



Making sense of the numbers

Physiotherapy

Workforce retention and attrition

Whiringa-ā-rangi 2019

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Physiotherapy Workforce Retention & Attrition Survey 2019

KEY: TIS Turnover Intention Scale CPD Continuing Professional Development FWA Flexible Working Arrangements

01. Those who have left

129
No. of respondents

11%
% of respondents

20%
Have < 10 yrs experience as a physio

50%
Working in a non-physio job

More likely to agree that Job promotion prospects were poor.

More likely to disagree that Their work prospects and income were adequate for their effort.

More likely to consider Continuing Professional Development (CPD) a burden.

And to agree that Their work was draining and had a negative effect on their private life.

TIS Those who have left the profession considered that it was unsatisfying at meeting their personal needs and rarely looked forward to another day as a physiotherapist.

02. Those who usually or always consider leaving

Predictability, recognition, & role clarity
The extent to which they feel they are well-informed, are treated fairly, and know what is expected from them at work, is strongly associated with considering leaving.

Support from supervisor
Employees and contractors who noted their superior seldom offered help and support were more likely to consider leaving.

More likely to agree that
Work was draining and had a negative effect on their private life, but not to the extent that those who left did, and they are very likely unsatisfied with their job.

55%
25-44 yrs old

76%
Female

43%
Private practice employees or contractors

50%
Have 6-20yrs experience as a physio

15%
DHB

15%
Business owners

considerably less than their 22% and 25% survey representation

82% DISAGREE CPD is easy to complete hours

68% AGREE CPD interferes with their family

75% AGREE CPD places a burden on their finances

55% DISAGREE CPD is easy to access in their location

These responses are 3 x higher than the overall response rate

TIS **56%**
Said physiotherapy does not meet their personal needs

75%
Likely to take a different job at same compensation

How satisfying physiotherapy is in fulfilling personal needs is strongly associated with looking forward to another day as a physiotherapist, and both impact how frequently someone considers leaving. However, achieving work-related goals isn't as strong an influence. This reinforces that physiotherapists need their job to be personally rewarding and fulfilling.

03. Those who are not considering leaving

83% PHYSIOS SATISFIED OR VERY SATISFIED WITH THEIR JOB

84%
Private practice employees & contractors

79%
DHB & private hospital

90%
Business owners

83%
Find their work meaningful and important to a large or very large extent.

TIS While this group largely has high job satisfaction, which protects against job stressors such as work demands and high work pace, **19%** would take a job in a different profession for the same compensation level.

FWA Results did not differ between cohorts

90% Of those that requesting FWA received a **YES**

45% Did not know if their workplace had a FWA policy

NO Where FWA requests were not approved, job satisfaction is lower and the likelihood of considering leaving increases.

JOB SECURITY Doesn't appear to influence whether someone was considering leaving physiotherapy

Is only an issue for those experiencing undesirable change

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1 Executive summary

In 2018, Business and Economic Research Limited (BERL) undertook research on the key workforce issues in physiotherapy for Physiotherapy New Zealand (PNZ). One of the findings of the research was that physiotherapy had a workforce retention issue, but the scope of the study meant that we were not able to investigate this further. This report follows on from the earlier research and explores factors that contribute to physiotherapists staying in or leaving the profession.

BERL designed and carried out a survey for PNZ from 19 August to 8 September 2019, using several survey scales that had previously been used to measure perceptions of working conditions, job satisfaction, turnover intention, and job security. Additional questions were added on Flexible Working Arrangements (FWA) and Continuing Professional Development (CPD). A total of 1,207 respondents completed the survey.

Three cohorts were identified:

- Those who have left the profession, including those who are unsure or intend to return (11.3 percent)
- Those who answered “usually” or “always” to the question, “How often have you considered leaving physiotherapy?” in the Turnover Intention Scale (TIS) (17.8 percent)
- Those who answered “sometimes”, “rarely” or “never” to the TIS leaving question, and are not considering leaving (70.8 percent).

Researchers have identified that turnover intention resulted in decreased job satisfaction, looking for better opportunities, and decreased workplace commitment. Job satisfaction in particular is the single greatest predictor of turnover intention. In lieu of identifying the specific reasons for individual’s job satisfaction, the survey was designed to help identify what psychosocial factors influence job satisfaction and turnover intention.

Those who had left the profession were more likely to agree their job promotion prospects were poor, and that their work was draining and had a negative effect on their life. They did not look forward to another day as a physiotherapist, and considered their income was inadequate for their efforts. There was a strong relationship between the quality of leadership they experienced and their overall job satisfaction. Continuing Professional Development (CPD) was taxing on all levels for this cohort.

For those who were considering leaving physiotherapy, CPD was also a drain, particularly on their time and finances. Quality of leadership was a key factor, with those who stated their superior seldom offered help and support more likely to consider leaving. In addition, this group was less likely to report being well-informed and appreciated in their workplace, and to have clarity about their role. This group were more likely to be private practice contractors and employees, and to be experienced physiotherapists with 6-20 years under their belt.

The group who weren’t considering leaving reported less work-life conflict than the other groups and didn’t feel CPD was as taxing on their resources, although it still required changes to family plans. They were largely satisfied with their job, and found their work personally rewarding and fulfilling. However, around one fifth would still take a non-physiotherapy job at the same pay rate.

Our recommendations cover individual practitioners, those in leadership roles such as business owners and public health management, and PNZ. For individual practitioners, we recommend seeking out information regarding FWA policies from their workplaces, and online CPD entitlements.

Those in leadership positions are advised to consider the implications of the survey findings regarding the quality of leadership support and positive workplace practices to job satisfaction and turnover intention. Strategies to improve these include providing mentoring opportunities and support for those undertaking CPD, having clear processes for sharing information, and developing strategies to monitor, prevent, and manage workplace stress. Recommendations for PNZ include greater support for individuals and businesses on FWA and CPD, and the development of an overall career pathway, from graduation to retirement, within existing scopes of practice.

2 Introduction

This report was prepared for Physiotherapy New Zealand (PNZ), which seeks greater understanding of workforce issues in physiotherapy. PNZ is the national membership organisation for physiotherapists, with a membership of over 4,000 people across New Zealand. Physiotherapists use evidence-based practice to assess, diagnose and manage patients, using their specific skills, expertise and knowledge of human function and malfunction to ensure patients receive the right treatment and exercise prescription in a timely manner.

This research builds on research undertaken in 2018, covered by *Analysis of the Physiotherapy Workforce*. In section 7.4.2 of that report we stated:

“Physiotherapists staying in (retention) or leaving the profession (attrition) were identified as concerns by the majority of people who fed back. Based on this feedback, there appears to be two primary exit points; within the first two years, and at 4-6 years.”

The limited scope of the previous study and the nature of self-selecting for stakeholder engagement meant that we were not able to investigate why people leave the profession and we had limited feedback from new graduates.

The aim of this research is to clarify and identify:

- Contributing factors for people leaving the profession, particularly at those exit points
- Potential levers for change to enable improved retention of the current and future New Zealand physiotherapy workforce.

