General Guidelines to Consider When Writing an Abstract

Overall Points to Consider. All abstracts are limited to **400** words and should be checked for grammatical and spelling errors. ***If your abstract is accepted and you choose to have your abstract published in JMMT, your final abstract for publication can be no longer than 200 words.***

ALL AUTHORS must review the abstract before submission.

- Is it succinct?
- Are the hypotheses or objectives clearly stated?
- Have unnecessary experimental details and statistical methods (not directly related to the focus of the abstract) been removed?
- Have abbreviations and/or "jargon" terms been eliminated?
- Make sure to list out acronyms when first used?
- Have major findings been stated concisely and comprehensively in an easily understood manner?
- Is the conclusion concise and linked to the hypotheses, objectives or aims?

Original research, systematic reviews, and Meta analyses require structured abstracts ***(e.g. Introduction, Methods, Results and Discussion)***. The abstract should provide the context or background for the study and should state the study's purpose, basic procedures (selection of study participants, settings, measurements, analytical methods), main findings (giving specific effect sizes and their statistical and clinical significance, if possible), and principal conclusions. It should emphasize new and important aspects of the study or observations, note important limitations, and not over interpret findings. If applicable, note the clinical trial registration at the end of the abstract.

I. Original Research (Pandis et al 2017, von Elm et al 2007):

Introduction: A brief background of the research including a description of the study aims.

Methods: Description of the study design and methodology.

Results: Concrete results related to the aim. No ambiguous expressions, such as "relatively large" or "obvious difference".

Discussion: Direct linkage to the study aims. Succinct statement of what can be drawn from the study with no exaggeration of the study's importance or value. Brief interpretation of the results, implications, clinical relevance, and recommendations for further action.

Original Research Abstract Example (196 words)

Title: Changes in Pulmonary Function Following Thoracic Spine Manipulation in a Healthy Inactive Older Adult Population—A Pilot Study

Introduction: Pulmonary function pathology is primarily treated pharmacologically, with a range of side effects. Few studies have systematically examined non-pharmacologic approaches such as joint manipulation. This study examined the immediate and short-term effects of thoracic manipulation on pulmonary function.

Methods: Twenty-one physically inactive healthy participants aged 50 years or older were randomly assigned to receive three sessions of thoracic manipulation (n=10) or three sessions of "sham intercostal training" (n=11). Outcome measures included forced vital capacity, maximal voluntary ventilation (MVV) and thoracic excursion during maximal inhalation and exhalation.

Results: There was a statistically significant difference in maximal voluntary ventilation in the manipulation group, when measured within a week of the third intervention session ($p<0.05$, $d=0.71$) and immediate effects

in thoracic excursion during exhalation in the sham group following a single intervention session ($p<0.05$, $d=0.57$).
Discussion: Spinal manipulation had no immediate effect on pulmonary function however effected an improvement in MVV within 7 days following a third session. The sham intervention showed a change in thoracic excursion during exhalation after the first session. Future research is necessary to further explore the relationship between thoracic manipulation and pulmonary function.

II. Systematic/Scoping Reviews/Met-analyses PRISMA Guidelines (Page et al 2021):

Title: Identify the report as a systematic review.

Introduction: Provide an explicit statement of the main objective(s) or question(s) the review addresses.

Methods: Specify the inclusion and exclusion criteria for the review. Specify the information sources (e.g. databases, registers) used to identify studies and the date when each was last searched. Specify the methods used to assess risk of bias in the included studies. Specify the methods used to present and synthesize results.

Results: Give the total number of included studies and participants and summarize relevant characteristics of studies. Present results for main outcomes, preferably indicating the number of included studies and participants for each. If meta-analysis was done, report the summary estimate and confidence/credible interval. If comparing groups, indicate the direction of the effect (i.e. which group is favored).

Discussion: Provide a brief summary of the limitations of the evidence included in the review (e.g. study risk of bias, inconsistency and imprecision). Provide a general interpretation of the results and important implications.

