Background: Health service reform, physiotherapy graduate unemployment, and the impending introduction of state regulation mean that physiotherapists in Ireland today are facing many challenges. Leadership is needed to ensure that the profession will be able to adapt to the demands and inevitable changes ahead. Objective: To investigate the perceptions of physiotherapists in Ireland of leadership and leadership characteristics, and to explore their participation in leadership development training. Methods: In this cross-sectional nationwide study, an Internet-based survey was administered via e-mail to members of the Irish Society of Chartered Physiotherapists (n = 2,787). Results: There were 615 responses to the survey. A high proportion of respondents (74.0%) perceived themselves to be a leader. Factors associated with self-declaration as a leader were time since graduation, highest qualification attained, and leadership training. Leadership training was also associated with placing greater importance on achieving a leadership position. Some form of leadership training had been completed by 41.5% of respondents. Communication and professionalism were the most highly rated leadership characteristics in all three settings. Conclusion: Physiotherapists who have had leadership training were more likely to perceive themselves to be leaders. Leadership training may support physiotherapists to assume leadership roles both clinically and nonclinically.

Introduction

The health service in Ireland is undergoing an ambitious and significant reform in an aim to modernize health services to better meet the needs of patients (Department of Health, 2012). As a result the delivery of healthcare is changing, with the focus moving from secondary to primary care (Department of Health, 2012). This, along with the impending introduction of state regulation (Irish Society of Chartered Physiotherapists, 2014), means that physiotherapists in Ireland are facing many challenges in this period of transition and development (McMahon, Waters, Cusack, and O’Donoghue, 2014). Statutory regulation of physiotherapists will mean that for the first time individuals will be required to register with the regulatory authority, to be allowed to use the title “physiotherapist” and to practice as a physiotherapist (Irish Society of Chartered Physiotherapists, 2015).

A number of sources have suggested that professional leadership is needed in physiotherapy to guide the changes necessary for the sustainable growth and development of the profession (Bury and Stokes, 2013; Desveaux and Verrier, 2014). In 2006 the American Physical Therapy Association (APTA) Presidential address Massey (2006) emphasized the importance of physiotherapists demonstrating leadership clinically, and in a more recent review of leadership literature in physiotherapy, McGowan and Stokes (2015) concluded that improving leadership within physiotherapy has the potential to improve the profession’s profile and status in this changing healthcare landscape. Furthermore, a report commissioned by the Chartered Society of Physiotherapists (CSP) in the UK contended that physiotherapy leaders have much to contribute to organizations and the wider healthcare system, including innovative solutions to clinical and managerial problems, facilitation of service change with the multidisciplinary team, and problem-solving skills developed through extensive clinical knowledge and experience (Chartered Society of Physiotherapists, 2012).

While there have been many papers and studies on leadership in healthcare in general, at present there is relatively limited literature on leadership in physiotherapy specifically (Desveaux et al., 2012; McGowan and Stokes,
To date there have been a small number of studies which have focused on physical therapists (Desveaux, Chan, and Brooks, 2016; Lopopolo, Schafer, and Nosse, 2004; Pescatello Glenney, and Certo, 2000; Schafer, 2002). However, it is important to recognize that leadership is needed from health professionals across all tiers of the health delivery system (Institute of Medicine, 2011; McAlearney, 2006). Cleather (2008) called on all physiotherapists to demonstrate leadership in their workplace. To encourage physiotherapists from a range of backgrounds to demonstrate leadership the APTA Leadership Development Committee has developed leadership core competencies in support of its value statement, “Every physical therapist and physical therapy assistant embraces the responsibilities of leadership to influence the growth of the profession” (American Physical Therapy Association, 2015). The Leadership, Administration, Management and Professionalism program offered by the Health Policy and Administration of the APTA recognizes that everyone has leadership potential and aims to develop personal leadership skills in physiotherapists without formal leadership roles as well as physiotherapists already in leadership positions (Health Policy and Administration, 2015).

