AUTHOR(S):

TITLE:

YEAR:

Publisher citation:

OpenAIR citation:

Accepted Manuscript

Title: Training peers to support older people with chronic low back pain following physiotherapy discharge: a feasibility study

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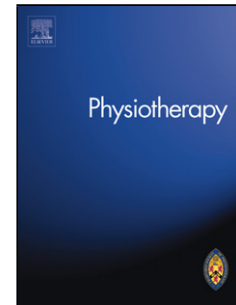
Please cite this article as: Cooper Kay, Jehu Llinos M, Klein Susan, Smith Blair H, Schofield Patricia.Training peers to support older people with chronic low back pain following physiotherapy discharge: a feasibility study.*Physiotherapy* http://dx.doi.org/10.1016/j.physio.2017.07.001

Title Page

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Word count: 3,597

Abstract

Objective: To determine the feasibility and acceptability of a training

programme for peer volunteers to support older adults with chronic low

back pain (CLBP) following discharge from physiotherapy.

Design: Feasibility study

Setting: Community-based

Participants: 17 adults (4 male, 13 female) with CLBP or experience of

supporting someone with CLBP enrolled and 12 (2 male, 10 female)

completed the volunteer training.

Intervention: Volunteers took part in a face-to-face or blended delivery

peer support training programme based on the Mental Health Foundation's

"Principles into Practice" and adapted for CLBP by the study team.

Main outcome measures: Recruitment/retention rates; demographics; time & resources used to deliver training; training evaluation (questionnaire); knowledge questionnaire, and self-efficacy questionnaire.

Results: Seventeen participants enrolled on the training programme (11 face-to-face, 6 blended delivery). 12 (71%) completed the training (73% face-to-face, 67% blended delivery). The training was positively evaluated. All but 2 participants passed the knowledge quiz at the end of the training, and the majority of self-efficacy scores (90%) were high.

Conclusions: It is feasible to develop, implement and evaluate a peer support training programme for the facilitation of CLBP self-management in older adults following discharge from physiotherapy. Blended delivery of training may facilitate the recruitment of greater numbers of peer support volunteers in future studies. Supported self-management of CLBP pain is widely recommended but can be difficult to achieve. Peer support might be a promising method of facilitating CLBP self-management without additional burden to health services, and should be further evaluated in a larger study.

Contribution of the paper

- This study demonstrates that it is possible to develop, implement and evaluate a peer support training programme for the facilitation of chronic low back pain self-management in older adults following physiotherapy discharge

- Support delivered by peer volunteers could be a useful adjunct to physiotherapy for chronic low back pain; ~~and~~ its effectiveness should be further investigated

Keywords: Peer support; Chronic low back pain; Self-management; Older adults; Training programme

Introduction

Low back pain causes more global disability than any other condition, with the prevalence and burden increasing~~e~~ with increasing age [1]. Chronic low back pain (CLBP; low back pain lasting more than 12 weeks) is a common and disabling condition among older adults [2,3], and the healthcare costs of people with CLBP are double those without [4]. It is therefore important to develop effective methods of managing CLBP in older adults.

CLBP is generally managed conservatively, with many older adults with CLBP consulting a physiotherapist. Whilst physiotherapy will be tailored to the individual's needs, the aim of physiotherapy will often be to facilitate self-management in the longer-term [5]. ~~Indeed,~~ Self-management is at the core of CLBP management, as emphasised in evidence-based practice guidelines [6,7]. Self-management of CLBP, as for other chronic health conditions, can be difficult for the individual to achieve, with several reported barriers ~~having been identified~~ [8-10]. Consequently, there is an increasing interest in methods of facilitating

longer-term self-management, with a growing evidence-base for peer support [11-12].

Peer support, defined as "the giving of assistance and encouragement by an individual considered equal" [13] has been widely applied in the fields of mental health [14], maternal and child health [15], and diabetes self-management [16]. It has been applied to a lesser extent in the musculoskeletal field, but its effectiveness has been demonstrated in workers with low back pain [11, 17] and it has been piloted in veterans with chronic musculoskeletal pain [12]. A systematic review [18] on peer support for chronic non-cancer pain concluded that peer support interventions may be more effective than usual care, but that further high-quality research was required. We therefore ~~felt it was~~ deemed it appropriate to develop and test a peer support intervention for older people with CLBP following physiotherapy discharge.

Peer support volunteers can be involved in a range of activities~~,~~ ~~such as~~ including: sharing experiences, mentoring, goal-setting and building self-esteem [19]. They can have varying responsibilities [20], and can have different roles within interventions from being part of a multi-component intervention to being the sole provider. As the intervention we developed was intended to be delivered following discharge from physiotherapy, our peer support volunteers had the primary role.

Training of peers varies considerably. Matthias et al's [12] peer coaches received a 3-hour training session in their study of chronic pain in veterans; however the peer coaches had taken part in previous self-management research. Dennis [21] reported on a 4-hour session to train

peers for delivering telephone peer support for postpartum depression, whereas Dale et al [22] employed a 2-day training programme for diabetes education and support delivered by telephone. In contrast, Simpson et al [23] employed 12 weekly 1-day sessions for training peers in mental health, and Tang et al [20] employed a 46-hour programme delivered over a 12-week period to train peers to deliver a diabetes self-management support intervention.

