

Analysis of the graphic report of results of randomized clinical trials in manual therapy: a methodological review.

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Objectives

To assess the quantity and quality of graphs in RCTs of MT.

Methods

- ✓ **Search strategy:** PubMed and CENTRAL.
- ✓ **Eligibility criteria:** RCT design, MT intervention, English language.
- ✓ Published between the year 2000 and 2015.
- ✓ We took a random sample of 100 trials.
- ✓ We identified figures and graphs presenting data related to the primary outcome.

Graph Characteristic (n=48)	% [CI 95%]
Completeness	
Number of subjects is discernable for each element	8.3% [2.3 to 20.0]
Title	14.6% [6.0 to 27.7]
x and y axis titles	85.4% [72.2 to 93.9]
x and y axis labels	87.5% [74.7 to 95.3]
Error bar meaning defined	33% [20.4 to 48.4]
All data elements defined (is self-explanatory)	18.8% [8.9 to 32.6]
Visual clarity (absence of the following)	
Numeric distortion (scale problems)	91.7% [80.0 to 97.7]
Chart junk (dark/thick/unnecessary grid lines or cross-hatching patterns)	70.1% [55.9 to 83.0]
Readability (superimposition of data elements or numeric/textual redundancy)	56.3% [41.2 to 70.1]
Other (problems with labels or improperly connected points)	89.6% [77.3 to 96.5]

Conclusions

Despite graphs being able efficiently to convey study findings, less than half of the RCTs in MT use them. In addition, there is a important deficit in the quality of graphic reports. Improvements in graphic reporting are necessary to generate advances in physiotherapy practice.

Introduction:

The number of randomized controlled trials (RCTs) in manual therapy (MT) has increased exponentially, and graphs are a usual way of summarizing the results. However, the quality of this kind of report has not been assessed yet.

Methodological quality:

PEDro Item (n=100)	%
Elegibility Criteria and Source	97%
Random Allocation	99%
Concealed Allocation	51%
Baseline Comparability	88%
Subject Blinding	32%
Therapist Blinding	3%
Assessor Blinding	57%
>85% Follow-up	84%
Intention-to-treat Analysis	73%
Between-group Comparisons	96%
Point Measures and Variability	92%



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