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Real world reflection: how physiotherapists experience reflection in their practice

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ABSTRACT

This paper explores the nature of reflection that qualified physiotherapists use in their day-to-day practice. This is an area in which there is a dearth of research. With a grounded theory approach purposive sampling was used to recruit seven qualified physiotherapists for photo-elicitation interviews exploring whether they did reflect and if so, what their reflection was like. The findings were that they did reflect but that it occurred outside of working hours. Four conceptual categories were identified: Personal Concept, Personal Process, Time and Head-Space. Practitioners had their own ideas of what reflection was, own ways of reflecting and personal strategies for making the head space to reflect in. Typically, they used thinking modes of reflection, with occasional dialogical modes; written reflection was rare. Of novel significance was the use of strategies to complete reflection to their satisfaction, most frequently walking but also preparing vegetables, driving and showering, typically outside of work hours. The use of such cognitively non-demanding, routinised activities to aid reflection has not been widely explored in the literature on reflection and may suggest a need to rethink approaches to support the teaching of reflection which would have high validity for its place in the real world of practice.

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Reflection; real-world practice; physiotherapy; grounded theory; reflective strategies; routinised activities

Background

The reflective practice community has a plethora of models and theories of reflection on which to draw. The arguments for an emphasis on reflective practice in healthcare have focussed on the importance of reflection for developing the health practitioner and the role of reflection for continued professional development. Models and theories of reflection are included in professional programmes leading to health practitioner registration – often being introduced very early in the teaching process – and once qualified, reflection is a requirement for the re-registration process (Health and Care Professions Council, 2013) and the ongoing development of practice (World Physiotherapy, 2019). The Chartered Society of Physiotherapy (2019) expects physiotherapists to critically reflect

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as part of their professional behaviour. Thus, as for other professions, reflection is firmly embedded into physiotherapy for pre-registration education and continued registration.

Reflection

A review of the extensive field of reflection has not been attempted here. Rather, a brief overview is given of some key points about reflection which informed this research and the findings. The term 'reflection' is often used loosely with overlap of meanings and terms (Walsh, 2009, p. 389). Nevertheless, there are areas of consensus corresponding with Dewey's (1910) idea of reflective thinking in response to something which evokes a state of perplexity and an active search towards resolution. Schön's (1983) ideas of professionals becoming aware of their own actions or thought processes, considering them, making sense of them and then incorporating their new understanding in their subsequent actions, are widely accepted. Some of the differences regarding reflection are captured by Walsh's (2009) recognition of different forms or 'modes' of reflection. Schön's (1983, p. 50) reflection-on and in-action, and Van Manen's (1995) idea of anticipatory reflection are examples of modes of reflection as is Clouder (2000) idea of dialogical reflection involving talking through a problem with a colleague. Further nuances within reflection are indicated by Taylor's (2010) technical, procedural and emancipatory modes of reflection which consider which aspect of professional practice is being reflected upon and the onion analogy used by Korthagen and Vasalos (2005) which facilitates consideration of the layers of when, how and in what context the reflection takes place. The understanding of reflection presented here, of overlapping meaning and uses, of a thinking-making sense of-responding to, and of differing modes of reflection, was the understanding taken forward into the research. This provided theoretical sensitivity through being open-minded to what reflection might mean to the participants.

Reflection research in physiotherapy

Research into the reflection of physiotherapists has moved from early scholarly papers which considered what reflection in the curriculum might offer to physiotherapy practice (e.g. Shepard & Jensen, 1990) to studies which consider the issues of teaching and assessing reflection (e.g. Greenfield et al., 2017; Smith & Trede, 2013). There have also been studies which explore the use of reflection as part of teaching clinical reasoning abilities (e.g. Trommelen et al., 2017) and reflection as part of ethical thinking (Nesbit et al., 2018). The majority of studies into physiotherapy reflection have been conducted with student physiotherapists. The few studies turning attention to the reflection of qualified practitioners, were still within the context of an education process (Ward & Grace, 2006), an accreditation process (Bausch & Fiddler, 2019), explored reflection within a pre-set employer-devised framework (Knab, 2012), or had a specific focus e.g. clinical decision-making (Wainwright et al., 2010). No papers were found that explored the nature of reflective practice in the real-world, away from the classroom.

However, attention has recently been given to reflection in professional practice in other professions. For example, Ferguson (2018) explored the reflection-in-action of qualified social workers finding that the demands of real-life situations could limit how far they could reflect in action and that social workers identified different levels of

reflection – distinguishing between reflection in and on action as well as layers of reflection. Fisher et al. (2015) and Carmichael et al. (2020) explored how clinical psychologists experience reflection in their clinical practice finding that reflection in practice evolved from reflecting initially for resolving clinical difficulties to later reflecting on themselves, their feelings and their professional identity and roles. Fisher et al. (2015) also reported that complex clinical situations limited reflection in action. Both studies noted that participants found reflection hard to articulate. These studies highlight the need to understand practitioner reflection using a 'Real World Enquiry' approach that recognises that real life situations are 'complex and generally messy' (Robson, 2002, p. 4). After considering the research design, sampling, data collection and analysis I share the study findings and discuss their implications.

