



Original article

Can a professional development workshop with follow-up alter practitioner behaviour and outcomes for neck pain patients? A randomised controlled trial

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ABSTRACT

Background: Continuing professional development (CPD) is a fundamental component of physiotherapy practice. Follow-up sessions provide opportunity for the refinement of skills developed during CPD workshops. However, it is necessary to identify if such opportunity translates to improved physiotherapist performance and patient outcomes.

Objectives: To determine whether a traditional CPD workshop with a follow-up session with the educator is more likely to change physiotherapists' practice behaviour and patient outcomes than a traditional workshop with no opportunity for follow-up.

Design: A single-blind, randomised controlled trial.

Methods: Participants were stratified and randomly allocated to the intervention and control groups. The control group participated in a two-day workshop dedicated towards the management of neck disorders. The intervention group completed the two-day workshop and attended a five-hour follow-up session one month later. Outcome measures included self-reported physiotherapist practice behaviour and confidence, as well as patient clinical outcomes using the Neck Disability Index.

Results: While all participants exhibited changes in confidence and practice behaviours, between-group differences were not significant for any response ($p > 0.05$). There were also no significant differences between the groups in terms of patient outcomes (Neck Disability Index: $F = 0.36$, $p = 0.56$).

Conclusion: A single follow-up session to a traditional workshop is insufficient to significantly influence practice behaviours or patient outcomes.

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1. Background

Continuing professional development (CPD) is the career-long process of maintaining and extending one's knowledge, skills and abilities (Lewis, 1998; French and Dowds, 2008; Gunn and Goding, 2009; PBA, 2011). In many countries, CPD is a mandatory requirement for professional registration (Mansouri and Lockyer, 2007; AHPRA, 2011). The term CPD generally encompasses formal learning methods, such as attendance at courses and conferences, and informal learning methods, through experience and interaction (Fleet et al., 2008; PBA, 2011). Physiotherapists have a

preference for formal learning methods, with a large industry devoted to the provision of face-to-face workshops and conferences (French and Dowds, 2008; Gunn and Goding, 2009; Chipchase et al., 2012).

Increasingly, attention is being paid to whether CPD can create change to practice sufficient to improve patient outcomes (Davis et al., 2003, 2011; Mansouri and Lockyer, 2007; Chipchase et al., 2012). This is due to two factors: First, health professionals spend between one and three weeks per year at courses and workshops (Mansouri and Lockyer, 2007). This means that CPD is associated with significant costs to governments, institutions and individuals. Second, and arguably of greatest importance, is that one third of patients have been shown to receive care that does not reflect current evidence (Davis and Galbraith, 2009; Grol and Grimshaw, 2003; Mansouri and Lockyer, 2007). In many instances care may be unnecessary or, at worst, potentially harmful.

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Participation in CPD workshops has been shown to improve knowledge and guideline-consistent behaviours among physiotherapy practitioners (Menon et al., 2009). Rebbeck et al. (2006) demonstrated that a program involving a CPD workshop on whiplash-related disorders improved practice behaviours when compared to physiotherapy guidelines received via mail. Such trends have been observed in reviews of both physiotherapy and medical literature (Mansouri and Lockyer., 2007; Menon et al., 2009; Davis and Galbraith, 2009; Davis et al., 1995; Chipchase et al., 2012). Active CPD approaches (workshops) tend to elicit greater improvements in practice behaviours than passive approaches, such as reading or viewing instructional material (Menon et al., 2009). However, studies of CPD workshops in physiotherapy have demonstrated inconsistent results in terms of improving patient outcomes (Bekkering et al., 2005; Brennan et al., 2006; Cleland et al., 2009). Educational interventions with continuing contact over time have demonstrated most success in this area, suggesting that the amount of follow-up provided during a CPD program may be a determining factor in its success (Mansouri and Lockyer., 2007; Menon et al., 2009). Unfortunately, many studies in this area have been of low-to-modest methodological quality (Scott et al., 2012; Jones et al., 2015).

