INTRODUCTION

An anterior cruciate ligament (ACL) injury is a common sports-related injury in the knee joint.\(^1\) An ACL injury is considered debilitating and can have long-term negative consequences such as a reduced level of physical activity, disability, increased risk of knee osteoarthritis, and poorer perceived knee-related quality of life.\(^2\)

Healthcare systems are moving toward patient-centered care\(^3\) and, accordingly, there is a growing interest in psychological impairments during rehabilitation after an ACL reconstruction. According to the biopsychosocial model by Wiese-Bjornstal,\(^4\) there is always a psychological response after an injury in athletes. The severity of the psychological response to an injury may vary and does not always result in a psychological diagnosis, such as depression.\(^5\) For instance,
following an acute orthopaedic trauma, depression can occur in up to 34% of cases, while following a musculoskeletal injury, the prevalence of depression in patients can be as high as 45%. In 1993, Heit proposed the affective cycle of injury; a theory suggesting that psychological reaction to injury are cyclical and vary. The cycles of psychological reaction might be of three kinds: macrocycle (the whole recovery process), minicycle (the rehabilitation stage) and microcycles (everyday life). According to the proposed framework, psychological reactions following an injury have three components: distress, denial, and determined coping. Distress is the effect the injury has on the emotional balance. Denial can be positive, a protective factor against overwhelming negative psychological distress, or negative, for example, not realizing severity of injury. Determined coping includes moving away from a passive “wait for the injury to heal” situation, to a proactive state with seeking of information, opportunities, and goal setting. According to the biopsychosocial model by Wiese-Bjornstal, the psychological response to an injury can be cognitive, emotional, and behavioral and might evolve into psychological impairments. In this context, behavioral response to an injury refers to the actions a patient takes in order to cope with the psychological reaction of the injury. The cognitive appraisal following an injury can manifest in an affection of personality factors, for instance reduced self-perceived worth (the view of one self on his/her worth), loss of athletic identity (the importance sporting has on the individual’s perception of him/herself) or reduced self-efficacy (a belief in oneself as competent and effective in a given situation). The negative emotional response to an injury can include feelings of frustration, fear, anxiety, and anger and is summarized as a “U” shaped pattern: negative emotions are high close to injury, and then decrease over time, for growing again close to the resuming of the sport activity. When not properly addressed, psychological impairments, seen as residues of cognitive appraisal and negative emotions, negatively affect rehabilitation, as inferior psychological outcome has been linked to poorer rehabilitation outcomes after ACL reconstruction and can persist for many years.

Physical therapy is a relational practice and relationships are built through the interaction between patients and their physical therapists, also known as the therapeutic alliance. In the case of patients with ACL injury, where patients are predominantly sports active individuals, shaping rehabilitation as an athletic challenge enables patients to use the tools they have knowledge about, that is, sporting activities, in the rehabilitation process. Important factors that facilitate the therapeutic alliance are the values, emotions, and perspectives held by the individual parties. Engaging patients in the rehabilitation process, by for instance using effective communication, discussing the rehabilitation plan, and the provision of social support, builds trust and confidence toward the physical therapists responsible for rehabilitation, and allows the patients to handle setbacks during the rehabilitation process. When patients and physical therapists share values and perspectives through genuine empathy, a positive therapeutic alliance can be built, providing the patient with support in the process. The support provided by a positive therapeutic alliance can consist of active listening, acknowledging advances in rehabilitation progress, providing emotional support, encouraging the achievement of physical rehabilitation goals, encouraging positive coping, and the personal sharing of practitioners’ own experiences and opinions.

Addressing psychological impairments during ACL rehabilitation could potentially improve quality of rehabilitation, and therefore impact long-term knee function and lead to more patients returning to their pre-injury activity level. According to physical therapists, the implementation of psychological interventions in the rehabilitation of musculoskeletal disorders has many potential benefits, and rehabilitation staff trained in sport psychology show greater sport psychology-related behaviors compared with non-trained staff. However, so far, psychological interventions have been poorly implemented, and therefore there is a need for knowledge about how physical therapists in a sports medicine (PTs) setting experience treating patients with psychological impairments during the rehabilitation of an ACL injury.

The aim of this study was to investigate the experiences of PTs in addressing psychological impairments in patients after an ACL reconstruction.

