Perceived behavioural control	Opposing stakeholders (patients and HCPs) Low self-efficacy Barriers Facilitators	Increase in knowledge and skills Barriers Facilitators
Behavioural intentions	Low levels because of lack of guidance	Necessary health care shift Preference for traditional rehabilitation techniques
Academic preparation	Need for SMS education Role of academic preparation	Positive effect of SMS training on self-efficacy

HCP = health care professionals; SMS = self-management support.

Attitudes

Attitudes toward a behaviour refer to whether a person is in favour of doing this specific behaviour; they also refer to a person's beliefs about the consequences of the behaviour.^{22–24}

Before attending the educational and practical modules

Students showed a positive attitude toward SMS and acknowledged patient-centred care as an attractive aspect of overall care. One mentioned, “I think patients will be more motivated if we target what they want to do.” Students thought that SMS would make patients more responsible for their treatment plan, which in turn could have a positive effect on their emotional health. One student said, “I think patients will be more motivated to engage in exercising.” Another suggested that “patients will take control of their lives, and this will be good for them.” Students also believed that SMS could relieve the burden on the health care system. One comment was that “self-management has the advantage of decreasing the demand on the health care system.”

After attending the educational and practical modules

Students once again acknowledged the advantages of SMS, as in this comment: “Self-management can empower the patient, decrease [the] burden on caregiver and family, as well as be cost effective for the whole health care system.” Another student added, “The patient is going to be more independent and not need to rely on the family member as much.”

Some concerns were also expressed. The first was the lack of a good liaison with patients because SMS reduces interaction. One student expressed it this way: “It's hard to explain to patients what to do over the phone.” A second concern related to the lack of supervision and increased susceptibility to injury. “I think there's the possibility for injury because patients are not always being supervised, and maybe they are doing something wrong, and they are just not aware of it.”

Most important, despite recognizing more advantages than disadvantages, students showed a disbelief in the effectiveness of SMS. One student stated, “I'm sold on the concept of self-management. But I don't know in reality if it works.”

Subjective norms

Subjective norms refer to how much a person feels social pressure to perform the targeted behaviour.^{22–24}

Before attending the educational and practical modules

Students emphasized the desire to conform to the current way of practice and expressed a fear of judgment—for example, “I want to be liked. If everyone else is doing something a certain way, maybe you won't feel like implementing self-management because everyone else won't agree.” They perceived government and caregivers as being in favour of implementing SMS. One student said, “The government would approve [SMS] because

it can reduce cost by reducing hospital stay.” Another added, “Caregivers might approve the use of self-management if it reduces disabilities.”

However, students thought that HCPs might not want to offer SMS if it adds tasks to their established workload or if they are not properly trained. Supporting this idea, a student said, “I think physicians and other professionals do not have the time to implement SMS.” Another added, “Therapists must be willing to change their practice, and a lot of times they [have] never worked with self-management before.”

Some patients and family members might also be against using SMS if they prefer a more passive approach and disagree with taking charge of their condition, as suggested by one student. “Patients and their family often feel that to be left on their own is not adequate care and that they are too sick to possibly manage on their own.”

After attending the educational and practical modules

Students expressed the theory that patients' and family members' negative perception of SMS was a social pressure for them to not adopt it. One student said, “If you have a patient with a bunch of comorbidities [who's] being managed by another family member, requesting them to actively manage their disease will increase their burden, so they might not want to co-operate, and as a health care professional, you want to help them.” Another said, “Patients like to be told what to do; they are not motivated. It's not all patients that will want to self-manage their condition.” However, students identified health care institutions as stakeholders favouring the use of SMS. As one participant suggested, “It can help triage the wait-list and reduce hospital admissions.”

Perceived behavioural control

Perceived behavioural control is the extent to which a person feels in control and confident about performing the targeted behaviour. It also involves barriers to and facilitators of adopting the targeted behaviour.^{22–24}

Before attending the educational and practical modules

Students lacked the confidence and the specific skills necessary to practice SMS; as one student said, “I don't think right now I would be the best at using SMS.” Another added, “Right now, I am not feeling skilled to have the proper way of talking to motivate them.” They acknowledged their lack of both leadership skills and goal setting, which are necessary to implement SMS in clinical settings. One participant put it this way: “I'm just this little student that is just getting out of school. I'm not ready to say anything and chime in.” This notion of limited practice was supported by another student: “In clinical stages, we don't necessarily have a programme that entails goal setting.” Despite being unfamiliar with SMS, however, some students seemed to be willing to try this approach if peers were also trying.

One student put it this way: "I still would feel comfortable doing it as long as you have supervision or a colleague who are [sic] also doing it."

After attending the educational and practical modules

Students' confidence in practising SMS increased, as one student mentioned. "I feel confident that I could start integrating SMS into my practice." Another said that "having the compliance of the patient increases the confidence in yourself because you're seeing that it's actually working." Visiting patients in their home environments helped the students establish goals and action plans with them. One student said, "Seeing the patient environment helped to set goals because I knew how the residence was. If she or he had some leisure activities to do, I knew how far it was, so if it was realistic or not." Some students pointed out, though, that the amount of time needed for this particular program (assessment and follow-up using telephone monitoring) was an important barrier. One student mentioned that "goal setting and a phone call every 2 weeks is a lot of time for the clinician, so I don't think it's possible."