The content of peer support training programmes has more consistency. , with Most ~~of the~~ published programmes to date focus~~ing~~ on: condition-specific knowledge, communication skills, ~~principles of~~ behaviour change principles, and problem-solving [20,21,23]. Simulation and role play are often incorporated [17,20].

Delivery of peer support training programmes is commonly face-to-face, with some having top-up sessions delivered by telephone during the period that peers are delivering the intervention [12]. Blended delivery (online + face-to-face), known to be effective in healthcare education [24,25], may offer a pragmatic solution to training peer support volunteers without the need for them to travel to a central location, and allowing them to complete the training at times and a rate suitable to their needs. However, blended learning does not appear to have been utilised in peer support training to date.

To our knowledge this is the first study aimed at training peers to facilitate self-management of CLBP in older adults following discharge from physiotherapy and also the first to explore flexible methods of delivering a peer support intervention. The aims of this study were to:

1. Determine the feasibility of delivering a training programme for peer support volunteers to support older people with CLBP following discharge from physiotherapy

2. Determine the acceptability of the peer support volunteer training programme

3. Evaluate whether the peer support training facilitates participants to achieve the knowledge, skills and self-efficacy required for delivering the intervention.

This study formed part of a larger study aimed at developing and testing the feasibility of a peer support intervention, the associated training programme, and the methods of evaluation. In keeping with MRC guidance [26] the knowledge generated will be used to inform the design of a future randomised controlled trial to evaluate clinical and cost effectiveness of the intervention.

The study was approved by the XXXX Research Ethics Committee (Ref No: XXXX).

Methods

Development of peer support intervention and training programme

The intervention was informed by a systematic review on peer support for chronic non-cancer pain [18], consultation with individuals and organisations experienced in peer support for chronic health conditions, and ~~the results of~~ a qualitative study exploring older adults with CLBP and physiotherapists' perceptions of peer support [27]. The knowledge

generated from these activities, along with a wider review of literature, was used to develop the peer support intervention and accompanying peer support volunteer training programme. The intervention, training programme, and all supporting materials were reviewed by a sample of physiotherapists, older people with CLBP, and individuals experienced in peer support for chronic health conditions, prior to being finalised for use in this feasibility study. The intervention was known as PALS (Peer support in XX for Long-term condition Self-management).

Sample

We aimed to recruit and train 10-15 peer support volunteers. We recruited participants who had taken part in our previous qualitative study, and ~~we~~ also from local organisations involved with older people, visits to local community/sports centres and groups, and via a media release. Participants were recruited in three phases, over a 6-month period, and inclusion criteria were: (i) aged 18+; (ii) have CLBP or experience of supporting someone with CLBP; (iii) live within a 20-mile radius of the study centre, and (iv) willing to commit to the training programme and to supporting at least 1 CLBP patient during the PALS intervention. In keeping with previous research, we employed several stages for the screening of potential volunteers [20]. First, interested participants were screened by the research assistant (RA) over the telephone to determine that the basic inclusion criteria were met. Second, those participants who passed ~~the~~ first level ~~of~~ screening were provided with detailed written information on the training and peer support intervention then interviewed by the RA (face-to-face) where they were

asked: (i) what are your thoughts about the PALS study?; (ii) why do you think you would be a good peer support volunteer?, and (iii) what has been most helpful to you in managing your low back pain (or helping someone else to manage their low back pain)? This allowed us to identify participants whose perceptions of peer support and self-management were not compatible with the study aims. These participants were provided with information on CLBP self-management and other local volunteering opportunities. Suitable participants provided written informed consent and 2 character references, and were enrolled on the training programme. Third, participants' communication and interpersonal skills, and responses to exercises and group work were observed by the study team during the peer support training programme. Participants who were deemed unsuitable were to be signposted to other volunteering opportunities or offered an administrative role. This was unnecessary however, as the 2 participants who the study team felt were not suited to being peer support volunteers self-selected to leave the study on completion of the training programme.

Peer support volunteer training programme

Figure 1 summarises the purpose of the training and its evaluation. The training was adapted from the Mental Health Foundation's (MHF) "Principles into Practice" programme [28], in consultation with their project manager who assisted in delivery to the first cohort. The MHF had previously identified a training need for peer volunteers in a variety of organisations, and had extensive experience of peer support for a variety of long-term conditions. Our training also drew on previous research

[21,22], and in keeping with the feasibility nature of the study it was developed in face-to-face and blended formats.

