Non-pharmacological management of cancer-related fatigue in men treated for prostate cancer

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August 2014
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Abstract

Cancer-related fatigue is the most common, distressing complaint reported by cancer patients and the most frequently reported long-term side effect of treatment for prostate cancer. Despite this, cancer-related fatigue has not received serious attention from health professionals or researchers, particularly in relation to men with prostate cancer. It is important for healthcare professionals to understand effective non-pharmacological interventions for treating cancer-related fatigue.

The aim of the research presented in this thesis was to determine effective non-pharmacological interventions for managing cancer-related fatigue in men treated for prostate cancer. Following on from this, this research aimed to advance the existing body of knowledge regarding effective non-pharmacological treatment of fatigue in men with prostate cancer by testing an intervention that has not been previously studied in this cohort.

To determine effective non-pharmacological interventions, a systematic review was conducted that found eight studies involving men treated for prostate cancer. The results of the review revealed one intervention, physical activity, which was effective in reducing cancer-related fatigue in the cohort of interest. Two psycho-educational interventions, cognitive behavioural therapy and intensive education, demonstrated some benefit in reducing cancer-related fatigue. The findings of the systematic review highlighted the need for further research into interventions not based on physical activity, so that a greater range of management options are available to men treated for prostate cancer who may be experiencing cancer-related fatigue.

In an effort to achieve high quality research, a conceptual framework was developed, which incorporated two existing conceptual models. Each of the two models had inherent limitations for the intended interventional studies, however combined into an overarching conceptual framework, the subsequent research builds upon work previously undertaken and adds to the body of knowledge in this field. The conceptual framework was used to develop and guide two pilot randomised controlled trials of an energy conservation and management intervention for men treated for prostate cancer. The two studies were designed to examine the effectiveness of this intervention for reducing cancer-related fatigue in two subgroups of the cohort of interest: men commencing prostate cancer treatment and men who have completed treatment within the previous twelve months.

The results of both pilot studies were encouraging and demonstrated that an energy conservation and management intervention was effective in reducing cancer-related fatigue and increasing
vigour and functional performance in the population studied. A further finding was that the intervention appeared to have had a greater benefit if delivered early in the patient’s treatment journey compared to providing the intervention after treatment for prostate cancer was complete.

The findings presented in this thesis can be used by healthcare professionals to inform the decisions they make in their clinical practice for men treated for prostate cancer who may be experiencing cancer-related fatigue. In order to provide patient-centred care, healthcare professionals need to be aware of a range of interventions that can be used to effectively manage the problem of cancer-related fatigue. Further research is required to corroborate the findings of the pilot studies and further develop the body of knowledge in this field.
Thesis Declaration

I certify that this work contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution to David Anthony Larkin and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. In addition, I certify that no part of this work will, in the future, be used in a submission in my name for any other degree or diploma in any university or other tertiary institution without the prior approval of the University of Adelaide and where applicable, any partner institution responsible for the joint award of this degree.

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25 August 2014
Acknowledgements

I would like to express my sincere gratitude and appreciation to:

Dr Edoardo Aromataris, for invaluable advice and guidance, his patience and for always being available no matter how hectic his work schedule

Professor Violeta Lopez, for her encouragement to undertake postgraduate study, her unending support throughout the journey and her invaluable advice and guidance

Ms Suzanne Edwards, for her invaluable advice and support for the statistical analyses of the interventional studies

Ms Jill Parke, for being the perfect “sounding board”, never faltering in her belief in me and inspiring me to keep going

Mr Tarkan Tez, for his support during the recruitment period maintaining the randomisation lists and allocation sequences

All the men with prostate cancer who have given me their time and commitment, without which this work would not have been realised; and the medical officers and nurses who supported the research undertakings by referring potential participants

Garry Sutherland, for his support in various ways that gave me the time and ability to be able to undertake this adventure

My mother, Marilyn Manfred, for the thrill she has got from me undertaking this adventure and for keeping me on target by regularly asking, “how’s the thesis?”
### Key to abbreviations

