Standing on the Precipice: Evaluating Final-Year Physiotherapy Students’ Perspectives of Their Curriculum as Preparation for Primary Health Care Practice

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ABSTRACT

Purpose: To explore final-year physiotherapy students’ perceptions of primary health care practice to determine (1) aspects of their curriculum that support their learning, (2) deficiencies in their curriculum, and (3) areas that they believe should be changed to adequately equip them to make the transition from student to primary health care professional. Methods: Framework analysis methodology was used to analyze group opinion obtained using structured group feedback sessions. Sixty-eight final-year physiotherapy students from the four higher education institutions in Ireland participated. Results: The students identified several key areas that (1) supported their learning (exposure to evidence-based practice, opportunities to practice with problem-based learning, and interdisciplinary learning experiences); (2) were deficient (primary health care placements, additional active learning sessions, and further education and practice opportunities for communication and health promotion); and (3) required change (practice placements in primary health care, better curriculum organization to accommodate primary health care throughout the programme with the suggestion of a specific primary health care module). Conclusion: This study provides important insights into physiotherapy students’ perceptions of primary health care. It also provides important indicators of the curriculum changes needed to increase graduates’ confidence in their ability to take up employment in primary health care.

Key Words: education; physical therapy specialty; primary health care; students.

RÉSUMÉ

Objectif : Explorer les perceptions qu’ont les étudiants de dernière année en physiothérapie des soins primaires afin de déterminer (1) les aspects du curriculum qui favorisent leur apprentissage, (2) les lacunes dans le curriculum et (3) les changements nécessaires pour mieux les préparer à la profession en soins primaires. Méthodes : Les opinions du groupe ont été recueillies lors de séances de groupe structurées et analysées au moyen d’un cadre méthodologique analytique. Soixante-huit étudiants de dernière année en physiothérapie des quatre établissements d’enseignement supérieur d’Irlande ont pris part à l’étude. Résultats : Les étudiants ont relevé des (1) éléments favorables à leur apprentissage (exposition à la pratique fondée sur les données probantes, apprentissage par problèmes, expériences d’apprentissage interdisciplinaire); (2) des lacunes (manque de stages en soins primaires, de séances d’apprentissage actif et de formation en communication et en promotion de la santé); (3) et des changements nécessaires (stages en soins primaires, réorganisation du curriculum afin d’intégrer les soins primaires tout au long du programme, inclusion d’un module spécifique sur les soins primaires). Conclusion : Cette étude apporte un éclairage utile sur les perceptions qu’ont les étudiants en physiothérapie des soins primaires. Elle met également au jour les changements qui s’imposent afin d’améliorer la confiance des diplômés en leur capacité de pratiquer en soins primaires.

Around the world, there is an increasing focus on investing in, and reforming, health care services to meet the demands of progressively aging populations with complex chronic presentations.1 This, it is hoped, will lead to better provision of primary health care services in the future. Health care reform strategies are aiming to meet the needs of whole communities in an integrated, interdisciplinary, and user-friendly manner by establishing primary health care teams in Ireland2 and community primary health care centres and, more recently, family health teams in Canada,3,4 where employment opportunities for physiotherapists will increase as more funding becomes available.

Primary health care is defined as an approach to care that includes a range of services designed to keep people well, from promotion of health and screening for disease...
to assessment, diagnosis, treatment, and rehabilitation as well as personal social services. In the Irish context, primary health care refers to the delivery of publicly funded, interdisciplinary care. Services provide first-level contact that is fully accessible by self-referral, and they have a strong emphasis on working with communities and individuals to improve their health and social well-being. Currently, physiotherapists in primary health care are not directly accessible to the general public; however, as we will show, this is what is envisaged by the Department of Health and Children in the future.