Methods

Philosophy

This paper reports on findings from the first stage of a larger study which explored the real-world practice of reflection by physiotherapists using a grounded theory approach (Dalley-Hewer, (2017)). Grounded theory has evolved since its creation by Glaser and Strauss (1967) and now exists in various forms (Mills et al., 2014). The grounded theory approach taken in this study was designed from a pragmatic stance which aligned the research process with a qualitative, interpretive, constructivist philosophy. This approach allowed the exploration of previously unexplored experiences which recognised the individual construction of meaning of those experiences alongside the researcher construction of the emerging theory (Charmaz, 2014, p. 14). To avoid a preconceived theoretical framework, no particular definition of reflection was specified. In addition, the use of any particular definition may have excluded some reflective practices, and this study wished to be open to any form of reflection that physiotherapists might be using. The findings presented in this paper arose from the first stage of the larger study that sought to answer the research question 'Do physiotherapists reflect and if so, what is their reflection like?'

Participants

Qualified, practicing physiotherapists were interviewed. The researcher is a physiotherapist and a higher education academic and participants were drawn from a network of qualified physiotherapy colleagues who expressed interest in the research, thus creating a purposive sample of volunteers. They were given information about the nature and purpose of the study and written informed consent was obtained. Seven participants took part in this phase of the study, 5 women, and 2 men, a gender ratio typical of the demographics of qualified physiotherapy practitioners in the United Kingdom (Beswetherick, 2021). Their clinical areas of practice were cardio-respiratory (n = 2), neurology (n = 3), musculo-skeletal (n = 1) and paediatrics (n = 1). The first three of these are the three core clinical areas of clinical practice (Chartered Society of Physiotherapy, 2021). The participants' employment contexts included public and private health care provision, or a mixture of the two. The years since qualifying ranged from 4 to

30 years and their ages ranged from 28 to 54. From this small sample, no meaningful comparisons could be made across age, experience or clinical speciality, furthermore, this was not the aim of this exploratory stage of research. Participants chose their own pseudonym.

Design

Interviews are the most common way of finding out about people's experiences in context (Woolner et al., 2009) and were chosen for this stage of the study. The lack of previous research in this area meant not assuming that physiotherapists *did* reflect on their practice, rather, asking if they did and if so, what their reflection was like. The interviews incorporated a photo-elicitation technique. This inclusion of visual research methods can enhance interviews (Harrison, 2002) where asking people what meaning they see in an image can help to explore their orientation to the topic (Rose, 2012). The advantage of using photo-elicitation and in particular, decontextualized images which were not related to the participants nor to reflection (Richard & Lahman, 2015) was that the unfamiliarity of approach minimized superficial practised rhetoric of reflection which physiotherapists might have and moved to a deeper contemplation of their reflective practice. The photographic images provided (n = 46) were from a selection of glossy greetings cards. Examples of the images include city scenes, beach, river and country scenes, nature, coloured pencils, butterflies, tractors, people in various poses, costumes and activities.

Data collection

Two or three pictures considered meaningful in terms of reflection in practice were chosen by the participant at the beginning of the interview that went on to explore why they had chosen those cards in relation to their view of reflection and their practice in a naturally flowing conversational manner. Choices were readily explained in a variety of ways: Firstly, Alison:

On the image of lady bird on a leaf chosen for reflection:

It's that kind of quiet moment, you're focusing on that particular thing at that time, and then you just sort of have this that quite moment to think about, well, okay, how did that go?

On the image of brightly coloured pencils chosen for practice

There's lots of different areas in which I'm developing. And I've been drawn in this way, it wasn't along one path and one direction, it was lots of different areas.

When asked about the contrast between the busy, vibrantly coloured cards chosen for practice and the peaceful solitary scenes chosen for reflection:

That's what (indicates busy cards) the demand is at work, being pushed in lots and lots of different directions and the demand in a very short amount of time to do this, do that, do the other, and then you know this (indicates peaceful cards) is the time to assimilate it all and kind of get your head around everything. (Alison)

Then Macey:

On the image of a dog looking through a hole in the wall chosen for practice:

Because that is how I felt when I started this job, you know, that little dog looks a little bit lost, a little bit unsure in a completely barren new environment. When I look at it, I see a bit of fear and a bit of un-surety and that's how I felt."

