

Exploring the Perceived Psychosocial Experiences of Recreational Runners with Patellofemoral Pain: A Grounded Theory Approach

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INTRODUCTION

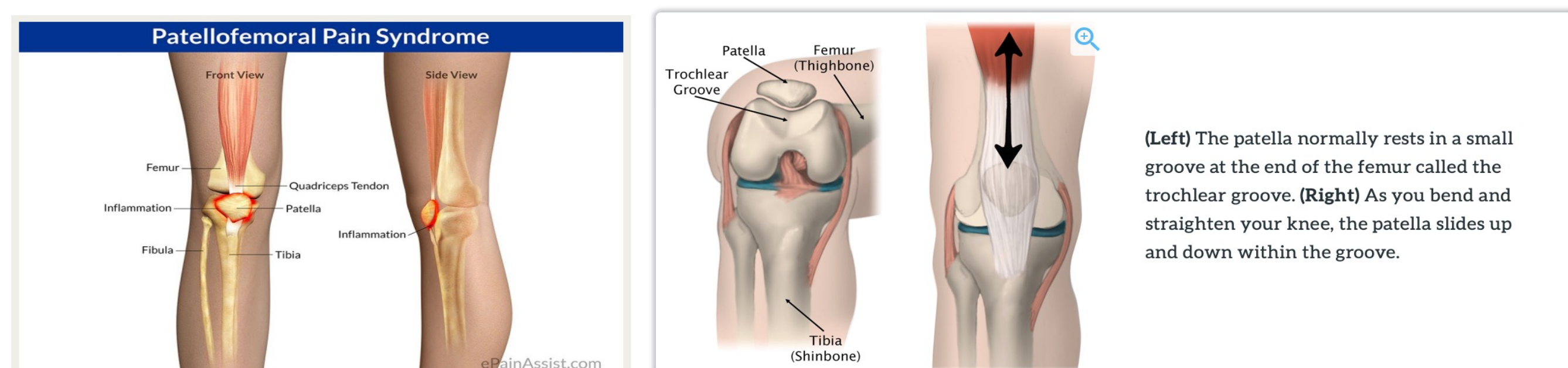
- ❖ Patellofemoral pain (PFP) is a specific type of patellar or retropatellar pain aggravated by at least one physical activity that loads the patellofemoral joint during weight bearing on a flexed knee such as running (Crossley et al., 2016)
- ❖ Thus far, existing psychosocial PFP literature (for a thorough review, see Ildefonso, 2023) has focused on understanding the role of selected psychosocial constructs in PFP risk, prognosis and overall experience, and it is apparent that it is limited with inconsistent findings.
- ❖ More specifically, much of the research has adopted quantitative research designs, with one of two research foci:
 1. identify and report on the existence of specific psychosocial constructs with PFP patients, namely fear-avoidance beliefs, pain catastrophizing, kinesiophobia, anxiety, depression, pain self-efficacy, and coping strategies (e.g., Hott et al., 2022; James et al., 2021; Maclachlan et al., 2018; Pazzinatto et al., 2022).
 2. compare and/or investigate potential changes, differences, and relationships between specific psychosocial constructs and physical PFP outcomes such as perceived pain and/or function (e.g., Bagheri et al., 2021; Doménech et al., 2014; Glaviano et al., 2019; Maclachlan et al., 2019).
- ❖ Only a few intervention studies have investigated the effects of patient education on PFP prognosis
- ❖ A handful of research studies (e.g., Robertson et al., 2017; Smith, Moffatt, et al., 2018; Smith et al., 2019) have also adopted a qualitative design, with results suggesting that there are more psychosocial constructs that influence the PFP experience than those explored quantitatively.
- ❖ The literature review also revealed inconsistencies in how the different psychosocial constructs (i.e., fear-avoidance beliefs, pain catastrophizing, kinesiophobia, anxiety, depression, pain self-efficacy, and coping strategies) are defined and operationalized in the literature. For example:
 - ❖ Pain catastrophizing has been defined as a cognitive coping strategy, a cognitive appraisal related to pain, an emotional response, and even a behavior (de Oliveira Silva et al., 2018; Doménech et al., 2014; Piva, Fitzgerald, Irrgang, et al., 2009; Priore et al., 2019; Selhorst et al., 2021).
 - ❖ Kinesiophobia has been defined and theorized in PFP research as a cognitive appraisal (de Oliveira Silva et al., 2018; Hott et al., 2022; Miller et al., 1991; Selhorst, Hoehn, et al., 2020; Vlaeyen et al., 1995), which is inconsistent with its core definition that classifies it as a negative emotional state that develops in response to stressful situations (for Tripartite model, see Clark & Watson, 1991).
- ❖ Without clear definitions and construct clarity, it is not surprising that existing psychosocial PFP research has also lacked theoretically based research designs, grounded in psychological theory.
- ❖ An absence of conceptual framework has prohibited researchers from understanding how psychosocial constructs influence the PFP experience, prognosis, and intervention outcomes.