The aim of the training was to increase knowledge and understanding of CLBP and self-management. It also provided opportunities to learn about peer support and explore boundaries/ ~~and~~ challenges inherent in ~~volunteer~~ undertaking the role and delivering the PALS intervention. The intervention will be reported in full elsewhere. In summary, it is a 6-session 1-1 peer support intervention delivered at fortnightly intervals either face-to-face, by telephone, Skype or e-mail, aimed at facilitating self-management of CLBP in older people following discharge from physiotherapy. It is underpinned by empowerment theory [20] and aims to enhance CLBP patients' self-efficacy [22; 29-31]. Each session~~s~~ has a key topic for discussion and there is an emphasis on maintaining or increasing physical activity [6-7]. The role of the peer support volunteer in the PALS intervention is not to educate the CLBP patient, but to provide support (emotional, informational and appraisal [13]) as they determine which self-management strategies work best for them, and to initiate and maintain behaviour change accordingly~~.~~

The face-to-face training programme was facilitated by 2 members of the research team and delivered over 2 non-consecutive days, with independent study prior to each day's attendance (see table 1). The blended delivery comprised 3 topics with embedded interactive learning objects, an online discussion forum, and a half-day workshop facilitated by one member of the study team (see table 1). The workshop allowed for discussion of the exercises completed by participants and any outstanding

questions. It also provided the opportunity for observation of communication and interpersonal skills as described above. Participants completed the blended delivery programme at their own pace.

Measures

Table 2 describes the items used to measure feasibility, acceptability, knowledge and skills, and self-efficacy. Measures included simple counts recruitment/retention rates; time/resources), tools adapted from previous peer support research (knowledge questionnaire20; self-efficacy29) and tools developed for this study (training evaluation, qualitative interview topic guide). The training evaluation asked for participants' opinions of the training related to: (i) usefulness; (ii) delivery; (iii) organisation; (iv) support from research team (blended delivery); (iv) achievement of learning outcomes, and (v) developing an understanding of peer support for low back pain. We set a pass mark of 70% for the knowledge quiz to indicate suitability as a peer support volunteer.

Data processing and analysis

Feasibility measures and recruitment and retention rates were documented throughout the study. Data from the satisfaction, knowledge, and self-efficacy questionnaires were input to Microsoft Excel, in order for summary descriptive statistics to be calculated. Qualitative interviews were recorded and transcribed verbatim. A coding index was constructed by and applied by two researchers, who analysed the data using the Framework method [36].

3. Results

Recruitment

Table 3 shows that 20 potential peer support volunteers registered an interest in the study over a six-month period (1 qualitative study participant; 8 from local organisations/groups; 11 from media release). Of these, 17 enrolled on the training (11 face-to-face; 6 blended delivery). It was not possible to calculate a recruitment rate, as accurate numbers of potential volunteers reached during visits/media release are not known. The time and effort required to recruit participants however should not be overlooked.

Participants reported satisfaction with the recruitment process and materials, and the inclusion/exclusion criteria resulted in an appropriate sample of participants. All participants had CLBP, many for several years' duration, and they used a variety of self-management methods with physiotherapist-prescribed exercises and physical activity most prevalent. Four participants, 2 each from the face-to-face and blended delivery, took part in qualitative interviews at the end of their involvement in the study, after providing peer support to 1-3 older adults each.

Retention

Of the 17 volunteers who started, 12 (71%) completed the PALS training programme (Table 3). Demographics for the 12 completers can be seen in table 2 4. All had CLBP, many for several years' duration, and all used various self-management methods, with physiotherapist-prescribed exercises and physical activity most common. Three

participants withdrew after the first day of face-to-face training (1 male, 2 female), one from each of the three cohorts who received the training. A further 2 participants withdrew from the blended delivery (1 male, 1 female). Completion rates were therefore 73% for face-to-face and 67% for blended delivery. One participant was unable to attend the second day's training and completed via the blended delivery route instead.

Feasibility

. Three cohorts (11 participants) enrolled on the 2-day face-to-face training which required 2 members of the research team on each day. A further 6 participants enrolled on the blended delivery format. Participants took on average 1-month to complete the blended delivery training, which required weekly contact by a member of the research team via the online learning platform. Due to the rolling nature of the blended delivery training 3 ½-day workshops were delivered by 1 member of the research team. Therefore, a total of approximately 80 person-hours were required to train the 12 participants who completed the PALS training programme (Table 3).

Training evaluations were overwhelmingly positive with participants consistently rating questionnaire items positively. Comments regarding the face-to-face training included: "*deciding what the most useful ways to help and understand the needs of the person*" [most useful aspect of the training]; "*working with others with a variety of views*" [most useful aspect of training]; "*learnt some things about self I hadn't realised*"; "*good and very easy to understand the course*"; "*the information and training has been excellent*"; "*everything explained fully and clearly with*

knowledge". The first cohort made some suggestions for improvement which we incorporated in the remaining cohorts:(i) greater incorporation of physical activities/postural adjustments on the training days, and (ii) more sharing of CLBP experiences between participants. The blended delivery was also positively evaluated with similar comments received. Areas for improvement related to reducing the need for downloading/printing material, and ensuring that all web-links were live and up-to-date.