On the image of part of a garden full of wildflowers and weeds chosen for reflection:

I look at that and I think wow, that garden needs some work and I think that's what it feels like for me, and I use reflection to turn that into a really nice pretty garden and a bit more organised. (Macey)

Then Julia:

Image of a kingfisher swooping low over a river chosen for reflection:

The Kingfisher is digging, ploughing through the unclear water, through the muddy water trying to find clues to solve the problem

Then Florence:

On the image of a bluebell wood chosen for work:

There are a lot of trees in it and in the NHS, seeing the wood for the trees is a challenge but there's a path through this one.

On the image of a bicycle chosen for reflection:

I do sports, cycling and canoeing where it's a single personal pursuit and that gives you time away from other people to have your own thoughts. (Florence)

A semi-structured interview schedule was available as a prompt which was checked towards the conclusion of the conversation. Examples of conversation prompts were 'What do your chosen cards mean to you in terms of reflection (or practice)? Do you think you reflect? How do you use reflection in your practice? In response to data from the first two interviews where participants' image choices for reflection were typically away from work, the questions 'When do you do your reflection?' and 'Where do you do your reflection?' were added. The interview length ranged from 40 to 90 minutes and the transcripts word range was 5,709–14,955 (mean 10,070).

Data analysis

The interviews were audio recorded, transcribed, and copies of the transcripts were returned to the participants for verification. Two participants made transcript changes of clarification or correction and three participants gave useful further reflections on the interview exemplifying how the resulting theory was co-constructed by participants and researcher. One participant shared with me a written reflection on the experience of being interviewed for this study that had led her to think more carefully about how and why she used reflection. She said that she reflected:

when I am on my own and sometimes when I am with others but not involved in their conversation. I reflected in bed during the early hours of the morning when to get up would mean no chance of any more sleep that night (Clare)

Julia also shared some post-interview thoughts:

Teaching reflection gives it the name and naming it gives it status. Instead of feeling overwhelmed by the problem you can recognise it as an important part of your work (Julia)

Initial coding of each transcript was performed alongside three 'thinking strategies' (Corbin & Strauss, 2008, p. 67) used in the grounded theory approach: asking questions of the data, memos and constant comparison. For example, one question asked of the data was 'what are physiotherapists doing for their reflection?'. Coding proceeded from initial open coding using descriptive, conceptual and in-vivo coding, through re-coding and grouping codes into categories. During this process I kept a reflective diary which included analytical memos about possible patterns in the data. Comparisons were made between different pieces of data for similarities and differences (Corbin & Strauss, 2008), across and within transcripts. For trustworthiness, the codes, diary and memos recorded the connection between the emerging theory and the data. The researcher's analysis was subjected to peer review by another researcher and by an experienced academic. From the peer review process, the codes and categories were verified as being true to the transcripts, and further insights were proposed and integrated into the categories. The aim of data analysis was to begin developing an interpretive theory of understanding (Charmaz 214) regarding physiotherapists and their reflection.

Findings

The photo-elicitation interviews demonstrated that physiotherapists do reflect on their practice. Four categories were identified: *Personal Concept*, *Personal Processes*, *Time*, and *Head-Space*. *Personal Concept* and *Personal Processes* identify the individuality of the practitioners' process of reflection while *Time* and *Head-Space* are about creating room for reflection in their lives. The participants reported using cognitive modes rather than written modes of reflection, mixed with dialogical modes of reflection.

Personal concept

Individual conceptions of what reflection was as part of their practice varied. Each participant recognised a particular form of thinking, or a particular process, as being 'their reflection'. For Macey, reflection was to transform a 'messy, crazy world' into a tidy one, to make her brain tidier, to become organised, in order that she could offer the best to those around her. For Julia, it was to find a way around something in order to overcome a challenge and achieve the apparently impossible. Pete considered it to be for solving an immediate problem, whilst for Florence reflection had to have a function, and the function (purpose or outcome) could vary depending on the reflection.

Two contrasting approaches were shown by Alison and Claire. Alison thought that reflection was for looking back and reviewing her actions, checking her practice all of the time to be better next time, 'to become as good as I can be'. Conversely, Claire considered reflection to be about looking forward. She reported a high frequency of prospective or anticipatory reflection to turn something in the future that she was unsure about into some positive ideas to address the issue. Both participants looked both forwards and

backwards in time, nevertheless, they experienced reflection in a different way, and conceived of it accordingly, showing the individuality of reflection for each person.

Not only was the process of reflection experienced differently; the end-point, or result, of reflection was also framed differently by the individuals. For Macey, it was about change in practice: reflection led to change. Claire distinguished between the result of her reflection, which was all of the possible solutions she could take forward and the outcome which was putting one solution into practice. For Alison, the end-point was feeling personal satisfaction because she knew that she was getting better at what she was doing. Individual approaches notwithstanding, the approaches had in common a deliberate engagement in thinking about practice problems or challenges, which could be an internal process or through discussion, to reach some form of intended end-point which was individual to the reflector.

The personal conceptions of reflection resonate with the idea of different modes of reflection recognised elsewhere in literature (Walsh, 2009). The intensely individual focus of each different person's reflections has not been widely remarked on. The individual nature of the reflective process evident in these findings, therefore, provides new knowledge and insight into qualified physiotherapists' practice of reflection.

