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Physiotherapists' reported attitudes and perceived influences to their continuing professional development – results of an online questionnaire

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Corresponding Author:	Heather Stewart University of Central Lancashire School of Health Sciences Preston, UNITED KINGDOM
First Author:	Heather Stewart, MSc AHP, GradDipPhys
Order of Authors:	Heather Stewart, MSc AHP, GradDipPhys
	Deborah Wisby, EdD, MA, BSc
	Hazel Roddam, PhD, MA, BSc, RegMRCSLT
Abstract:	<p>Introduction – There are intrinsic and extrinsic factors that influence physiotherapists' participation in continuing professional development (CPD). A number of benefits of and barriers to CPD participation are identified in the literature, but relatively little is known about factors that influence attitudes towards continued learning. The aim of this study was to identify factors influencing UK physiotherapists' attitudes towards CPD, with a focus on career point and type of employment, in the context of motivational theories.</p> <p>Methods – An online questionnaire consisting of likert style questions was used to collect data from UK physiotherapists. Nominal and ordinal data were analysed to determine differences between subgroups within the dataset.</p> <p>Results – 205 physiotherapists completed the online questionnaire. Physiotherapists were generally internally motivated towards CPD, but attitudes were influenced by career point, and whether physiotherapists worked in the National Health Service (NHS) or in the private sector. External factors appeared to have a negative effect on motivation towards CPD.</p> <p>Discussion – Differences in attitudes at different points on the career path suggests that organisational structure may impede lifelong learning at some stages in career progression, while differences between those working privately and in the NHS may potentially reflect organisational differences between these types of employment.</p> <p>Implications for Practice – individual attitudes towards CPD are affected by a number of factors and employers should strive to encourage engagement, while recognising the different drivers within different types of employment and at different career points. By increasing physiotherapists' engagement with CPD, patient experience of care and best practice will improve.</p>

Physiotherapists' reported attitudes and perceived influences to their continuing professional development – results of an online questionnaire.

Factors influencing attitudes to CPD

Heather Stewart, GradDipPhys, MSc AHP¹

Dr. Deborah Wisby, EdD, MA, BSc²

Dr. Hazel Roddam, PhD, MA, BSc, RegMRCSLT¹

¹School of Health Sciences, University of Central Lancashire, Preston

²Faculty of Health and Wellbeing, University of Central Lancashire, Preston

Corresponding author: Heather Stewart, HStewart@uclan.ac.uk 01772 894926

Abstract

Introduction – There are intrinsic and extrinsic factors that influence physiotherapists' participation in continuing professional development (CPD). A number of benefits of and barriers to CPD participation are identified in the literature, but relatively little is known about factors that influence attitudes towards continued learning. The aim of this study was to identify factors influencing UK physiotherapists' attitudes towards CPD, with a focus on career point and type of employment, in the context of motivational theories.

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39 practice will improve.

Physiotherapists' reported attitudes and perceived influences to their continuing professional development – results of an online questionnaire.

Introduction

There is a long history of continuing professional development (CPD) within physiotherapy, with mandatory CPD having been part of physical therapy registration in some states in the USA since 1981, and in 33 states since 2011 (Federation of State boards of Physical Therapy, 2011). In Canada, regulation of physiotherapists and their CPD is controlled by individual provinces and territories (International Network of Physiotherapy Regulatory Authorities, 2015). Mandatory CPD is part of reregistration in Australia (Physiotherapy Board of Australia, 2015), South Africa (Health Professions Council of South Africa, 2008) and recertification in New Zealand (The Physiotherapy Board of New Zealand, 2012).

In the UK, the Health and Care Professions Council (HCPC) introduced mandatory audit of CPD for physiotherapists in 2010 (HCPC, 2014). This biannual audit process involves 2.5% of registered physiotherapists in the UK being asked to submit their CPD portfolio. There are no specific guidelines in terms of the number of hours of CPD, but there must be evidence of CPD activity at least every three months, and CPD must meet the HCPC standards for CPD (HCPC, 2018).

In the context of UK health and social care, several factors continue to drive the need for CPD, including the new service model set out in the Long Term Plan (National Health Service (NHS), 2019), the new five-year General Practitioner (GP)

contract which will recruit 22,000 multidisciplinary staff, including physiotherapists, to work alongside GP's to provide first contact interventions (Millet, 2019), and the drive for a digital workforce, which will require physiotherapists to develop skills to support and evaluate the use of validated smartphone apps and the integration of artificial intelligence, robotics and virtual reality into rehabilitation (The Topol Review, 2019).

