

LIFE AFTER CANCER NAVIGATING CHRONIC PAIN WITH STYLE

A lifestyle approach to chronic pain after cancer with a focus on
sleep and physical activity



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PUBLIC PHD DEFENCE FOR THE DEGREE OF DOCTOR
IN REHABILITATION SCIENCE AND PHYSICAL THERAPY

22nd November 2023 at 6 PM
VUB, Campus Jette, Auditorium P. Brouwer

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ABSTRACT OF THE RESEARCH

Chronic pain is highly prevalent among cancer survivors. The number of survivors experiencing pain is expected to continue to rise as the global cancer burden is expected to increase by 47% by 2040. These numbers are concerning since chronic pain remains underrecognized and undertreated in cancer survivors. One of the main reasons is the poor knowledge of clinicians about pain assessment and management in the cancer survivor population. On top of that, cumulative evidence suggests that lifestyle factors such as physical inactivity, stress, poor sleep, unhealthy diet, alcohol consumption, and smoking may contribute to the maintenance of chronic pain severity in non-cancer populations.

This dissertation aims to contribute to the advancement of cancer survivor care by providing insights into lifestyle behaviours, pain management, sleep disturbances, and effective interventions such as pain neuroscience education (PNE) and behavioural graded activity (BGA).

Part I provides a comprehensive review of the current evidence regarding lifestyle behaviours and pain following cancer. The existing evidence in the cancer population primarily focuses on interventions addressing pain, insomnia, physical inactivity, obesity, and stress. There is a significant gap in research examining the effects of smoking, alcohol consumption, and prudent diets on pain in cancer survivors.

Part II focuses on sleep disturbances in breast cancer survivors (BCS) and aims to deepen our understanding of this issue. Chapter 2 examines the prevalence and risk factors contributing to sleep disturbances. The prevalence of sleep disturbances ranges from 14% to 93%, with identified risk factors including post-menopausal non-Caucasian BCS experiencing depression, fatigue, pain, and/or hot flashes. While Chapter 3 provides valuable insights into the mediating role of perceived injustice and pain catastrophizing in the relationship between pain and the experience of fatigue and sleep disturbances in BCS. These findings highlight the interconnected nature of these factors.

Part III emphasises the added value of incorporating a behavioural physical component, more specifically BGA to alleviate pain, improve the health-related quality of life (HRQoL), and enhance the endogenous pain modulation system of cancer survivors. Chapter 4 reviews the effects of psychologically informed practice (PIP) with BGA in cancer patients and survivors. The systematic review demonstrates that psychologically informed practices, when combined with BGA, have a favourable effect on fatigue, anxiety, depression, psychological distress, social impairment, quality of life, functional impairment, and physical activity. While Chapter 5 investigates the effects of PNE combined with BGA compared to usual care on chronic pain in BCS and contributes to the growing body of evidence supporting its effectiveness in managing pain severity, interference, and maladaptive cognitions in BCS. This combination can enhance pain reconceptualization, which appears to be an important process to facilitate patients' ability to cope with their condition.

Overall, this thesis provides new findings that will empower cancer survivors to navigate their pain and enjoy a full life after cancer.

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Astrid Lahousse (born on January 11, 1996) obtained two master's degrees with great distinction, one in 2019 in the Rehabilitation Sciences and Physiotherapy and one in 2020, in the Manual Therapy, both at the Vrije Universiteit Brussel (VUB). In 2019, she started her PhD research at the VUB. Her research is funded by the Research Foundation - Flanders (FWO). Astrid has (co-)authored 14 publications in peer-reviewed journals and is contributing to an editorial series on "comprehensive pain management". She presented her work at various national and international conferences. She also actively mentored master students' theses and is supervising the PhD of an international researcher. Aside from her academic pursuits, Astrid volunteers as a physiotherapist at the University Hospital Brussels and she also organizes lectures for clinicians and patients. Astrid is dedicated to make meaningful improvements in the cancer survivor care.