Defining what leadership is, how it is best modeled, and how to teach it, are some of the greatest challenges associated with developing leadership skills programs (Shive and Dorn, 2012). Yet finding comprehensive answers to these questions is essential if effective leadership development programs, at both an entry-to-practice and professional level, are to be developed. The only research conducted in this area has involved physiotherapy students (Black, Palombaro, and Dole, 2013; Larin et al, 2011; Wilson and Collins, 2006). To date there has been no investigation of the leadership development activities of qualified physiotherapists. The Chartered Physiotherapists in Management of the Irish Society of Chartered Physiotherapists (ISCP), an employment group for those in leadership or management roles, incorporated leadership issues into their Constitution in May this year (Chartered Physiotherapists in Management, 2015). Before this recent change, there was no professional network in Ireland for physiotherapy leadership and leadership development. There is a lack of information on the perceptions of Irish physiotherapists about leadership including views on characteristics and leadership roles and development. Hence, the aim of the study is to investigate the perceptions of physiotherapists in Ireland of leadership and their experiences of leadership development. The objectives are namely to: (1) Measure the proportion of physiotherapists in Ireland who perceive themselves to be a leader and the level of importance physiotherapists in Ireland place on attaining a leadership position; (2) Identify factors associated with self-declaration as a leader in physiotherapists and with the level of importance placed on attaining a leadership position (i.e. gender, highest level of education, years of experience, leadership development training, work setting, and supervisory role); (3) Describe and compare the leadership characteristics which physiotherapists in Ireland believe to be extremely important in various settings (i.e. the workplace, in the healthcare system, and in society); and (4) Measure the proportion of physiotherapists in Ireland who have had formal or informal leadership development training and describe the nature of the training.

Methodology

A quantitative, cross-sectional nationwide study was performed using an Internet-based survey administered via e-mail to members of the ISCP. The ISCP is the sole physiotherapy professional body in Ireland. Membership of this organization is not compulsory for physiotherapists in Ireland; therefore, this survey group is a proportion of the total number of physiotherapists in Ireland. Due to the lack of a statutory register, it is not possible to know definitively the number of physiotherapists practicing in Ireland, but the ISCP estimates that there were approximately 3,500 physiotherapists in Ireland in 2013 (World Confederation of Physical Therapy, 2015).

Data were collected in an eight-week period from November 2013 to January 2014. Ethical approval was granted by Trinity College Faculty of Health Sciences Ethics Committee. Permission was sought from the chief executive officer of the ISCP using the process required by the ISCP board. Once this permission had been obtained, the survey link was circulated by an administrator to members of the ISCP (n = 2,787). Student members were excluded because of their limited experience working in a clinical environment. The communication contained a short description of the project, an attachment with information about the survey and an embedded link to the survey. Reminders were sent by the ISCP administrator two weeks after the initial invitation to encourage participation in the study. The survey was available to participants 24 hours a day during the data-collection period. The data were coded into numerical values and analyzed using the Statistical Package for the Social Sciences (SPSS). Minitab was used for the production of Normality plots.

The questionnaire was based on that by Desveaux et al. (2012). Permission to use the questionnaire was sought and obtained from the survey authors. The original questionnaire was designed using information obtained through a literature review on leadership characteristics described in healthcare and business settings (Desveaux et al., 2012). In this study the roles of
leadership and management are viewed as distinct concepts as described by Kotter (2008). A leader was defined as “an individual who influences the actions of another individual or group toward accomplishing goals and sets the pace and direction of change while facilitating innovative practice”. This definition was the same as that used by Desveaux et al. (2012) and remained visible to participants at the top of their screen as they completed the questionnaire.

Adaptations were made to the original questionnaire used by Desveaux et al. (2012) to make it applicable to an Irish participant and additional questions were asked (refer to Supplemental Appendix S1 for the survey instrument used in this study). The workplace categories were altered slightly so that they were representative of the workplaces of physiotherapists in Ireland. As Ireland does not have the same diversity of rural and urban environments present in Canada, the question from the original survey relating to geographical location was removed. Based on the recommendations for further research given by Desveaux et al. (2012), a question was added to the survey which asked participants to indicate the other healthcare professionals with whom they work. If the respondent indicated that they worked with two or more other healthcare professionals they were considered to work in a multidisciplinary team (MDT). A second question added to the demographics section of the survey asked respondents how long ago they had graduated from their entry-to-practice degree. This question was added to investigate whether there was an association between self-perception as a leader and level of experience.