2 | MATERIAL AND METHODS

2.1 | Study design and participants

This qualitative study was based on data collected from interviews conducted with PTs in specialist sports medicine settings. Four focus group discussions were conducted with a semi-structured interview guide (Appendix S1) that consisted of open questions. As no existing theory was aimed to be tested, we chose an inductive approach, which aims to move from specific observation to broad generalizations. To ensure transparency with research, the Consolidated criteria for Reporting Qualitative research (COREQ) checklist was used to report methodological information.

The interview guide was created by the first and the senior author (both experienced sports PTs) through a review of the available qualitative literature on the subject and extensive discussions. A proposal for the questions was then sent for confirmation to the second author who is experienced in qualitative research. This process was repeated until consensus was reached among all the authors.

The interviews took place at four different sports rehabilitation clinics in Sweden. The four different clinics were chosen and contacted due to their clear sport-specific profile...
within the geographical area where the present study was conducted. Clinics were contacted by telephone and participants were chosen by their individual supervisor (Table 1) based on differences in age, sex, years of experience and availability. Fourteen participants (seven men and seven women) were included. No clinic refused participation. A goal of minimum 12 participants was set, since it corresponds to a minimum in order to reach data saturation in interview studies.25 Before agreeing to participate in the study, all the PTs were given oral and written information about the purpose and methods of the study and were informed that participation was voluntary and that withdrawal from participation was possible without any explanation at any time. All the statements from PTs were analyzed confidentially, and no patient data were recorded. No ethical approval was required for this study since no patients were included.

Three focus groups were held by the first author (RP), while one was held by the first (RP) and the second (FK) author. The first, the senior, and the third authors are PTs, working in a sport rehabilitation setting (years of experience 4–8), with a Master of Science (MSc) (first author) and an associate professor (senior author). In terms of the other authors, one works as a registered nurse (PhD), two as medical doctors (PhD and PhD student), and one as a professor of psychology. All authors except the fourth are males. All the participants in the focus group are PTs, similar to the first, the third and the senior authors within the same geographical area. Therefore, all participants were aware of the aims and goals with the present project, although no direct relationship was present between authors and participants. During the focus groups, the first author provided neither own bias nor own assumption during the interviews, in order to not bias participants. Another important consideration in qualitative research is reflexivity, that is, the process ongoing between the research data and the author analyzing the data. The first author (involved in the data collection and analysis process) is an experienced PT working in a sport rehabilitation setting and meets patients after ACL reconstruction on a weekly basis. The curiosity which generated the question for this study was due to a feeling of helplessness on the non-physical plane when trying to help patients after an ACL reconstruction. This motivated the choice to explore experiences of PTs with similar working orientations and factors other than physical during rehabilitation after ACL reconstruction. These preconceptions were taken into account and reflected upon during the present study realization.

## 2.2 Data collection

The interviews took place in conference rooms at each clinic. Four focus groups (group size 3–4 PTs per group) were conducted. No other person beside the first author and the participants in each study group was present at the time of interview, and no field notes were taken during interviews. All the interviews took place between May and October 2019 in Sweden. All the interviews began by participants telling their names, year of experience in the sports rehabilitation field, and areas of interest in order to get acquainted with the interview setting. Subsequently, the interviewer asked open-ended questions from the present interview guide, with no strict order, depending on how the conversation proceeded. Examples of open-ended questions present in the interview guide included “what do you think is important during the rehabilitation of patients after an ACL reconstruction?” or “which difficulties do you think patients encounter during rehabilitation after an ACL reconstruction?”. The interviews were recorded using an application (VoiceRecorder, version 3) on a mobile device after consent had been obtained from the PTs. Recorded audio files were transcribed verbatim by the first author of the study and by secretaries, without information identifying the PTs. Transcripts were not sent to participants for correction or comments. The interviews lasted between 39 and 66 min.

## 2.3 Data analysis

The data were analyzed using qualitative content analysis with an inductive approach based on Graneheim and Lundman.26,27 The first, second, and senior authors were responsible for the data analysis process. Transcripts were first read thoroughly to obtain a general understanding of the data. As a second step, meaningful units were extracted and grouped into a condensed meaningful unit. The condensed meaningful units were then abstracted and coded. Codes addressing similar categories were grouped into subcategories, and subcategories were then grouped into main categories. During the process of abstraction, coding and categorization of codes, the interview transcripts were continually read so to ensure that data were appropriately understood in relation to the context. Any disagreement between authors was resolved by discussion with the senior author. Credibility is a crucial part of trustworthiness in qualitative research27 and so, after grouping categories into subcategories, the transcripts were

