

NICaN AHP Brief Research Proposal Template

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The Proposal

The clinical question-hypotheses: Implementing a Nordic walking group exercise programme with breast cancer survivors within Northern Ireland.

The study background:

Breast cancer is the most commonly occurring cancer among women in Northern Ireland, with an average of 897 new cases each year. Early detection and improvements in treatments for breast cancer have resulted in increased survival rates. The physical and psychological impact that cancer treatment can have on an individual's ability to carry out their activities of daily living has been identified. The survivorship agenda, for those cured from or living with cancer, recognises that true patient care must encompass all patients' needs and has established the need to assess and improve rehabilitation services.

Several trials have demonstrated that survivors of breast cancer can achieve significant improvements in quality of life, cardiorespiratory fitness, physical functioning and fatigue by engaging in aerobic and lower body training. This does not however effectively counteract the many upper body morbidities resulting from breast cancer therapies, including reduced upper body strength, range of movement, endurance, flexibility, and impaired ability to tolerate activities of daily living. Clinical concern regarding upper body exercise prescription, particularly in this cohort has centred on the assumption that such exercise might induce or exacerbate symptoms of lymphoedema (Cheema and Gaul, 2006).

The rationale for the new research:

Nordic walking is a type of fitness walking with specially designed poles for the purpose of activating the upper body during walking. Compared with regular walking, Nordic walking has been shown to result in a higher energy expenditure and oxygen uptake at lower rates of perceived exertion. Whilst combining aerobic exercise with upper body resistance training, Nordic walking encourages muscle pump through a hold-relax grip and puts less strain on the lower limb. In theory therefore, Nordic walking is an ideal form of recreation for breast cancer survivors, both with and without lymphoedema. Currently there are no Nordic walking groups in Northern Ireland. Current guidance and gold standard evidence has shown that aerobic exercise, combined with upper body resistance training results in benefits particularly important in breast cancer care. However there is no research investigating the benefits of Nordic walking with breast cancer patients. These improvements have occurred without serious and adverse events, including upper extremity lymphoedema. Although additional validation through large scaled RCTs is needed, the evidence for cancer survivors to participate in regular exercise is sufficient at the present time to warrant offering exercise programmes to patients with cancer. Therefore, there is valid reasoning for developing a Nordic walking group exercise programme for breast cancer survivors, with or without lymphoedema.

A basic study plan:

A ten week Nordic walking programme for 12 breast cancer survivors would be carried out. Current literature recommends a minimum of 8 to 12 weeks duration, including flexibility training as well as aerobic and resistance training. For a moderate intensity exercise like Nordic walking, twenty to sixty minutes of continuous exercise at a rate of perceived exertion of 11-14 (somewhat hard) using the Borg 6-20 scale is optimum. This would include a warm up and cool down period which incorporates stretching and range of movement exercises. Positive effects of a twice

weekly supervised group exercise programme which had 12 participants in the intervention group have been demonstrated. Two sessions per week of resistance training is necessary to elicit strength benefits and improve quality of life.. To save on resources however, once weekly may be sufficient. Education sessions could ensure participants are appropriately advised in carrying out physical activity outside the programme. The classes would be combined with education sessions from varied health care professionals including time for refreshments and peer support. Follow up through development of a Nordic walking group, meeting on a twice weekly basis would be ideal to maintain improvements.

Running a pilot study initially, whilst assessing relevant outcome measures, would aim to produce essential evidence. The breast cancer specific Functional Assessment of Cancer Therapy (FACTB) QOL questionnaire has been deemed suitable for oncology clinical trials and practice in terms of validity, reliability, brevity, ease of administration and sensitivity to change. The Shuttle Walking Test would also be appropriate to assess functional capacity, having been tested on patients with advanced cancer proving a standardised, valid and reproducible measure. To ensure control and local accessibility of the programme, it would start within a local trust. However, plans would include extending the programme to all trusts in Northern Ireland and to run the programme for all cancer survivors.

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