

In terms of follow-up duration, most studies focus on short-term outcomes, typically assessing changes immediately after intervention or within 3-6 months, while long-term evidence is scarce. Given that DRA involves complex processes of structural remodeling, neuromuscular adaptation, and behavioral change, long-term outcomes include not only sustained IRD reduction but also maintenance of functional improvements, recurrence after cessation of training, and long-term effects on pain, pelvic floor function, and quality of life (Du et al., 2025). However, due to the lack of sufficient longitudinal data, the durability and comparative advantages of different interventions remain unclear. Similarly, surgical studies primarily report short- to mid-term outcomes, with limited evidence on recurrence rates, mesh-related complications, and functional outcomes beyond 2-5 years (Janiszewska et al., 2025).

In addition, inconsistency in outcome measures represents another major limitation. Some studies report only IRD changes, neglecting clinically meaningful outcomes such as muscle strength, pain, functional disability, body image, and quality of life, while others include functional measures but use different tools and reporting standards, limiting comparability. Furthermore, the natural course of untreated or conservatively managed DRA remains poorly understood, adding complexity to the interpretation of long-term intervention effects (Du et al., 2025). Therefore, future research should prioritize multicenter, large-scale, high-quality RCTs with standardized diagnostic criteria and core outcome sets, extended follow-up periods, and inclusion of diverse populations to better define the long-term value of rehabilitation strategies, their integration with surgical approaches, and optimal treatment pathways for different patient subgroups.

7 Future Research Directions

7.1 Establishing standardized assessment criteria and classification systems to improve comparability

A primary priority for future research is to establish unified, scalable, and internationally applicable assessment standards and classification systems for diastasis recti abdominis (DRA). Although inter-recti distance (IRD) is currently the most commonly used structural indicator, substantial variability exists across studies in measurement tools, anatomical reference points, body positioning, and diagnostic thresholds, which significantly limits cross-study comparability and the reliability of meta-analyses (Chen et al., 2023). Some studies define DRA solely based on IRD width, whereas others incorporate symptoms, functional impairment, or treatment needs, further reducing the consistency and integrability of existing evidence (Skoura et al., 2024; Bigdeli et al., 2025). Therefore, future work should prioritize large-scale, multicenter studies to establish standardized anatomical landmarks, unified reporting protocols under both resting and activated conditions, and definitions that account for sex, parity, and body composition differences, thereby developing a more universally applicable framework for DRA (Bracale et al., 2025).

Building on this foundation, DRA assessment should evolve from a purely structural classification toward a multidimensional system integrating “structure-function-symptom-psychosocial” domains. Current grading systems are primarily based on IRD width or myofascial deformation, with some classifications tailored to guide decisions between conservative and surgical treatment (Bracale et al., 2025). Future classification systems with greater clinical utility should incorporate multi-site IRD measurements, linea alba quality and elasticity, trunk and pelvic floor function, pain severity, body image concerns, quality of life, and the presence of hernia, thereby improving prediction of treatment response and prognosis (Du et al., 2025; Huang et al., 2025; Janiszewska et al., 2025). Additionally, these systems should be validated through Delphi consensus processes, prospective studies, and multicenter external validation to ensure reliability, reproducibility, and clinical applicability. The establishment of standardized assessment and classification systems is essential not only for improving research comparability but also for advancing randomized controlled trial design, network meta-analysis, and international guideline development.

7.2 Promoting individualized and precision-based rehabilitation strategies

With the advancement of precision medicine, rehabilitation for DRA should transition from experience-driven, uniform protocols toward data-driven, individualized intervention strategies. Existing research highlights significant heterogeneity among patients in terms of separation severity and pattern, parity, BMI, connective