3 Recommendations

The following section covers recommendations for individual physiotherapists, those in leadership positions such as private practice business owners and physiotherapy managers, and for Physiotherapy New Zealand (PNZ) across the profession. The recommendations are based on the findings detailed in Section 5 and previous research.^{1, 2}

3.1 Individual practitioners

3.1.1 Flexible Working Arrangements (FWA)

Nearly half (45.1 percent) of respondents, from a variety of working environments, were unsure whether their workplace had a policy for FWA. Under part 6AA of the Employment Relations Amendment Act 2014, all employees have the right to request a variation of their working arrangements at any time. While not all workplaces will have a defined FWA policy, the survey response indicates a lack of clarity and certainty for a large percentage of the workforce. There is an opportunity here for employees to educate themselves as to whether their specific workplace has a policy in place.

Where workplaces do not have a FWA policy, the legal right still exists – it is the employee’s responsibility to initiate an application for FWA. An application may be made to change working arrangements, whether hours, days, or location, either permanently or for a set period of time, anytime from the first day of employment. It can be for any purpose or reason, including caring for family, sporting or volunteering commitments, or for study. There are specific legal requirements that must be contained in a request.³ Employers do not have to agree with the request if there is a good business reason for declining.

3.1.2 Continuing Professional Development (CPD)

CPD was a considerable burden for those who have considered leaving or who have already left the profession. In particular, 75 percent of those who have considered leaving agreed that CPD placed a burden on their finances, and 55 percent disagreed it was easy to access in their location. The PNZ website has a range of CPD resources, including free external online learning modules, and webinars from branches and special interest groups. In addition, the peer review process is an important part of CPD, and is voluntary and collaborative. PNZ also has information, guidance and templates for peer reviewing on their website, as well as templates for reflection. Practitioners are encouraged to seek these resources out or connect with their branch for support and direction if accessing CPD is challenging for them.

3.2 Leadership roles – managers and business owners

3.2.1 Quality of leadership

The extent to which physiotherapists feel they are well-informed, are treated fairly and appreciated, and know what is expected from them at work, is strongly associated with considering

¹ BERL. (2018). *Analysis of the Physiotherapy Workforce*.

² Notably, remuneration was not highly tied to any other measure, including to job satisfaction.

³ <https://www.employment.govt.nz/workplace-policies/productive-workplaces/flexible-work/how-to-apply/request-for-flexible-working-arrangements-checklist/>

leaving. For those in leadership roles, including business owners, this is a call to consider how their management practices affect the working environment and influence workforce retention.

Mentoring and CPD support

It is critical to align employee career goals with organisational goals, and to enable career and leadership development. Career mentoring has been shown to improve employee retention, as a mentor role models effective professional practice, and shares their knowledge, skill and expertise. Offering to mentor can also demonstrate a commitment to career development to staff at all levels, and both mentors and mentees feel more engaged with each other and with their organisation. An organisation with an active learning culture is stronger and more effective. Mentoring needs to be supported by a structure that offers clarity about job roles and what job promotion prospects look like within a particular organisation.

PNZ recognises the important role of professional relationships, like mentoring, in both CPD and professional practice. Information and resources about such professional relationships may be found on the PNZ website.

In the 2018 research, we heard feedback that many physiotherapists undertake CPD in their own time with their own resources. Supporting staff with study leave, FWA to study, fully or partially subsidised CPD opportunities, and other strategies, demonstrates commitment to their ongoing learning and career development. It also reduces some of the burden on their time and resources.

Information sharing

Leading from the top means having clear processes for sharing information, and demonstrating transparent and inclusive decision-making. These approaches can support staff to feel knowledgeable and positive about their work environment, which in turn, can increase workplace commitment.

Better sharing of information includes informing staff of any FWA policies: the need for FWA reflects the demographic of the workforce. A successful FWA programme may require a shift in culture. But there are benefits for employers and businesses as well as staff - employees who have the best work-life balance are more likely to remain with an organisation and show increased levels of job satisfaction.

Work demands and stress

Overseas research has shown a relationship between work demands, work-life conflict, and burnout. Many physiotherapists are working at a high pace with considerable emotional demands placed on them – the 2018 research found many new graduates weren't prepared for the heavy workloads or the psychosocial aspect of face-to-face client interaction. In addition, the 2019 Remuneration Survey found two thirds of those working full-time were more likely to experience burnout. This way of working is unsustainable for individuals and the profession.

Periods of increased demand, patient complexity, staff shortages, and constant and high caseloads, are key workplace stressors for physiotherapists. They need more support to deal with the consequences of their work pace and emotional demands. Strategies to monitor, prevent, and manage stress should be implemented by managers and business owners to identify and minimise burnout risk.

3.3 Physiotherapy New Zealand

3.3.1 Business support

We recommend PNZ add to their suite of business support services to include support for practices to develop FWA policies that are fit-for-purpose. In addition, there is a role for PNZ in developing communications around the benefits of FWA.

This research did not ascertain awareness of CPD offerings through PNZ. The CPD responses suggest a communication strategy on these may be valuable. For example, more frequent information sharing to physiotherapists, and guidance for businesses, on availability of online, free, and branch CPD.

3.3.2 Career pathway

In the 2018 research, we recommended working with the Physiotherapy Board of New Zealand to develop a career pathway that encompasses a competency framework. The purpose of this career pathway recommendation was to support retention, enabling identification where the practitioner is on the continuum of performance and experience, and providing guidance for development of specific areas of expertise.

We support the overall intention of this recommendation, which is to increase the long-term attractiveness of the profession. However, we modify it for this report to propose the development of an overall career pathway, from graduation to retirement, within existing scopes of practice. This type of career pathway approach is more about supporting private practice business owners and public health providers to develop clear strategies for job promotion prospects past the initial two year new graduate period.

4 Survey administration

From 19 August to 8 September 2019, PNZ conducted an online survey. Business and Economic Research Limited (BERL) designed and carried out the survey for PNZ, and analysed findings and authored this report. Measurements of workforce attrition and retention is generally restricted to self-report subjective data, such as surveys. This is because measurement relies on perceptions of working conditions and job satisfaction. Existing survey scales were chosen where they had already been used to measure characteristics in healthcare workforce settings, including turnover intention, job security, and work demands.

The scales were also chosen because they had high levels of validity (it measures what the variable it intends to) and reliability (it measures this variable consistently across time). These scales include the Copenhagen Psychosocial Questionnaire (COPSOQ), the Effort-Reward Imbalance (ERI) questionnaire, and items from the Turnover Intention Scale (TIS). The majority of survey scales and questions used Likert rating responses for measurement (i.e. Strongly Agree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree), with some check box questions. Additional questions were added on Flexible Working Arrangements (FWA) and Continuing Professional Development (CPD). Further details on the survey scales may be found in Appendix A.

A total of 1,207 respondents completed the survey. Professional practice questions asked about Annual Practising Certificate (APC) status, country of registration, length of registration, main area of work, highest level of physiotherapy qualification completed, and current work situation, including employer. Demographic information provided by respondents included region, ethnicity, gender, and age.

Respondents were sub-categorised according to their responses to APC status, including intention to return to physiotherapy if they did not currently hold an APC, and TIS responses for analysis. A detailed break-down of the survey responses, including percentages, is provided in Appendix B. In the report, percentages have been rounded to whole numbers and may not add to 100 percent. Percentages may add up to more than 100 percent where respondents could select more than one answer. Data provided by respondents is reported in the aggregate results.