Motivation to undertake CPD can be internally driven by perceived benefit or internal reward of the learning (Festinger, 1964), perceived ability of the self as a learner (Ryan and Deci, 2017) and to be able to undertake the specific learning tasks (Cassidy and Eachus, 2000), as well as the perceived level of control over learning, or internal locus of control (Cassidy and Eachus, 2000). From an external perspective, motivation can be increased if there is likely to be an external reward (Festinger, 1964; McClelland, 1985; Ryan and Deci, 2017), but external motivation can also be influenced by organisational policy, working relationships, status within the organisation and security of role (Herzberg, 1968), and by the quality and flexibility of the learning provision (Kantar, 2018). Porter and Lawler (1968) proposed that actions are eventually influenced by a balance between the perceived value of the reward (either internal or external) and the effort required to attain the reward.

Published research on CPD has highlighted benefits of and barriers to CPD in physiotherapy (Cole et al, 2008; French, 2006; Gunn and Godling, 2009; Johnson, 2008), and generally attitudes towards CPD in healthcare professionals is reported

positively in the literature (Bell et al, 2002; Keim et al, 2001; Moons et al, 2012; Sturrock and Lennie, 2009) but none of these studies identified whether there was any variance in responses, in terms of benefits, barriers or attitudes, across different subgroups of physiotherapists, such as at different points on the career ladder, or in different types of roles.

The aim of this study was to investigate factors influencing UK physiotherapists' attitudes to CPD, with a focus on the influence of career point and type of employment, in the context of motivational theories. This study formed part of a larger exploratory research project at PhD level. Ethical approval was received from the University of Central Lancashire STEMH Ethics Committee (reference number STEMH 586).

Methods.

An online questionnaire was used to be able to collect data from a large sample of UK physiotherapists. The questionnaire was designed using the Snap 11 Professional online questionnaire software. The questionnaire was piloted with two physiotherapists and the final version was refined according to their feedback. The questionnaire collected demographic information about the participant, including gender, age, length of time qualified as a physiotherapist and physiotherapy related qualifications. It also collected employment data, in terms of primary employment type, the number of other physiotherapists and AHP's the participant worked with daily, job banding, and percentage of time spent in clinical, managerial, educational or research activities. The next section of the

questionnaire asked about CPD activity, perceived benefits and barriers to CPD, and attitudes towards CPD. The attitudinal questions provided statements which were ranked on 6-point likert scales, ranging from strongly agree to strongly disagree.

Sample.

Participants for the questionnaire were recruited from physiotherapists in the UK between May and July 2017. The aim was to recruit from across a range of physiotherapy employment sectors in the UK, in order to gain as diverse a population of responders as possible.

Emails were sent to 158 National Health Service (NHS) physiotherapy service managers across the UK (England, Wales, Scotland and Northern Ireland), whose details had either been retrieved from Oscar Research, via the UCLan Marketing Department or had been obtained through calling the Trusts directly to ask for contact information. The email asked **managers** to circulate the email, including the link to the survey, to their staff. The email included an information sheet about the study, which included contact details for the primary researcher if participants had any questions about the survey before completing it. It was not possible to gain contact information for 36 NHS Trust physiotherapy managers. Private providers across the UK were identified via the PhysioFirst website (<http://www.physiofirst.org.uk>). All contacts (n=1910) retrieved from the website were emailed directly, **inviting** them to participate in the online questionnaire. Only 11 emails were returned as undeliverable, two were returned with automatic replies

88 for maternity leave, and one responded to say that she had retired. No reminder
89 emails were sent.

90 Since it is impossible to know how many NHS managers distributed the email to
91 their staff, and due to lack of control over the email addresses obtained for private
92 practitioners, the number of actual recipients of the link to the questionnaire is
93 uncertain. All physiotherapists who responded to the survey were deemed to have
94 given consent for their anonymised responses to be used in the study.

95 ***Measures.***

96 To develop the questionnaire, relevant surveys from the literature were reviewed,
97 and questions created based on those used in previous research as well as items
98 specifically relevant to this study. Demographic and employment information was
99 collected to be able to compare across different career points and employment
100 types within sample. An even number of response choices were chosen for Likert
101 scales, to avoid participants being able to sit on the fence, which can potentially
102 lead to collection of inaccurate information (Raajmakers, et al, 2000). Six-point,
103 evenly balanced scales were used, to try to determine strength of opinion as well
104 as direction of it (Burns and Burns, 2008), and to minimise the bias that was seen
105 in the literature reviewed (Advani et al, 2014; Mubuke et al, 2010).

106 ***Analysis.***

107 Demographic and employment data were analysed descriptively to gain an
108 overview of the different subgroups of the population of respondents. The full

dataset was analysed in order to gain insights from both within group and between group responses.

The likert question responses were then analysed to compare the following categories – NHS versus privately employed physiotherapists (PP), and respective job banding. Nominal data were analysed using the Chi-squared test, and the ordinal data from the 6-point likert scales were analysed using a Mann Whitney U test for comparison of NHS and privately employed physiotherapists' responses. A Kruskal Wallis test was used to compare the ordinal data from the 6-point likert scales by banding, with significant results analysed using a post-hoc Mann Whitney U test to identify where differences occurred. All data analysis used SPSS Statistics 24 package. A p-value of <0.05 was accepted as significant.