To avail themselves of these new employment opportunities, physiotherapy graduates will need to be ready and confident that they can deliver care in an interdisciplinary primary health care team. This article presents for the first time an exploration of final-year physiotherapists’ perceptions of how well their curriculum prepares them for working in primary health care. Gathering student perceptions provides reflective, experiential feedback from key stakeholders in the educational process. Of the key stakeholders involved in curriculum evaluation, none have a better perception of the impact of the curriculum than the students who have completed it.

The key question that we aimed to address in this study was whether students believe their physiotherapy education in Ireland prepares them for employment in primary health care. From a pragmatic perspective, if students, just before graduation, do not believe that they are prepared to work in primary health care, they considerably limit their employment opportunities. Physiotherapy programmes must ensure that graduates are “fit for purpose,” meaning that they require competent diagnostic and clinical skills, an ability to communicate effectively with their colleagues and patients, an ability to self-manage, and an understanding of the implications of cultural differences. Physiotherapy educators need to know which elements of their programmes are beneficial in building a perception of preparedness to work in primary health care while also examining what students perceive to be the deficits in the curriculum and the elements that they believe require change.

Various studies in the disciplines of nursing, medicine, and physiotherapy have explored the issue of integrating primary health care into the curriculum. It has been suggested that 4th-year medical students who have spent 8 weeks in a primary health care setting during the course of their educational programmes will be more successful in making the transition to working in that environment. This is in accordance with Kolb and Kolb’s theory of experiential learning, which suggests that providing concrete experience and the opportunity for reflective observation leading to active experimentation is essential for learning. Jones and colleagues found that physiotherapy graduates did not feel prepared to apply for employment in general and were unable to identify transferable skills required by potential employers. Transferable skills are defined as those cognitive and personal skills (such as information handling skills; technical and numeracy skills; information technology skills; organizational skills, managing self-learning, and presentation skills) that are central to occupational competence in all sectors and at all levels.

Kilminster and colleagues explored preparedness for practice among medical students and identified that preparedness is dependent on the transfer of learning, presuming that doctors are prepared for practice by their learning in medical school and that they will transfer this learning to the practice setting. However, research has suggested that identifying strategies for improving transfer of learning that do not involve deliberate practice is very difficult. The need for situated learning was supported by Lave and Wenger, who identified that learning is specific and dependent on the context in which it is achieved.

Physiotherapy curricula need to be responsive to the changing needs of the health service, government initiatives, and society. In Ireland, however, the transition for students from graduate to practising health care professional is made all the more difficult by the ongoing restructuring of the public health service and the development of primary health care teams and networks. The challenge for educators is to ensure that the learning opportunities provided meet the needs of both students and patients. A 3-year review of the clinical learning opportunities available to students in the primary health care setting in Ireland demonstrated that only 5% (171/3,142) of all placements available were in primary health care. Therefore, the possibilities for students to gain experience in the primary health care context during their physiotherapy education are limited. A follow-up Delphi survey of physiotherapists employed in primary health care revealed that more than 70% did not believe that students were adequately prepared for primary health care practice because they lacked an understanding of the structures involved and the complexity of cases. The main barriers to providing placement opportunities identified by the physiotherapists were a lack of a tradition of taking students and a lack of physiotherapy tutor support for both physiotherapists and students in the primary health care setting. Since 2006 in Ireland, support for physiotherapy practice placements has mainly been provided by specific practice tutor posts, the majority of which are based in acute hospital settings. It is essential for the future of physiotherapy education that there be successful collaboration between academic staff and primary health care practitioners.

To date, several studies have been conducted to evaluate the curricular content of physiotherapy programmes. These studies have focused on different areas of practice, ranging from gerontology, joint manipula-
and exercise prescription. Methods previously used to conduct these evaluations have included interviews, focus groups, surveys, and structured group feedback sessions (SGFS) involving clinical staff, academic staff, and students. SGFS were first described by Gibbs and colleagues as structured discussion that encourages students to air their views and defend their statements with peers while allowing time for individual thought and reflection on the views of others.