The average time to complete the survey was eight minutes. The completion rate was 92 percent. SurveyMonkey notes that surveys of this length have a 79 percent completion rate, and surveys of this complexity (with 10 matrix or rating scale questions) have an 81 percent completion rate.

5 Survey findings

This section covers the analysis and findings from the survey. The purpose of the survey was to examine the relationship between employees’:

- Psychosocial work demands, using the Copenhagen Psychosocial Questionnaire (COPSOQ)
- Perception of “reward” for effort, including job promotion prospects, salary, and job security, using the Effort-Reward Imbalance (ERI) questionnaire
- Plans to leave their job or profession, or turnover intention, using the Turnover Intention Scale (TIS)
- Other variables such as Flexible Working Arrangements (FWA) and Continuing Professional Development (CPD).

Due to the impact that turnover has on organisations and professions, there is a considerable body of research on the ability of turnover intention to predict turnover. Researchers have identified that turnover intention resulted in decreased job satisfaction, looking for better opportunities, and decreased workplace commitment. Job satisfaction in particular is the single greatest predictor of turnover intention. Psychosocial factors may contribute to poor working environments, increased work-related stress, and reduced job involvement and job satisfaction levels. In lieu of identifying the specific reasons for individual’s job satisfaction, the survey was designed to help identify what psychosocial factors influence job satisfaction and turnover intention.

The three cohorts were identified:

- Those who have left the profession, including those who are unsure or intend to return
- Those who answered “usually” or “always” to the question, “How often have you considered leaving physiotherapy?” in the TIS
- Those who answered “sometimes”, “rarely” or “never” to the TIS leaving question, and are not considering leaving.

Answering “sometimes” to this question in itself has not been shown to be correlated with actual turnover or to job satisfaction to the extent that answering “usually” or “always” is.

Convention is to call the variables within a scale “items”, rather than questions, so that term is used in the following analysis. Further information on the statistical analysis methodology may be found in Appendix C.

5.1 Those who have left

Of the 128 respondents who did not currently hold a New Zealand Annual Practising Certificate (APC), 35 percent worked in Manual Therapy/Musculoskeletal, 13 percent with Older Adults, and 10 percent with Private Outpatients. Over 55 percent first registered 21 or more years ago, while 20 percent registered 10 or less years ago. Around 45 percent were aged 25-44 years of age, and nearly 85 percent were women. Eighty percent of this cohort did not plan to resume their physiotherapy career. This group represents 11.3 percent of the total number of respondents. For ease of description, this cohort is considered to be those who have left the profession.

5.1.1 Copenhagen Psychosocial Questionnaire (COPSOQ)

The strongest correlations in the COPSOQ scale were between:

- Predictability and recognition ($r=0.84$), role clarity ($r=0.76$), and social support from supervisor ($r=0.68$)
- Quality of leadership and recognition ($r=0.82$), social support from supervisor ($r=0.81$), and predictability ($r=0.73$)
- Recognition and social support from supervisor ($r=0.71$), and role clarity ($r=0.69$)
- Meaning of work and commitment to the workplace ($r=0.68$).

These are all considered strong positive associations. However, when considering this cohort and the cohort who are not considering leaving, the between-group difference is 0.03 and 0.07 higher in most of these associations. The exceptions are predictability and social support from supervisor (0.17 higher correlation), and predictability and quality of leadership (0.13 higher correlation).

Where the largest differences exist between these cohorts are in how predictability, recognition, and role clarity impact job satisfaction, with greater associations between discontent in these areas and low job satisfaction (0.49 higher correlation) in the cohort that has left. Dissatisfaction with the quality of leadership and job dissatisfaction also have a stronger correlation (0.37 higher correlation). With the cohort that is not considering leaving, there was almost no association between these variables. It may be reasonably inferred that these are causal factors that influence leaving.

This cohort was more likely to agree that their work was draining, and had a negative effect on their private life (67 percent). However, there was no difference in time demand and impact on private life between those who have left and the overall response rate.

5.1.2 Effort-Reward Imbalance (ERI) questionnaire

The strongest associations in the ERI were between work prospects and salary being adequate considering all efforts ($r=0.62$), and adequate work prospects and current position reflecting education/training ($r=0.57$). While the second association is almost the same as the cohort that is not considering leaving, the first is a 0.15 higher correlation. As the ERI items measure perceived reward for effort, those who have left were more likely to consider their work prospects and salary inadequate given their efforts and achievements.

Additionally, they were more likely to have experienced undesirable changes in their work situations that negatively affected their job promotion prospects (0.17 higher correlation), and were more likely to agree that their job promotion prospects were poor. They were also more likely to disagree that their work prospects and income were adequate for their effort. This indicates that for those who have left, they did not feel their work prospects and income reflected their education and training, and their job promotion prospects were unsatisfactory.

5.1.3 Flexible Working Arrangements (FWA)

Under half this cohort (47.7 percent) said their last physiotherapy workplace had a policy for FWA, although 45.8 percent had submitted a request. Caring for children (21.5 percent) or to have greater work-life balance (19.6 percent) were the most common reasons. Their request was approved in 89.1 percent of cases. This figure is similar to the overall response rate, and for this cohort, was not associated with leaving.

5.1.4 Continuing Professional Development (CPD)

Making changes to family activity plans and CPD demands interfering with home and family life were the most strongly correlated variables for this cohort ($r=0.70$). The cost of maintaining an APC was also associated with making changes to family plans ($r=0.63$), and CPD demands interfering with home and family life was linked to the ease of completing CPD hours ($r=0.63$). This cohort was more likely to consider CPD a burden across all items. In particular, ease of completing CPD hours and making changes to family activity plans was more strongly correlated (0.26 higher correlation than the cohort that is not considering leaving), and this variable also had a 0.22 higher correlation with CPD demands interfering with home and family life. However, the ease of accessing CPD was not considered to be as much of a strain on finances (0.08 lower correlation).

5.1.5 Turnover Intention Scale (TIS)

The strongest correlations were between looking forward to another day as a physiotherapist and accepting a job in a different profession at the same pay rate ($r=0.56$), and how satisfying physiotherapy is in fulfilling personal needs ($r=0.50$). Considering leaving physiotherapy had a moderately strong relationship with how satisfying the profession is ($r=0.45$). The weakest relationships were between achieving work-related goals and all other items in the TIS scale. The correlation between accepting a job in a different profession at the same pay rate and leaving physiotherapy was 0.38 higher in the group who had already left.

When assessing the relationship between considering leaving physiotherapy and job satisfaction, there was a moderately strong relationship in all responses ($r=0.49$). Despite the assumed passage of time, the correlation held with this cohort ($r=0.45$).

5.2 Those who usually or always consider leaving

This group consists of those who hold an APC, and answered “usually” or “always” to the question, “How often have you considered leaving physiotherapy?” in the TIS. There were 202 respondents in this cohort, with 43 percent working as private practice employees or contractors, 15 percent working as business owners, and 15 percent working for District Health Boards (DHBs). They were largely aged 25-44 years of age (55 percent), and were female (76 percent), with 50 percent first registering between six and 20 years ago. Seventy eight percent were currently practising as physiotherapists, while 6.4 percent were working in a physiotherapy-related role, and another 6.4 percent were undertaking post-graduate study while still working. This group represents 17.8 percent of the total number of respondents.