Results

Two hundred and five physiotherapists completed the online questionnaire, representing 0.5% of the total registered physiotherapy population (HCPC, 2015). Eighty-five percent of the sample were female, compared with 77% of the overall UK physiotherapy population (HCPC, 2014). Fifty-two percent of the sample were aged between 22 and 35, with the average age of all HCPC registered UK physiotherapists being 38 (HCPC, 2014). The majority of the sample classed their role as being primarily clinical (70%).

The sample were divided into two groups depending on employment type. Eighty-three percent of the participants worked in the NHS (n=171) and 15% worked in

private practice (n=31). Participants were also divided into five groups depending on their job banding. In the UK, NHS jobs are banded by level of experience and expertise, with newly qualified physiotherapy graduates entering the workforce at band 5. Bands 6 and 7 reflect greater levels of experience and responsibility, with Bands 8a and 8b often being consultant or managerial level posts. Twenty-seven of the private practitioners did not include information about grade or banding and so it was not possible to include them in these calculations, which may have skewed the results. There were five groups – band 5 (n=33), band 6 (n=74), band 7 (n=48), band 8a (n=17), band 8b (n=5).

Demographic data is provided in Table 1. Those working in PP were older and had been qualified longer than those working in the NHS.

UK physiotherapists' reported CPD activity

The amount of CPD undertaken by the full sample, NHS and PP physiotherapists is shown in Figure 1. When considering the full sample, physiotherapists in the UK had completed varying amounts of CPD, ranging from none to more than 26 hours in the last month. Comparing the NHS and PP physiotherapists, there was no significant difference in the amount of CPD undertaken in the last month ($p=0.09$), but when comparing by career point, there was a significant difference between the groups, with those in band 8a posts having completed significantly more CPD than either band 6s or band 7s (Kruskal Wallis test, $p=0.043$; post hoc Mann Whitney U test, 6 vs. 8a $p=0.022$, 7 vs. 8a $p=0.004$) (see Figure 2). There were no significant differences between any other bands.

UK physiotherapists' reported benefits of and barriers to CPD

The participants were asked to consider 10 benefits and 10 barriers identified from the research (see Figure 3), and to answer yes if they thought these were benefits or barriers for them personally. Overall, more benefits of CPD were identified by the respondents (mean 7.84, median 8, range 3-10), than barriers to CPD (mean 4.74, median 5, range 0-10).

There were no significant differences between the NHS and PP physiotherapists in terms of the number of benefits of CPD identified ($p=0.557$), but there were significant differences in identified barriers, with the NHS physiotherapists identifying significantly more barriers than those working in PP ($p=0.006$). While PP physiotherapists reported being an isolated worker a barrier significantly more than NHS physiotherapists, the NHS physiotherapists reported a lack of protected time, a lack of employer support, lack of cover for time out of work to attend CPD activities, patient care prioritised over CPD and employer financial constraints were barriers significantly more than PP physiotherapists.

There were no significant differences in the number of benefits of CPD identified by the different grade bandings ($p=0.059$), but there was a significant difference in the number of barriers to CPD identified by the different groups ($p=0.028$). On post hoc analysis, band 5 and 6 physiotherapists identified significantly more barriers than those at band 8a ($p=0.020$ and $p=0.004$ respectively), and band 6s identified significantly more barriers than those in band 8b posts ($p=0.048$). When analysing specific questions, more junior staff felt that patient care being prioritised over

174 CPD, and a lack of information regarding CPD opportunities were barriers
175 significantly more than senior staff.

176 ***UK physiotherapists' attitudes to CPD***

177 The percentages of positive and negative responses to the 6-point likert
178 statements on attitudes to CPD, as well as statistical analysis comparing between
179 NHS and PP physiotherapists are shown in Table 2. On analysis, responses from
180 the full sample were positive, with physiotherapists being motivated to undertake
181 CPD (93%), feeling that there is value in undertaking CPD (92%), considering CPD
182 to be worthwhile (96%) and seeing CPD and lifelong learning as part of what it
183 means to be a professional (99%). Despite this, nearly half of respondents still
184 thought that CPD is a chore (43%). Although 94% of the sample felt that they had
185 improved patient outcomes by undertaking CPD, 43% considered it difficult to
186 implement changes generated from CPD into their practice.

187 In terms of attitudes towards CPD, there were statistically significant differences
188 between NHS and PP physiotherapists on four of the 20 questions asked.
189 Physiotherapists working in private practice were significantly more motivated to
190 undertake CPD ($p=0.023$) and gained more enjoyment and job satisfaction from
191 CPD ($p<0.001$ and $p=0.046$ respectively). Those working in the NHS found it
192 significantly more difficult to implement changes generated from CPD into their
193 practice ($p=0.002$).