The qualitative interviews reinforced these findings. Participants from face-to-face and blended delivery were equally positive about their experiences, suggesting that the formats had suited their individual preferences and that it was appropriate to take a flexible approach to the training:

> *"Blended training was fine for me, I did it quite quick. My past knowledge probably helped* [college tutor & assessor]. *Was never a time I felt I didn't understand or needed somebody there to explain"* [P47, Female, Blended]

> *"Interviewing skills were useful, using open questions, wish I'd had that when I was working with clients"* [P66, Male, Blended]

> *"Wouldn't like online, can't be bothered with all that reading, prefer to see a face…for me I just get stuck in"* [P42, Female, face-to-face]

Knowledge

For the face-to-face training, on the first attempt at the quiz participants scored between 40% and 85% with a mean score of 60% (table 5). All participants improved their scores with final scores ranging from 50% to 96% with a mean score of 75%. All participants except for two scored above 70% on the final attempt. The two participants whose scores were low (50% & 53% respectively) subsequently elected to leave the study. For the blended delivery, scores for the first attempt ranged from 53% to 93% (mean 76%), and for the second attempt from 70% to 96% (mean 82%).

Self-efficacy

All participants agreed or strongly agreed that as a result of the training they were confident to provide peer support, with the exception of two participants who responded "neither agree nor disagree" in response to "as a result of the training I feel confident that I could end the peer-mentoring relationship successfully" (one face-to-face, one blended learning), and one participant each who responded "neither agree nor disagree" to "I feel confident I could provide support to someone with persistent low back pain " (blended delivery), and "I know when to defer to a healthcare professional" (blended delivery) (Table 6).

Discussion

The results demonstrate that the PALS training programme is feasible to deliver. We exceeded our recruitment target and achieved our training target. Of the three participants who dropped out of the face-to-face training, one was due to poor health but the reasons for the other two are unknown. It is possible that these participants were not fully

aware of the time-commitment required or the nature of the PALS intervention, and this should be considered when recruiting participants for future studies. ~~Similarly~~ We do not know the reasons why the two participants dropped out of the blended delivery. However, it is reassuring that the drop-out rates were similar for both formats, suggesting that both are feasible to deliver. Although some studies have reported lower drop-out rates [12,20], Simpson et al [23] reported similar drop-out rates for their peer support training programme for people with lived experience of mental distress/illness. Due to the relatively low burden of providing the training, we feel that a dropout rate of around 30% is acceptable.

Although there is increasing evidence for the effectiveness of blended learning in healthcare education [24,25], to our knowledge this is the first peer support volunteer training programme to be delivered in blended learning format. Participants chose the blended learning option for a variety of reasons: (i) reducing the need to travel to the central training location; (ii) ability to fit training around other commitments such as work and caring responsibilities, and (iii) not wanting to wait for the next face-to-face cohort to begin. Blended learning may therefore overcome some ~~common~~ barriers that might currently be preventing greater numbers of people to taking up the opportunity of training as peer support volunteers. It might also provide a cost-effective method of providing peer support volunteer training, as less human resource is required for its delivery. Further evaluation of this format of providing peer support volunteer training is therefore indicated.

The results also demonstrated that the PALS training programme was acceptable to participants. Again it is reassuring that participants were equally satisfied with both methods of delivery; however the recommendations regarding downloading/printing of materials and currency of web-links should be acted on for future cohorts.

We set a pass mark of 70% for the knowledge quiz and all but 2 participants achieved a pass by the end of training. The study team also assessed these participants as not being suitable for a peer support volunteer role during observation of their communication and/or interpersonal skills during the training. Since these 2 participants elected to leave the study after completion of the training, we did not have to implement the process of signposting to other volunteering opportunities or offering an administrative role in the project. However, having observed these participants despite the rigorous recruitment process described above, it confirms that it is important to have a process whereby unsuitable volunteers can be detected, which is in keeping with previous research [20].

Although self-efficacy was rated highly by participants, the results indicated that 4 participants had dimensions that could be improved. Previous researchers have utilised top-up training or supervision for peer support volunteers [12, 23]. We did not implement top-up training, but did provide ongoing support to the volunteers during the intervention phase via regular telephone calls with a member of the research team. It might however be prudent to provide top-up training to future cohorts in

order to enhance self-efficacy in all dimensions and to maintain knowledge and skills.

This study has several limitations. The sample size was ~~relatively~~ small and drawn from one geographical area of the United Kingdom. It is unknown whether the PALS training would be acceptable to participants from a wider range of geographical and socio-demographic backgrounds. However, we did demonstrate feasibility and acceptability of the training, which can be utilised in further research on a more diverse sample. We only interviewed 4 participants at the end of their involvement in the study; it is therefore possible that alternative views may have been expressed by other participants, particularly those whom we were unable to match with adults with CLBP during the course of the study. Unlike some previous research [20] we did not formally assess communication and interpersonal skills; we did however observe participants' communication and interpersonal skills during the training in order to identify any participants unsuitable for a peer support volunteer role.

Conclusion

Findings from this study suggest that it is feasible to develop, implement and evaluate a peer support training programme for adults with CLBP in order to empower them to facilitate self-management of CLBP in older adults following discharge from physiotherapy. Delivering this training appears to be feasible as a face-to-face or blended delivery option; flexibility in training method might facilitate the recruitment of greater numbers of peer support volunteers in future studies. The findings have informed amendments to be made to the training programme prior

to further evaluation, namely (i) enhanced participant information for prospective volunteers; (ii) reduce the need for downloading and printing materials; (iii) carefully consider the best method of assessing communication and interpersonal skills, and (iv) consider providing top-up training to volunteers during the intervention phase. Further research is required to evaluate the PALS training programme on a more diverse sample of peer support volunteers. The next phase of this research will be to conduct a large-scale study to fully evaluate the peer support training and the effectiveness of the peer support intervention provided by the trained volunteers.