### TABLE 1 Demographics of physical therapists

| PTs (n = 14) |
|-------------|
| Female sex (n) | 7 |
| Age, mean (SD) | 34 (8) |
| Median (range) | 32 (26–49) |
| Years of experience, mean (SD) | 9 (7) |
| Median (range) | 5.5 (2–22) |

Abbreviations: N, number; PTs, physical therapists; SD, standard deviation.
read again and subcategories were validated against the transcripts, in order to ensure that data were not missed or erroneously included. As this trial aimed to study PTs experiences of a phenomenon, the meaning of a certain phenomenon was constructed by the subject’s interaction with the phenomenon, that is, PTs interacting with psychological impairments in patients. Therefore, different PTs might construct different meanings of a certain phenomenon, which motivated our use of an interpretive/constructivist epistemological approach, as it was considered suitable to study the multiple realities, descriptions, and experiences of different populations.28

3 RESULTS

The experiences of PTs relating to the way they address psychological impairments in the rehabilitation of patients after an ACL injury were summarized in four main categories: (1) Calling for a guiding light; (2) Meeting the burden of psychological impairments; (3) Trying to balance physical and psychological aspects; and (4) Goal setting: a helpful challenge. The main categories and their subcategories are presented in Table 2.

3.1 Calling for a guiding light

The PTs stated that their knowledge of how to address psychological impairments during rehabilitation is mainly acquired through clinical experience, individual “gut feeling” when working with a patient, and by learning from mistakes. Mistakes in rehabilitation included setbacks for patients such as increased pain and knee joint effusion due to the prescribed training. It was suggested that discussions with colleagues and other professions played a major part in the PTs learning on how to address psychological impairments. In addition, mentoring physical therapy students, advanced level education, participating in rehabilitation-specific courses, and reading social media were also believed to contribute to the PTs’ knowledge of psychological impairments. Despite this, the PTs reported that they lacked knowledge of how to identify and address psychological impairments in the rehabilitation after ACL injury. In all four interviews, interactions with colleagues were mentioned as the primary source of a deeper understanding of how to address psychological impairments, which meant that acquiring knowledge through interaction with colleagues was identified as a subcategory.

… you have some kind of theoretical reference, and, as [physical therapist A] says, there are great differences between patients, so there’s a little bit of trial and error with each patient, but, of course, that is based on the theoretical knowledge you have on healing and recovery and muscles and so on.

The PTs said that they might have insufficient skills, knowledge, and resources to address psychological impairments in their patients. Although the PTs reported that they might be able to help resolve patients’ psychological impairments, they reported that they are not the right profession to best help the patients with these types of impairment. Furthermore, the PTs were uncertain about whether or not psychological impairments are something they are responsible for addressing. The PTs described themselves as being very confident about how to address physical impairments and muscle function and how to evaluate these aspects of rehabilitation. However, the PTs questioned their confidence in addressing psychological impairments. Some PTs believed that they do a great deal to improve psychological impairments and recovery, without exactly knowing how. One recurring topic was that PTs reported that they did not possess knowledge of how to address psychological impairments and therefore sometimes felt insufficient.

I feel that I do not possess enough tools to know what to ask my patients either. Instead, I just go with what they say and perhaps they just say what it is…. A small problem and then
the bigger problems (possible psychological impairments) lie much deeper. But the patients do not open up to us. And so we do not really have... we do not ask that question.

3.2 Meeting the burden of psychological impairments

The PTs described several challenges with psychological impairments during rehabilitation, such as loss of motivation and patients feeling stressed, for example, when relatives push them to succeed in rehabilitation. A further challenge for PTs was the lack of social support in injured patients (dealing with patients reporting they feel socially isolated), in cases where an injury resulted in absence from training with a team. The PTs said that an injury could have a great negative psychological impact on a patient, leading to what patients described as a loss of identity. The PTs reported that patients who report pain, fear of movements or fear of pain are particularly difficult to treat, especially when patients have limited time to commit to rehabilitation. The PTs mentioned the use of conversations and being there for patients as the main interventions to try to help patients resolve their psychological impairments. Four subcategories were identified as follows: the injury changes who you are, psychological impairments are greater than physical impairments, the rehabilitation of psychological impairments is difficult, and intervening with psychological impairments. The PTs reported that helping patients who missed a large part of their social lives because of an injury was very challenging; this included patients that are absent from participating within a sports team context due to the inability to train at the same level as teammates. Patients who were very active, spending many hours a week within a sport before injury, suddenly miss the psychosocial existence that characterized their lives. This can lead to changes in personality traits in patients. As one PT reported:

and there... the identity, who you are as a person (meaning the patient), as you said that... if you are a soccer player, but you have surgically reconstructed your ACL, you are not a soccer player. Then you might not know who you really are. During that time. I think that the attitude in the sports world is challenging. You are outside the team when you are injured.