5.2.1 Copenhagen Psychosocial Questionnaire (COPSOQ)

As with the cohort who have left, the strongest correlations in the COPSOQ scale were in the interpersonal domain:

- Predictability and recognition ($r=0.76$), and quality of leadership ($r=0.63$)
- Quality of leadership and social support from supervisor ($r=0.77$), and recognition ($r=0.71$)
- Recognition and role clarity ($r=0.63$).

Over a third said they were only informed about important decisions or plans for the future to a small or very small extent, less than the overall rate. In addition, only 38.7 percent said their immediate superior gave priority to their job satisfaction to a large or very large extent, compared

to 48 percent of the total group. Recognition and appreciation from management to a large or very large extent was 15 percent less in this cohort (31.8 percent compared to 46.7 percent).

As with the cohort who are considering leaving, this cohort was more likely to agree that their work was draining, and had a negative effect on their private life (82 percent). They are also more likely to say that their work impacts on their time (67.3 percent). These figures are considerably higher than the overall response rate, and the lack of work-life balance is very likely a factor in the 43.3 percent who were unsatisfied or very unsatisfied with their job.

The difference between this cohort and the cohort who have already left is most noticeable in that this cohort have higher levels of commitment to their workplace, and 48.5 percent of this group say their workplace is of great importance to them. There are between-group differences of 0.46 to 0.51 in correlations between workplace commitment and predictability, recognition, role clarity, and quality of leadership in the two groups. This is to be expected when people have already left, as workplace commitment is unlikely to be present.

When comparing to the group who are not thinking of leaving, the greatest difference is in the relationship work pace and quantitative demands – while for those who are considering leaving, there is not a strong relationship between the two variables, it is one of the strongest associations for those who are staying. This indicates differing tolerances for the demands of the job between the two cohorts. Nearly 85 percent of this group answered “always” or “often” to questions around working at a high pace, higher than the response rate of those who are not considering leaving (78 percent).

Overseas research has also shown a relationship between work demands, work-life conflict, and burnout. A smaller German study looking at work stress of physiotherapists showed much lower reported rates of high work pace, quantitative demand, and work-life conflict, but similar levels of job satisfaction.⁴

While 82.5 percent of the total responses are satisfied or very satisfied with being a physiotherapist, just 56.7 percent of this cohort are. In addition, only 67 percent say their work is important to a large or very large extent (82.3 percent overall). It’s fair to say that this group has a level of disillusionment about their working conditions and are at higher risk of burnout given their work pace.

5.2.2 Effort-Reward Imbalance (ERI) questionnaire

Correlations between job promotion and job security items were generally moderate to weak ($r=0.33$ or lower), with the exception of adequate work prospects and current position reflecting education/training ($r=0.47$). This is a weaker relationship than for those who have already left by 0.10 points, but it still indicates that they consider their current position and their future work prospects inadequate given their training. However, salary adequacy was not as great a factor.

This group was less likely to have experienced undesirable changes in their work situations that negatively affected their job promotion prospects than the cohort who have already left (0.41 lower correlation). However, the cohort who are staying were even less likely than this group to consider their job promotion prospects impacted by adverse changes (0.24 lower correlation), unsurprising given 36.7 percent indicated they had experienced such a change. The overall response was 24.3 percent.

⁴ Brattig, B., Schablon, A., Nienhaus, A., & Peters, C. (2014). Occupational accident and disease claims, work-related stress and job satisfaction of physiotherapists. *Journal of Occupational Medicine and Toxicology*, 9(1), 36.

This indicates unwanted changes were harmful not only to job promotion prospects, but to job satisfaction. Seventy six percent of this group stated they agreed or strongly agreed their job promotion prospects were poor, over 20 percent greater than the overall response rate. In addition, job security is poorer in this cohort and nearly twice that of the overall rate at 16.4 percent agreement.

5.2.3 Flexible Working Arrangements (FWA)

Less than 40 percent of this group said they knew their workplace had a policy for FWA, with 14.7 percent stating their workplace didn't have a policy. Close to 50 percent had submitted a request, with an 85 percent approval response. This figure is lower than the overall response rate, and may be associated with considering leaving as every person who received a "no" expressed being unsatisfied or very unsatisfied with their job. Caring for children (26 percent) or to have greater work-life balance (23.3 percent) were the most common reasons. Ten percent applied for FWA to undertake further training.

5.2.4 Continuing Professional Development (CPD)

The requirements of CPD were mentioned in the 2018 *Analysis of the Physiotherapy Workforce* report as being particularly burdensome in focus groups and email feedback, particularly around the conflict with family life, the cost, and accessibility.

Intriguingly, there was moderately strong negative correlation between making changes to family activity plans and CPD demands interfering with home and family life ($r=-0.47$). This means the more family plans have to change, the less the respondents perceive that CPD demands interfere with family life. There was a similar negative correlation with the cost of maintaining an APC and making changes to family plans ($r=-0.51$). These results are almost the opposite of those in the cohort that had already left, as well as the cohort of those who are not considering leaving.

However, when considering the responses to individual items on CPD:

- 82 percent disagree or strongly disagree that it is easy to complete CPD hours
- 68 percent agree or strongly agree that CPD interferes with their family plans
- 75 percent agree or strongly agree that the cost of CPD places a burden on their finances
- 55 percent disagree or strongly disagree that CPD is easy to access in their location.

These responses are up to three times higher than the overall response rate, particularly in the case of being easy to complete the hours. For this cohort, CPD is a considerable obligation. However, work-life balance only has a weak relationship with CPD demands affecting home and family life ($r=0.26$). In addition, as a whole, CPD is not related to job satisfaction, and has only a very weak relationship with considering leaving physiotherapy ($r=0.17$). This could possibly indicate a level of acceptance of the requirements of CPD as part of working as a physiotherapist, but general dissatisfaction with the implications of those requirements.

5.2.5 Turnover Intention Scale (TIS)

The strongest correlation in this cohort was between looking forward to another day as a physiotherapist and how satisfying physiotherapy is in fulfilling personal needs ($r=0.61$). Looking forward to another day in the job had a moderate relationship with accepting a job in a different profession at the same pay rate ($r=0.34$). As with the cohort who has left, the weakest relationships were between achieving work-related goals and all other items in the TIS scale.

This group is more likely to accept a job in a different profession at the same pay rate than those who are not considering leaving (0.51 higher correlation), but also finds physiotherapy less satisfying in meeting their personal needs (0.38 lower correlation). While they may have answered “usually” or “always” to the question, “How often have you considered leaving physiotherapy?” in the TIS, they are less likely to actually leave than those who have already left – an unsurprising result, but one that adds validity to the analysis.

There was a moderate relationship between the TIS and job satisfaction ($r=0.43$), slightly weaker than the cohort who have left. It may be while this group frequently thinks about leaving, they haven’t reached a point where they act on those thoughts. To understand this better, we look to international research. Job dissatisfaction has been consistently shown to be one of the most reliable predictors of turnover intention of healthcare workers. Korean research on the turnover rate of physiotherapists found the higher the workplace stress, the higher the turnover intention, and the better the working environment, the lower the turnover intention.⁵ In particular, workplace stress had the most significant impact on turnover intention ($r=0.42$), with working environment have a negative correlation ($r=-0.39$). The research concluded workplace stress was the direct cause of turnovers, but improving the working environment could lessen turnover intention. Therefore, it was essential to reduce the workplace stress of physiotherapists and improve the working environment to increase job satisfaction and reduce turnover.