Practice Implications

Supported self-management of CLBP is recommended by several practice guidelines, but can be difficult to achieve in practice. Peer support is a promising method of facilitating CLBP self-management without producing an additional burden to physiotherapy services. It is possible to recruit and train community dwelling adults with CLBP as peer support volunteers. Ultimately, it might be possible for peer support to provide a relatively low-cost intervention to support older adults with CLBP following discharge from physiotherapy services.

Ethical Approval: The study was approved by the XXXX Research Ethics Committee (Ref No: XXXX).

Conflicts of interest: None

Acknowledgements

The authors would like to thank XXXX for assistance with developing the training and delivering it to the first cohort, and XXXX for assistance with producing the online learning materials.

References

[1] Hoy D, March L, Brooks P, Blyth F, Woolf A, Bain C et al. The global burden of low back pain: estimates from the Global Burden of Disease 2010 study. Ann Rheum Dis 2014; 73: 968-74. doi:10.1136/annrheumdis-2013-204428

[2] Knauer SR, Freburger JK, Carey TS. Chronic low back pain among older adults: a population-based perspective. J Aging Health 2010; 22: 1213-34. doi: 10.1177/0898264310374111

[3] Weiner DK, Sakamoto S, Perera S, Breuer Pl. Chronic low back pain in older adults: prevalence, reliability, and validity of physical examination findings. J Am Geriatr Soc 2006; 54: 11-20. doi:10.1111/j.1532-5415.2005.00534.x

[4] Hong J, Reed C, Novick D, Happich M. Costs associated with treatment of chronic low back pain: An analysis of the UK General Practice research database. Spine 2013; 38: 75-82. doi:10.1097/BRS.0b013e318276450f

[5] Pillastrini I, Gerdenghi I, Bonetti F, Capra F Guccione A, Mugnai R et al. An updated overview of clinical guidelines for chronic low back pain management in primary care. Joint Bone Spine 2013; 79: 176-85. doi:10.1016/j.jbspin.2011.03.019

[6] Scottish Intercollegiate Guidelines Network (SIGN). Management of chronic pain. Edinburgh: SIGN; 2013. (SIGN publication 136). [December 2013]. Available from URL:
http://www.sign.ac.uk/guidelines/fulltext/136/index.html [accessed 10.10.16].

[7] National Institute for Health and Care Excellence (NICE). Low back pain in adults: early management. Clinical guideline. [Nov 2016]. Available from: www.nice.org.uk/guidance/ng59   [accessed 10.02.16].

[8] Briggs AM, Slater H, Bunzil S, Jordan JE, Davies SJ, Smith AJ, Quintner JL. Consumers' experiences of back pain in rural Western Australia: access to information and services, and self-management behaviours. BMS Health Serv Res 2012; 11:357. doi: 10.1186/1472-6963-12-357.

[9] Lukewich J Mann E, VanDenKerhhof E, Tranmer J. Self-management support for chronic pain in primary care: a cross-sectional study of patient experiences and nursing roles. J Adv Nurs 2015; 71: 2551-62. doi: 10.1111/jan.12717.

[10] Slade SC, Patel S, Underwood M, Keating JL. What are patient beliefs and perceptions about exercise for nonspecific chronic low back pain?: a systematic review of qualitative studies. Clin J Pain 2014; 30:995-105. doi: http://dx.doi.org.ezproxy.rgu.ac.uk/10.1097/AJP.0000000000000044

[11] Werner EL, Laerum E, Wormgoor MEA, Lindh E, Indahl A. Peer support in an occupational setting preventing LBP-related sick leave. Occup Med 2007; 57: 590-5. doi: 10.1093/occmed/kqm094

[12] Matthias MS, McGuire AB, Kukla M, Daggy J, Myers LJ, Bair MJ. A brief peer support intervention for veterans with chronic musculoskeletal pain: A pilot study of feasibility and effectiveness. Pain Med 2015; 16: 81-7. doi: 10.1111/pme.12571

[13] Dennis C-L. Peer support within a health care context: a concept analysis. Int J Nurs Stud 2003; 40: 321-22.

[14] Mahlke CI, Kramer UM, Becker T, Bock T. Peer support in mental health services. Curr Opin Psychiatry 2014; 27: 276-81. doi: 10.1097/YCO.0000000000000074.

[15] Kaunonen M, Hannula L, Tarkka MT. A systematic review of peer support interventions for breastfeeding. J Clin Nurs 2015; 21:1943-54. doi: 10.1111/j.1365-2702.2012.04071.x

[16] Qi L, Liu Q, Qi X, Wu N, Tang W, Xiong H. Effectiveness of peer support for improving glycaemic control in patients with type 2 diabetes: a meta-analysis of randomized trials. BMC Public Health 2015; 15:471. doi: 10.1186/s12889-015-1798-y

[17] Odeen M, Ihlebaek C, Indahl A, Workgoor MEA, Lie SA, Eriksen HR. Effect of peer-based low back pain information and reassurance at the workplace on sick leave: a cluster randomized trial. J Occup Rehabil 2013; 23: 209-19. doi:10.1007/s10926-013-9451-z.