To ensure the readability and clarity of the survey the questionnaire was sent to five physiotherapists known to the first author. One adaptation was made to the questionnaire based on their feedback. The leadership term “contingent reward” was changed to “adaptability” as respondents felt that this term more accurately fit the given definition. The definition was “to deal with change and adversity and to adjust to different situations”. The wording of the definition was not changed from that used in the Canadian study. Apart from this change in leadership term, the leadership characteristics investigated in this study were the same as those in the survey by Desveaux et al. (2012).

The original questionnaire consisted of two sections: (1) the first section asked for participants’ demographic and workplace details; and (2) the second section asked participants to rate how important they perceive 15 leadership qualities to be for a physiotherapist in different settings – the workplace, the healthcare system, and society, using a 5-point Likert-type scale (1 = not at all important, 5 = extremely important). Workplace refers to the physiotherapist’s primary practice environment. The healthcare system refers to the level of hospital administration and networks that govern the overall operation of healthcare. Society refers to the global environment in which the community functions. Participants were also asked “Do you perceive yourself to be a leader?” If a respondent answered “yes” to this question then they were said to self-declare or self-identify as a leader.

A third section consisting of two questions was added to the questionnaire for this study. The first question asked participants to rate how important attaining a leadership position was to their overall sense of career success. To date there has been no research on the leadership development activities of physiotherapists in Ireland. A second question was added to address this gap. The question asked if they had participated in any leadership development training, formal or informal, and to specify what this had been if they had.

**Data analysis**

To address the first objective frequency distributions and percentages were obtained for the leadership variable. Chi-square analysis was performed to investigate which factors (i.e. gender, time since graduation, highest qualification achieved, workplace, working within an MDT, supervision of students, and development training) were associated with self-declaration as a leader and which factors were associated with importance placed on attaining a leadership position to overall career success. The significance level was set at $p \leq 0.05$ under the hypothesis that no association exists. Due to low counts in certain categories low frequency data were pooled into new categories. This ensured that the expected frequency in each cell of the chi-square was greater than 5 and thus enabled the use of the chi-square test. For example, very few respondents answered “Not at all important” or “Not very important” when rating the importance of the leadership characteristics. Therefore to enable analysis the data were pooled into three categories: (1) “Extremely Important” (ratings of 5); (2) “Very Important” (ratings of 4); and (3) “Not Important” (ratings 1 – not at all important, 2 – not very important, 3 – neutral).

Due to a flaw in the questionnaire the participants were able to tick more than one answer when answering the question, “How important to you is attaining a leadership position (within your employment or professional association) to your sense of overall career success?” Ten respondents indicated two answers when answering this question. The data from these 10
respondents was removed from the analysis of this question.

Tests for normality were conducted before addressing the third objective. Histograms displaying the distribution of the ratings and normality plots of each characteristic across the three settings were created using Minitab. All characteristics were found to be skewed to the left. A non-parametric test was therefore necessary and the Mann–Whitney U-test was used to investigate if there was a difference in the ratings of importance of the characteristics between the three settings.

To address the third objective frequency distributions and percentages for each characteristic were obtained for each setting. Frequency distributions and percentages were obtained for the leadership development training variable to address the fourth objective.

**Results**

There were 615 responses which gave a response rate of 22%. Of these responses 525 had completed the survey and so were included in the analysis. The demographic details of the respondents are displayed in Table 1.

**Self-declaration as a leader**

To the question “Do you perceive yourself to be a leader?” There were 523 responses, 74.0% (n = 387) answered “yes” and 26.0% answered “no”. Results of chi-square analyses of factors potentially associated with self-declaration as a leader are displayed in Table 1.

