



Editorial

How to Undertake Personalized Assessments and Administer Cures for Pain

Barbara Rocca

Children's Orthopedics, Lenval Hospital, 57, Av. Californie, 06200 Nice, France; barbararocca81@gmail.com

1. Introduction

Pain is a multidimensional and highly individualized experience shaped by biological, psychological, and social determinants. Advances in pain science over the last decade have increasingly emphasized the importance of personalized approaches to both assessment and treatment. Rather than viewing pain as a purely biomedical phenomenon, contemporary research highlights its complex interplay with cognitive, emotional, behavioral, and environmental factors. This Special Issue gathers six contributions that explore these dimensions and illustrate how personalization can enhance understanding, management, and outcomes in patients experiencing acute, chronic, or postsurgical pain.

2. Recent Developments in Personalized Pain Assessment

Personalized evaluation has evolved significantly with the integration of psychological profiling, patient-reported outcome measures (PROMs), neurophysiological techniques, and biopsychosocial screening. Recent evidence demonstrates that psychological traits—such as emotional stability, coping strategies, and personality dimensions—meaningfully influence pain perception, disability, and quality of life (contribution 1).

Sex- and gender-related differences have also emerged as critical determinants of pain trajectories. Biological, psychosocial, and sociocultural variables influence differential pain responses and disability patterns between men and women (contribution 2).

Additionally, advancements in measurement tools have strengthened personalized assessment. Validated short-form PROMs, such as updated versions of the Roland–Morris Disability Questionnaire, allow clinicians to monitor disability efficiently and reliably in daily practice (contribution 3).

3. Innovations in Personalized Pain Therapies

The shift toward personalization has catalyzed therapeutic innovation. Non-invasive brain stimulation (NIBS), particularly cerebellar stimulation, represents a promising frontier for chronic pain treatment. The cerebellum plays a key role in sensory, affective, and cognitive modulation of pain, and early evidence suggests beneficial effects of cerebellar-targeted stimulation (contribution 4).

Patient-centered care models are increasingly integrated into pain management. Shared decision-making has demonstrated significant promise in improving understanding, empowerment, satisfaction, and adherence among patients with acute neuropathic pain such as postherpetic neuralgia (contribution 6) [1,2].

Despite theoretical support, structural barriers limit the clinical implementation of the biopsychosocial model. Insufficient training, organizational constraints, and limited time remain key challenges for clinicians (contribution 5).



Received: 2 December 2025
Accepted: 8 December 2025
Published: 18 December 2025

Citation: Rocca, B. How to Undertake Personalized Assessments and Administer Cures for Pain. *J. Pers. Med.* **2025**, *15*, 630. <https://doi.org/10.3390/jpm15120630>

Copyright: © 2025 by the author. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

4. Integrating Insights Across Contributions

Together, the contributions emphasize that personalized pain care requires multidimensional evaluation and tailored interventions. They collectively show the following:

- Psychological traits affect long-term surgical outcomes (contribution 1).
- Sex-specific differences shape chronic pain trajectories (contribution 2).
- Neurophysiological innovations such as cerebellar NIBS offer promising personalized interventions (contribution 4).
- Efficient, validated PROMs support accessible, patient-centered assessment (contribution 3).
- Systemic improvements are essential for biopsychosocial implementation (contribution 5).
- Shared decision-making enhances treatment engagement and outcomes (contribution 6).

5. Future Directions

Future research should prioritize the following points:

1. Refined psychological profiling integrating biological and emotional markers.
2. Advanced understanding of sex- and gender-based mechanisms influencing pain.
3. Development of neurophysiological biomarkers for personalized neuromodulation.
4. Implementation studies to overcome barriers to the biopsychosocial model.
5. Digital PROMs and remote monitoring for continuous assessment.
6. Structured shared decision-making tools across different pain populations.
7. Multimodal therapeutic approaches combining psychological, physical, and neurophysiological interventions.

6. Conclusions

This Special Issue provides a comprehensive overview of the current state of personalized pain science, highlighting its clinical, psychological, and neurophysiological dimensions. The six contributions collectively affirm that effective pain management must consider individual differences across biological, emotional, cognitive, and social domains. By advancing assessment tools, treatment strategies, and implementation frameworks, this Special Issue supports continued progress toward truly personalized pain medicine [3–10].

Conflicts of Interest: The author declares no conflict of interest.