[18] Cooper K, Kirkpatrick P, Wilcock, S. A comprehensive systematic review of the effectiveness of peer support interventions for community dwelling adults with chronic non-cancer pain, JBI Database System Rev Implement Rep. 12 (2014) 319-348.

[19] Jacobsen N, Trojanowski L, Dewa CS. What do peer support workers do? A job description. BMC Health Serv Res 2012; 12: 205. doi: 10.1186/1472-6963-12-205.

[20] Tang TS, Funnell MM, Gillard M, Nwankwo R, Heisler M. Training peers to provide ongoing diabetes self-management support (DSMS): Results from a pilot study. Patient Educ Couns 2011; 85: 160-8. doi: 10.1016/j.pec.2010

[21] Dennis CL. Peer support for postpartum depression: volunteers' perceptions, recruitment strategies and training from a randomized controlled trial. Health Promot Int 2012; 8: 187-196. doi: 10.1093/heapro/das003.
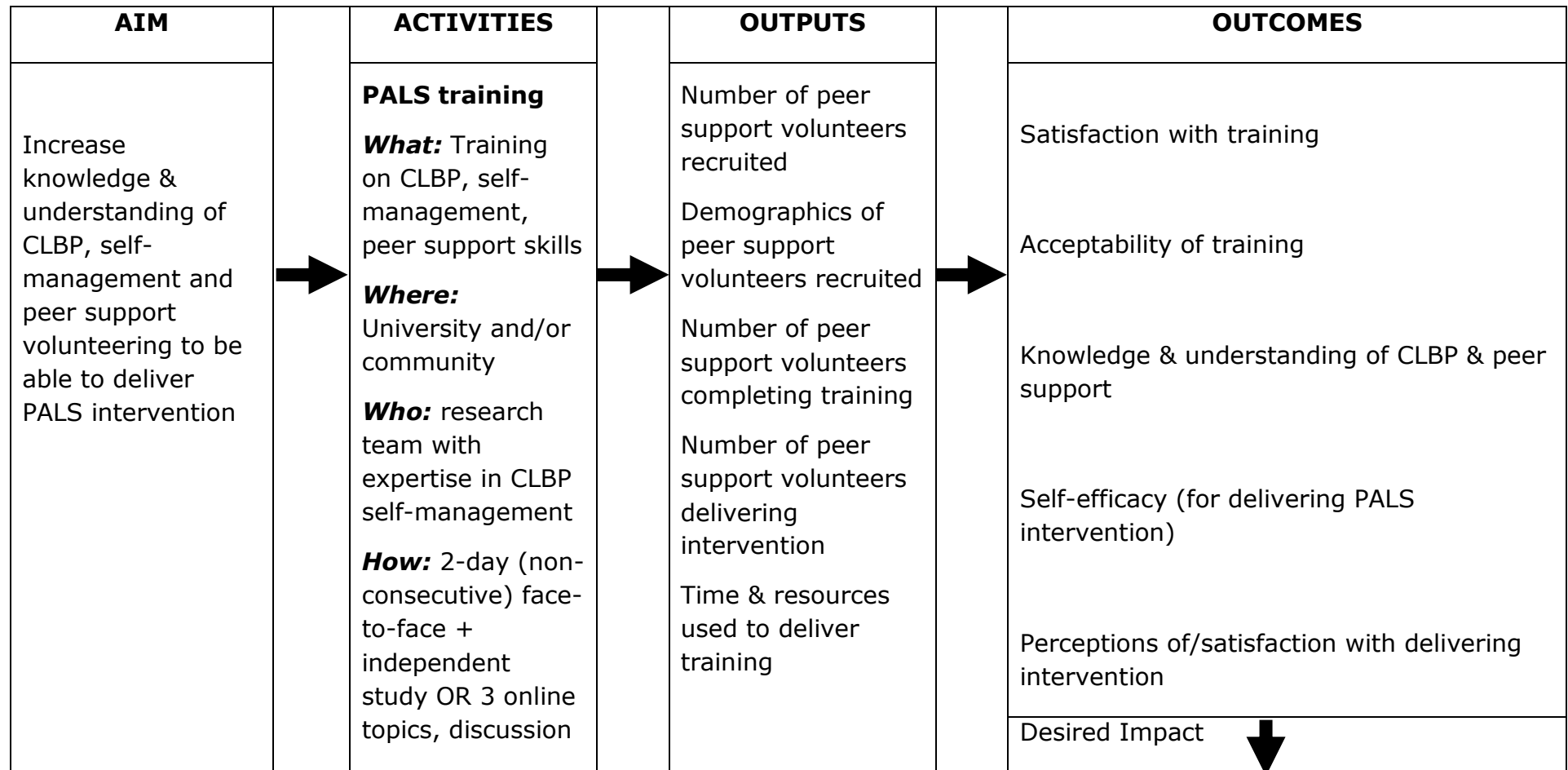
[22] Dale J, Caramalu I, Sturt J, Friede T, Walker R. Telephone peer-delivered intervention for diabetes motivation and support: The telecare exploratory RCT. Patient Educ Couns 2009; 75: 91-8. doi: 10.1016/j.pec.2008.09.014.