**Factors associated with self-declaration as a leader**

No significant difference was found in chi-square analyses between self-declared leadership status and gender, practicing in private practice, working in education, practicing as part of an MDT, or supervision of students (Table 1).

A significant association was found between leadership declaration status and highest degree attained. In the chi-square, more respondents with master’s or doctorate degrees perceived themselves to be leaders than expected. Fewer physiotherapists with diplomas and bachelor degrees perceived themselves to be leaders than expected. A significant association was also found between leadership declaration status and the length of time since graduating. More physiotherapists who had graduated 6–10, 11–15, 16–20, or >20 years ago perceived themselves to be leaders than expected. Fewer physiotherapists who had graduated <2 or 2–5 years ago perceived themselves to be leaders than expected.

**Leadership status and leadership development training**

The most commonly cited types of formal and informal leadership training are displayed in Table 2.

Overall 41.5% (n = 216) had had some form of leadership training. A significant association was found between leadership training (both formal and informal) and self-declaration as a leader. More respondents who had completed leadership development training perceived themselves to be a leader than was expected, and fewer of those who had not completed leadership development training perceived themselves to be a leader than was expected.

**Importance of attaining a leadership position**

Participants were also asked to rate how important attaining a leadership position was to their overall sense of career success. The results are displayed in Table 3.

**Factors associated with importance placed on attaining a leadership position**

No significant association was found between the importance placed on attaining a leadership position and gender, practicing in private practice, working in education, supervising students, practicing as part of an MDT, highest qualification attained, or time since graduation.

A significant association was found between leadership training and the importance placed on attaining a leadership position (Table 1). The number of respondents who rated attaining a leadership position as “extremely important” was higher than expected for those who had undertaken leadership training. The number of physiotherapists who rated attaining a leadership position as “Not important or neutral” was higher than expected for physiotherapists who had not undertaken leadership development training.

**Ratings of leadership characteristics**

Table 4 displays the ratings of the leadership characteristics in the workplace, the healthcare system, and society.

**Comparison of leadership characteristic ratings in different settings**

Mann–Whitney U tests found that each characteristic was more highly rated as important in the workplace than in society and this difference was significant (p < 0.001 for all characteristics). Most characteristics were rated as significantly more important in the workplace than in the
healthcare system; however, there was no significant difference in the ratings of the importance of professionalism, adaptability, active management and social dominance in the workplace and in the healthcare system. Results of the Mann–Whitney U test of the characteristics are displayed in Table 4.

**Table 4.** Frequency distribution of formal and informal leadership training examples most often cited by respondents.

| Formal leadership training | Number of respondents (% of respondents who reported having participated in formal leadership training) | Number of respondents (% of respondents who reported having participated in informal leadership training) |
|----------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Diploma or certificate in management or leadership | 24 (18.6%) | Mentoring | 58 (34.1%) |
| Health Service Executive (HSE) funded leadership and management courses | 19 (14.7%) | Experiential learning at work | 20 (11.8%) |
| Masters courses in management or leadership | 17 (13.2%) | Experience as clinical supervisor of junior staff or students | 15 (8.8%) |
| Leadership courses through work | 11 (8.5%) | Independent reading/learning | 12 (7.1%) |
| Informal leadership training | 47 (28.8%) | Role-modeling/observing others | 10 (5.9%) |
| Peer review/supervision | 10 (5.9%) | |

Mann–Whitney U test of the characteristics are displayed in Table 4.

**Leadership and physiotherapists who practice in private practice**

Physiotherapists who responded that they work in private practice (n = 194, 37.0% of respondents) were found to rate business acumen as more important in the workplace ($\chi^2 = 18.97$, $p < 0.001$) and in society ($\chi^2 = 7.65$, $p = 0.022$) than physiotherapists practicing in other areas. More physiotherapists working in private practice rated business acumen as “extremely important” in the workplace and society than expected and fewer than expected rated business acumen as “not important or neutral”.