The role of follow-up during CPD workshops is a developing area of research (Mansouri and Lockyer, 2007). Previous randomised controlled trials have demonstrated that physiotherapists who receive ongoing education following a two-day workshop on neck pain demonstrate superior patient outcomes in terms of Neck Disability Index (NDI) scores compared to those who undertake the workshop alone (Brennan et al., 2006; Cleland et al., 2009). While these studies highlight the potential for improvement with additional follow-up, the delivery of this follow-up, in the form of regular outreach visits or co-assessment and treatment of clients by physiotherapists and workshop leaders, is rarely feasible (Woollett, 1990). Indeed, the cost and time associated with the provision of outreach visits in a geographically dispersed population prohibits their widespread use in many countries (Woollett, 1990; Asthana and Halliday, 2004; O'Brien et al., 2002).

While CPD workshops targeting physiotherapists have been shown to be effective in terms of improving practice behaviours, benefits to patients have primarily been explored through programs consisting of multiple follow-up sessions over a period of weeks to months. Not only are such approaches costly and time-consuming, they do not reflect the belief held by many physiotherapists that short 'refresher' courses are sufficient to enhance techniques and improve patient outcomes when combined with clinical practice over time (PBA, 2011). Unfortunately, the effectiveness of this short-term follow-up has yet to be completely elucidated, and additional high quality studies are required (Menon et al., 2009; Scott et al., 2012; Jones et al., 2015). Thus, the aim of this study was to determine whether a traditional workshop with a single follow-up meeting with the educator was more likely to change practice behaviour and patient outcomes than a traditional workshop with no opportunity for follow-up.

2. Method

This study is reported in accordance with Consolidated Standards of Reporting Trials (CONSORT) guidelines (Schulz et al., 2010).

2.1. Research design

A single blind, randomised clinical trial was used with participant stratification for years of post-entry-level qualification experience and gender.

2.2. Participants

Physiotherapists were eligible for the study if they were able to attend a two-day workshop with follow-up one month later (depending on group allocation) and were willing to collect pre- and post-course patient data. Physiotherapists who did not have a musculoskeletal caseload were not eligible to participate. Prior to the workshop, all participants completed a demographic questionnaire including age, gender and years of clinical experience. Ethical clearance for the study was gained from the institutional medical research ethics committee and all participants provided informed consent.

The sample size was determined based on the ratio of instructors (one course leader and an assistant) to participants. With two instructors, a sample size of no greater than 26 allowed participants to work practically in pairs with one instructor assigned to six or seven pairs.

2.3. Randomisation

Participants were stratified and randomly allocated after completion of the two-day workshop to ensure that the instructors were unaware of the group assignments when providing feedback on skill performance (Cleland et al., 2009). The first level of stratification grouped participants with similar years of experience in bands of five years and then by gender. The names of pairs of the same gender with similar experience were placed on separate pieces of paper in an opaque envelope. Unsigned names were drawn from the envelope by an independent researcher and the first drawn name was allocated to the control group and the second to the intervention group. This was repeated for each pair. As there were an uneven number of participants, the unpaired participant was allocated to the intervention group. In addition, participants who had work/social connections were specifically asked not to discuss the project with each other.

The workshop was developed and led by a specialist musculoskeletal physiotherapist, experienced researcher and Fellow of the Australian College of Physiotherapy. An experienced educator familiar with the workshop material assisted the lead instructor. The workshop was conducted in a state of Australia that was not the home state of the lead instructor, and one in which the workshop material had not been presented for greater than two years.

2.4. Intervention

The two-day workshop provided an evidence-based approach towards the diagnosis and management of neck disorders, with an emphasis on multimodal interventions inclusive of advice, education, exercise and manual therapy. The two-day timeframe was selected as it represents common practice and has been utilised by multiple studies exploring the effectiveness of continuing professional development workshops related to the neck and spine (Bekkering et al., 2005; Brennan et al., 2006; Cleland et al., 2009). The course especially promoted a research-informed therapeutic exercise program within the multimodal program that has been shown to be efficacious for persons with neck disorders in clinical trials (Jull et al., 2002, 2007). The workshop was 12.5 h in duration and consisted of lectures (2.5 h), as well as demonstrations, practice and discussion (10 h) over a two-day period. The lead instructor and assistant provided supervision in the practical sessions.

Participants in the control group participated in the two-day workshop. Participants in the intervention group completed the two-day workshop and, in addition, attended a five-hour follow-up

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