[23] Simpson A, Quigley J, Henry SJ, Hall C. Evaluating the selection, training, and support of peer support workers in the United Kingdom. J Psychosoc Nurs 2014; 52: 31-40. doi: 10.3928/02793695-20131126-03.

[24] McCutcheon K, Lohan ML, Traynor M, Martin D. A systematic review evaluating the impact of online or blended learning vs. face-to-face learning of clinical skills in undergraduate nurse education. J Adv Nurs 2015; 71:255-70. doi: 10.1111/jan.12509.

[25] Liu Q, Peng W, Zhang F, Hu R, Li Y, Yan W. The effectiveness of blended learning in health professions: a systematic review and meta-analysis. J Med Internet Res 2016; 18: e2. doi: 10.2196/jmir.4807.

[26] Craig P, Dieppe P, Macintyre S, Michie S, Nazareth I, Petticrew M. *Developing and evaluating complex interventions: new guidance* [online]. Medical Research Council. 2008. Available from: www.mrc.ac.uk/complexinterventionsguidance [accessed 13/02/17].

[27] Cooper K, Schofield P, Klein S, Smith BH, Jehu LM (2016). Exploring peer-mentoring for community dwelling older adults with chronic low back pain: a qualitative study. *Physiotherapy* [In Press] http://dx.doi.org/10.1016/j.physio.2016.05.005

[28] Mental Health Foundation. Peer Support in Long term Conditions: The Basics. Mental Health Foundation, Edinburgh, 2012. Available from: https://www.mentalhealth.org.uk/sites/default/files/peer_support_the_ba sics.pdf [accessed 10.10.16].

[29] Heisler M Piette JD. "I help you, and you help me." Facilitated telephone peer support among patients with diabetes. Diabetes Educ 2005; 31: 869-79. doi:10.1177/0145721705283247.

[30] Richardson J, Loyola-Sanchez A, Sinclair S, Harris J, Letts L, MacIntyre NJ et al. Self-management interventions for chronic disease: a systematic scoping review. Clin Rehabil 28 2014; 1067-77. doi: 10.1177/0269215514532478.

[31] Nelson K, Crain N, Robinson J, Kapp J, Hebert P, Taylor L, Silverman J, Kiefer M, Lessler D, Krieger J. Peer Support for Achieving Independence in Diabetes (Peer-AID): design, methods and baseline characteristics of a randomized controlled trial of community health worker assisted diabetes self-management support. Contemp Clin Trials 2014; 38: 361-9. doi:10.1016/j.cct.2014.06.011

 [32] Roland MR, Waddell G, Klaber Moffett J, Burton K, Main C. The Back Book. UK Edition. London: The Stationery Office; 2002.

[33] Moore P, Cole F. The Pain Toolkit. Revised 2014. Available from: http://www.paintoolkit.org/images/uploads/downloads/Pain_Toolkit_Short _Version_February_2017.pdf

[34] Martin D, Anderson L. Living with persistent pain in later life. Pain Association Scotland; 2013. Available from: http://eopic.dundee.ac.uk/files/A3-A5_persistent_pain_leaflet%20(2).pdf

[35] How to look after your mental health. UK: Mental Health Foundation. Available from: https://www.mentalhealth.org.uk/publications/how-to-mental-health

[36] Spencer L, Ritchie J, O'Connor W, Morrell G, Ormston R. Analysis in Practice. In: Ritchie J, Lewis J, McNaughton Nicholls C, Ormston R (Eds). Qualitative research practice. A guide for social science students and researchers, London, SAGE, 2014

Figure 1: PALS Peer support training logic model

AIM		ACTIVITIES		OUTPUTS		OUTCOMES
Increase knowledge & understanding of CLBP, self-management and peer support volunteering to be able to deliver PALS intervention	➤	**PALS training** *What:* Training on CLBP, self-management, peer support skills *Where:* University and/or community *Who:* research team with expertise in CLBP self-management *How:* 2-day (non-consecutive) face-to-face + independent study OR 3 online topics, discussion	➤	Number of peer support volunteers recruited Demographics of peer support volunteers recruited Number of peer support volunteers completing training Number of peer support volunteers delivering intervention Time & resources used to deliver training	➤	Satisfaction with training Acceptability of training Knowledge & understanding of CLBP & peer support Self-efficacy (for delivering PALS intervention) Perceptions of/satisfaction with delivering intervention
						Desired Impact ⬇

		forum + ½ day workshop				
						Successful delivery of PALS intervention, demonstrated by: Integrity of intervention delivered* Satisfaction of patients receiving peer support* Patient outcomes**

PROCESS EVALUATION		OUTCOME EVALUATION

CLBP=Chronic low back pain; PALS=Peer support in XX for Long-term condition Self-management; *To be reported elsewhere (PALS intervention feasibility evaluation); **To be evaluated in future randomised controlled trial