**Discussion**

The response rate of 22% is in line with other physiotherapy literature (Chipchase, Williams, and Robertson, 2009; Connell, McMahon, Eng, and Watkins, 2014; McMahon and Connolly, 2013). Couper, Singer, Conrad, and Groves (2008) suggest that response rates are poor indicators of non-response rate error. Respondent representativeness can be used as an alternative approach to gauging
Comparing the settings, those employed in the workplace were more likely to perceive themselves to be leaders than physiotherapists in other settings. This is consistent with the findings of Rozier, Raymond, Goldstein, and Hamilton (1998) who reported greater leadership levels in workplace and society. Differences between respondents and non-respondents (Roush et al., 2015). Given the range of different levels of experience, levels of qualification, and clinical areas of practice, the non-responders in this study were unlikely to be systematic.

In this study, 74.0% of respondents believed themselves to be a leader. This was slightly less than the 79.6% of respondents in the Canadian study (Desveaux et al., 2012), but is still a positive finding. It is important that all physiotherapists see themselves as leaders so that they feel confident and empowered to drive continual change and improvement in the service that they provide. However, this finding may have been biased by the fact that the respondents were a self-selected cohort. People who respond to a questionnaire about leadership may be more likely to be interested in leadership in general and thus more likely to perceive themselves to be leaders.

Factors found to be associated with self-declaration as a leader were highest qualification attained, time since graduation, and leadership development training. Chi-square analysis demonstrated that physiotherapists with master’s or doctorate degrees were more likely to perceive themselves to be leaders than physiotherapists without these additional qualifications. This may reflect that those who have higher levels of education may feel that they have more to teach others and thus may be more likely to consider themselves to be a leader. It may also be that physiotherapists with higher levels of education may be more likely to be practicing in more senior or management positions and therefore may have responsibility in supervising and managing other members of the team. Wylie and Gallagher (2009) found that health professionals practicing at higher staff levels reported greater leadership levels than those practicing at lower levels in a survey-based investigation of transformational leadership in health professionals.

Chi-square analysis also demonstrated that there was also a tendency for physiotherapists who had been qualified for longer to be more likely to self-declare as a leader. Just as with "the highest degree attained" this may be because physiotherapists who have been qualified for longer may be more likely to be in senior or management positions. They may also feel more secure and confident about their status in their workplace, or in the profession, and thus empowered to advocate and strive for the things that they are passionate about. The finding that leadership development training was associated with self-declaration as a leader could be interpreted in two ways. It may indicate that the leadership development training contributed to these professionals perceiving themselves to be leaders. It may also reflect that physiotherapists who perceive themselves as leaders may be more likely to participate in and complete leadership development training.

When asked to rate how important attaining a leadership position was to their sense of overall career achievement, 53.0% rated achieving a leadership position as very important or extremely important. This question stemmed from the study by Rozier, Raymond, Goldstein, and Hamilton (1998) where members of the APTA were surveyed on their perceptions of career success. In contrast to Rozier, Raymond, Goldstein, and Hamilton (1998) who

| Leader characteristic | Workplace | Healthcare system | Society | Workplace vs. healthcare system (p-value) | Workplace vs. society (p-value) |
|-----------------------|-----------|--------------------|--------|------------------------------------------|-------------------------------|
| Credibility           | 64.5      | 52.1               | 34.2   | <0.001                                   | <0.001                        |
| Motivating            | 66.7      | 53.2               | 39.2   | <0.001                                   | <0.001                        |
| Communication         | 79.0      | 71.0               | 58.1   | 0.002                                    | <0.001                        |
| Professionalism       | 67.4      | 66.2               | 49.2   | 0.554                                    | <0.001                        |
| Business acumen       | 34.7      | 43.7               | 21.2   | 0.023                                    | <0.001                        |
| Delegation            | 58.9      | 50.4               | 28.4   | 0.001                                    | <0.001                        |
| Vision                | 43.1      | 53.5               | 30.4   | 0.006                                    | <0.001                        |
| Adaptability          | 60.7      | 56.4               | 37.1   | 0.066                                    | <0.001                        |
| Extraversion          | 39.7      | 33.0               | 25.9   | 0.004                                    | <0.001                        |
| Active management     | 61.8      | 56.6               | 34.6   | 0.051                                    | <0.001                        |
| Social dominance      | 27.0      | 27.0               | 18.4   | 0.550                                    | <0.001                        |
| Empathy               | 57.8      | 44.3               | 44.6   | <0.001                                   | <0.001                        |
| Social skills         | 55.6      | 39.4               | 40.6   | <0.001                                   | <0.001                        |
| Self-awareness        | 33.1      | 28.3               | 24.9   | 0.005                                    | <0.001                        |
| Self-regulation       | 46.8      | 38.6               | 30.8   | <0.001                                   | <0.001                        |
found that “appointment or election to a leadership position in a professional organisation” was not deemed important to overall career success, the majority of respondents here indicated that this was important to their career success. In a study investigating the job satisfaction and organizational commitment of physiotherapists and occupational therapists in Canada, Wagner et al. (2014) highlighted the importance of recognizing the expertise of physiotherapists with advanced education by recruiting or promoting them to leadership positions.