There were statistically significant differences in attitudes between the physiotherapists on different job bandings on 12 of the 20 questions (see Table 3). When considering this data, band 6 respondents were significantly less sure what constituted CPD than those at bands 7 and 8a, and band 6 respondents were also significantly less motivated to undertake CPD than bands 5 and 8a. Band 6 physiotherapists felt that CPD was a chore significantly more than bands 8a and 8b, while bands 5 and 7 felt it was more of a chore than those in band 8b positions. Bands 6 and 7 both felt that CPD was less worthwhile than those in bands 8a and 8b. Band 8b physiotherapists felt there was value in CPD significantly more than those at bands 6, 7 or 8a. Band 6 physiotherapists also felt that the culture of physiotherapy did not value CPD significantly more strongly than bands 5, 7 and 8b physiotherapists, that they should only have to undertake CPD if there was opportunity for progression significantly more and that professional status could not be maintained without CPD significantly less than those at bands 8a and 8b. They also felt that they could maintain their professional competence without CPD significantly more than bands 5 and 7, but found it significantly more difficult to implement changes from CPD into practice than those in bands 7 and 8b. Band 5 and 6 physiotherapists felt that they did more CPD because of the threat of HCPC audit than those at band 8a and 8b, and that employer support for CPD had improved since the introduction of CPD audit significantly more than bands 7 and 8a.

Discussion

216 ***Factors influencing physiotherapists' CPD activity and attitudes to CPD***

217 Significant differences were found in terms of the barriers to CPD between NHS
218 and privately employed physiotherapists. These reflect findings from previous
219 research in terms of NHS physiotherapists' identified barriers (Johnson, 2008;
220 Gunn and Godling, 2009; Haywood et al, 2013). The NHS had over 100,000 staff
221 vacancies in 2018 (Nuffield Trust et al, 2018), increasing pressure on staff to
222 provide a quality service with reduced resources, and it is therefore unsurprising
223 that NHS physiotherapists found limited time for CPD, and lack of cover for time
224 out of work to attend CPD activities were barriers. Equally, with the increased
225 requirement for mandatory and core skills training (Skills for Health, 2018), NHS
226 staff time is used to meet the requirements of annual appraisals, rather than on
227 developmental learning. Many of the barriers identified were external
228 organisational influences, reflecting the negative impact of Herzberg's (1968)
229 hygiene factors.

230 **Physiotherapists** working in the private sector also appear to have more positive
231 attitudes towards CPD than those working in the NHS, being more motivated to
232 undertake CPD, and gaining more enjoyment and job satisfaction from it. This is
233 reasonable, given the autonomy of the work environment and therefore the ability
234 to choose and undertake CPD as and when **it** is appropriate, in comparison with
235 those working in the NHS, where CPD may be driven by service need rather than
236 personal desire, as is reflected in the Chartered Society of Physiotherapy (CSP)
237 CPD standard relating to employer policies (CSP, 2013). The ability to take

responsibility for learning choices, in terms of when and what to learn, suggests a strong sense of personal agency (Ryan and Deci, 2017) as well as an internal locus of control (Cassidy and Eachus, 2000), displayed more strongly by those physiotherapists working in PP. Having said this, there was no significant difference in the amount of CPD undertaken by the two groups in the last month, suggesting that, despite the potential for a negative impact of external barriers to CPD, physiotherapists remain internally motivated to continue their development (Herzberg, 1968), and the study found that physiotherapists see lifelong learning as part of what it means to be a professional, suggesting desire for personal betterment (Kantar, 2018) and recognition of the internal value of learning (Festinger, 1964; Ryan and Deci, 2017).

Junior staff (bands 5 and 6) identified more barriers to CPD than those of higher grades. Study results showed that staff in lower bands have a higher percentage of clinical workload (means by band – 5=84%, 6=78%, 7=64%, 8a=38%, 8b=14%) which explains this finding, since the majority of barriers related to patient prioritisation over CPD.

Band 6 physiotherapists had significantly less positive attitudes to CPD than any other bands. This appeared to be in relation to internal factors (e.g. motivation, enjoyment, value), as well as external factors (e.g. professional culture, implementing change into practice, and drivers for undertaking CPD). One possible explanation for this is the position of band 6 physiotherapists in the hierarchical structure of the profession. For newly qualified physiotherapists (band 5), CPD

usually focusses on developing their clinical skills, while for more experienced staff (bands 7-8b), their CPD is likely to focus on leadership or management tasks, or on highly specialised clinical skills. In both of these cases, CPD is matched to daily practice and therefore fits with both personal and service need, ensuring maximum benefit (Gunn and Godling, 2009). Band 6 physiotherapists have usually developed an idea of where they want to specialise within the profession, but are often still employed in rotational posts, where the CPD they are required to undertake for the service may not fit with their personal area of interest, reducing internal motivation. Because of the nature of their role, they may not feel in a position to influence practice as significantly as higher banded staff, which could in turn, make them feel that the culture of the profession does not value their CPD activity. Although Herzberg's (1968) motivation-hygiene theory is aimed at motivation to work, rather than to learn, the band 6 physiotherapists in this study appeared to be demotivated towards CPD by many of the hygiene (or external) factors described in the model, such as organisational policy for CPD to be aligned with service need, and status within the organisation. Reduction in their internal motivation could potentially stem from a reduced sense of personal agency (Ryan and Deci, 2017) or a poor internal locus of control (Cassidy and Eachus, 2000), feeling that their power over CPD choices is limited by the constraints of the workplace environment.

