

# Knowledge, Practice and Barriers to Exercise Rehabilitation Among Chinese Patients with Acute Musculoskeletal Injury: A Mixed-Methods Study [Letter]

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## Dear editor

I read with interest the mixed-methods study by Yang et al examining knowledge, practice, and barriers to exercise rehabilitation among Chinese patients with acute musculoskeletal injury. The authors provide timely data on the substantial gap between perceived importance of rehabilitation and real-world uptake, and they thoughtfully map multilevel barriers using the COM-B (Capability, Opportunity, Motivation and Behavior) framework.<sup>1</sup>

While the paper is a valuable contribution, several issues merit clarification because they may influence interpretation and the design of future implementation efforts.

First, the operationalization of “acute” injury as any acute musculoskeletal injury occurring within the past five years introduces substantial clinical heterogeneity and a high risk of recall bias. Patients at very different points in their recovery trajectory (eg, weeks vs years) are likely to report different barriers and behaviors. Stratified analyses by injury recency and injury type/severity, or restriction to a narrower recall window, would better support actionable inferences.

Second, although the study is described as single-center, the quantitative survey relied heavily on online recruitment through social media groups and apps. This approach may preferentially include younger, more digitally literate participants and those with higher health-seeking behaviors, even if the intent was to reduce selection bias toward clinical populations. Reporting the proportion recruited via each channel, response metrics where feasible, and sensitivity analyses comparing hospital-attending versus non-hospital-attending respondents would help readers judge representativeness.

Third, the survey instrument was developed for this project with expert review and a small pilot, yet measurement properties were not reported. For implementation research, it is crucial to distinguish low knowledge from low self-efficacy, low perceived need, or poor access. Providing evidence of content validity, test-retest reliability, or internal consistency for key constructs (even in supplementary material) would strengthen confidence in the quantitative estimates and support reuse in multicenter studies.

Fourth, the qualitative component included multiple stakeholder groups but with very small numbers for some roles (eg, two orthopedic surgeons and two physiotherapists). Given the centrality of provider behavior and referral practices to the authors’ conclusions, broader sampling across settings (tertiary vs community hospitals; public vs private clinics; urban vs rural areas) may be needed to ensure thematic saturation for provider-level barriers and to avoid over-weighting idiosyncratic views.

Finally, the interpretation of “underestimation of injury severity” as the dominant driver of non-attendance may be incomplete. Patients can simultaneously recognize that rehabilitation is important yet defer care because of uncertainty about timing, fear of harm, unclear pathways to access, and perceived low value for non-athletes. This aligns with prior syntheses showing that intrapersonal barriers (time, pain, beliefs) interact with opportunity constraints such as access and



cost.<sup>2</sup> The letter would benefit from more explicit framing of the intention-to-action gap as a systems problem rather than a purely educational deficit.

These observations also point to practical opportunities for contribution. Rather than relying on broad “education” alone, future work could test a small set of implementation components with measurable endpoints: (i) a standardized, brief “rehabilitation prescription” at first contact (eg, emergency/orthopedic visit) including red flags, activity modulation, and a default follow-up plan; (ii) referral triggers embedded in routine imaging or discharge workflows; (iii) a hybrid model combining early in-person assessment with remote supervision and adherence monitoring; and (iv) outcome tracking that extends beyond symptom resolution to return-to-activity milestones and re-injury rates. Booster-visit models have been proposed as a scalable way to provide structured follow-up while reducing burden on specialist capacity.<sup>3</sup>

In summary, Yang et al provide important early evidence on barriers to exercise rehabilitation after acute musculoskeletal injury in China. Clarifying sampling, measurement properties, and the role of clinical heterogeneity would strengthen the message, while pragmatic referral and hybrid-care interventions could help translate high perceived importance into sustained participation.

## Artificial Intelligence Statement

ChatGPT (OpenAI, San Francisco, CA, USA; GPT-5.2 version) was used exclusively to assist with language and grammatical refinement. All suggested edits were carefully reviewed and approved by the author, who takes full responsibility for the scientific content.

## Funding

The author declares that no financial support, grants, or other forms of assistance were received in the preparation of this manuscript.

## Disclosure

The author declares no conflicts of interest in this communication.

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