This finding can be supported by response rates to the psychosocial factors in the COPSOQ for this cohort discussed in section 3.2.1. These include low rates of satisfaction with interpersonal factors (predictability, recognition, role clarity, quality of leadership, and social support from supervisor), and high levels of workplace demands (work pace and work-life conflict). Improved leadership and support, which includes having workplace contributions recognised, having clear work objectives, and being informed of important decisions and plans is crucial. These aspects can strengthen the working environment, which may mitigate turnover intention. Furthermore, they can contribute to reducing workplace demands and lessen workplace stress.

An overseas study found those who want to leave their workplace may exhibit low workplace commitment.⁶ The study indicated that workplace commitment had three facets: affective commitment (emotional attachment), normative (obligation), and continuance (necessity or fear of loss). Normative commitment was shown to influence turnover intention, but affective and continuance commitment impact job satisfaction. A New Zealand allied health workforce study found job satisfaction and affective commitment were considerable mediators between workplace stress, and work-life conflict with turnover intentions.⁷

The lower levels of workplace commitment in this cohort are reflected in the 75 percent who would take a different job at the same compensation. As well, 56 percent say working as a physiotherapist does not meet their personal needs. Given the strong relationships between how satisfying physiotherapy is at meeting personal needs, looking forward to another day as a physiotherapist, and considering leaving, these figures are concerning.

⁵ Lee, B. K., Seo, D. K., Lee, J. T., Lee, A. R., Jeon, H. N., & Han, D. U. (2016). Impact of work environment and work-related stress on turnover intention in physical therapists. *Journal of physical therapy science*, 28(8), 2358-2361.

⁶ Bonds, A. A. (2017). *Employees' Organizational Commitment and Turnover Intentions (Thesis, Doctor of Business Studies (DBA))*. Walden University, Minnesota, USA.

⁷ Riley, D. (2006). *Turnover Intentions: The Mediation Effects of Job Satisfaction, Affective Commitment and Continuance Commitment (Thesis, Master of Social Sciences (MSocSc))*. The University of Waikato, Hamilton, New Zealand. Retrieved from <https://hdl.handle.net/10289/2415>

5.3 Those who are not considering leaving

This group consists of those who hold an APC, and answered “sometimes”, “rarely” or “never” to the question, “How often have you considered leaving physiotherapy?” in the TIS. This was the largest cohort with 802 respondents. The largest practice areas were Manual Therapy / Musculoskeletal (37.5 percent), Older Adults (8.4 percent), Paediatric (7.4 percent), and Private Practice Outpatients (7.2 percent). They were predominantly more experienced physiotherapists with 30.3 percent first registering 11 to 20 years ago, and 43.4 percent registering 21 or more years ago. This group represents 70.8 percent of the total number of respondents.

Eighty three percent were currently practising as physiotherapists, while 7.1 percent were working in a physiotherapy-related role, and another 5.2 percent were undertaking post-graduate study while still working. Business owners were well represented in this group (24.4 percent), as well as private practice employees or contractors (39.6 percent), and DHB employees (23.6 percent). Most academic institution employees were in this cohort. This group were more likely to be in the main urban centres around Auckland, Wellington, and Christchurch (55 percent). Gender and age representation did not widely vary from the overall survey response with the exception of having less responses from those over 65 years of age.

5.3.1 Copenhagen Psychosocial Questionnaire (COPSOQ)

Similarly to the previous two cohorts, the strongest correlations in the COPSOQ scale were in the interpersonal domain:

- Predictability and recognition ($r=0.76$), and role clarity ($r=0.73$)
- Quality of leadership and social support from supervisor ($r=0.77$), and recognition ($r=0.75$)
- Recognition and role clarity ($r=0.70$), and social support from supervisor ($r=0.63$).

There were also strong correlations between work organisation variables:

- Meaning of work and possibilities for development ($r=0.68$), and commitment to the workplace ($r=0.63$).

Workplace commitment was high with this group with 73.7 percent saying their workplace is of great importance to them, 25.2 percent higher than the cohort who are considering leaving. Possibilities for development are also high – 71.6 percent are able to learn new things or take the initiative to a large or very large extent, 6.3 percent higher than the leaving cohort. The between-group difference with these items is 0.38, with a much stronger association for the group who are staying.

This cohort is less likely to agree that their work drains their energy (55.8 percent) or their time (45.2 percent), indicating less work-life conflict than with the other cohorts. Across interpersonal variables, such as predictability, recognition, quality of leadership, and social support from supervisor, the cohort who are not considering leaving consistently report higher levels of engagement, information, and support. They were also less likely to have high work pace, emotional demands, and quantitative demands (having enough time for work tasks).

Fifty two percent said their immediate superior values their job satisfaction to a large or very large extent, compared to 38.7 percent of those who are considering leaving, and 50.6 percent were recognised and appreciated by management (compared to 31.8 percent). We can reasonably assume that the lower levels of work stress and higher rates of approval of working environment contributes to the higher levels of job satisfaction.

Eighty three percent of those who are not considering leaving are satisfied or very satisfied with being a physiotherapist, considerably higher than the 56.7 percent of those who are considering leaving. Satisfaction differs across employment type: private practice employees and contractors (84 percent), DHBs and private hospitals (79 percent), and business owners (90 percent). In addition, 83 percent say their work is meaningful to a large or very large extent.

5.3.2 Effort-Reward Imbalance (ERI) questionnaire

There were more correlations between ERI items for this cohort, largely with the adequate work prospects variable:

- Current position reflecting education/training ($r=0.58$)
- Job promotion prospects ($r=0.42$)
- Adequate income ($r=0.47$).

This group was less likely again to have experienced undesirable work changes, and this was moderately correlated with poor job security ($r=0.40$). These are stronger relationships than with the cohort who is considering leaving, and shows a level of confidence in their current situation. This is supported by the 65.8 percent who agree or strongly agree that their current position reflects their training, and the 52.3 percent who agree or strongly agree that their work prospects are adequate.

This cohort was the least likely to have experienced unwanted changes (21.5 percent). This is reflected in relatively high job security in this group, with just 6.1 percent agreeing it is poor, considerably lower than the 16.4 percent of the leaving cohort. However, 50.4 percent still felt their job promotion prospects were poor (compared to 76 percent of that group). This may relate to the lack of career pathway discussed in the 2018 *Analysis of the Physiotherapy Workforce* report or it may relate specifically to individual workplaces.

5.3.3 Flexible Working Arrangements (FWA)

Again there was a low awareness or presence of FWA policies with 40.3 percent saying their workplace had one, and 13.3 percent stating they didn't. As with the unsatisfied cohort, close to 50 percent had submitted a request, with a higher approval rate of 91.4 percent (compared to 85 percent). Caring for children (25.4 percent) or to have greater work-life balance (25.3 percent) were the most common reasons, similar to other groups. A larger percentage had applied for FWA to undertake further training (13.8 percent).

