

Is skillful, bodily self-awareness healthy? A phenomenological investigation of how athletes versus non-athletes handle low back pain.

Background

Low back pain (LBP) is among the most common reasons for seeking healthcare in Denmark (1) and remains a leading global cause of disability (2). More than half a billion people live with LBP worldwide, and the prevalence is expected to increase by around 30% by 2050 (3). Further, LBP is not only highly prevalent in the general population, but also among athletes (4), where certain sports and dance activities show an even higher occurrence (5,6). Largely due to the subjective, complex and multifactorial nature of pain, knowledge of prevention and treatment of LBP remains sparse (7). Despite extensive research, no curative treatment has been identified (7,8), and the focus has shifted from curing pain to supporting individuals in living meaningful lives with as little interference from pain as possible (9). Current guidelines emphasize a multidisciplinary approach, encouraging self-management and active lifestyles (8,10). Further, enhancing bodily movement and awareness is central, as inactivity may reinforce pain-related fear, avoidance, and disability (9).

Interestingly, athletes have experiences and capabilities of their body and movement developed through sports participation (11–13), which may influence how they experience and manage LBP. Studies show that athletes often continue training despite pain (14,15), reflecting strategies grounded in an enhanced ability to sense and adjust bodily movement (11–13). This embodied expertise enables them to attune to subtle bodily signals and distinguish between different qualities of pain or discomfort, a skill that becomes integral to both performance and injury management (16). In this sense, athletes' skillful body self-awareness represents not only a resource for athletic performance but also a potential factor in shaping how LBP is experienced and managed. Hence, this embodied awareness may provide athletes with distinctive resources for coping with LBP compared to the general population.

Although some studies have explored how athletes relate to LBP through interviews (15,17), little attention has been given to how their specialized bodily awareness shapes the way they feel, sense, and adjust movement when living with pain. Most existing LBP research relies on quantitative questionnaires, while qualitative and ethnographic studies following people in their everyday movement practices remain sparse. Consequently, we know little about how individuals with LBP move and manage pain in daily life. Hence, there is a clear need for qualitative investigations that explore lived experiences, with a particular focus on everyday movement practices, to better understand how both athletes and non-athletes draw on bodily self-awareness to manage LBP in daily life (18). This knowledge is important for the further development of treatment and rehabilitation practices on LBP. Therefore, this study focuses on the lived experiences and everyday movement practices of both athletes and non-athletes and investigates in which ways bodily self-awareness is of use when handling

and managing LBP in everyday life. To do so, we will engage qualitative methods and analytical approaches developed for capturing and analyzing lived experiences, where phenomenology has been proven especially valuable (19). Phenomenology seeks to describe conscious and embodied experiences from a first-person perspective, making the lived experience of the lifeworld a central focus (20–22).

Aim of the PhD project

Based on a phenomenological account of bodily self-awareness, this PhD project investigates the lived experiences of bodily movement and bodily self-awareness in both athletes as well as non-athletes when experiencing and managing LBP. The study is structured around the following research questions:

- a. What differences can be identified in how athletes and non-athletes handle LBP?
- b. Which aspects of skillful bodily self-awareness are transferable to LBP situations – for athletes and non-athletes respectively?
- c. Which factors influence the way bodily self-awareness comes into use for athletes and for non-athletes?

Methodology and design

In total, the study involves 24 participants with LBP (more than 3 months). The design involves three groups of 8 participants in each: Group a) elite/highly talented athletes, b) prof. or semi-prof. dancers, and c) non-athletes. The study consists of two phases: **Phase I** involves short-term person-centered ethnographical fieldwork (23), performed by following a selected number of participants in each group (in total 6-10) in their everyday life. In concrete, the participant will be closely followed through minimum five days in various contextual settings of everyday activities. Informal interviews will be conducted as part of this fieldwork (24). The aim is to describe experiences, behaviors, and practices as they play out in the everyday life of the participants. This fieldwork forms the ground for preparing and setting up in-depth phenomenological interviews. **Phase II** addresses the phase of performing these in-depth phenomenological interviews (25) of 90-120 minutes which will be carried out with all 24 participants.

Methodologically, the project is based on an interdisciplinary approach *integrating ethnographical fieldwork and phenomenology* (26–28) which involves the following iterative and overlapping phases: 1) Specification of phenomenological concepts of relevance to the specific topic in focus of the investigation (here: bodily self-awareness), 2) generating empirical data on the contextualized conditions of each participant's lifeworld using observations and/or interviews 3) coding and condensing data on enculturated field-specific conditions using in vivo or emic codes, 4) engaging phenomenological concepts in the further analysis, to identify central themes across participants' experiences. As the project involves a comparative aspect, a further analytical phase will be involved: 5) Using the findings from phase 3 and 4 to look for diversities and commonalities in the degree and ways in which participants move and the ways the different dimensions of bodily self-awareness are in use by the different kinds of athletes (sports and dance) and non-athletes in their everyday life handling LBP. Further, participants' everyday movement practices and experiences will also be inductively analyzed to

identify other potential topics and themes that indicate diversities and/or commonalities within groups of athletes (dance and sports) and non-athletes, as well as across the different groups.

Ethics

The project will follow SDU guidelines and regulations for ethics, GDPR and data protection. All participants will receive written information about the project. The participants will have an information and debriefing meeting before and after fieldwork and/or interviews. In the information meeting, they will be provided with detailed information about the project that explains how the interviews and/or fieldwork will take place. The participants will also have an opportunity to ask questions about the project and discuss any other considerations they might have. Here participants will also be asked to sign an informed consent form, which will include the information that must be provided by SDU to the data subjects pursuant to GDPR art. 13. The debriefing meeting will focus on informing participants about the analysis and follow up on their experiences regarding specific events and/or reflections elicited by observations and/or interviews. Throughout the fieldwork and interviews we will follow '*Unexpected findings policy*': aspects that concern private matters of the participants (e.g. to partner, parents, close friends, etc.), health-related issues beyond handling LBP, political engagements, or the like will not be the focus of observations. Observational notes on these matters will be excluded in a first round of reading through generated material.

Perspectives

The findings will provide new insights into how skilled bodily self-awareness can support people in managing LBP and inform more health-promoting ways of engaging with movement. In collaboration with clinicians, coaches, and patients, workshops and seminars we will translate these insights into practice, aiming to refine current treatment approaches. Ultimately, the project seeks to enhance how health professionals recognize and integrate patients' movement experiences in treatment and to inform future strategies for maintaining movement despite LBP - benefiting both athletes and non-athletes.

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