However, none of these studies explored curricular content to focus on the education required for the primary health care setting. This study considered several methodologies to determine how best to gather students’ perceptions of their curricula. Because it was thought that surveys and interviews might result in students only responding to the questions and not actually addressing the kernel of their concerns, it was decided that focus groups and SGFS would offer an opportunity for group discussion and debate. Although focus groups are a popular form of group interview because they rely explicitly on group interaction to generate data, SGFS were chosen because they offer a three-stage process in which students develop their own initial thoughts on a topic before being confronted with other people’s perceptions. SGFS tend to moderate extreme views while allowing a group consensus to emerge.

Therefore, the aim of this study was to explore, using SGFS, final-year physiotherapy students’ perceptions of their ability to work on a primary health care team on graduation to determine (1) aspects of their curriculum that support their learning, (2) deficiencies in their curriculum, and (3) areas they believe should change.

METHODS

Participants and recruitment

Physiotherapy education in Ireland is, mainly, a 4-year Bachelor of Science physiotherapy degree programme delivered by universities at Level 8 (Irish National Framework of Qualifications). Although the programmes are not exactly the same, substantial similarities exist, and all are accredited by the Irish Society of Physiotherapy. We invited by email all final-year students registered in undergraduate physiotherapy programmes (n = 134) in the higher education institutions in Ireland to attend SGFS. The students were informed that the main purpose was to gather feedback on their curriculum and how it addressed the concept of primary health care practice, the results of which would, in turn, be used to inform future curricula. At the time of recruitment, all students had completed the clinical component of their programme (more than 1,000 hours) and were within 2 months of receiving their professional qualification. Clinical experience is composed of a broad range of practice areas, which must include musculoskeletal, cardiorespiratory, and neurological physiotherapy. Ethical approval for this study was granted by the relevant universities’ human research ethics committees. No funding was received to conduct this study.

Data collection

Of the final-year students contacted, 51% (68/134) participated in the study, 10 of whom were male and 12 of whom had previously completed primary health care experience. Four SGFS were held, one in each institution, and each session included only students from that institution. Students who had previously completed primary health care experience were included in each group. For the purposes of this study, primary health care experience was defined as an interdisciplinary approach to providing health care to patients living in the community. Each session was moderated by a facilitator, and an assistant facilitator observed the participants’ behaviour and took notes on the discussion. Each SGFS was scheduled to take 90 minutes, and the protocol set out next was used for all four sessions.

Each session was divided into three distinct stages, as described by Frazer and colleagues (see Figure 1). To open, the facilitator welcomed the group and presented the purpose and context of the session. In Stage 1 (10–15 min), students worked alone; they were initially asked to consider their understanding of primary health care practice as a potential employment setting for themselves as new graduates. They were then asked to consider (1) components of their curriculum that they perceived supported their understanding of primary health care practice, (2) components of their curriculum that did not add to or develop their understanding of primary health care practice, and (3) what they would like to see changed in their curriculum to improve their understanding of primary health care practice. Approximately 10 minutes was allocated for uninterrupted thought and recording of individual ideas without input from others. In Stage 2 (20–25 min), students worked in small groups, discussing their views from Stage 1. Each group was asked to record its responses. Finally, in Stage 3 (45–50 min), students came back together in one large group for a plenary discussion. Each point from the small groups was discussed and recorded in writing once majority support (>50%) was achieved, and all comments were noted until no new points emerged.

Data analysis

All information from each group was recorded in writing, and data were reduced and analyzed using framework analysis, a systematic process informed by Ritchie and Spencer. Framework analysis was chosen because it can provide outcomes and recommendations in a short time frame. The analysis was undertaken in a coherent, systematic, and visible way, which, although mainly inductive, allowed for the inclusion of a priori as
well as emergent concepts. In the initial familiarization stage, the authors developed a feel for the meaning of the data, identifying emerging themes and using key codes to develop a thematic framework. Second-level coding was then used to identify more specific themes that emerged, and charts were developed using the headings from the thematic framework. To ensure coder reliability, the primary researcher and two experienced qualitative researchers checked inter-coder and intra-coder reliability on a random selection of transcripts. The resulting 93% inter-coder reliability and 95% intra-coder reliability suggested excellent agreement. Kappa coefficients for inter- and intra-coder reliability ranged from .75 to .91, suggesting good to excellent agreement.