5.3.4 Continuing Professional Development (CPD)

The strongest CPD correlations were between making changes to family activity plans and CPD demands interfering with home and family life ($r=0.57$), and the cost of maintaining an APC ($r=0.51$). This shows that not only does CPD impact home and family, but also impacts financial resources available for family plans. However, the effect of CPD requirements was not perceived to be as great as for the cohort that had already left.

Comparing to those who are considering leaving:

- 19.3 percent disagree it was easy to complete CPD hours, compared to 82 percent
- 46.9 agree that CPD interferes with home life, compared to 68 percent
- 42.9 percent agree CPD costs are a burden, compared to 75 percent

- 35.5 percent disagree CPD is accessible in their location, compared to 55 percent.

It is possible that the high urban representation, business owner representation, or longer physiotherapy experience in this cohort is reflected in these figures, which generally reflect that CPD is not as much of a burden as for the other groups. Additionally, when considering inter-item relationships, CPD also has very weak relationships with work-life conflict, job satisfaction, and the TIS.

5.3.5 Turnover Intention Scale (TIS)

Moderately strong correlations were found between thinking about leaving and how satisfying physiotherapy is in fulfilling personal needs ($r=0.58$), accepting a different job at the same pay ($r=0.57$), and looking forward to another day as a physiotherapist ($r=0.54$). The strongest correlation was between looking forward and physiotherapy meeting personal needs ($r=0.63$). Given that this group answered “sometimes”, “rarely” or “never” to the TIS question on considering leaving, these correlations indicate these other variables are important factors in staying. As with other cohorts, relationships between achieving work-related goals and other items were weak.

The between-group difference (with this cohort and considering leaving cohort) for thinking about leaving and how satisfying physiotherapy is in fulfilling personal needs was 0.51. The high correlation between these variables in this cohort points to how important intrinsic motivators are in turnover intention for those staying in the profession – the job needs to be personally rewarding and fulfilling. Another between-group difference is for accepting a different job and satisfying personal needs (0.38). This is a smaller difference, but supports the protective relationship between personal satisfaction and the likelihood of accepting a different job.

In fact, this group responded that 73.4 percent were satisfied or very satisfied that physiotherapy meets their personal needs. Additionally, 68.4 percent always or usually look forward to another day as a physio. While this group largely has high job satisfaction, which appears to be protecting against work demands, 19 percent would accept a different job at same rate. It would be prudent to not make assumptions that risk factors still exist here.

Appendix A Survey scales

Copenhagen Psychosocial Questionnaire (COPSOQ) items

The COPSOQ includes extensive coverage of reliable and distinct psychosocial factors that impact people in their working life, and is intended for practical use in workplaces and in research on work and health.^{8, 9, 10} There are short (or core), middle, and long versions of the COPSOQ, used in over 40 countries in over 400 peer reviewed papers.¹¹

For this study, items from the short version were used. These items covered demands at work, work organisation and job content, interpersonal relations and leadership, and work-individual interface. Trust and health items from the short version were not used.

Effort-Reward Imbalance (ERI) questionnaire items

Six items regarding job promotion prospects, salary, and job security were taken from the ERI questionnaire.¹² These items are intended to measure perceived rewards or gains from education and employment efforts. Other items from the questionnaire were not used as COPSOQ items were already asking about quantitative demand (work pace and workload) and over-commitment (work-life balance).

Flexible Working Arrangements (FWA)

The FWA questions were custom designed for this survey based on the most common reasons identified for FWA in desktop research.

Continuing Professional Development (CPD)

The items on CPD were adapted from items in the Work-Family Conflict Scale (WAFCS) designed to measure two directional components of work-family conflict.¹³ The WAFCS items were easily adaptable when looking for measures to evaluate how CPD may impact functioning across domains. Additional items were designed to complement the adapted questions. Work-life conflict was also measured in the COPSOQ items, and correlated to CPD items to assess validity.

⁸ Kristensen, T.S. (2010). A questionnaire is more than a questionnaire. *Scandinavian Journal of Public Health*, 38(3 Suppl):149-55. doi:10.1177/1403494809354437.

⁹ Pejtersen, J.H., Kristensen, T.S., Borg, V., & Bjorner, J.B. (2010). The second version of the Copenhagen Psychosocial Questionnaire. *Scandinavian Journal of Public Health*, 38(3 Suppl):8-24. doi:10.1177/1403494809349858.

¹⁰ Nübling, M., Burr, H., Moncada, S., & Kristensen, T.S. (2014). COPSOQ International Network: Co-operation for research and assessment of psychosocial factors at work. *Public Health Forum*, 22(1):18.e1-18.e3. doi:10.1016/j.phf.2013.12.019.

¹¹ <https://www.copsoq-network.org/assets/Uploads/Literaturliste-Mai18-Netzwerk-peer-reviewed-only-V1.pdf>

¹² Siegrist, J., Starke, D., Chandola, T., Godin, I., Marmot, M., Niedhammer, I., & Peter, R. (2004). The measurement of effort-reward imbalance at work: European comparisons. *Social Science & Medicine*, 58(8), 1483-1499.

¹³ Netemeyer, R.G., Boles, J.S., & McMurrian, R. (1996). Development and validation of work-family conflict and family-work conflict scales. *Journal of Applied Psychology*, 81(4), 400.

Turnover Intention Scale (TIS) items

Five items were used from the TIS to measure the dependent variable of turnover intentions.¹⁴ While the paper detailing the development of the TIS is unpublished (that is, not published in a peer reviewed journal), it is widely available on the internet and the scale has been used in studies to assess an employee's intent to leave.

Limitations on survey scales

A limitation with this survey was the ability to design a survey that would effectively capture the breadth of workforce experience. Physiotherapy is a profession with many variables regarding area of practice, type of employer, including business owner, and qualification type. The diversity of the physiotherapy workforce created a challenge to include all possible working and practice situations, while also considering how long the survey could reasonably be to respect people's time and commitments, which further restricted how many dimensions could be surveyed.

For this reason, the survey focused on general psychosocial pressures in the workplace and turnover intentions, alongside some tailored questions to get a high level and broad understanding of general job strain, job satisfaction, working environment, and professional development. Questions were not included where they may have been specific to only one type of working environment or experience, i.e. ACC co-payment rates in private practice, or staff recruitment for business owners.

¹⁴ Roodt, G. (2004). *Turnover intentions*. Unpublished document. Johannesburg: University of Johannesburg.

Appendix B Detailed survey results

Professional practice questions

Do you have a current New Zealand Annual Practising Certificate (APC)?

Yes	89.30%	1077
No	10.70%	129

Where are you currently registered as a physiotherapist?

New Zealand	91.92%	1104
United Kingdom	5.58%	67
Australia	3.66%	44
Other	2.75%	33
I am not currently registered	5.08%	61

Please indicate your main area of work. If you hold (or have held) multiple roles please indicate your primary role.

Manual Therapy/Musculoskeletal	37.69%	435
Older Adults	8.58%	99
Private Practice Outpatients	8.15%	94
Paediatric	6.24%	72
Neurology	4.59%	53
Hand Therapy	4.42%	51
Business Owner	3.81%	44
Sports & Exercise	3.73%	43
Occupational Health	3.03%	35
Academic	2.86%	33
Management	2.43%	28
Respiratory	2.34%	27
Pelvic Men's & Women's Health	2.17%	25
Advisory/Leadership	1.39%	16
Cardiothoracic	0.87%	10
Acupuncture	0.52%	6
Mental Health	0.43%	5
Other	6.76%	78

What is your highest level of physiotherapy qualification completed?