When looking at the demographics of respondents who rated attaining a leadership position as “very important” or “extremely important”, an association was found with having completed leadership development training ($p < 0.001$). This result may simply reflect that those who believe achieving a leadership position is important would be more likely to participate in leadership development training. However, it could also be argued that people were more likely to understand the importance of leadership to practice as a physiotherapist once they had undertaken leadership development training.

Results showed that 24.7% had participated in formal leadership training and 32.8% had participated in informal leadership training. A wide range of sources and types of training were cited by respondents. The most frequently cited form of leadership development was mentoring ($n = 58$). Mentorship has been defined as a relationship focused on the sharing of knowledge and experience between experienced mentors and motivated “mentees” (Owens, Herrick, and Kelley, 1998). The role of mentoring in leadership development in healthcare organizations has been recognized (McAlearney, 2005). In a qualitative study of physiotherapists in Canada, Ezzat and Maly (2012) found that mentoring relationships enabled physiotherapists to adapt to change, advance practice, and develop the profession. This study did not explore the respondents’ opinions of their training experiences or whether they found them beneficial. More research is necessary to explore the mode and type of leadership development training that physiotherapists would like to participate in and also to measure the outcomes of these training programs.

Communication and professionalism were the most highly rated leadership characteristics across all three settings. These characteristics were also the two most highly rated characteristics in the Canadian study (Desveaux et al., 2012). The importance of effective communication to good leadership has been widely reported (Gaiter, 2013; Hicks, 2011; Michelman, 2009). With respect to physiotherapy, effective communication is a core competency (Health Professions Council, 2013; World Confederation of Physiotherapy - European Region, 2008). It has been shown to be valued by patients attending physiotherapists (Cooper, Smith, and Hancock, 2008; Kidd, Bond, and Bell, 2011) and to be essential in demonstrating effective practice (Reynolds, 2005). Professionalism is one of five competency domains that the Healthcare Leadership Alliance (HLA) found were universal to all practicing healthcare managers (Stefl, 2008). The HLA was a consortium of six major healthcare professional groups in the USA. The consortium used research from their individualized credentialing processes to propose competency domains common to all healthcare managers. The importance placed on communication and professionalism across all three settings suggests that development of skills in these areas should be a core component of leadership training for physiotherapists.

Respondents were significantly more likely to rate each characteristic as “extremely important” in the workplace than in society. This finding was consistent with that of Desveaux and Verrier (2014) who hypothesized that the decrease in perceived importance of leadership characteristics at the societal level may reflect that physiotherapists are more focused on leadership in their immediate work environment than in wider society. Desveaux and Verrier (2014) concluded that physiotherapists need to recognize leadership roles and opportunities beyond their own workplace if physiotherapy is to grow as a profession and increase its profile. Opportunities for physiotherapists in Ireland to demonstrate leadership in society may include health promotion initiatives, education of the public on the prevention of injury, and programs to enable people to become more physically active.