Table 1: PALS training programme

Face-to-face delivery	Blended delivery

Part 1 – Independent study "pre-training pack" consisting of:
• Introduction to training including aims & objectives
• Volunteer person specification & role description
• CLBP self-management literature
  ○ The Back Book[32]
  ○ Pain Toolkit[33]
  ○ Living with persistent pain in later life[34]
  ○ How to look after your mental health[35]
• Web links to selected online resources on CLBP and self-management
	Part 1 – online learning package
	
	• Introduction to training & PALS study
	• Volunteer person specification & role description
	• CLBP self-management literature
	  ○ The Back Book[32]
	  ○ Pain Toolkit[33]
	  ○ Living with persistent pain in later life[34]
	  ○ How to look after your mental health[35]
	• Web links to selected online resources on CLBP and self-management

Part 2 – Face-to-face day 1
Short presentations, interactive group exercises & discussions on:
• The PALS study
• What is peer support?
• CLBP & peer support
• Peer support roles & skills
	Part 2 – online learning package
	• PALS intervention
	• What is peer support?
	• CLBP & peer support
	• CLBP self-management
	• Peer support roles & skills
	• Self-completion reflective exercises on:
	  - Mentoring
	  - Core skills
	  - Communication & questioning

	styles
Part 3 – Independent study "mid study pack" consisting of: Reading materials and self-completion reflective exercises on: • Mentoring • Core skills • Communication & questioning styles • Confidentiality • Self-management strategies (pacing, goal-setting, relaxation)	**Part 3- online learning package** • Self-management strategies (pacing, goal-setting, relaxation) • PALS intervention processes • Boundaries & challenges • Confidentiality
Part 4 – Face-to-face day 2 Short presentations, interactive group exercises & discussions on: • The PALS intervention • CLBP & self-management • Boundaries & challenges • Future involvement in the PALS study	**Part 4 – face-to-face workshop** • Review of self-completion exercises • Discussion of topics identified by participants • Future involvement in the PALS study

Table 2: Outcome Measures

Objective	Measure	Further details
Feasibility		
Recruitment of peer support volunteers	Recruitment rates	Numbers approached/effort required: participants recruited
	Demographics	To explore suitability of inclusion/exclusion criteria
	Qualitative interview	To explore perceptions of recruitment process
Retention of peer support volunteers	Retention rates	Reporting drop-outs
Feasibility of peer support training programme	Participant numbers	Numbers attending face-to-face and completing blended delivery
	Time & resources utilised	Reporting drop-outs Staff time & resources required for face-to-face and blended learning formats
Acceptability		
Acceptability of peer support training programme	Training evaluation (questionnaire)	Completed after each day (face-to-face) or at the end of blended delivery
	Qualitative interview	To explore perceptions of training received
Satisfaction with peer support training programme	Training evaluation	Completed after each day (face-to-face) or at the end of blended delivery
	Qualitative interview	To explore satisfaction with training and resources received
Knowledge/Skills & Self-efficacy		

Knowledge of CLBP and peer support	Knowledge questionnaire (10-item multiple choice quiz)	Informed by Tang et al (2011)[20]; completed pre- & post- training
Self-efficacy for delivering intervention	Self-efficacy questionnaire (10 5-point Likert scales; "strongly agree" to "strongly disagree")	Adapted from Heisler & Piette (2005)[29]; completed post- training

Table 3: Feasibility measures

Outcome measure	Summary Statistics
Recruitment rates peer volunteers	Exact rate unknown: 20 interested volunteers over 6-month period
Retention rates peer volunteers	
Overall	71%
Face-to-face	73%
Blended delivery	67%
Participant numbers (started training: completed training)	
Overall	17:12
Face-to-face	11:8
Blended delivery	6:4

Time & resources utilised	Approx. 80 person-hours
	Seminar room 6 days
	Catering 6 days
	Learning & teaching materials

Table 4: Sample demographics

Gender	M	2
	F	10
Employment	Employed	4
	Not Employed	3
	Retired	5
Age	≤34	2
	35-59	5
	60+	5

Table 5: Knowledge Questionnaire Results

	Pre-training	Post-training
Face-to-face		
Mean	60%	75%
Range	40% to 85%	50%***** to 96%
Blended		
delivery	76%	82%
Mean	53% to 93%	70% to 96%
Range		

*Participants with scores<70% self-selected to leave the study

Table 6: Self-efficacy Questionnaire Results (%)

As a result of the training I feel confident:	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
In asking open-ended questions	22%	78%	0	0	0
In addressing emotions	22%	78%	0	0	0
That I know when to defer to a healthcare professional	33%	56%	11%	0	0
In making an action plan	22%	78%	0	0	0
In my problem-solving skills	33%	67%	0	0	0
That I could provide support	38%	50%	12%	0	0

to someone with low back pain					
That I could motivate someone with low back pain to adopt positive health behaviours	50%	50%	0	0	0
That I could direct someone with low back pain to appropriate sources of information	38%	62%	0	0	0
That I could set boundaries for peer-mentoring	11%	89%	0	0	0
That I could end the peer-support relationship successfully	22%	56%	22%	0	0

Results presented as % due to missing data for some items