Band 5 and 6 physiotherapists felt that they do more CPD because they may be audited by the HCPC significantly more than the higher bands of staff. This could be explained by the fact that these physiotherapists are likely to have been

educated since the introduction of audit and their courses may have placed emphasis on this as a driver for CPD activity. This emphasis during pre-registration education may lead to the development of graduates who are externally motivated to undertake CPD, rather than instilling in them the professionally internal desire for lifelong learning and continual improvement of the self. This lack of internal motivation could be augmented by the fact that HCPC CPD audit is a negatively driven process, with loss of licence because of failing the audit, rather than reward for demonstration of excellent CPD (Festinger, 1964).

Study strengths and limitations

One of the strengths of this study is that the sample is representative of the general population of physiotherapists in the UK, in terms of personal and professional demographics (HCPC, 2014). It is, however, a small percentage of the total physiotherapy population (approximately 0.5%), (HCPC, 2018), and therefore responses may not reflect those that would have been received from a larger sample. It is also important to recognise that the results of the questionnaire are subject to self-selection bias, due to the methods of recruitment. It may have been possible to increase the sample size if questionnaires were distributed by a different route, for example posting the link onto relevant Twitter and social media pages, however this would have only attracted physiotherapists who use these platforms. Alternatively, only targeting local employers, with direct contact with physiotherapists, may have improved the return rate on the questionnaire, however

this would have limited the sample to one geographical location, reducing the generalisability of the findings of the study.

Because of the small number of physiotherapists at band 8b who completed the questionnaire (n=5) the results could have been skewed. Grades or bandings are often not considered to be relevant in private practice and this resulted in the majority of the private practitioners not providing this information; this means that the analysis relating to the influence of career point is skewed to those working in the NHS.

Although some of the questions in the questionnaire related to the impact of the introduction of HCPC audit of CPD in the UK, the participants were not asked whether they qualified before or after the introduction of audit. This limited the analysis that was possible on this data.

While previous research has examined CPD behaviours and opinions within the physiotherapy population (Dowds and French, 2008; Johnson, 2008; Cole et al, 2008; French, 2006; Gunn and Godling, 2009), this is the first study that has examined whether employment type or point on career path influence how physiotherapists approach and perceive CPD and CPD portfolios.

Conclusion

Working in a large organisation such as the NHS seems to have an impact on the motivation of physiotherapists towards CPD, based on the opinions of the physiotherapists who participated in this study. The impact of external motivating

factors, such as organisational structure, policy and hierarchy, seem to impair motivation for CPD in general, in comparison to physiotherapists working in private practice who appear to have more autonomy in terms of their CPD. This is in keeping with motivational theory. This impact on motivation to continue with lifelong learning is particularly noticeable in band 6 physiotherapists, who are no longer novices within the profession, but are still moving towards expert and specialist practice, where personal and service drivers may not be aligned, causing external factors to impact on internal motivation for CPD. Employers and physiotherapists should use the principles of motivational theory when considering how best to encourage engagement in CPD and lifelong learning, particularly for those staff in middle grade bandings, working in the NHS.

Lessons for Practice

- Internal motivation for CPD appears strong within the physiotherapists, but is influenced by external factors, such as organisational structure and policy, and the individuals' place on the organisational hierarchy.
- Improved motivation and engagement with CPD by physiotherapists will ultimately improve quality of care and patient experience
- Employers should aim to align CPD activities to meet both personal and service needs to maintain internal motivation and reduce the impact of external factors
- Pre-registration physiotherapy educators should encourage the development of internal motivation and personal responsibility towards CPD,

rather than emphasising the threat of licence withdrawal that may result from HCPC CPD audit.