Furthermore, PTs stated that psychological impairments are often a greater challenge than physical impairments through rehabilitation after an ACL injury.

The mental part is really hard (for patients) ... it is first when a patient suffers an injury... it is really hard when they get injured... when it happens. Later... most of those patients who get injured might have friends or relatives who injure themselves and might know what it means. But it is mentally difficult for them to get injured. Even the long absence from the activity. One year can feel like an eternity when you (patient) are... We are talking about people who are 15, 16, 17 years old. So it is very hard. I think the mental aspect is worse than the physical aspect. Because they are used to training and they know what it means. So they know they will get better by training, but you (patient) could even get a setback and it does not work out as planned. Then it can be worse. For those (patient) who are young, these aspects are... it is mentally hard for them. So perhaps this is what we encounter more often.

The PTs regarded the management of psychological impairments as very difficult, where fear of pain in patients was central.

It is like that, you have a patient that is motivated and everything works out just fine, you just need to say do this, do that and that goal, but then you have those (patients) who are difficult, who are... afraid, it hurts, it is painful and they are afraid of moving, they are difficult and there is very often something behind, deeper than just pain in the knee I think.

When difficulties are encountered while helping patients with psychological impairments, the PTs said that they used conversations as their primary intervention. Other examples of interventions used to address psychological impairments included supporting patients and organizing training together with other patients with the same injury. One important feature in the support of patients was time, since patients and PTs meet during a long period of time during the rehabilitation after an ACL injury. The PTs described a feeling of becoming a part of a patients’ life and that patients can therefore feel that they can talk about their psychological impairments with PTs. Although PTs believed that the courage to ask patients about psychological impairments is important, they said that they are sometimes afraid to initiate this kind of conversation.

...to evaluate more and perhaps think more about asking questions about psychological impairments, I think we (physical therapists) can be better at this... in the same way as we are really good at training programs and what we do in the gym, we might just always need to save five minutes and actually ask better questions
about how they (patients) feel… hopefully everything is great, but there we can find a large group. We might even find a large obstacle or a problem that we might need to work on more actively. I can imagine that.

3.3 | Trying to balance physical and psychological aspects

The most important factor during rehabilitation was thought to be patient education. Educating patients on rehabilitation and helping patients set realistic expectations was brought up in every interview. One key factor within patient education was helping patients understand that the rehabilitation after an ACL injury takes time, and it is most likely not a straight path. Furthermore, patients need to understand that they must commit to rehabilitation and training and compliance was considered important for successful rehabilitation. A subcategory of patient education and expectations was identified.

I feel that mostly when they (patients) are… they are working people and not elite athletes… They got injured perhaps sporting at recreational level or in another physical activity and feel they do not have the time or motivation to put so much time into rehabilitation. So, when they (patients) feel their daily life is working, they might disappear (from the clinic). Something like this… It doesn’t happen often, but it does happen. So they (patients)… You can’t call them and force them to come here. You have to be very careful with the information about what it takes so they (patients) understand it. Then it is up to them to actually do the work.

Another key factor during rehabilitation identified by the PTs was adapting the rehabilitation program to the patients’ present physical and psychological status. To facilitate this process, regular structured evaluations of patients with standardized tests together with small assessments, that is, normal conversations with no assessment tool, with direct feedback on every single visit were considered important. Sharing the results with patients was mentioned as being important in order to create a stronger patient-therapist alliance. Although the PTs reported that they were very confident about providing feedback on the results of physical tests, the PTs said that they were hesitant of asking questions about psychological well-being and reported that they did not evaluate psychological aspects specifically. A subcategory of evaluating and providing feedback was identified.

… And that is when it gets hard, when we (physical therapists) take them (patients) away from that twice a week for half a year or a year, and then they have to go back to their clubs…. Ehm… if you can find a balance there somehow, get an evaluation there, it would be a dream. But that evaluation, I think I do that much more than I do a ‘clear’ evaluation, when they (patients) score on different scores on a computer, except for project ACL, that is. It is more of an oral evaluation, alongside what they (patients) do at the gym. More than filling in different questionnaires. But you can be better. But it is easier this way. More time effective.