List of Contributions

1. Thomas, M.; Führes, H.; Scheer, M.; Rampp, S.; Strauss, C.; Schönfeld, R.; Leplow, B. Perceived Health Benefits in Vestibular Schwannoma Patients with Long-Term Postoperative Headache: Insights from Personality Traits and Pain Coping—A Cross-Sectional Study. *J. Pers. Med.* **2024**, *14*, 75. <https://doi.org/10.3390/jpm14010075>.
2. Pericot-Mozo, X.; Suñer-Soler, R.; Reig-Garcia, G.; Patiño-Masó, J.; Sitjar-Suñer, M.; Masià-Plana, A.; Bertran-Noguer, C. Quality of Life in Patients with Chronic Low Back Pain and Differences by Sex: A Longitudinal Study. *J. Pers. Med.* **2024**, *14*, 496. <https://doi.org/10.3390/jpm14050496>.
3. Díaz-Fernández, Á.; Cortés-Pérez, I.; Obrero-Gaitán, E.; Ortega-Martínez, A.R.; Osuna-Pérez, M.C.; Zagalaz-Anula, N.; Lomas-Vega, R. Chronic Pain Management Approaches among Spanish Physiotherapists: Influences, Practices, Barriers, and Challenges. *J. Pers. Med.* **2024**, *14*, 903. <https://doi.org/10.3390/jpm14090903>.
4. Sveva, V.; Cruciani, A.; Mancuso, M.; Santoro, F.; Latorre, A.; Monticone, M.; Rocchi, L. Cerebellar Non-Invasive Brain Stimulation: A Frontier in Chronic Pain Therapy. *J. Pers. Med.* **2024**, *14*, 675. <https://doi.org/10.3390/jpm14070675>.
5. Wu, Y.-T.; Lao, H.-C.; Kao, S.-C.; Lin, Y.-C.; Yang, Y.-W.; Li, Y.-H.; Chen, Y.-J. From Consultation to Collaboration: A Patient-Centered Approach to Shingles Pain and Postherpetic Neuralgia Management. *J. Pers. Med.* **2025**, *15*, 191. <https://doi.org/10.3390/jpm15050191>.

6. Paolucci, T.; Pezzi, L.; Coraci, D.; Tognolo, L.; Pantalone, A.; Attanasi, C.; Graziani, G.; Dalla Costa, D.; Arippa, F.; Cichelli, A.; et al. Reliability, Concurrent Validity, and Clinical Performances of the Shorter Version of the Roland Morris Disability Questionnaire in a Sample of Italian People with Non-Specific Low Back Pain. *J. Pers. Med.* **2024**, *14*, 740. <https://doi.org/10.3390/jpm14070740>.

References

1. Miaskowski, C.; Blyth, F.; Nicosia, F.; Haan, M.; Keefe, F.; Smith, A.; Ritchie, C. A biopsychosocial model of chronic pain for older adults. *Pain Med.* **2020**, *21*, 1793–1805. [[CrossRef](#)] [[PubMed](#)]
2. Driscoll, M.A.; Edwards, R.R.; Becker, W.C.; Kaptchuk, T.J.; Kerns, R.D. Psychological interventions for the treatment of chronic pain in adults. *Psychol. Sci. Public Interest* **2021**, *22*, 52–95. [[CrossRef](#)] [[PubMed](#)]
3. Raja, S.N.; Carr, D.B.; Cohen, M.; Finnerup, N.B.; Flor, H.; Gibson, S.; Keefe, F.J.; Mogil, J.S.; Ringkamp, M.; Sluka, K.A.; et al. The revised International Association for the Study of Pain definition of pain: Concepts, challenges, and compromises. *Pain* **2020**, *161*, 1976–1982. [[CrossRef](#)] [[PubMed](#)]
4. Patel, K.V.; Amtmann, D.; Jensen, M.P.; Smith, S.M.; Veasley, C.; Turk, D.C.; Dworkin, R.H. Clinical outcome assessment in clinical trials of chronic pain treatments. *Pain Rep.* **2021**, *6*, e784. [[CrossRef](#)] [[PubMed](#)]
5. Moseley, G.L.; Leake, H.B.; Beetsma, A.J.; Watson, J.A.; Butler, D.S.; van der Mee, A.; Stinson, J.N.; Harvie, D.; Palermo, T.M.; Meeus, M.; et al. Teaching patients about pain: The emergence of pain science education, its learning frameworks and delivery strategies. *J. Pain* **2024**, *25*, 104425. [[CrossRef](#)] [[PubMed](#)]
6. Ziadni, M.S.; Carty, J.N.; Doherty, H.K.; Jordan, K.D.; Schubiner, H.; Lumley, M.A. Emotional awareness and expression therapy achieves greater pain reduction than cognitive behavioral therapy in older adults with chronic musculoskeletal pain: A randomized controlled trial. *Pain Med.* **2020**, *21*, 2811–2822. [[CrossRef](#)]
7. Eastwood, F.; Godfrey, E. The efficacy, acceptability and safety of acceptance and commitment therapy for fibromyalgia—A systematic review and meta-analysis. *Br. J. Pain* **2024**, *18*, 243–256. [[CrossRef](#)] [[PubMed](#)]
8. Keogh, E. Sex, gender, and pain: Evidence and knowledge gaps. *Curr. Opin. Psychol.* **2025**, *55*, 101763. [[CrossRef](#)]
9. Zhang, L.-B.; Chen, Y.-X.; Li, Z.; Geng, X.-Y. Advances and challenges in neuroimaging-based pain biomarkers. *Cell Rep. Med.* **2024**, *5*, 101784. [[CrossRef](#)] [[PubMed](#)]
10. Williams, A.C.d.C.; Fisher, E.; Hearn, L.; Eccleston, C. Psychological therapies for the management of chronic pain (excluding headache) in adults. *Cochrane Database Syst. Rev.* **2020**, *8*, CD007407. [[CrossRef](#)] [[PubMed](#)]

Disclaimer/Publisher’s Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.