WORKSHEET – APPRAISAL OF A QUANTITATIVE ARTICLE

I. Study Purpose
    - Clearly stated
    - Phrased as a research question or hypothesis

II. Literature Review
    - Provide a synthesis of appropriate previous research & the clinical importance of the topic
    - Include primary > secondary sources
    - Interpret results of previous work
    - Clearly demonstrate the ‘holes’ that need to be filled by this particular study and thus justifies the need for this study

III. Study Design
    - RCT
    - Case-Control
    - Cohort
    - Cross-Sectional
    - Single subject
    - Case Study
    - Before-After

IV. Appropriateness of Design
    Sample/selection Bias
    - Volunteer or referral bias
    - Seasonal bias
    - Attention bias

    Measurement/detection Bias
    - No. of outcome measures
    - Lack of ‘masked’/’blinded’ evaluation
    - Recall or memory bias

    Intervention/Performance Bias
    - Contamination
    - Co-intervention
    - Timing of intervention
    - Site of treatment
    - Different therapists
V. Sample
- Was there a detailed description eg. Age, gender, duration of disease / disability?
- Were the number reported? Were the groups equal & similar?
- Was there a description of how subjects were sampled/recruited?
- Were there appropriate inclusion/exclusion criteria?
- Was there justification of sample size (calculation of power?)
- If there was more than one group, were subjects randomly allocated?
- Was allocation concealed?
- Were the ethics procedures reported?

VI. Outcomes
- Were the outcomes clearly described?
- Were they detailed sufficiently for replication?
- Was the frequency of outcome measures described?
- Were the measures relevant to clinical outcome?
- Was reliability examined/reported & confirmed with these investigators?
- Was validity examined & reported?

VI. Intervention
- Was the intervention described in detail (to replicate)?
- Was the intervention relevant?
- Who delivered it; were they trained?; were they blinded?
- Was the frequency appropriate?
- Was the setting appropriate?
- Was contamination/co-intervention avoided?

VII. Stats Analysis & Results
- Was a testable hypothesis or objective stated?
- Was the sample adequately described?
- If randomized - are the baseline groups similar? (table with baseline characteristics presented and statistical comparison)
- Adequate number of subjects? (30+ per group)
- Is the population normally distributed? Should a parametric or nonparametric test been used?
- If hypothesis testing - is the result statistically significant? (p <0.05)
- Was the change meaningful?
- If showing confidence intervals, does the interval cross 0 (if presenting the mean difference between the two groups) or 1 (if showing relative risk or odds ratios).
- Is the change what you expect?
- Have they made too many comparisons? Fishing expedition.
- Were the statistical methods provided in detail?
- Were the statistical methods appropriate?
- Were drop-outs reported? Were their results analyzed?

VIII. Conclusions
- Were clinical implications explored?
- Were conclusions restricted to a reasonable interpretation of the results?
- Were limitations of the study reported?
IX How can I apply the results to patient care?
   - Were the study patients similar to my patient?
   - Were all clinically important outcomes considered?
   - Are the likely treatment benefits worth the potential harm and costs?

Adapted from:
1. Critical Review Form, Quantitative Studies, developed by McMaster OT Evidence-Based Practice Research Group (Law et al, 1998)

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