

A Systematic Review of Randomised Controlled Trials on Pain Domains and Assessment Methods in Post Pancreatectomy patients

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BACKGROUND

- Pain is a multidimensional phenomenon and encompasses sensory, affective, cognitive, and functional aspects.
- Studies continue to rely on scales that often capture only pain intensity at rest or during activity.
- This systematic review aimed to identify the domains and tools for assessment of postoperative pain in randomised controlled trials following pancreatic surgery, and to identify gaps in multidimensional assessment.

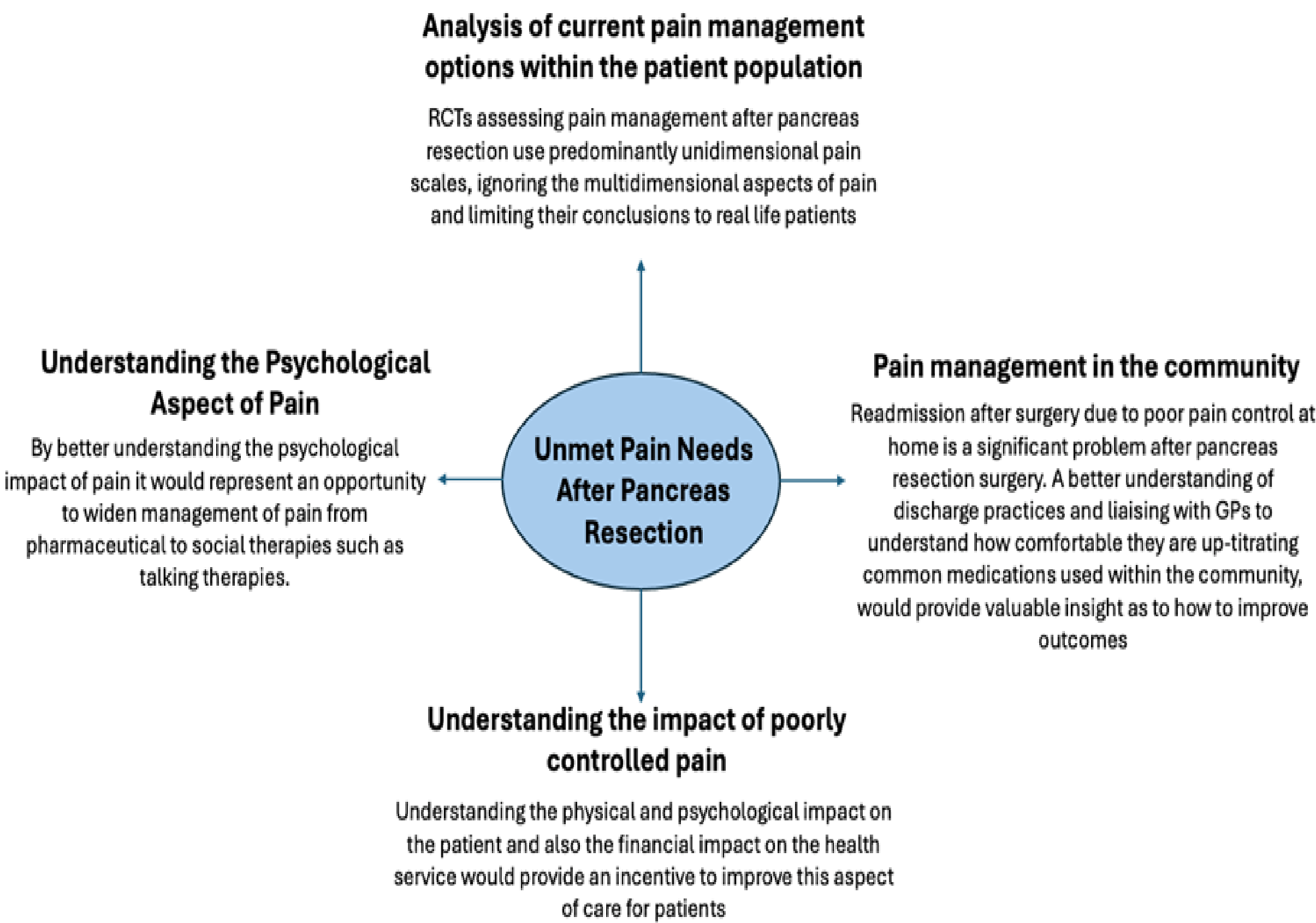
METHODS

- This systematic review was conducted and reported in accordance PRISMA 2020 guidelines
- PubMed, Embase, Web of Science, and the Cochrane Library were searched without restrictions.
- Data extracted for pain assessment tools, analgesic outcomes, adverse effects, pain interference and quality- of-life measures

RESULTS

- Fifteen RCTs involving 1,034 patients were included.
- All trials assessed pain intensity using visual analogue scale (n=11) or numerical rating scale (n=4).
- Analgesic consumption was reported in 13 trials, with significant variability in the reporting, rescue analgesia and adverse effects.
- Pain interference or physical function was described in 10 trials, including pain on coughing (n=4), mobilisation (n=3), % gait speed and % peak cough flow(n=2).
- Two trials incorporated validated recovery tools QoR-15 and QoR-40.
- Multidimensional tools were rarely used, with a single RCT employing three different scales(anxiety scale, depression scale and SF36).
- Patient satisfaction was explicitly assessed in one study using the Overall Benefit of Analgesic Score (OBAS)

Intensity isn't enough- Know how patients recover



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DISCUSSION

- Most RCTs on postoperative pain after pancreatic surgery rely on unidimensional tools (VAS, NRS), which capture intensity but ignore functional and psychological dimensions.
- Only 4/15 trials used validated multidimensional instruments (QoR-15, QoR-40, OBAS, SF-36), highlighting limited adoption of patient-centered assessment.
- Analgesic use and adverse effects reporting was highly variable, limiting comparability across studies.
- Functional outcomes (mobility, pain interference) and psychological assessment (anxiety, depression) were underrepresented, despite their impact on recovery and chronic pain risk.
- There is no pancreatic surgery-specific core outcome set for postoperative pain; existing PROM frameworks (IMMPACT, StEP, IMI-Pain Care) do not fully address procedure-specific recovery profiles.
- Evidence is further limited by heterogeneity (disease type, intervention, timing of assessment), small sample sizes, and risk of bias in some studies.

CONCLUSION

- There was notable heterogeneity in pain domains assessed and the tools used across pain management RCT's post pancreatectomy.
- This highlights the need for standardized core outcome domains and multidimensional tools specific to pancreatic surgery to enable comparability of data and robust analysis.

TOOLS USED IN RCTs

- QoR-40 (Quality of Recovery-40): A 40-item validated questionnaire assessing multidimensional postoperative recovery, including physical, emotional, and functional well-being.
- QoR-15 (Quality of Recovery-15): A shorter 15-item version of QoR-40 that provides a rapid, sensitive measure of overall postoperative recovery.
- SF-36 (Short Form-36): A 36-item generic health survey measuring quality of life across eight physical and mental health domains.
- OBAS (Overall Benefit of Analgesia Score): A composite score evaluating the balance between analgesic efficacy and adverse effects in postoperative pain management.

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