Bachelors	35.49%	427
Post-graduate Certificate	17.29%	208
Post-graduate Diploma	17.29%	208
Masters	16.71%	201
Diploma	10.72%	129
PhD	2.49%	30

When did you first register as a physiotherapist?

21+ years ago	43.80%	526
11-20 years	29.73%	357
6-10 years	14.07%	169
2-5 years	8.91%	107
Less than 2 years ago	3.50%	42

What best describes your current situation?

Currently practising as a physiotherapist	74.17%	890
Currently practising in a physiotherapy-related role, i.e. advisor, educator, assessor	6.92%	83
Currently practising as a physiotherapist and undertaking postgraduate study	5.25%	63
Working in another job (not physiotherapy)	3.92%	47
On parental leave	2.50%	30
Undertaking postgraduate study and not practising as a physiotherapist	0.42%	5
Looking for work as a physiotherapist	0.33%	4
Other, including retired	6.50%	78

If you are currently not working as a physiotherapist, do you plan to resume your physiotherapy career within the next 3 years?

No	55.26%	84
Yes	24.34%	37
Unsure	20.39%	31

Please select your current main employer.

Private Practice Employee	24.59%	257
Business Owner	24.69%	258
District Health Board	22.01%	230
Private Practice Contractor	14.26%	149
Academic Institution	4.31%	45
Overseas	2.78%	29
Ministry of Education Group	1.53%	16
Other Government Department or Crown Entity	1.24%	13
Private Hospital	0.96%	10
Other	3.64%	38

Survey questions

Copenhagen Psychosocial Questionnaire (COPSOQ) – short version

Quantitative demands				
	Do you get behind with your work?		Do you have enough time for your work tasks?	
Always	12.63%	148	6.14%	72
Often	29.78%	349	30.29%	355
Sometimes	33.79%	396	33.11%	388
Seldom	14.51%	170	22.18%	260
Hardly ever or never	8.70%	102	7.42%	87
Not applicable	0.60%	7	0.85%	10
Work pace				
	Is it necessary to keep working at a high pace?		Do you work at a high pace throughout the day?	
Always	33.53%	392	29.44%	343
Often	44.91%	525	48.93%	570
Sometimes	17.54%	205	17.85%	208
Seldom	2.48%	29	2.58%	30
Hardly ever or never	0.94%	11	0.52%	6
Not applicable	0.60%	7	0.69%	8

Emotional demands				
	Does your work put you in emotionally disturbing situations?		Do you have to relate to other people's personal problems as part of your work?	
Always	2.38%	28	25.28%	297
Often	19.40%	228	47.66%	560
Sometimes	43.83%	515	19.83%	233
Seldom	22.30%	262	4.60%	54
Hardly ever or never	11.40%	134	2.13%	25
Not applicable	0.68%	8	0.51%	6
Work-life conflict				
	Do you feel that your work drains so much of your energy that it has a negative effect on your private life?		Do you feel that your work takes so much of your time that it has a negative effect on your private life?	
Yes, certainly	24.31%	275	18.35%	207
Yes, to a certain degree	37.58%	425	32.00%	361
Yes, but only very little	29.00%	328	30.41%	343
No, not at all	9.11%	103	19.24%	217
Influence at work				
	Do you have a large degree of influence concerning your work?		Can you influence the amount of work assigned to you?	
Always	18.14%	212	17.12%	201
Often	35.67%	417	25.38%	298
Sometimes	31.91%	373	33.30%	391
Seldom	11.04%	129	16.52%	194
Hardly ever or never	1.97%	23	6.90%	81
Not applicable	1.28%	15	0.77%	9

Development				
	Do you have the possibility of learning new things through your work?		Does your work require you to take the initiative?	
To a very large extent	21.15%	247	35.88%	418
To a large extent	37.07%	433	44.12%	514
Somewhat	30.82%	360	16.05%	187
To a small extent	8.65%	101	2.58%	30
To a very small extent	2.05%	24	0.77%	9
Not applicable	0.26%	3	0.60%	7
Meaning of work				
	Is your work meaningful?		Do you feel that the work you do is important?	
To a very large extent	35.87%	415	38.56%	450
To a large extent	46.50%	538	44.90%	524
Somewhat	15.90%	184	14.22%	166
To a small extent	1.21%	14	1.71%	20
To a very small extent	0.26%	3	0.34%	4
Not applicable	0.26%	3	0.26%	3
Commitment to workplace				
	Do you feel that your place of work is of great importance to you?		Would you recommend a good friend to apply for a position at your workplace?	
To a very large extent	24.76%	289	25.90%	301
To a large extent	43.10%	503	32.01%	372
Somewhat	23.65%	276	23.32%	271
To a small extent	6.17%	72	9.04%	105
To a very small extent	1.71%	20	6.71%	78
Not applicable	0.60%	7	3.01%	35

Predictability				
	At your place of work, are you informed well in advance concerning for example important decisions, changes, or plans for the future?		Do you receive all the information you need in order to do your work well?	
To a very large extent	16.55%	189	14.19%	162
To a large extent	24.96%	285	44.92%	513
Somewhat	30.39%	347	29.33%	335
To a small extent	13.84%	158	6.83%	78
To a very small extent	9.28%	106	1.14%	13
Not applicable	4.99%	57	3.59%	41
Recognition				
	Is your work recognised and appreciated by the management?		Are you treated fairly at your workplace?	
To a very large extent	18.19%	207	28.57%	326
To a large extent	28.47%	324	39.61%	452
Somewhat	28.56%	325	18.14%	207
To a small extent	11.34%	129	5.00%	57
To a very small extent	5.98%	68	2.28%	26
Not applicable	7.47%	85	6.40%	73
Role clarity				
	Does your work have clear objectives?		Do you know exactly what is expected of you at work?	
To a very large extent	20.79%	237	29.24%	333
To a large extent	45.61%	520	50.48%	575
Somewhat	22.72%	259	14.84%	169
To a small extent	6.23%	71	1.49%	17
To a very small extent	2.46%	28	0.88%	10
Not applicable	2.19%	25	3.07%	35

Quality of leadership				
	To what extent would you say that your immediate superior gives high priority to job satisfaction?		To what extent would you say that your immediate superior is good at work planning?	
To a very large extent	18.39%	208	15.04%	170
To a large extent	29.62%	335	27.96%	316
Somewhat	24.14%	273	28.76%	325
To a small extent	11.85%	134	11.24%	127
To a very small extent	6.10%	69	6.02%	68
Not applicable	9.90%	112	10.97%	124
Social support				
	How often is your nearest superior willing to listen to your problems at work?		How often do you get help and support from your nearest superior?	
To a very large extent	32.67%	361	17.39%	193
To a large extent	31.76%	351	27.57%	306
Somewhat	18.10%	200	29.37%	326
To a small extent	4.71%	52	11.44%	127
To a very small extent	2.44%	27	4.14%	46
Not applicable	10.32%	114	10.09%	112

How pleased are you with your job as a whole, everything taken into consideration?