Students acknowledged the need for workplace involvement to address such barriers and fully implement SMS. One said that "there has to be some sort of policy about it or support from your workplace if you want self-management working properly." They suggested that protected time for clinicians to follow up with patients over the phone and a system to screen for patient motivation were additional measures that would minimize the barriers to implementing SMS. One student suggested that "with all [the] activities clinicians already do, they should have time set aside to call their patients." A second student added, "You would probably need a triage to identify those that are more motivated and would adhere to such [a] program."

Behavioural intentions

Behavioural intentions are defined as whether a person intends to do something.^{22–24}

Before attending the educational and practical modules

Students noted an overall lack of intention, at both individual and group levels, to use SMS. One said, "I don't see myself using self-management with the patients because I would never have time to do my job." Another said, "Doctors, nurses, and physios never thought to say, 'Oh we should use self-management with this patient.' It is never brought to their mind to do that, so it's not incorporated." In addition, students did not feel encouraged to use SMS with their patients because they thought that there was a lack of responsibility about implementing it, as pointed out in this comment: "We need one person who is going to stand up and say, 'Look, we need to implement such a program.' If nobody on the team is doing that, there will never be such a program."

After attending the educational and practical modules

Students acknowledged the importance of having patients who are actively engaged in their treatment plan; however, they were still resistant to the idea of using SMS rather than traditional treatment. One student offered, "I think it's really important that we move from this idea of passive health care to being more proactive and being responsible for our health, but as a future physiotherapist, I want to be hands-on; I want to spend my time with patients." Moreover, some students mentioned that they do not intend to implement telemonitoring: "As a future physiotherapist, I don't intend spending half of my week calling patients."

Additional theme: academic preparation

In addition to discussing issues that fell into the preceding themes, students emphasized the role of academic preparation before implementing SMS.

Before attending the educational and practical modules

Students identified a gap in the curriculum and further explained that the perceived difficulty in practising SMS reflected the difficulty of clinical practice in general. "We don't have SMS at school, so we don't practice it." This idea was reinforced by another student, who said, "We're all a little unsure about everything because we're new and we haven't had the experience." Despite their lack of formal training, however, students felt that they could overcome this gap with more clinical practice. "You learn by doing, so it would be nice to have someone showing self-management to us."

After attending the educational and practical modules

Training improved the students' knowledge and skills. One emphasized that "a year ago, before these classes, I don't think I would have known how to use a self-management programme, but now I feel like I would be able to." Another said, "I'm much more confident now than before the first phone call." Students also mentioned that they would have liked more practical SMS experience so that they could develop their skills and be able to adapt to different situations. One student commented, "I treated only one patient using self-management, so I feel I could definitely get better with different types of patients."

DISCUSSION

Students' knowledge of SMS improved after attending the educational and practical modules. However, their attitudes, despite remaining positive about patient-centred care, were very critical of the overall effect of SMS.

After the intervention, students felt more confident about using SMS with patients. Along the same lines, Baumbusch and colleagues²⁵ reported that students' knowledge and beliefs about adult care improved with 42 hours of theoretical courses and 14 hours of practical courses. Yank and colleagues¹⁹ found that medical residents improved their confidence in using SMS after

4 weeks of Internet-based self-management training. Mollon and colleagues,²⁶ however, reported that online educational programmes did not affect HCPs' knowledge, skills, or attitudes. Therefore, if similar educational sessions were to be incorporated into academic programmes, the way of delivering it (i.e., classroom vs. online) and its length would need to be carefully investigated.

Students also mentioned that they felt more comfortable about educating patients after participating in the educational module. Similarly, Potter and colleagues²⁷ reported that students' confidence in regard to patient care was enhanced after they had completed a 1-hour theoretical and 6-week practical course. Koren and colleagues²⁸ suggested that an increase in knowledge is associated with higher levels of confidence in the clinical setting. Studies in the field of evidence-based practice^{29,30} have found that confidence in one's ability to adopt new behaviour is associated with a greater intention of using this behaviour in practice.

In our study, attitudes toward self-management were polarized. Students initially manifested a positive attitude toward the potential value of SMS; however, after having a hands-on experience, they expressed scepticism about its effectiveness. This polarization could be explained by the short duration of and amount of exposure to the intervention and by the limited follow-up period, which might have prevented the students from observing more significant results.^{31–33} According to Potter and colleagues²⁷ as well as Bousfield and Hutchison,³⁴ the quality and quantity of contact with patients positively influenced students' attitudes. Following this idea, lengthier interventions—interacting with more patients, with different conditions—could be a possible solution to polarized attitudes.