3.4 | Goal setting: a helpful challenge

According to the PTs, helping patients achieve their goals constitutes successful rehabilitation. The desire to reach each patients’ main goal, regardless of what that goal may be, is important to create motivation and discipline. According to the PTs, goals are not static and might change during the rehabilitation process. In cases where a patients’ goal changes during rehabilitation, the motivation toward this goal could change as well. Creating and reaching sub-goals during the rehabilitation process help improve the patients’ motivation. Having realistic subgoals was considered very important for the process toward successful rehabilitation. One subcategory was reaching goals gives patients motivation, where PTs stated that dividing the rehabilitation into small subgoals and reaching those subgoals could aid in the process and give patients what is needed to keep going.

Yes, we (physical therapists) have it like this… return to training without contact and we have a couple of boxes to tick… or criteria that we want patients to meet before. And you even get… You can give the paper to the patients and ask them to tick the boxes. Then I think like… they light up. They go like ‘I have achieved all of those!’.

4 | DISCUSSION

The main findings in this study regarding experiences of sports PTs in addressing psychological impairments in patients after an ACL reconstruction are summarized in four main categories: (1) Calling for a guiding light; (2) Meeting the burden of psychological impairments; (3) Trying to balance physical and psychological aspects; and (4) Goal setting: a helpful challenge.
One consistent point in all the interviews was that the PTs expressed insufficient knowledge of how to address psychological impairments. However, all PTs reported believing that they try to improve psychological well-being in patients to a great extent, without knowing exactly how they addressed it.

Psychological impairments during rehabilitation after an ACL injury might include frustration, lack of motivation, fear of the moment or re-injury, loss of athletic identity, anxiety, disorder eating, and culminate in serious physical consequences. Several of these psychological impairments are not classified as diagnoses and might not need the attention of a qualified sports psychologist. Physical and psychological stress and injuries can affect athletic performance and hinder training, career transitions, or rehabilitation, unless properly coped with. Because healthcare professions, such as PTs, should treat patients from a biopsychosocial perspective, we advocate that PTs should be open to accepting that they may need to be trained to handle psychological impairments occurring in patients after a sport-related injury. In cases where psychological diagnosis is present in concomitance of a sport-related injury, referral to a sport psychologist is unquestionable.

The most common way for PTs to gather new knowledge of psychological impairments in patients after an ACL injury was to discuss the case with colleagues. Despite this, the PTs said that they often feel insufficient and lack knowledge of how to address psychological impairments. Surprisingly, reading peer-reviewed publications, attending academic courses, or consulting with a psychologically trained professional was barely mentioned during the interviews. It is unknown why a profession based on evidence-based medicine does not refer to scientific publications as an important source of acquiring new knowledge, or whether this was merely a coincidence related to the interviewed PTs. When asked about the preferred methods for PTs to learn new knowledge, workshops, seminars, mentoring, and coaching were referred to as preferences. Nevertheless, this lack of referral to scientific papers is worrying since evidence-based medicine does not refer to scientific publications as an important source of acquiring new knowledge, or whether this was merely a coincidence related to the interviewed PTs. When asked about the preferred methods for PTs to learn new knowledge, workshops, seminars, mentoring, and coaching were referred to as preferences. Nevertheless, this lack of referral to scientific papers is worrying since evidence-based medicine, as defined by Sackett, the “conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients”. This means acting on the basis of three pillars, integrating (i) the clinical experience, (ii) with the best available research, and (iii) the patients’ values and preferences. On the other hand, literature on the psychological consequences of an ACL injury needs to improve, especially regarding researchers’ outreach to clinics and clinicians and providing alternatives for addressing psychological impairments. As active sport PTs, based on our clinical experience and own assumptions, we believe peer-reviewed publication to be an essential part of our clinical work, and encourage the use of regular continued staff education through literature studies, discussion groups, and attending conferences. Our results indicate that we need to be better at minimizing the gap between clinical practice and scientific research.