Personal processes

In addition to having different approaches, participants used different processes for reflection. For Julia, reflection was inextricably linked with searching the literature, dialogical reflection with local peers, or consulting nationally and internationally. Claire's mental picture of her own reflection was that it was a process which started with the problem being 'fuzzy at the edges', and her 'mind all over the place' and going off on 'a tangent'; her strategy for reflection was 'getting rid of some of the bits', so that the important ones could come to the fore, and could then be thought about in a clear way. Florence was unable to articulate clearly the reflective process, but knew what it felt like:

It doesn't have a structure. It doesn't have 'this is question A, this is question B this question ...
... but that's how my brain works, I think. (Florence)

Alison often experienced a delay between the thinking and the solution:

You've kind of thought, and you've thought: I'm not quite sure. Okay, mull it over, and then suddenly it will come to you what the solution is. (Alison)

This phenomenon described by Alison is termed the 'Aha!' moment in literature on problem solving or creativity (Kounios & Beeman, 2009), although this feature of problem solving has not been explored in the literature on facilitating reflection.

Time

All participants reported spending a considerable amount of time on their reflections, typically, hours on one problem. They lacked time for all of the issues that they would have liked to reflect on, which caused some frustration. Julia limited the hours that she worked in order to give each patient the amount of reflective time that she considered to be an integral part of her treatment approach. She explains:

If I've only got maybe a handful of patients then I can really ... because work is no fun if you can't reflect, if you can't have time to reflect. That's the challenge. That's our professional challenge, really. (Julia)

The timing of the reflection varied in relation to the event. Florence would reflect immediately if the need for a solution was urgent (i.e. a clinical emergency), otherwise, would wait until later. For Alison, (working in a non-critical care environment) 'immediate' meant later the same day, due to time constraints preventing a more imperative immediacy of reflection, as she explains here:

I think I probably do most of it outside of that (work) environment after I've left work ... there isn't time to do it at work. There's no way. (Alison)

Pete thought that his current post in a private health practice gave more time within the routine of the day. He explained the difference between this and a previous post in public health care:

I guess because of time, maybe not in the actual [treatment] session but in between sessions, I get a lot more time ... to reflect, so to speak ... so just think it through and just figure it out. Whereas, before, I would probably have wanted to do that but done it at 6 o'clock when I had finished my shift because I didn't have any time to do it. (Pete)

In addition, some of the participants reported a continual, on-going self-questioning of their practice which formed a mainstay of their work. Alison reported:

I do a lot of thinking about what I do, and probably too much, I don't know, but I look at a lot of what I do a lot of the time and think, could I have done that any better? How could I have improved it, you know, just sort of get a better outcome or whatever? I'd be constantly thinking about things. (Alison)

This does not mean that the participants doubted themselves as physiotherapists, only that monitoring their practice was an integral part of their work. This personal checking of their practice drove their need to reflect.

Although it has previously been recognised that time is an issue for reflection (e.g. O'Connell & Dymont, 2011) the putting aside of several hours to consider one problem is rarely promoted. Clouder (2000) suggests that work is organised in the workplace to allow time for reflection; this has been supplanted here by practitioners developing personal, out of work-time strategies for their reflection. Given the typical pressures within the working day, work schedules would not permit that amount of reflection that practitioners were doing, and perhaps the working environment also does not facilitate the head space that is discussed in the theme below. The activities that these practitioners were engaged in while they reflected mirror Musolino's (2006) findings that (student) physiotherapists engaged in reflection and self-assessment during lunch activities, showering and walking down the hall. The qualified participants in this study were using physical places to create the thinking space they required. Some participants valued dialogical reflection with colleagues, nevertheless, even for these participants it appeared that a balance between dialogue and solitude facilitated their reflection.

The use of work and non-work time for reflection signals the state of 'being' a physiotherapist (Dall'Alba 2009) with blurring of boundaries between work and non-work. While there are divisions between participants personal and professional lives,

when it came to thinking about practice, these divisions were not time restricted. Indeed, the use of personal time for thinking about work-related issues may be the only way to make sufficient space and time to gain the emotional easing that a resolution of the perplexity leads to (Dewey, 1910).

Head-space

The strategies used for making time also necessitated space to reflect in and often the need for quietness or solitude. Several participants referred to 'getting their heads round' an issue, hence the theme label 'head-space'. Sustained, repetitive exercise was not uncommon, for example.