RESULTS

Results are presented in the following three sections: (1) aspects of their curriculum that students perceived supported their transition to primary health care practice; (2) aspects of their curriculum that students perceived to be deficient and that, if addressed, would better prepare them for primary health care practice; and (3) aspects of their curriculum that students perceived required change. Figure 2 provides an overview of these themes.

Each theme is presented, augmented by student quotations. (The numbers in parentheses after the quotations represent university and student number.)

Aspects of their curriculum that students perceived supported their transition to primary health care practice

**Exposure to evidence-based practice**

Student groups frequently voiced the belief that “evidence-based practice is covered very well, so even if I was on my own I would feel able to look up information” (2.1). Students identified the importance of being able to communicate their findings.

Presentations as part of our assessments were good because it is important to be able to present not just to patients but to other members of the multidisciplinary (interdisciplinary) teams, and that can be very hard if you have not done it before. (1.5)

In terms of their ability to tackle areas that they thought were not well covered in the academic curriculum, students reported confidence in knowing how to search the literature and databases. “We discuss cases, look up evidence, and reflect on this, so I would feel confident I could this” (3.1).

**Practice with problem-based learning**

In terms of pedagogical approaches, the students identified active participation, problem-based learning, role play, and case-based reflection as beneficial for enhancing the problem-solving and clinical reasoning skills that they believed were necessary for primary health care practice. “Small-group case scenarios are
Aspects of their curriculum that students perceived as supporting their transition to primary health care practice

- Exposure to evidence-based practice
- Practice with problem-based learning
- Inter-disciplinary learning

Aspects of their curriculum that students perceived to be deficient

- Practice placements in primary health care
- Additional active learning opportunities in academic curriculum
- Education and practice on how to communicate / interact with patients and members of the team
- Education relating to health promotion

Aspects of their curriculum that students perceived required change

- Practice placements in primary health care
- Ensure that concepts of primary health care are threaded throughout the curriculum
- Inclusion of a primary health care module

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Figure 2  Themes identified by final-year physiotherapy students regarding their perceptions of working in a primary health care setting on graduation.

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Students identified active learning opportunities as being important. “There is some repetition of lectures—it would be better to have case-based/problem-based learning. We should use the time better—look into using webinar and problem-based learning more” (3.2). Students advocated the need for diverse learning opportunities, such as “more role play in college, especially when learning communication skills” (4.2).

**Lack of education on and practise in how to communicate or interact with patients and members of the team**

Students highlighted their lack of confidence in their ability to communicate with patients and other members of an interdisciplinary team. In terms of patients, they noted that “we are told to ‘educate patients,’ but how are we supposed to do this? We don’t know how” (4.2). In relation to written communication, they highlighted the need for skills to know “how to communicate with team and know how to write letters—for example, dealing with people who did not attend; this is not covered in college” (2.2). They also highlighted their concerns regarding their confidence in talking to team members. “We don’t have the confidence to speak up at meetings, especially if the whole multidisciplinary (interdisciplinary) team are there; we need more practice in college or on placement” (1.1).
Lack of education relating to health promotion

In terms of academic content relating to primary health care, students believed that “health promotion should be covered earlier in the curriculum and should reoccur as a common theme throughout” (1.7).

Aspects of their curriculum that students perceived required change

Practice placements in primary health care

All students thought that they should be offered the chance to complete a primary health care placement as part of their educational experience. One student group said, “Primary care placements should be mandatory” (4.2). Students who had experienced a primary health care placement believed that the experience was invaluable. “On the placement in primary care, you really got to see the setup and administration and how to work with others” (1.6). Another student group noted, “We lack contacts in primary care—there is no networking—no point of contact in primary care compared to hospital” (1.3).