The PTs said that psychological impairments are more difficult to resolve compared with physical impairments (eg, strength and hop performance) during the rehabilitation after an ACL injury, which is consistent with the perceptions of patients. This could derive from the fact that PTs describe a knowledge gap in the area and that there is no current consensus on how to address psychological impairments during rehabilitation. Despite recent consensus criteria mentioning the use of regular psychological assessment in ACL injured patients. With regard to psychosocial interventions to improve rehabilitation outcomes after an ACL injury, a systematic review reported limited evidence and inconsistent results throughout the analyzed literature. This perhaps contributes to the fact that experienced PTs in sports medicine choose to trust their gut feeling when addressing psychological well-being. The limited evidence does not, however, imply that psychosocial interventions are not effective, but call for additional and higher quality studies.

Patient education and setting realistic expectations were mentioned as important factors after an ACL injury by the interviewed PTs. Patient education has strong positive effects on outcomes when customized to suit the patient and is associated with a positive therapeutic alliance, improved health outcomes, and treatment adherence in any patient category. However, we want to address the fact that patient education should be much more than just providing the patient with information and advice. Patient education is a learning experience and should be evaluated to ensure that the recipient has understood the information provided, that is, has been educated. Choosing not to determine whether the knowledge has been understood is contradictory and, to some extent, misleading, as “patient education” is semantically more comprehensive than just “information.” We therefore encourage the use of simple questionnaires to assess whether patients have understood the information that was meant to educate them.

With regard to using simple communication instead of standardized outcome measurements on every visit, a further concern was raised with statements such as

[...] It is more of an oral evaluation, alongside what they do at the gym. More than filling in different questionnaires. But you can be better. But it is easier this way. More time effective.

Healthcare evaluation is the critical assessment of an aspect, such as the effectiveness of health care, and aims to assess whether the current aspect realizes its objectives.
Talking to a patient while carrying out some rehabilitation tasks is important, but it is not sufficient as an evaluation. As psychological PROs are easy to administer in clinical settings, improvements are possible to capture through regular administration as part of clinical practice. In this way, a more rigorous evaluation will be achieved and PTs could learn to appreciate the results of these outcome measurements.

Goal setting has an important impact on outcomes such as muscle strength and is much appreciated by injured athletes. In our study, we found “Goal setting: a helpful challenge” as a main category, where according to the PTs, helping patients achieve their goals constitutes successful rehabilitation. According to PTs, reaching goals helped improving patients’ motivation. However, with regard to improving motivation, there is still a great deal of uncertainty about the definition of motivation, and its role in the rehabilitation process. Furthermore, there is low-quality evidence with moderate effect that the goal-setting process in rehabilitation may not be superior to not setting any goals for psychological outcomes. However, adherence to longer rehabilitation processes can entail superior functional outcomes. Associations between psychological aspects such as self-confidence and adherence to longer rehabilitation processes have been documented. Therefore, a positive therapeutic alliance, based on trust and confidence toward the PTs responsible for rehabilitation, can provide the patient with support in the process, and, perhaps the motivation to endure in a longer rehabilitation process, resulting in better functional outcomes and the resolution of psychological impairments.

This study was conducted in Sweden, with the limitation that PTs in this area might have similar ways of working and education. It is possible that PTs working in other geographical areas or other countries have different experiences. For this reason, the generalizability of the results may be limited, as they may not reflect the opinions and experiences of all PTs in specialist care settings. Another limitation is that the findings are a reflection of the perceptions of the PTs and not of patients.

4.1 | Recommendations

Our recommendations to PTs with regard to the rehabilitation of patients after an ACL injury who present psychological impairments include reading peer-reviewed publications, in order to stay up-to-date, and learn about psychological aspects and interventions in the rehabilitation process, and to use relevant PROs. Furthermore, we recommend our colleagues to evaluate whether patients understand the information provided to educate them, and, we encourage talking to patients about their psychological impairments.

5 | CONCLUSION

Sports physical therapists express the need for specific knowledge of the rehabilitation of psychological impairments following an ACL injury. To help provide the current best practice, we encourage researchers to develop psychologically centered interventions for rehabilitation after an ACL injury, and PTs to stay up-to-date with the literature published, and to implement eventual interventions.

6 | PERSPECTIVE

In this manuscript, we show that PTs stated that psychological impairments are greater than the physical ones in patients during rehabilitation after ACL injury, and that they express insufficient knowledge of how to address psychological impairments. Clinical active PTs could benefit by reading this paper as we provide suggestions in the discussion section about how to reduce the gap between research and clinicians, in order to improve the care of ACL injured patients.

CONFLICT OF INTEREST
Authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT
Data will be made available by the corresponding author upon reasonable request.

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**SUPPORTING INFORMATION**

Additional supporting information may be found online in the Supporting Information section.

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