I can go cycling for three or four hours and there is a sense of achievement. I think, along the way, it gives me the opportunity because of the nature of, because it has a longer time element to it that I can do these other things [reflection]. I utilise the time while my legs and arms are doing something else to use my brain for something. (Florence)

I don't reflect on life sitting on the sofa, I'm far more likely to be out walking, to be maybe sort of in the countryside or something. I grew up in the countryside and sort of out and about. (Pete)

Fiona valued her daily time in the shower, which was a space away from her two young children:

It's the only time where I'm on my own, and there's not noise or there's not someone shouting, or at work. It really is the only time where I'm able to switch my brain off and think about – or driving in the car, you know – if you're occasionally driving a distance then you can switch off and think. (Fiona)

The apparent contradiction here in switching off in order to think captures the concept of head-space well – switching off from the busyness of life to allow thinking to happen. Participants made use of the solitary time that occurred in their routines and Claire used the small hours of the night when she could not sleep. This dedicated time and space for reflection did not occur by chance but through deliberate planning and organising suggesting a conscious and deliberate engagement in the reflective process which is indicative of the value that is placed on it by the practitioners.

Of all the strategies used by participants for making space for their reflective thinking, walking was most frequently mentioned. There are connections between walking and problem solving, and walking and creativity, which have been recognised in other fields of practice such as writing and psychology. Papadimitriou (2013) a writer, suggested that walking is transpersonal and trans-temporal – it takes you out of yourself and of your time. This seems to be a way of mentally going somewhere else (back to your work) whilst being absolutely 'in' the 'where' of where you are. Cognitive psychologists have explored the use of routinized, non-cognitively demanding activities to improve problem solving (e.g. Baird et al., 2012). Walking is one form of such an activity which has been specifically studied and found to boost the generation of novel insights (Opezzo & Schwartz, 2014). Novel insights may provide the reflective resolution to a problem that is being considered. As I began to explore such activities as a strategy for reflection, I found that the use of routinized, non-cognitively demanding activities such as walking, chopping wood,

preparing vegetables for meals, showering and driving for reflecting were commonly reported experiences.

Some indication of how non-cognitively demanding activities may relate to reflection in practice is provided by Baird et al. (2012) who explored the phenomenon of creative thoughts arising when doing something unrelated to the problem. Their experiments solving a set problem demonstrated that an incubation period involving an undemanding activity led to the best improvement in solution generation. They concluded that engaging in simple tasks allowing the mind to wander may facilitate creative problem solving. Significantly, improvement after incubation time was only related to the solving a problem which had been attempted previously, so that incubation comes after some initial reflective engagement. Baird et al. (2012) proposed that this incubation time allowed increased neural network connections to form, and the routinized non-cognitively demanding activities allow unconscious rather than analytical thinking processes to function.

Reflective writing

Of particular interest was finding that none of the participants regularly wrote their reflections down, or recorded them in any way. This is in contrast to the emphasis on written reflections from the professional body, in physiotherapy higher education and higher education generally. Four participants never recorded their reflections at all, the remaining three wrote up a single incident every once in a while, (e.g for Macey, about every 6 weeks). Reasons for writing included keeping a professional development portfolio and for working a particular problem through. None of the three returned to their reflections to evaluate them later; having 'completed' their reflections and reached their desired end point, they did not perceive the need to return to them. For the written reflections, one participant used a model, the others wrote freehand or made lists of points.

It appeared as though the participants considered reflective writing to be mostly for the purpose of formalised documentation of their professional development. Their use of reflection was meaningful on a personal level rather than being driven by the professional or organisational requirements such as written reflection and portfolio keeping. This response to written reflection is seen in the findings of Kurunsaari et al. (2015) study, where reflective writing was considered to be 'a useless task'. Any outcome of the reflection immediately becomes historic and writing is seen as merely a way to capture that, not as a reflective process itself which possibly explains why none of the participants returned to evaluate their reflections at a later point. The learning has occurred, there is no longer a perplexity to be resolved and thus no trigger to prompt a re-evaluation. This does not diminish the value of reflective writing activities, rather, it highlights that writing is not routinely a part of the reflection that qualified practitioners experience, and that writing is used by practitioners to capture an historic account of reflection rather than for the process of reflection itself.

Discussion

For physiotherapists, the education curriculum and the promotion of reflection from the professional body (Chartered Society of Physiotherapy, 2019) explain and facilitate

reflection through the use of models of reflection. Although there are a large number of models to choose from it would seem that that they do not meet everyone's need; this is implied through the variety available. One problem which may hinder the use of models in real world practice is that the models are developed for different needs. For example, either as theory about the process of learning (Kolb, 1984) or reflection (Boud et al., 1985), or as an aid to help explore different aspects of practice (Johns, 1995) or to guide performance for an assessment (Dalley 2009). Amongst those models developed to facilitate reflection, there are still differences in purpose. For example, Barksby et al.'s (2015) REFLECT model was developed because it is easier to remember and Edwards's (2017) 're-conceptualised' combination of models sought to recognise more modes of reflection within the model. While Barksby et al., (2015) suggest their model may be used for dialogical reflection, the others are typically used to structure written reflection. All of these models have their usefulness in different contexts. Another factor which may lead real world practitioners away from the models is the variation in reflection as it is experienced in practice. Not only due to the different uses for which models are developed but also to the variations in people's experiences and conceptualisations of reflection.