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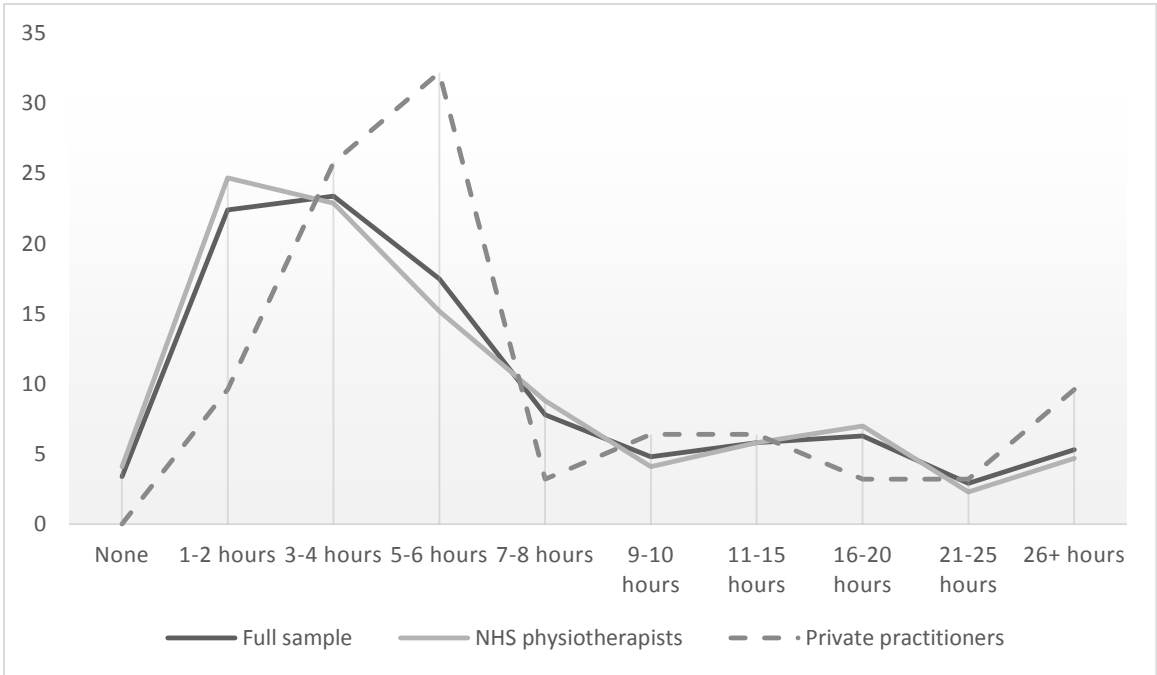


Figure 1 – comparison of amount of CPD activity in last month – full sample, NHS and PP