Social dominance was the lowest rated characteristic across all three settings. Social dominance was defined as “gain respect and attention of others, appear competent and have a strong influence over others”. The lower importance placed on social dominance may give some information about the leadership style adopted by physiotherapists in Ireland. A reluctance to appear dominant or to have a strong influence over others is suggestive of a more transformational or servant leadership style. Transformational leadership involves empowering others to achieve the shared vision (Robbins and Davidhizar, 2007). The key element of a servant leader is demonstrated by commitment to “helping others realise their potential by focusing not on their weaknesses but on their strengths” (Sanders, 2008).

Physiotherapists who practice in private practice were more likely to rate business acumen as “extremely important” in the workplace than those who do not practice in private practice. This result was the same as that found by Desveaux et al. (2012) in their Canadian study. In both physiotherapy and healthcare, more
In a study investigating the skills that managers feel are important for employment success, Pescatello, Glenney, and Certo (2000) found that healthcare managers differed from non-healthcare managers in the importance they placed on business skills. Only 22.1% of healthcare managers believed that the possession of business skills was an important quality for a staff level physiotherapist; whereas 66.7% of non-healthcare managers believed it to be critical for career success (p = 0.001). Physiotherapists who practice directly considering the financial and business aspects of their service may be more aware of their significance in day-to-day practice than physiotherapists who are more removed from these aspects. However, physiotherapists who practice in the public sector or in education also need to appreciate that money and financial matters drive most of the decisions regarding their service and status within an organization or the healthcare system. The principles of developing business plans have relevance beyond the start-up and running of private practices, including, but not limited to, activities such as: starting a new service or facility within a hospital department, organization of a scientific or professional conference, expansion of a community-based service, or planning the development of a new academic course module (Wassinger and Baxter, 2011). Perceptions of business skills are an important consideration as these opportunities may be lost if physiotherapists do not possess these critical nonclinical skills.

**Implications for practice**

Results from this study are encouraging as almost three-quarters of respondents perceive themselves as leaders. However, caution must be exercised when interpreting this result due to the low response rate and potential response bias of the survey. Further research is warranted to investigate how physiotherapists in Ireland demonstrate leadership and the leadership styles they employ.

This study provides information of the leadership characteristics which physiotherapists in Ireland perceive as important. Research is needed to investigate how physiotherapists believe these characteristics should be enacted in the workplace, the healthcare system, and in society.

Leadership development may enable physiotherapists to perceive themselves as leaders. For this reason leadership development opportunities should be made available to physiotherapists in Ireland. However, more research is needed as to the optimal mode of delivery and content of these development activities.

**Limitations of the study**

Limitations of this study included the bias associated with administering a web-based questionnaire, the low response rate, and the wording of the questionnaire. The social desirability associated with being a leader may have led to a response bias where respondents were more likely to perceive themselves as a leader in this survey than would actually consider themselves to be a leader in their daily practice. The survey was sent to all members of the ISCP rather than to all physiotherapists in Ireland. It would, however, have been very difficult to contact physiotherapists via e-mail who are not members of the ISCP. When using a questionnaire there is a risk that some of the terms are unclear or that there could be differences in interpretation. To mitigate for this working definitions of the terms in the questionnaire were provided and remained visible to respondents throughout the survey. This research must be regarded as initial exploratory research and the results used as a stimulus for more research into the perceptions and practice of leadership of physiotherapists.

**Conclusion**

This exploratory study provides information on the perceptions of leadership of physiotherapists in Ireland. The majority of respondents to this questionnaire perceived themselves to be leaders and rated attainment of a leadership position as important to their overall sense of career success. Communication and professionalism were rated as the most important leadership characteristics for physiotherapists to demonstrate in the workplace, the healthcare system, and society. This is informative for the development of education opportunities such as leadership development programs for physiotherapists in Ireland. Results from this study may also indicate the value of incorporating development of these skills into professional degree program curricula and formalized training in clinical settings. Further research is ongoing to investigate how physiotherapists in Ireland demonstrate leadership and the leadership styles that they employ. Physiotherapists who have had leadership development training were more likely to perceive themselves to be leaders. Leadership development training may support physiotherapists to assume leadership roles both clinically and nonclinically.
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Declaration of interest

The authors report no declaration of interest.

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