In pre-registration education there is also an incongruence with the once-in-time use of an event analysis model to record or explore reflection typically promoted in health care professions (e.g. Gibbs, 1988; Johns, 1995) and the heuristic continuance of reflection experienced in practice. Furthermore, reflection is taught as part of pre-registration course for health professionals because it is perceived to enhance practice. However, it's function in many education programmes is to provide a form of academic assessment or to demonstrate that one *can* reflect. Thus, it's use and purpose in higher education differ to that in practice. This study adds further evidence to that generated by Fisher et al. (2015) and Ferguson (2018) that suggests there is a more intricate relationship between reflection and practice than the teaching of reflection in higher education might suggest. There is a very real challenge in the attempt to firstly explain and then facilitate reflective practice in students in a way which has validity for the way that they will later experience reflection in their day-to-day practice. Edwards (2017) observes that reflection-on-action assignments may not develop the reflection-in-action skills required for clinical practice. This study suggests that reflection-on-action based education may not correctly portray reflection-on-action in practice either. Perhaps models may provide the means to explain the process of reflection, while different strategies might be used to facilitate the skills/practice of reflection

Reflective strategies such as the walking, showering, taking nature photographs, swimming, cycling and canoeing that were reported by the participants in this study might offer an incubation time to physiotherapists engaged in the process of problem solving. Attempting to promote the use of routinized cognitively non-demanding activity may enhance existing teaching approaches to facilitate student reflection. Structured activities such as labyrinth walking explored by (Dalley-Hewer and Opie 2016) or simple advice to 'go for a walk' when a student is struggling with a reflective assignment may achieve more than simply educating them in a reflective model of practice. Such strategies may also encourage and bring value to their future reflection in real-world practice that the participants in this study suggest are likely to occur.

Strengths and limitations

The data analysis was performed by one researcher which may have limited the interpretation; however, peer review of the analysis enhanced trustworthiness. Post-analysis discussions with some participants further strengthened an understanding of the data. The researcher's position as an academic and a physiotherapist may have influenced data collection for some participants while giving valuable insight into the context of the data collected. Participants were all interested in the study although two had reservations about the place of reflection in practice which provided some diversity of views. An audit trail was maintained between raw data and emerging theory.

Conclusions

This research used photo-elicitation to explore the reflection of qualified physiotherapists. The findings were that physiotherapists do reflect as part of the day-to-day practice. Their conceptions of reflection and their reflective processes were individual. They require time to do this to their satisfaction, typically, hours, and they used a variety of strategies for making this time and gaining the head-space to think in and they do not routinely use written reflection. These insights into how reflection is used in practice may have implications for the way in which reflection is facilitated. Physiotherapists typically learn about reflection in the classroom rather than in the real world of practice. Given the findings presented here about the way in which practitioners experience reflection in their working lives, there may be limitations of authenticity of the way in which reflection is learned to the way in which reflection is practised.

Further research: the recognition that there is much we do not understand about the habit of reflecting on work while out of work and about professional practice as part of a life lived in and out of the place of work may challenge ideas of how best to facilitate reflection in order to prepare professionals for their on-going professional development. The particular significance of walking and other strategies to make physical and mental space in which to reflect is an area worthy of further exploration.

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Ethics

Ethical Approval was obtained from Coventry University, protocol reference numbers P15049 and P38761

References

- Baird, B., Smallwood, J., Mrazek, M. D., Kam, J. W. Y., Franklin, M. S., & Schooler, J. W. (2012). Inspired by distraction: Mind wandering facilitates creative incubation. *Psychological Science*, 23(10), 1117–1122. <https://doi.org/10.1177/2F0956797612446024>
- Barksby, J., Butcher, N., & Whysall, A. (2015). A new model of reflection for clinical practice. *Nursing Times*, 111(34/35), 21–23. <https://www.nursingtimes.net/roles/nurse-educators/a-new-model-of-reflection-for-clinical-practice-17-08-2015>
- Bausch, N., & Fiddler, H. (2019). Reflective practice as part of the association of chartered physiotherapists in sports and exercise medicine CPD pathway: UK physiotherapists' experiences [Poster presentation 2018, October 19-20 Physiotherapy UK, Birmingham]. *Physiotherapy*, 105 (Suppl 1), e98. <https://doi.org/10.1016/j.physio.2018.11.074>
- Beswetherick, N. (2021, May 1st). The gender balance in physiotherapy. *Frontline*, (5). <https://www.csp.org.uk/frontline/article/gender-balance-physiotherapy>
- Boud, D., Keogh, R., & Walker, D. (eds.). (1985). *Reflection: Turning experience into learning*. Kogan Page.
- Carmichael, K., Rushworth, I., & Fisher, P. (2020). 'You're opening yourself up to new and different ideas': Clinical psychologists' understandings and experiences of using reflective practice in clinical work: An interpretative phenomenological analysis. *Reflective Practice*, 21(4), 520–533. <https://doi.org/10.1080/14623943.2020.1775569>
- Charmaz, K. (2014). *Constructing grounded theory* (2nd ed.). SAGE.
- Chartered Society of Physiotherapy. (2019) *Code of members' professional values and behaviours*. Chartered Society of Physiotherapy. Retrieved November 19 2021 from <https://www.csp.org.uk/>