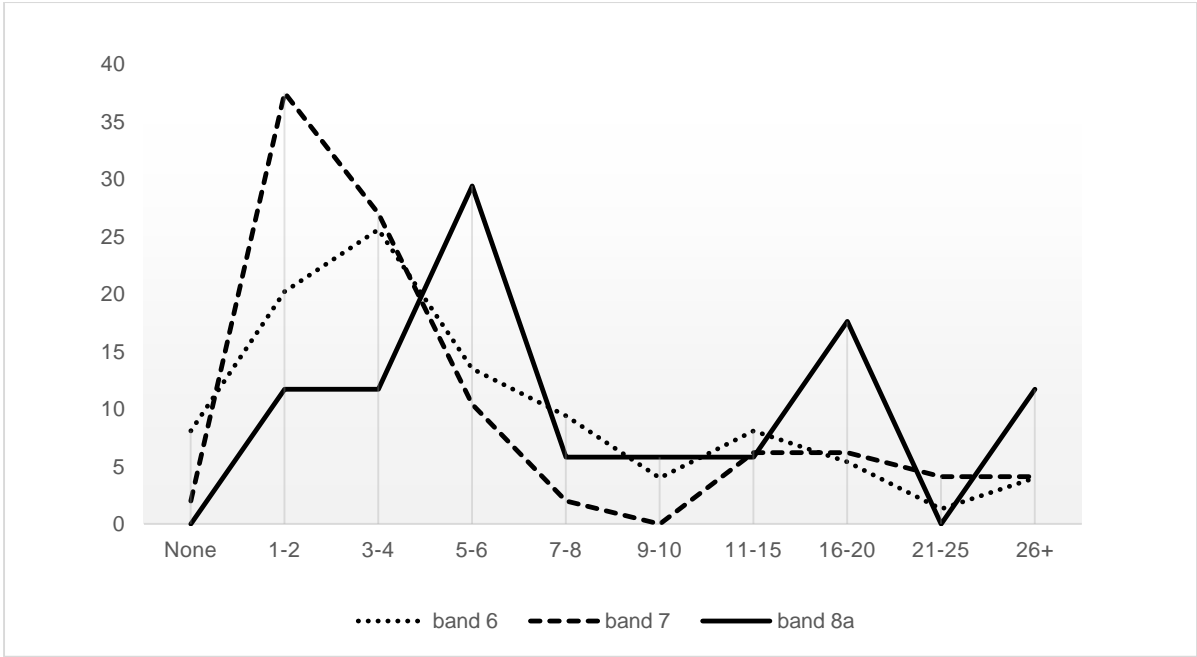


Figure 2 – Comparison of CPD Activity – Bands 6, 7 and 8a

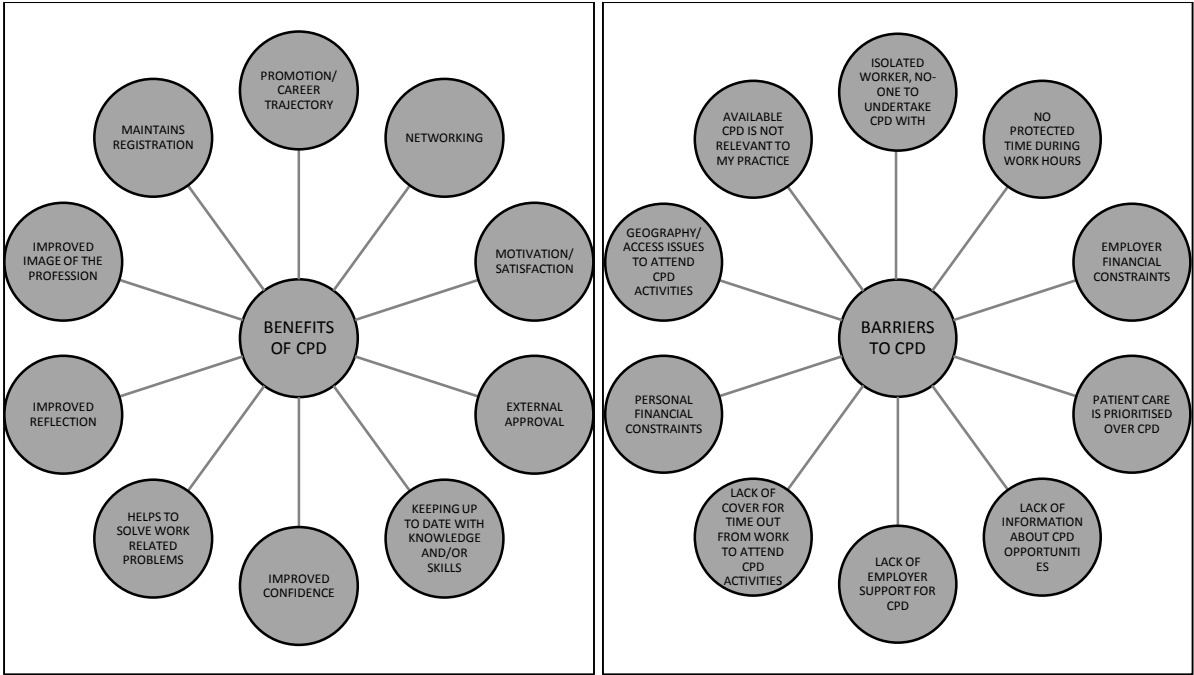


Figure 3 – Benefits of and Barriers to CPD

Table 1 – Demographic Data

AGE	22-25	26-30	31-35	36-40	41-45	46-50	51-55	55+		
% of sample	16	21	15	13	7	11	8	9		
% of NHS sample	19	26	18	13	6	8	6	3		
% of PP sample	0	0	3	10	10	23	13	35		
GENDER	male	female								
% of sample	15	85								
% of NHS sample	16	84								
% of PP sample	6	94								
HOW LONG QUALIFIED	< 5 years	5-10 years	11-20 years	21-30 years	> 30 years					
% of sample	27	20	24	16	13					
% of NHS sample	32	24	25	12	6					
% of PP sample	0	3	19	29	48					
LOCATION OF EMPLOYMENT	SE	SW	EM	EA	NW	WM	YH	W	S	NI
% of sample	33	16	4	5	23	7	2	7	2	0.5
% of NHS sample	32	17	4	6	25	8	2	6	0	0
% of PP sample	39	13	6	3	13	3	3	6	10	0

Coding of locations – SE = South East, SW = South West, W = Wales, EA = East Anglia, NW = North West, WM = West Midlands, YH = Yorkshire and Humber, NI = Northern Ireland, S = Scotland, EM = East Midlands

Table 2 – Attitudes to CPD – Full sample, NHS and PP

	FULL SAMPLE (N=205)		NHS (N=171)		PP (N=31)		P VALUE NHS VS. PP
	% POSITIVE RESPONSE	% NEGATIVE RESPONSE	% POSITIVE RESPONSE	% NEGATIVE RESPONSE	% POSITIVE RESPONSE	% NEGATIVE RESPONSE	
I am unsure what constitutes CPD	13	87	12	88	17	83	0.509
I am motivated to undertake CPD activities	93	7	91	9	100	0	0.023*
I get enjoyment from undertaking CPD	89	11	88	12	100	0	<0.001*
CPD is worthwhile	96	4	96	4	100	0	0.074
CPD is a chore	43	57	45	55	31	69	0.112
I feel a sense of achievement when I have completed some CPD	93	7	92	8	96	4	0.057
Undertaking CPD gives me job satisfaction	89	11	87	13	96	4	0.046*
There is value in undertaking CPD	92	8	92	8	89	11	0.968
The culture of physiotherapy as a profession does not recognise the value of CPD	16	84	16	84	11	89	0.918
I do not need external prompting to undertake CPD	80	20	78	22	86	14	0.079
Lifelong learning is an expected part of my professional status	99	1	97	3	100	0	0.800
I cannot maintain my professional status unless I undertake CPD activities	86	14	87	13	86	14	0.438
CPD is only relevant for those still developing in their professional careers	8	92	9	91	7	93	0.859
I should only have to undertake CPD if there is opportunity for career progression for me	15	85	16	84	0	100	0.226
I do not need to undertake CPD to maintain my professional competence	6	94	6	94	0	100	0.548
Undertaking CPD has helped to improve client/patient outcomes	94	6	92	8	96	4	0.287
It is difficult to implement changes generated from CPD into practice	43	57	46	54	21	79	0.002*
I have started undertaking more CPD since the introduction of HCPC CPD audit	54	46	56	44	45	55	0.977
I undertake CPD because I might be asked to submit for HCPC CPD audit	59	41	59	41	55	45	0.775
Employer support (financial/time/cover) for CPD has improved since the introduction of HCPC CPD audit	34	66	35	65	31	69	0.614