PURPOSE

- ❖ To explore the perceived psychosocial experiences of recreational runners with PFP.

METHODS

- ❖ Ten recreational runners with PFP (n = 4 females, n = 6 males) participated in semi-structured interviews.
- ❖ Straussian Grounded Theory (Corbin & Strauss, 2015) was used to develop a theoretical framework that conceptualizes the perceived psychosocial experiences of recreational runners with PFP.
- ❖ A Comparative Method (Pennings et al., 2006) was used to compare the proposed theoretical framework to five existing models typically used to explain psychological responses to sport (e.g., Brewer et al., 2002; Richardson et al., 2008; Ryan & Deci, 2017; Wadey et al., 2018; Wiese-Bjornstal et al., 1998)



RESULTS

The proposed theoretical framework suggests recreational runners are individuals Who have prominent personal characteristics that influence their perceived psychosocial experiences of recreational running with PFP. Dominant psychosocial responses are What recreational runners experience when running with PFP. Those experiences influence and are influenced by How they address the perceived cause of their psychosocial responses and the reasons Why they respond the ways in which they do. All of which, influence and are influenced by Psychosocial Outcomes.

Theoretical Categories	
Who	Refers to the prominent personal characteristics of the participants who provided their psychosocial experiences of recreational running with PFP. In the sample, two psychosocial factors (subcategories) as pertinent to the psychosocial PFP experience were found. These include “run by any means necessary” attitude and having an emotional attachment to running, characterized by accomplishment, happiness, and euphoria.
What	Refers to participants perceived psychosocial responses to PFP. In the sample, three pertinent cognitive-affective responses (subcategories) to PFP were found. These include (a) uncertainty (i.e., unacquaintedness or unknowingness) as to whether training influenced pain or vice versa, (b) worry (i.e., genuine concern, nervousness, and/or anxiousness), often associated with frustration with continuing to run, and (c) perceived pain. The subcategory of perceived pain refers to pain-related perceptions participants described having when continuing to run with PFP. Perceived pain fluctuated between low and high intensities during training and activities of daily living.
How	Refers to the means through which participants addressed what they perceived to be the cause of their dominant psychosocial responses (i.e., What). In the sample, three pertinent behavioral responses (subcategories) participants used to address their dominant psychosocial responses to PFP were found. These include (a) training responses (i.e., training modifications), (b) physical responses (i.e., tapping, icing, over-the-counter anti-inflammatories, footwear, insoles, orthotics, or knee sleeves), and (c) psychological responses. The psychological responses included seeking help from friends, teammates, family, and/or medical professionals, documenting training pace, duration, distance, weather, and/or how runs felt, and engaging in positive self-talk.
Why	Refers to the reasons why participants responded to their dominant psychosocial responses (i.e., What) with the means they did to address the perceived cause (i.e., How). In the sample, four pertinent factors (subcategories). These include (a) previous experiences, (b) extrinsic motivation (i.e., externally focused aspirations of achievement), (c) intrinsic motivation (i.e., internally focused aspirations of achievement), and (d) social influences were found. The social influences included friends, teammates, family, coaches, medical professionals, run-store staff, and internet/print media.
Psychosocial Outcomes	Refers to the prominent psychosocial sequelae described by participants as integral to their experiences of recreational running with PFP. The robust psychosocial outcomes were secondary results that arose from, and influenced Who the participants are, What they experienced, How they responded, and Why they responded the ways in which they did to PFP. In the sample, two pertinent psychosocial outcomes (subcategories). These include (a) relatedness (i.e., the level of connectedness participants described having with others), and (b) acceptance (i.e., willingness to make the training accommodations necessary to minimize the discomfort of recreational running with PFP). Were found.

CONCLUSIONS

- ❖ Comparatively, the proposed theoretical framework has an all-encompassing presence that uses simple language to concisely conceptualize the perceived psychosocial experiences of recreational runners with PFP.
- ❖ By design, the conceptual framework is the first attempt to create a foundational framework for understanding the psychosocial PFP experience of recreational runners.
- ❖ Grounded in empirical evidence, the data driven and conceptually defined theoretical categories and subcategories provide a foundation for future psychosocial PFP research.
- ❖ The next steps in this line of research would be to design early-stage exploratory research, followed by applied and/experimental research before any evidence-based clinical recommendations can be made.
- ❖ The applicability of the proposed theoretical framework in conceptualizing the perceived psychosocial experiences of other PFP populations requires exploration.
- ❖ The Who, What, How, Why, and Psychosocial Outcomes categories of the proposed theoretical framework may need to adapt and/or extend based on future findings.

PRACTICAL IMPLICATIONS

This research provides fundamental knowledge in the developing, critiquing, and refining, of theories and methodologies that inform research, development, and subsequently, future applied practice suggestions.