Ensure the concepts of primary health care are threaded throughout the curriculum

Students highlighted the need for “an earlier introduction to the structure of the health service and a recap of any changes that have occurred toward the end of our course” (2.1). One student commented, “We currently have a primary care lecture only in final year—this is too late” (3.2).

Inclusion of a primary health care module

To work in primary health care, students suggested that a module on primary health care should be included in the curriculum: “It would be really good to have a module on primary care in college that was inter-professional and had role-play examples of real cases in primary care” (1.2). “We need to know all organizational/professional issues that might arise—for example, we need to know all the planning that goes with seeing someone in their own home” (4.1).

DISCUSSION

Students unanimously agreed that they needed specific primary health care practice placement opportunities during their education, and they identified the lack of these opportunities as being a major curricular deficit. A variety of learning opportunities is currently provided across a wide variety of clinical situations during students’ education, but there is a distinct lack of context-specific primary health care practice placements. In line with Lave and Wenger’s theory of situated learning, it is essential that these context-specific opportunities be available; this also concurs with Kolb and Kolb’s experiential learning theory. Therefore, students’ concerns are valid: Inclusion of primary health care practice placements is important because immersion in communities of practice has been recognized as being essential for the development of professional skills that are specific to that workplace.

However, there are issues with providing a sufficient number of practice placements in primary health care. In a recent study that investigated the main barriers to providing practice placement opportunities in primary health care, a lack of a tradition of providing placements and a lack of tutor support in the primary health care setting were identified as key barriers. Physiotherapy tutors, who would support both physiotherapists and students, have been identified as a key resource by primary health care clinicians who were considering providing context-specific primary health care learning opportunities for students. Therefore, it will be essential in the future for academic faculty and primary health care clinicians to work together to develop closer collaboration and support a more patient-centred ethos.

Students identified the need to include or further develop interdisciplin ary educational opportunities whereby they would learn with and from other members of an interdisciplinary team to improve collaboration and quality of care. Inter-professional educational opportunities, such as specific modules, can be included in both the academic and the clinical components of the physiotherapy curriculum. Inter-professional education is important for the future because primary health care teams will function within a wider primary health care network, an inter-professional work environment that relies on professionals having excellent specialist skills, a positive attitude toward working together, knowledge of other health professionals, and the ability and confidence to work with each other in a collaborative and respectful manner.

Previous research has shown that inter-professional education can increase students’ confidence in their own professional identity, strengthen their value of other roles, and improve their preparation for placements. A systematic review of postgraduate, work-related inter-professional education identified six trials that compared an intervention and a control group, and it found that four studies reported positive outcomes. Bar also commented that work-based inter-professional education was far more likely than college-based education to improve the quality of service or bring about direct patient benefit. Interdisciplinary knowledge would therefore appear to be essential for successful primary health care team functioning and an important component for inclusion in the physiotherapy curriculum.

Students identified three generic skills that they believed would improve their ability to deliver primary health care: communication skills, an ability to educate patients, and motivational skills, particularly with respect to educating and motivating patients to change their behaviour and enhance their health. This finding is in line with the results of a meta-analysis by McGrane and
colleagues\textsuperscript{51} that indicated that motivational interventions are successful in increasing healthy physical activity. These authors further suggested that physiotherapists are ideally placed to take on this role and that motivational interventions must become part of physiotherapy practice.\textsuperscript{51} From a curriculum development perspective, the inclusion, or further development, of these skills would serve to enhance students’ ability to provide physiotherapy services across a wide spectrum of sectors and specialties, not only in primary health care. How these skills might be incorporated into the curriculum is explored in the following paragraphs.