As for subjective norms, students felt pressure from patients and caregivers to not adopt SMS. Such a negative perception might partially explain the low intention to adopt SMS. However, they did not feel pressure from their peers to adopt SMS, although this perception might differ according to work environment. In our case, students were part of an independent research project that had little influence over their opinion. Once they finish their program, however, participants will likely be integrated into multi-professional teams. In the event that their professional setting is using SMS, they may have to conform to the system already established, which can then lead to higher levels of social pressure.

Despite acknowledging the need for change in the health care system, students' intention to use SMS remained low to moderate. The idea of working remotely with patients might not seem attractive to students. In this early professional phase, they are eager to practice one on one with each patient and apply interventions learned in university. Therefore, if the final aim is to support behaviour adoption among future clinicians, further knowledge translation strategies need to be used. For

instance, continuing professional development will be the key to reinforcing behaviour adoption among future graduates.

Another factor affecting students' low intention of adopting a behaviour could be related to the intrinsic and extrinsic barriers identified in the focus groups. This study identified barriers at different levels (e.g., lack of experience, lack of protected time), and, according to the TPB, even if intentions are positive, barriers are sometimes so powerful that individuals are unable to act on their intentions.^{22–24} Knowledge translation approaches, such as structured debriefing interviews, can be used to facilitate the process of identifying clinician and organizational barriers.³⁵ As reported in the literature, incorporating SMS into academic programmes requires significant investment in resources and support.^{10,36}

This study has a few limitations, and thus our results might be unique to this group. First, it had a small sample. Nonetheless, a sample size of 10 for focus group analysis is viewed as appropriate to establish diversity of information.³⁷ Ideally, we would have liked to have had multiple focus groups with 10 participants in each; however, we only had access to a convenience sample. A second limitation is that the researcher was the moderator of the focus group. Although this could introduce social desirability bias, participants were blinded to the researcher's assumption that students would increase their intentions to use SMS after the educational and practical modules. Furthermore, the fact that all participants knew each other could have influenced some responses (e.g., acquaintance bias), although this situation was addressed with the interview approach we took at the end of the focus groups.

CONCLUSION

SMS has been widely adopted in the past 3 decades.^{1–6} The future generation of HCPs should be aware of this shift in providing care and be well prepared to face it. The findings of this study provide useful insights into the impact of SMS education on student knowledge of, attitudes toward, and intentions to adopt SMS. The educational and practical modules positively increased the knowledge and skills of the future clinicians, whereas intention to adopt a behaviour (e.g., using SMS) may require longer and more intense exposure to this approach to patient-centred care.

To translate knowledge into practice for future physiotherapists and occupational therapists, formal training in SMS will be beneficial, but it must be integrated into professional curricula early and maintained throughout. Furthermore, course format, length, and method of delivery are aspects to be considered when delineating a self-management course for health care students. On the basis of this study's results, educational modules alone will not promote the necessary changes. Increasing knowledge is indeed a vital first step; however, the next

research phase should focus on identifying potential barriers among different stakeholders that might prevent adopting certain behaviour. The research of Stevens and Kirkland¹⁶ might be a guide; they reported that implementing chronic care education is a multilayered process that needs to target students, educators, and managerial staff.

KEY MESSAGES

What is already known on this topic

Attention has been paid to educating patients about self-management of chronic conditions. However, patients will fully benefit from SMS only when health care professionals are well trained in this approach. Unfortunately, an educational gap exists for future clinicians about SMS.

What this study adds

Our findings support the need for more exposure to SMS training than was provided in the educational module in this study. Lengthier practical exposure might increase students' intention to adopt SMS.

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APPENDIX: FOCUS GROUP QUESTIONS

1. What do you believe are the advantages of using a mobility self-management program for patients awaiting rehabilitation services? (Use probes as necessary.)
 - a) Explain further: Why do you believe these are advantages?

 - b) Are advantages the same across all clients?

2. What do you believe are the disadvantages of using a mobility self-management program for patients awaiting rehabilitation services? (Use probes as necessary.)
 - a) Explain further: Why do you believe these are advantages?

 - b) Are advantages the same across all clients?

3. Who do you think would benefit from using a mobility self-management program, and can you tell us why?
 - a) Are there any individuals or groups (stakeholders) who would approve of your using a mobility self-management program for patients awaiting rehabilitation services?

 - b) Are there any individuals or groups (stakeholders) who would disapprove of your using a mobility self-management program for patients awaiting rehabilitation services?

4. What are your thoughts about your ability to use a mobility self-management program for patients awaiting rehabilitation services?

5. What factors (supports) would enable you to use a mobility self-management program for patients awaiting rehabilitation services?
 - a) Please explain.

 - b) Are these supports in place? If so, how; if not, why?

 - c) Would this change if circumstances change? How so?

6. What factors or circumstances (barriers) would make it difficult or impossible for you to use a mobility self-management program for patients awaiting rehabilitation services?
 - a) Please explain.

 - b) Are these barriers present now?

 - c) Can they be overcome?

 - d) Would this change if circumstances change? How so?