2017/2018 Summer Studentship Project Application Form

Send to: Research Office, University of Otago Christchurch, PO Box 4345, Christchurch, by 5pm on 3 July 2017

Supervisor Information (First named supervisor will be the contact):	
First Supervisor's Name and Title: Bronny Trewin, Senior Clinical Psychologist	
Department - UOC &/or CDHB (if applicable): CDHB – Burwood Hospital Pain Management Centre	
First Supervisors Phone: 021 2242292	First Supervisors Email: bronny.trewin@cdhb.health.nz
First Supervisors Mailing Address: Burwood Hospital – Pain Management Centre, 300 Burwood Road	
Co-Supervisors Name and Title(s): Dr. Ian Holding, Musculoskeletal Specialist, Dr. Jessica Mills, Clinical Psychologist	

Research Category (Choose one category only **– to be used for judging the students' presentations):**		
Clinical	Laboratory	Community

Project Title (20 words MAXIMUM):

Preliminary outcome evaluation one year after the introduction of a chronic pain education seminar (BASE)

Project Description:

Introduction:

It is widely accepted that chronic pain is a highly prevalent chronic health issue worldwide, impacting one in six New Zealanders (1). It is not feasible, nor appropriate, for the vast majority of people with chronic pain to be managed in specialist pain services. For this reason the overall responsibility of care falls within the primary and secondary care sectors of the healthcare system. This problem is not unique to NZ, and pain management services in Australia have spent time considering the most effective way to educate and upskill such a large population. Subsequently, services in Australia have developed state-of-the-art programmes aimed at supporting the clinical need whilst also becoming smarter with the resources available. Such programmes include STEPS (Self Training Educative Pain Sessions) in Freemantle hospital Perth (2), and a range of programmes offered at the Hunter Pain Service (3).

Based on these Australian models of care, in 2016, the Burwood Pain Management Centre (PMC) at Burwood Hospital developed their own education programme. The Burwood Advancement Screening Education Seminar (BASE) was introduced in June 2016, as a compulsory half-day education seminar for the majority of PMC referrals. Before the introduction of BASE, 65% of patients with chronic pain referred to the PMC were declined at the point of referral due to a limited service capacity. Since introducing BASE, no referrals have been declined solely due to capacity limitations. As well as providing validation for chronic pain as a diagnosis, the seminar offers education about chronic pain mechanisms, and an introduction to self-management strategies for pain. The seminar aims to influence the significant economic burden of managing chronic pain within Canterbury. It is hoped that ultimately the introduction of BASE will lead to improvements such as reducing the use of the Emergency Department, reducing inappropriate referrals and procedures within secondary care, and reducing the use of inappropriate or ineffective pharmacological treatments. Associated with this, it is also hoped that people attending will experience improvements in confidence for coping and functioning with chronic pain, alongside improved emotional functioning and reduced pain related anxiety.

To help with measuring outcomes from BASE, people referred are required to complete the Burwood PMC standardised pain psychometrics prior to attending the seminar, and also at follow-up points including two weeks, six months and 12 months post BASE. Whilst we have been able to commence a review of participant's attendance rates and qualitative analysis of their feedback about the seminar, we have not yet considered the quantitative data drawn from the follow-up psychometric questionnaires. Evaluation of the psychometric questionnaires across time is hoped to offer further evidence of the effectiveness of BASE, and supports a scientist practitioner model of care.

Aim:

To evaluate the 'pre' and 'follow-up' psychometric questionnaire data completed by people who have attended BASE. This will offer further evidence of the impact BASE may have on key domains identified as important for enhancing quality of life in people with chronic pain (e.g. pain self-efficacy, catastrophising and rumination about pain, helplessness, mood, anxiety and stress). Time points measured will include pre-BASE, and post-BASE at two weeks, six months and 12 months after the seminar.

Possible impact (in lay terms):To offer further evidence of the impact of BASE, which will be valuable for enhancing services for the broader population of people with chronic pain in NZ and for service related planning and funding discussions. Does BASE make a notable difference in the lives of those who attend the seminar?

Method:

Psychometric data will be drawn from the electronic Persistent Pain Outcomes Collaboration (ePPOC) database and analysed with SPSS. Questionnaires to be analysed will include the Brief Pain Inventory (BPI), Depression Anxiety Stress Scale-21 (DASS-21), Pain Self-efficacy Questionnaire (PSEQ) and the Pain Catastrophising Scale (PCS).

The Brief Pain Inventory (BPI) is a self-administered measure of the sensory and reactive dimensions of pain—that is the severity or intensity of the pain and the level of interference it has on various aspects of life. Interference is divided into activity and affective sub-dimensions. (4) The validity, reliability and sensitivity to change have been investigated for the pain intensity and interference items only. These items have adequate internal consistency (5,6,7,8), acceptable-excellent test-retest reliability (5,6), satisfactory-good construct validity (5,6,7), criterion validity (6,7) and these items are sensitive to change. (7,8)

The DASS-21 (Short form of the Depression Anxiety Stress Scale) was designed (9) to determine the extent to which the participant was experiencing the core symptoms of anxiety and depression, as well as stress. The DASS and DASS-21 have been extensively validated in clinical (10,11) and non-clinical (12) samples.

The Pain Self-Efficacy Questionnaire (PSEQ) (13) is a self-report scale administered to sufferers of chronic pain which assesses their beliefs about their own self-efficacy. The PSEQ, like the PDI, is a well-validated (13, 14, 15), and has been shown to be a likely link in the relationships between chronic pain, depression, and disability (16).