- system/files/publication_files/000529_Code%20of%20Members%20Professional%20Values%20and%20Behaviours%202019.pdf
- Chartered Society of Physiotherapy. (2021) *What is physiotherapy?* Chartered Society of Physiotherapy. Retrieved July 28 2021, from <https://www.csp.org.uk/careers-jobs/what-physiotherapy>
- Clouder, L. (2000). Reflective practice in physiotherapy education: A critical conversation. *Studies in Higher Education*, 25(2), 211–23. <https://doi.org/10.1080/713696142>
- Corbin, J., & Strauss, A. (2008). *Basics of qualitative research* (3rd ed.). SAGE Publications.
- Dall'Alba, G. (2009). Learning professional ways of being: Ambiguities of becoming. *Educational Philosophy and Theory*, 41(1), 34–45. <https://doi.org/10.1111/j.1469-5812.2008.00475.x>
- Dalley, J. (2009). Getting marks for written reflection. In H. Bulpitt & M. Deane (Eds.), *Connecting reflective learning, teaching and assessment*. Occasional Paper 10, Health Sciences & Practice Centre, Health Education Academy.
- Dalley-Hewer, J. (2017). Constantly Thinking: Virtue in the reflection of practising physiotherapists. Coventry University. <https://pureportal.coventry.ac.uk/en/studentTheses/constantly-thinking-virtue-in-the-reflection-of-practising-physio>
- Dewey, J. (1910). *How we think*. Regnery.
- Edwards, S. (2017). Reflecting differently. New dimensions: Reflection-before-action and reflection-beyond-action. *International Practice Development Journal*, 7(1), [2]. <https://doi.org/10.19043/ipdj.71.002>
- Ferguson, H. (2018). How social workers reflect in action and when and why they don't: The possibilities and limits to reflective practice in social work. *Reflective Practice*, 37(4), 415–427. <https://doi.org/10.1080/02615479.2017.1413083>
- Fisher, P., Chew, K., & Leow, L. J. (2015). Clinical psychologists' use of reflection and reflective practice within clinical work. *Reflective Practice*, 16(6), 731–743. <https://doi.org/10.1080/14623943.2015.1095724>
- Gibbs, G. (1988). *Learning by doing: A guide to teaching and learning methods*. Oxford Brookes University.
- Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Aldine Transaction.
- Greenfield, B. H., Bridges, P. H., Carter, V., Barefoot, T., Dobson, A., Eldridge, E., Nicoletti, L., Ng, N., & Phillips, T. (2017). Reflective narratives by student physical therapists on their early clinical experiences: An inductive and deductive analysis – The use of a reflective framework. *Journal of Physical Therapy Education*, 31(4), 49–58. <https://doi.org/10.1097/JTE.0000000000000005>
- Harrison, B. (2002). Seeing health and illness – Using visual methodologies in a sociology of health and illness: A methodological review. *Sociology of Health and Illness*, 24(6), 856–872. <https://doi.org/10.1111/1467-9566.00322>
- Health and Care Professions Council. (2013). Standard of proficiency for physiotherapists. *Health and Care Professions Council*. <https://www.hcpc-uk.org/resources/standards/standards-of-proficiency-physiotherapists/>
- Johns, C. (1995). Framing knowledge through reflection within carper's fundamental ways of knowing in nursing. *Journal of Advanced Nursing*, 22(2), 226–234. <https://doi.org/10.1046/j.1365-2648.1995.22020226.x>
- Knab, M. S. (2012). *Reflection in physical therapy practice: A phenomenological inquiry into oral and written narratives* [Doctoral dissertation, Lesley University]. Lesley University Digital Commons. https://digitalcommons.lesley.edu/cgi/viewcontent.cgi?article=1036&context=education_dissertations
- Kolb, D. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice-Hall.
- Korthagen, F., & Vasalos, A. (2005). Levels in reflection: Core reflection as a means to enhance professional growth. *Teachers and Teaching*, 11(1), 47–71. <https://doi.org/10.1080/1354060042000337093>
- Kounios, J., & Beeman, M. (2009). The aha! moment: The cognitive neuroscience of insight. *Current Directions in Psychological Science*, 18(4), 210–216. <https://doi.org/10.1111/j.1467-8721.2009.01638.x>
- Kurunsaaari, M., Piirainen, A., & Tynjälä, P. (2015). Students' experiences of reflective writing in physiotherapy education. [Paper presentation, World Confederation for Physical Therapy