Very satisfied	25.22%	285
Satisfied	57.26%	647
Unsatisfied	15.40%	174
Very unsatisfied	2.12%	24

Effort-Reward Imbalance (ERI) – promotion and job security items

	Strongly agree		Agree		Neutral		Disagree		Strongly disagree	
	%	n	%	n	%	n	%	n	%	n
My job promotion prospects are poor.	30.90%	343	24.32%	270	26.58%	295	12.52%	139	5.68%	63
My current position adequately reflects my education and training.	18.47%	207	43.71%	490	20.96%	235	12.67%	142	4.19%	47
Considering all my efforts and achievements, my work prospects are adequate.	9.84%	110	38.82%	434	27.82%	311	18.43%	206	5.10%	57
Considering all my efforts and achievements, my salary/income is adequate.	6.49%	73	22.69%	255	20.28%	228	31.49%	354	19.04%	214
I have experienced or I expect to experience an undesirable change in my work situation.	6.81%	76	18.46%	206	31.99%	357	29.84%	333	12.90%	144
My job security is poor.	1.60%	18	7.22%	81	18.36%	206	41.09%	461	31.73%	356

Flexible Working Arrangements (FWA)

Does your workplace have a policy for FWA?

Yes	41.06%	457
No	13.84%	154
Unsure	45.10%	502

I have requested FWA at my workplace in order to:

Care for children	25.07%	267
To have greater work-life balance	24.41%	260
To undertake further education or training	12.68%	135
For leisure or sporting interests	8.36%	89
Due to health related issues	6.67%	71
Care for elders, partners or other relatives	6.01%	64
To volunteer	2.72%	29
Other	3.29%	35
I have not requested flexible working	51.55%	549

If you have requested FWA, did your employer agree to your request?

Yes	90.07%	499
No	9.93%	55

Continuing Professional Development (CPD)

	Strongly agree		Agree		Neutral		Disagree		Strongly disagree	
It is easy for me to complete the CPD hours required to meet the re-certification requirements.	22.71%	253	35.28%	393	17.41%	194	18.94%	211	5.66%	63
The demands of CPD interfere with my home and family life.	14.03%	156	37.23%	414	26.35%	293	17.81%	198	4.59%	51
The cost of maintaining my APC places a strain on my finances.	21.59%	241	27.96%	312	22.40%	250	18.91%	211	9.14%	102
To attend CPD, I have to make changes to my plans for family activities.	30.88%	344	41.29%	460	15.08%	168	9.34%	104	3.41%	38
CPD is easy to access in my location.	8.89%	99	33.39%	372	20.20%	225	22.62%	252	14.90%	166

Turnover Intention Scale items

How often have you considered leaving physiotherapy?

Always	9.00%	99
Usually	13.09%	144
Sometimes	37.00%	407
Rarely	22.91%	252
Never	18.00%	198

How satisfying is physiotherapy in fulfilling your personal needs?

Very satisfying	15.79%	175
Satisfying	47.56%	527
Neutral	25.27%	280
Unsatisfying	8.94%	99
Very unsatisfying	2.44%	27

How often are you frustrated when not given the opportunity as a physiotherapist to achieve your personal work-related goals?

Always	6.76%	74
Usually	16.91%	185
Sometimes	41.04%	449
Rarely	27.79%	304
Never	7.50%	82

How likely are you to accept a job in a different profession at the same compensation level should it be offered to you?

Very likely	13.97%	154
Likely	18.97%	209
Neither likely nor unlikely	25.59%	282
Unlikely	20.78%	229
Very unlikely	20.69%	228

How often do you look forward to another day as a physiotherapist?

Always	11.30%	125
Usually	46.29%	512
Sometimes	29.93%	331
Rarely	10.04%	111
Never	2.44%	27

Demographic questions

Region

Auckland	28.79%	317
Canterbury Region	14.35%	158
Wellington	9.54%	105
Bay of Plenty	8.54%	94
Otago Region	7.27%	80
Waikato	7.08%	78
Manawatu-Wanganui	3.81%	42
Northland	3.00%	33
Hawke's Bay	2.82%	31
Taranaki	2.18%	24
Southland Region	2.09%	23

Nelson Region	1.91%	21
Gisborne	1.27%	14
Marlborough	1.27%	14
Tasman Region	1.27%	14
West Coast Region	0.54%	6
Other	4.27%	47

Ethnicity

NZ European	76.06%	845
British or Irish	9.09%	101
Other European	5.76%	64
Māori	4.86%	54
Chinese	2.16%	24
Indian	1.89%	21
Other Asian	1.62%	18
Pasifika	0.81%	9
Other	5.22%	58

Gender

Female	77.19%	853
Male	22.62%	250
Gender diverse	0.18%	2

Age

18 to 24	3.88%	43
25 to 34	22.72%	252
35 to 44	29.13%	323
45 to 54	23.17%	257
55 to 64	16.23%	180
65 to 74	4.06%	45
75 or older	0.81%	9

Appendix C Statistical analysis methodology

There were three “sweeps” of the survey data. The first sweep focused on the totality of responses and high level results. The second sweep focused on correlations between the items within the survey scales, both within each scale and between items in different scales. From this sweep, the three cohorts were identified.

These cohorts include

- Those who have already left the profession, including those who are unsure or intend to return
- Those who answered “usually” or “always” to the question, “How often have you considered leaving physiotherapy?” in the TIS
- Those who answered “sometimes”, “rarely” or “never” to the TIS leaving question.

Answering “sometimes” to this question was not shown to be correlated with actually leaving in international research and therefore is not indicative in itself of turnover intention.

The third sweep focused on practice situations, including employer type, and length of time since first registration, in order to identify differences between these. Employer type was shown to have the greatest variance in response, followed by registration length. Highest qualification, area of work, and the demographic variables did not offer any additional insight.

Correlations

To understand the relationship between variables, correlation coefficients (or “r”) were calculated. The value of “r” ranges from -1.0 to +1.0. The closer “r” is to +1.0 or -1.0, the more closely the two variables are related, in either a positive or negative direction. If “r” is close to 0, there is no relationship between the variables. Correlations were calculated for some individual items between scales, including the Copenhagen Psychosocial Questionnaire (COPSOQ), the Effort-Reward Imbalance (ERI) questionnaire, items from the Turnover Intention Scale (TIS), and the Continuing Professional Development (CPD) items, as well as answers to questions on Flexible Working Arrangements (FWA).

Correlation matrices are tables showing correlation coefficients between variables, and are a way to summarise data. Each cell in the table shows the relationship between two variables. The diagonal of the table is always a set of ones, because the correlation between a variable and itself is always 1.0. A correlation matrix was derived for each of the main survey scales for each of the cohorts to understand the different associations between the variables that may influence turnover intention and job satisfaction in each cohort.

There is no rule for determining what size of correlation is considered strong, moderate or weak. The interpretation of the coefficient depends, in part, on the topic of study. When studying variables that are difficult to measure, such as the subjective or psychosocial variables surveyed in this study, the correlation coefficients are expected to be lower. In these types of surveys, correlations above 0.6 would be considered relatively strong; correlations between 0.4 and 0.6 are moderately strong; correlations between 0.3 and 0.4 are moderate; and correlations below 0.3 are weak.

While correlation does not imply causation, it does give an indication of the strength of relationship between these variables. A strong correlation, between-group difference, or within-group change, in combination with other information, can support a strong cause-effect interpretation, and vice versa.