The Pain Catastrophizing Scale (PCS) measures 'catastrophizing' across three categories. These are tendencies: to focus strongly on thoughts about pain ('rumination'); to view oneself as helpless in dealing with pain-inducing situations ('helplessness'); and to over-estimate the potential threat of stimuli that induce pain ('magnification') (17) The Pain Catastrophizing Scale has been widely used and validated (17,18, 19).

Reference List

1. Dominick, C., Blyth, F., & Nicholas, M. (2011). Patterns of chronic pain in the New Zealand population. *New Zealand Medical Journal, 124*(1337), 63-76.

2. Davies, S.,Quintner, J., Parsons, R., et al. (2011). Preclinic group education sessions reduce waiting times and costs at public pain medicine units. *Pain Medicine, 12,* 59-71

3. Hayes, C (2011). A Whole-Person Model of Care for Persistent Pain: From Conceptual Framework to Practical Application. *Pain Medicine 2011; 12: 1738–1749*

4. Stanhope J. Brief Pain Inventory Review. Occup Med (Lond) 2016: in press.

5. Erdemoglu AK Koc R . Brief Pain Inventory score identifying and discriminating neuropathic and nociceptive pain. Acta Neurol Scand 2013;128:351–358.

6. Mendoza T Mayne T Rublee D Cleeland C . Reliability and validity of a modified Brief Pain Inventory short form in patients with osteoarthritis. Eur J Pain 2006;10:353–361.

7. Keller S Bann CM Dodd SL Schein J Mendoza TR Cleeland CS. Validity of the brief pain inventory for use in documenting the outcomes of patients with noncancer pain. Clin J Pain 2004; 20:309–318.

8. Tan G Jensen MP Thornby JI Shanti BF. Validation of the Brief Pain Inventory for chronic nonmalignant pain. J Pain 2004; 5:133–137.

9. Lovibond SH, Lovibond PF. Manual for the Depression, Anxiety, and Stress Scales (2nd edn) Sydney: Psychology Foundation; 1995.

10. Wood BM, Nicholas MK, Blyth F. The Utility of the Short Version of the Depression Anxiety Stress Scales (DASS-21) in Elderly Patients with Persistent Pain: Does Age Make a Difference? Pain Medicine 2010; 11:1780-1790.

11. Brown TA, Chorpita BF, Korotitsch W, Barlow DH. Psychometric Properties of the Depression Anxiety Stress Scales (DASS) in Clinical Samples. Behaviour Research and Therapy 1997; 35(1): 79-89.

12. Norton PJ. Depression Anxiety and Stress Scales (DASS-21): Psychometric analysis across four racial groups. Anxiety, Stress & Coping: An International Journal 2007; 20(3):253-265.

13. Nicholas MK. Self-efficacy and chronic pain. In Annual conference of the British Psychological Society; 1989; St Andrews.

14. Nicholas MK. The pain self-efficacy questionnaire: taking pain into account. European Journal of Pain 2007; 11(2): 153-163.

15. Vong SK, Cheing GL, Chan CC, Chan F, Leung AS. Measurement structure of the Pain Self-Efficacy Questionnaire in a sample of Chinese Patients with Chronic Pain. Clinical Rehabilitation 2009; 23:1034–1043.

16. Arnstein P, Caudill M, Mandle CL, Norris A, Beasley R. Self efficacy as a mediator of the relationship between pain intensity, disability and depression in chronic pain patients. Pain 1999; 80(3): 483-491.

17. Picavet HS, Vlaeyen JW, Schouten JS. Pain Catastrophizing and Kinesiophobia: Predictors of Chronic Low Back Pain. American Journal of Epidemiology 2002; 156(11): 1028–1034.

18. Sullivan MJ, Bishop SR, Pvik J. The Pain Catastrophizing Scale: Development and Validation. Psychological Assessment 1995; 7(4): 524-532.

19. Osman A, Barrios FX, Gutierrez PM, Kopper BA, Merrifield T, Grittmann L. The Pain Catastrophizing Scale: Further Psychometric Evaluation with Adult Samples. Journal of Behavioral Medicine 2000; 23(4): 351-365.

Student Prerequisites (eg. Medical Student) if applicable:

A working knowledge of SPSS and relevant statistical procedures (e.g. t-tests, ANOVA) will be required.

Administration Details

1. Is ethical approval required? No

   If Yes: please circle or tick one of the following:

   a) Applied for (provide application #)

   b) Approved (attach a copy of the letter of approval from the ethics committee or application #)

   c) To be done

2. Are you able to provide the funding for this project (i.e. $5,000 for the student, incidental expenses should be met from departmental or research funds) No

   If Yes: Please provide name of the funder _____

   If No: Please provide ideas of possible funding sources, including past funding agents and topics often associated with this research area, for the Research Office to contact.

   _____

   If Yes: You will be sent a request for more information.

3. Medical Records or Decision Support accessed No

4. Health Connect South or other DHB records No

5. Signatures:

   - I have read the 2017/2018 Summer Studentship programme handbook.
   - I am prepared to supervise the project and will be available to the student during the studentship (including Christmas/New Year break if the student is working during this time).
   - I agree to assume responsibility for the submission of the student's reports to the Research Office by the due date 29 January 2018.
   - I agree that the project lay report may be available to local media for publicity purposes.

Signature of Project Supervisor(s): Bronny Trewin, Ian Holding and Jessica Mills (hard copy with signatures in the mail)	Date: 3 July 2017

- I understand that I am responsible for hosting the Summer Student chosen for this project and will meet any costs incurred. I agree that incidental expenses will be met from departmental or research funds.

Signature of Head of Department: Prof E Shipton (hard copy with signatures in the mail)	Date: 3 July 2017
Signature of Clinical Director: (if applicable) Prof E Shipton (hard copy with signatures in the mail)	Date: 3 July 2017