Systematic Review Abstract Example (193 words)

Title: Lack of Standardization In Dry Needling Dosage And Adverse Event Documentation Limits Outcome And Safety Reports: A Scoping Review Of Randomized Clinical Trials
Introduction: This scoping review examined: whether variability in dry needling (DN) dosage affects clinical pain outcomes and how adverse events (AEs) were documented, and whether DN safety was determined.
Methods: Nine databases were searched for randomized controlled trials (RCTs). RCTs which met the Physiotherapy Evidence Database (PEDro) criteria #1 and scored > 7/10 were included. Data extraction included DN dosage, pain outcome measures, inclusion or absence of AE reporting, and means to categorize AEs. Minimum clinically important difference (MCID) for pain outcome measures defined clinically meaningful differences.
Results: Out of 22 identified RCTs, 11 demonstrated significant between-group differences exceeding the MCID, suggesting a clinically meaningful change for pain outcomes. Nine documented whether AEs occurred, five provided AEs details, and four cited a standard means to report AEs.
Discussion: Secondary to inconsistency in reporting DN dosing parameters and AEs, we could not determine whether DN dosing affects outcomes or establishes DN dosage. Without more detailed AEs a more thorough appraisal of relative risk, severity, and frequency was not possible. Based on these inconsistencies, adopting a standardized checklist for reporting DN dosage and AEs may improve internal and external validity and the generalizability of results.

III. **<u>Case reports (Gagnier et al 2013):</u>** require structured abstracts ***(e.g. Background, Case Description/Diagnosis, Outcomes, and Discussion)***. Case reports should be unique/unusual cases, include validated clinical outcomes measures, record of pain medication intake, and should include follow-up data when applicable.

Background: A concise summary statement of findings from review of literature. Provide the rationale as to why the case is worth reporting ("The purpose of this case study is to describe. . .")

Case Description/Diagnosis: Focus this section on the purpose defined in the background. Provide a general overview of the patient (i.e. clinical history, remarkable clinical examination finding, diagnostic testing and differential diagnosis) but do not lose sight of the primary purpose of the case. The author should establish a causal and temporal relationship of the examination and justify the proposed management (highlight clinical reasoning).

Outcomes: Include outcome and patient's progress (report in terms of MDC and MCID when applicable), follow up and complications (when applicable).

Discussion: Summarize and interpret the key findings of the case. Contrast what is already known in the literature and justify its uniqueness, to derive new knowledge and applicability to practice and lessons learned. A final element for the discussion is some suggestion for future inquiry into the topic stating, "more research is needed". Do not over-interpret the case/results, be concise.

For cases with a focus on diagnosis, more detail about the test or measure that is providing information needed to form the diagnosis or prognosis decision is included in the case description, and less detail about the interventions and outcomes per se. For cases about educational processes or risk management/adverse events details are about the nature of the education or risk, the rationale for the type of education or dealing with the risk and how risk was mitigated or resolved.

<u>Case Report Abstract Example (189 words)</u>

Title: Cervical spine assessment and intervention for the successful management of a candidate for shoulder surgery: A fellow's case report

Background: Imaging alone can lead to inaccurate diagnosis and management. This case report highlights the importance of cervical spine screening in a patient recommended for shoulder arthroplasty.

Case Description: 86-year-old male with a 4-month history of insidious R-shoulder pain complaining of limited sleep, difficulty dressing, and work disruption. Evaluation revealed limited shoulder active range of motion (AROM) and glenohumeral joint (GHJ) passive accessory mobility deficits. Axial examination revealed limited AROM and segmental hypomobility at the cervical and thoracic spine. Concordant R-shoulder pain was reproduced with active cervical R-rotation and R-UPA at C5-6. Neurological examination revealed hypoesthesia at the supraspinatus fossa. Interventions included cervical and thoracic manual therapy and therapeutic exercises.

Outcomes: 4 visits over 9 days resolved shoulder pain, hypoesthesia, sleeping, and functional impairments. Cervical rotation AROM improved 20° and concordant sign abolished. FOTO (53 to 74/100) and DASH (35.8 to 9.2) scores improved.

Conclusion: Cervical examination revealed somatic referred shoulder pain. Interventions performed at the cervical and thoracic spine resolved impairments avoiding surgery. It is imperative to assess the cervical spine as a source of nociception in shoulder pain patients, regardless of shoulder imaging findings.

References:

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Pandis N, Chung B, Scherer R W, Elbourne D, Altman D G. CONSORT 2010 statement: extension checklist for reporting within person randomised trials *BMJ* 2017; 357 :j2835 doi:10.1136/bmj.j2835

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