Students perceived that building their confidence in both oral and written communication was important. In the primary health care setting, there is little evidence to date of what constitutes optimal inter-professional communication;\textsuperscript{52} however, having the confidence and ability to empower patients to change their behaviour and embrace a healthier lifestyle would appear to be key skills for physiotherapists. As educators, we must provide opportunities for students to practise and develop these communication skills in a safe and supportive environment.

Students also suggested that educators need to provide more active learning opportunities in both clinical and academic settings. For example, problem-based learning,\textsuperscript{53} role play,\textsuperscript{54} and case studies\textsuperscript{55} all have the benefit of improving students’ ability to communicate with their colleagues while also enabling them to develop their problem-solving skills. Offering students more opportunities to communicate with colleagues across the interdisciplinary spectrum, increased attendance at interdisciplinary team meetings, more opportunities to present their work in public, and more formative feedback on written components of their work would all serve to increase student learning while increasing their confidence. However, as with any educational development, close collaboration and co-operation among academic, clinical, and student stakeholders will be vital to ensure the success of this initiative.

Another student suggestion was a greater curricular focus on health promotion. This is in keeping with current trends in physiotherapy practice, which is moving toward illness prevention. Providing students with the skills necessary not simply to manage illness but also to be proactive agents of change by promoting health and well-being is crucial. In keeping with students’ suggestion to improve curricular organization, health promotion should be tracked through the physiotherapy curriculum.\textsuperscript{7} Authors who have written about curriculum design have suggested that core areas required for practice should be visited and revisited at increasing levels of complexity as students progress through their programme.\textsuperscript{56,57} Learning opportunities should be established in the curriculum to enable the development of this understanding; they could take the form of specific modules designed with both academic and clinical components. Alternatively, specific modules relating to primary health care could be designed that would encompass issues relating to health promotion.

However, it is important that modules not be standalone; they need to be linked vertically throughout the programme to develop students’ understanding of primary health care while also linking horizontally to their ongoing learning.\textsuperscript{57} Spiral curricula,\textsuperscript{56} which integrate concepts into all years of a programme, are frequently used in health disciplines to revisit key concepts such as health promotion. At the University of Toronto, for example, work has been undertaken, using a spiral curriculum, to integrate community health teaching into the undergraduate medical curriculum.\textsuperscript{58}

Finally, students identified that introducing education relating to primary health care in the final year of study is too late. They suggested an early introduction to primary health care, which would then be built on as the programme progresses, with the possibility of a specific primary health care module with direct input from staff working in primary health care. There has been a fundamental shift in where health care will be delivered in the future, and it is crucial that graduates feel empowered to deliver that care.

CONCLUSION

This is the first study that has explored physiotherapy students’ perceptions of how they believe their curriculum has prepared them for employment in primary health care. This study highlights the need for enhanced integration of primary health care into the undergraduate physiotherapy curriculum in an explicit, organized, and systematic manner, using the principles of good curriculum design.\textsuperscript{56,57} The study also emphasizes the lack of practice placements in the primary health care setting: the need to increase the focus on health promotion, interdisciplinary working, and communication skills through active participation; the requirement for more diverse and innovative teaching methods, such as problem-based learning and role play; and engaging with staff from a primary health care setting throughout the programme. To increase learning and improve the confidence of the next generation of physiotherapy practitioners in primary health care, there is an urgent need for physiotherapy education programmes to explicitly adopt primary health care as the conceptual foundation for their curriculum.

KEY MESSAGES

What is already known on this topic

With an increasing focus on investing in, and reforming, health care services to meet the demands of progressively aging populations with complex chronic presentations, it is essential that students feel confident to take up employment in primary health care. However, little
is known about final-year physiotherapy students’ perceptions of how well their curriculum prepares them.

**What this study adds**

This study identifies the need for enhanced integration of primary health care into undergraduate curricula in an explicit, organized, and systematic manner. This integration needs to include practice placement opportunities, development of communication skills, and health promotion education. We believe that adopting these recommendations will better equip students to make the transition to primary health care employment.

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