- Congress, 1-4 May, Singapore]. *Physiotherapy*, 101(Suppl 1), e803–e804. <https://doi.org/10.1016/j.physio.2015.03.3687>
- Mills, J., Birks, M., & Hoare, K. (2014). Grounded theory. In J. Mills & M. Birks (Eds.), *Qualitative methodology: A practical guide* (pp. 107–122). SAGE.
- Musolino, G. M. (2006). Fostering reflective practice: Self-assessment abilities of physical therapy students and entry level graduates. *Journal of Allied Health*, 35(1), 30–42. <https://www.ingentaconnect.com/content/asahp/jah/2006/00000035/00000001/art00005>
- Nesbit, K. C., Jensen, G. M., & Delaney, C. (2018). The active engagement model of applied ethics as a structure for ethical reflection in the context of course-based service learning. *Physiotherapy Theory and Practice*, 34(1), 1–12. <https://doi.org/10.1080/09593985.2017.1368759>
- O'Connell, T. S., & Dymont, J. E. (2011). The case of reflective journals: Is the jury still out? *Reflective Practice*, 12(1), 47–59. <https://doi.org/10.1080/14623943.2011.541093>
- Oppezzo, M., & Schwartz, D. L. (2014). Give Your ideas some Legs: The positive effect of walking on creative thinking. *Journal of Experimental Psychology: Learning, Memory and Cognition*, 40(4), 1142–1152. <https://psycnet.apa.org/buy/2014-14435-001>
- Papadimitriou, N. (2013, April 22). *The London perambulator* [Paper presentation]. Walking, Journeys and Knowledge: An interdisciplinary approach, Motiroti, Cass Business School, University of London.
- Richard, V., & Lahman, M. K. E. (2015). Photo-elicitation: Reflexivity on method, analysis and graphic portraits. *International Journal of Research and Method in Education*, 38(1), 3–22. <https://doi.org/10.1080/1743727X.2013.843073>
- Robson, C. (2002). *Real world research: A resource for social scientists and practitioner-researchers* (2nd ed.). Blackwell Publishers.
- Rose, G. (2012). *Visual methodologies* (3rd ed.). SAGE.
- Schön, D. (1983). *The reflective practitioner: How professionals think in action*. Ashgate Publishing Ltd.
- Shepard, K. F., & Jensen, G. M. (1990). Physical therapy curricula for the 1990s: Educating the reflective practitioner. *Physical Therapy*, 70(9), 566–573. <https://doi.org/10.1093/ptj/70.9.566>
- Smith, M., & Trede, F. (2013). Practical concerns of educators assessing reflections of physiotherapy students. *Physical Therapy Reviews*, 18(6), 445–451. <https://doi.org/10.1179/1743288X13Y.0000000099>
- Taylor, B. (2010). *Reflective Practice for healthcare professionals: A practical guide* (3rd ed.). Open University Press.
- Trommelen, R. D., Karpinski, A., & Chauvin, S. (2017). Impact of case-based learning and reflection on clinical reasoning and reflection abilities in physical therapist students. *Journal of Physical Therapy Education*, 31(1), 21–30. <https://doi.org/10.1097/00001416-201731010-00006>
- Van Manen, M. (1995). On the epistemology of reflective practice. *Teachers and Teaching: Theory and Practice*, 1(1), 33–50. <https://doi.org/10.1080/13540609500101014>
- Wainwright, S. F., Shepard, K. F., Harman, L., & Stephens, J. (2010). Novice and experienced physical therapist clinicians: A comparison of how reflection is used to inform the clinical decision-making process. *Physical Therapy*, 90(1), 75–88. <https://doi.org/10.2522/ptj.20090077>
- Walsh, A. (2009). Modes of reflection: Is it possible to use both individual and collective reflection to reconcile the 'Three-Party Knowledge Interests' in workplace learning? *European Journal of Education*, 44(3), 385–398. <https://doi.org/10.1111/j.1465-3435.2009.01389.x>
- Ward, A., & Grace, J. (2006). Reflective practice in physiotherapy curricula: A survey of UK university based professional practice coordinators. *Medical Teacher*, 28(1), e32–e39. <https://doi.org/10.1080/01421590600568512>
- Woolner, P., Thomas, U., Todd, T., & Cumming, C. (2009, September 15th-17th). *How do visually mediated encounters differ from traditional interviews?* [Paper presentation]. 1st International Visual Methods Conference, Leeds, England. <https://www.ncl.ac.uk/media/wwwnclacuk/cflat/files/WoolnerThomasetal2009.pdf>
- World Physiotherapy. (2019) *Policy statement: Education*. World Physiotherapy. Retrieved April 08 2022 from <https://world.physio/policy/ps-education>