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<th>Abbreviation</th>
<th>Description</th>
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<tr>
<td>ADT</td>
<td>Androgen Deprivation Therapy</td>
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<tr>
<td>AS</td>
<td>Active surveillance</td>
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<tr>
<td>ASR (W)</td>
<td>Age standardised incidence or mortality rate (world)</td>
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<td>BNI</td>
<td>Brief Nursing Intervention</td>
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<td>CBT</td>
<td>Cognitive Behavioural Therapy</td>
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<tr>
<td>CIS-fat</td>
<td>Checklist Individual Strength (fatigue subscale)</td>
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<tr>
<td>CRF</td>
<td>Cancer-related fatigue</td>
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<tr>
<td>CRPC</td>
<td>Castration-resistant prostate cancer</td>
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<tr>
<td>CSM</td>
<td>Common Sense Model of illness representation</td>
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<tr>
<td>DRE</td>
<td>Digital rectal examination</td>
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<tr>
<td>EBHC</td>
<td>Evidence-based healthcare</td>
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<td>EBRT</td>
<td>External beam radiotherapy</td>
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<td>ECAM</td>
<td>Energy conservation and management</td>
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<tr>
<td>FACT-F</td>
<td>Functional Assessment of Cancer Therapy – Fatigue</td>
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<tr>
<td>FPI</td>
<td>Functional Performance Inventory</td>
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<td>FSI</td>
<td>Fatigue Symptom Inventory</td>
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<tr>
<td>FSS</td>
<td>Fatigue Severity Scale</td>
</tr>
<tr>
<td>HPA</td>
<td>Hypothalmic-pituitary-adrenal</td>
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<tr>
<td>HEAC</td>
<td>Health Education Attention Condition</td>
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<tr>
<td>ICD</td>
<td>International Classification of Diseases</td>
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<tr>
<td>ICD-10</td>
<td>International Classification of Diseases – 10th Revision</td>
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<tr>
<td>IFM</td>
<td>Piper’s Integrated Fatigue Model</td>
</tr>
<tr>
<td>ITT</td>
<td>Intention-to-treat</td>
</tr>
<tr>
<td>JBI</td>
<td>Joanna Briggs Institute</td>
</tr>
<tr>
<td>MASTARI</td>
<td>Meta Analysis of Statistics Assessment and Review Instrument</td>
</tr>
<tr>
<td>MFI</td>
<td>Multidimensional Fatigue Inventory</td>
</tr>
<tr>
<td>MICD</td>
<td>Minimally important clinical difference</td>
</tr>
<tr>
<td>NCCN</td>
<td>National Comprehensive Cancer Network</td>
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<tr>
<td>ONS</td>
<td>Oncology Nursing Society</td>
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<td>PA</td>
<td>Physical Activity</td>
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<tr>
<td>PFS</td>
<td>Piper Fatigue Scale</td>
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<tr>
<td>Acronym</td>
<td>Full Form</td>
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<td>PFS-R</td>
<td>Piper Fatigue Scale - Revised</td>
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<td>POMS</td>
<td>Profile of Mood States</td>
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<td>PSA</td>
<td>Prostate Specific Antigen</td>
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<tr>
<td>QOL</td>
<td>Quality of Life</td>
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<tr>
<td>RCT</td>
<td>Randomised Controlled Trial</td>
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<tr>
<td>RP</td>
<td>Radical Prostatectomy</td>
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<tr>
<td>RT</td>
<td>Radiotherapy</td>
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<tr>
<td>SAS</td>
<td>Statistical Analysis Software</td>
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<tr>
<td>SD</td>
<td>Standard Deviation</td>
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<tr>
<td>SCFS</td>
<td>Schwartz Cancer Fatigue Scale</td>
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<tr>
<td>SPSS</td>
<td>Statistical Package for the Social Sciences</td>
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<tr>
<td>TIP-C</td>
<td>Telephone Interpersonal Counselling</td>
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<tr>
<td>TNM</td>
<td>Tumour, lymph node, metastasis</td>
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<tr>
<td>TRUS</td>
<td>Transrectal ultrasound</td>
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<tr>
<td>VAS</td>
<td>Visual Analogue Scale</td>
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<tr>
<td>WHO</td>
<td>World Health Organisation</td>
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