	BAND 5 (N=33)		BAND 6 (N=74)		BAND 7 (N=48)		BAND 8A (N=17)		BAND 8B (N=5)		P VALUE KRUSKAL WALLIS TEST	P VALUES POST HOC MANN WHITNEY U TESTS (statistically significant results only)	
	% POSITIVE RESPONSE	% NEGATIVE RESPONSE	% POSITIVE RESPONSE	% NEGATIVE RESPONSE	% POSITIVE RESPONSE	% NEGATIVE RESPONSE	% POSITIVE RESPONSE	% NEGATIVE RESPONSE	% POSITIVE RESPONSE	% NEGATIVE RESPONSE		BANDS BEING COMPARED	P VALUE
I am unsure what constitutes CPD	9	91	18	82	9	91	6	94	20	80	0.001*	6 and 7	<0.001
I am motivated to undertake CPD activities	97	3	89	11	87	13	100	0	100	0	0.010*	6 and 8a	0.002
												5 and 6	0.030
												6 and 8a	0.001
												7 and 8a	0.034
I get enjoyment from undertaking CPD	97	3	82	18	85	15	100	0	100	0	0.072		
CPD is worthwhile	97	3	96	4	93	7	100	0	100	0	0.003*	6 and 8a	0.002
												6 and 8b	0.007
												7 and 8a	0.023
												7 and 8b	0.018
CPD is a chore	44	56	55	45	41	59	31	69	0	100	0.017*	5 and 8b	0.021
												6 and 8a	0.026
												6 and 8b	0.008
												7 and 8b	0.018
I feel a sense of achievement when I have completed some CPD	97	3	92	8	87	13	100	0	100	0	0.825		
Undertaking CPD gives me job satisfaction	94	6	89	11	83	17	88	12	80	20	0.488		
There is value in undertaking CPD	94	6	92	8	87	13	94	6	100	0	0.037*	6 and 8b	0.002
												7 and 8b	0.020
												8a and 8b	0.025
The culture of physiotherapy as a profession does not recognise the value of CPD	3	97	22	78	17	83	12	88	0	100	0.017*	5 and 6	0.005
												6 and 7	0.047
												6 and 8b	0.027
I do not need external prompting to undertake CPD	78	22	75	25	76	24	88	12	100	0	0.053		
Lifelong learning is an expected part of my professional status	100	0	99	1	100	0	100	0	100	0	0.209		
I cannot maintain my professional status unless I undertake CPD activities	91	9	85	15	87	13	94	6	100	0	0.039*	6 and 8a	0.043
												6 and 8b	0.021
CPD is only relevant for those still developing in their professional careers	3	97	14	86	9	91	0	100	0	100	0.112		
I should only have to undertake CPD if there is opportunity for career progression for me	3	97	11	89	2	98	0	100	0	100	0.047*	6 and 8a	0.036
												6 and 8b	0.043
I do not need to undertake CPD to maintain my professional competence	0	100	11	89	7	93	0	100	0	100	0.013*	5 and 6	0.003
												6 and 7	0.024
Undertaking CPD has helped to improve client/patient outcomes	81	19	93	7	89	11	100	0	100	0	0.635		
It is difficult to implement changes generated from CPD into practice	41	59	56	44	37	63	50	50	0	100	0.018*	6 and 7	0.006
												6 and 8b	0.029
I have started undertaking more CPD since the introduction of HCPC CPD audit	53	47	60	40	59	41	50	50	20	80	0.251		
I undertake CPD because I might be asked to submit for HCPC CPD audit	69	31	70	30	52	48	38	62	20	80	0.003*	5 and 8a	0.005
												5 and 8b	0.014
												6 and 8a	0.003
												6 and 8b	0.015
Employer support (financial/time/cover) for CPD has improved since the introduction of HCPC CPD audit	56	44	36	64	24	76	12	88	20	80	0.001*	5 and 6	0.026