

Review title

Professional supervision for allied health practitioners working in non-metropolitan health care settings: A comprehensive systematic review

Reviewers

Wendy Ducat, B. A., B.Psych. (Hons1), Ph.D. (Clin Psych)¹ and Susanne Pearce RN, BN (with distinction), MN, PhD, JBICF²

¹Australian Centre for Rural and Remote Evidence Based Practice, a JBI Collaborating Centre and Cunningham Centre, Queensland Health. Phone: +61(07) 4616 5545, Fax: +61 (07) 4616 5699, Email: wendy_ducat@health.qld.gov.au

²Australian Centre for Rural and Remote Evidence Based Practice a JBI Collaborating Centre. Phone: +61(07) 4699 8312, Fax: +61(07) 4699 8940, E-mail: susanne_pearce@health.qld.gov.au

Review objective/question

The review objectives are to synthesize the best available evidence on the experiences and effects of professional supervision on allied health clinician practice and client outcomes across rural and remote health settings.

Specifically, the review questions are:

1. What are the experiences of professional supervision for allied health professionals working in non-metropolitan settings?
2. What are the effects of professional supervision on allied health practitioner practice and clients outcomes in non-metropolitan locations?

Background

The importance of professional support for clinical practice has been widely researched and advocated in recent years. ^{1, 2} There is evidence to suggest professional support initiatives play a critical role particularly in rural and remote health services to enhance recruitment, retention and service delivery outcomes. ³⁻⁸ With increasing adoption of professional support arrangements in both public and private health services, and across multiple disciplines, it is important to systematically review the international research evidence in relation to the experiences and effects of supervision both on clinician practice and client outcomes.

Participation in professional support has recently been defined as a mandatory requirement for allied health clinicians in Queensland Health and refers to participation in “...activities that create an environment where personal and professional growth may occur.” ³ An important aspect of the Queensland Health Allied Health Professional Support Implementation Standard is to enhance access to professional support for all allied health professionals as currently allied health disciplines are not uniform in their access to, training in, expectations of and uptake of supervision.²

However, in spite of differences between professions, available research shows that the aims, processes and methods of supervision – and in particular what makes supervision effective – is more similar than different across professions.¹⁰

Defining professional supervision is challenging, as multiple terms and definitions are widely used in research. Proponents versus critics of supervision appear to have different definitions and beliefs regarding its purpose.¹¹ There is confusion from both health professionals and critics who may confuse professional supervision with line management as a tool to monitor staff performance.¹¹

For the purposes of this systematic review, supervision is defined as “*a working alliance between two or more professional members in which the aim is to achieve a range of goals that can be broadly categorised into themes relating to (a) organisational/administrative functions, (b) clinical practice, and (c) provision of personal support to the employee*”¹⁰ (p. 136).

The focus of this review is on professional supervision as a professional development and support tool to enhance service delivery. The experience and effect of professional supervision can be evaluated in two main ways: in terms of the experience and effect of supervision on clinician practice and service delivery, and in terms of the effect on client outcomes, both of which will be the focus of this review.

Supervision is multidimensional and many forms of activities are undertaken under the practice of supervision. In a study investigating the experience of professional supervision, 14 participants reported that the most common styles of previously received supervision were one to one, face to face (100%), goal / target setting (93%); reflective practice (86%); on-site supervision (79%); peer support meetings (79%) and sharing good practice through in-house seminars (64%).¹² The least common styles of supervision included telephone supervision (14%); off-site supervision (36%); and competency rating (36%).¹² Characteristics of supervision that have been reported to be beneficial and valued for clinicians include structured, regular participation where a supervisory relationship is marked by trust, empathy and genuine regard, which is often referred to as a strong working alliance^{10, 13}. The importance of supervisee driven support has also been shown. For example, physiotherapists have reported benefits from selecting their own supervisor and the importance for both supervisee and supervisor to be clear about their purpose and links to professional development and reflective practice has been noted.¹¹

The delivery of different modes of professional supervision was the focus of three systematic reviews.¹⁴⁻¹⁶ Educational outreach visits (EOV's) for healthcare professionals were systematically reviewed by the Cochrane Collaboration to assess their effect on health professional practice and client outcomes. In this review, randomised trials of EOV's that included an objective measure of performance or client outcomes were included. EOV's were defined as a face-to-face visit to a healthcare professional in his or her own environment. The review found that EOV's alone have a small, yet relatively

consistent effect on medication prescribing and a modest to small effect on other forms of healthcare practice. EOVS were slightly superior to audit or feedback alone.¹⁶

Another Cochrane systematic review investigated continuing education meetings – originally in 2001¹⁵ and then updated in 2009.¹⁴ The earlier review found that interactive meetings were associated with moderate improvements in practice, whereas didactic sessions were not, however the later review found that educational meetings alone or combined with other interventions demonstrated improvement in health professional practice, though this was not true for complex behaviour change; and less true for serious outcomes compared to less serious.¹⁴ The effect of continuing education meetings is likely to be small and comparable to other forms of medical education including audit, feedback and educational outreach visits¹⁴.

A recent systematic review of 24 studies into the effectiveness of various cognitive-behavioural therapy (CBT) strategies used during supervision included giving feedback to the therapist, use of audio/video materials, use of multi-modal methods of supervision including reading, teaching, agenda, live demonstrations, use of an agenda and a collaborative approach.¹ Another earlier systematic review investigated clinical supervision effect on medical students.¹⁷ In this instance, the literature on effective aspects of supervision was reviewed and the literature at the time only partially answered the questions, however the supervision relationship was found to be the most important aspect of effective supervision, feedback was found to be critically important as was supervisee input into the supervision process, though more rigorous programmes of research were called for.¹⁷

One aspect of professional supervision that is of particular interest for this review is the effect of professional support for regional, rural and remote allied health practitioners who often face challenges of isolation, poor accessibility of resources and high levels of staff turnover and burnout.⁸ For instance, mental health professionals working in rural communities who were not receiving adequate supervision, reported feeling overwhelmed, had lower job satisfaction, provided lower service quality and were susceptible to burnout.¹⁸ Where efforts have been made to address rural and remote clinician needs, telephone or videoconference formats of supervision have been used, as accessibility to these modes of delivery are much higher than face-to-face opportunities.

Reported effects of remote modes of supervision vary and some studies have reported less clinician satisfaction with remote modes of supervision. For example, one study found that participants from all professional groups reported that the distance from the supervisor was a major barrier to satisfactory supervision.¹² Other research has expressly focussed on the effectiveness of face-to-face versus distance formats. For instance, one study found that there were no significant differences between videoconference and face-to-face formats for intern psychologists in rural mental health setting.¹⁸ However, a confounding factor reported by the researchers was the presence of initial face-to-face visits between supervisee and supervisor prior to commencing supervision via videoconference, in addition to ongoing opportunities to meet face-to-face during the research.

In relation to the effect of clinical supervision on client outcomes, a review of supervision for allied mental health professionals (psychologists, social workers, occupational therapists and speech pathologists) reported limited findings that clinical supervision may effect on client outcomes.^{10,19} Intern psychologist's who received more supervision were found to have higher rates of client attendance at treatment, but no relationship between amount of supervision received and client outcomes was found.¹⁹ One significant finding was a link between client improvement when there was congruence between a supervisor's and supervisee's therapeutic orientation (e.g. when both described themselves as eclectic in orientation).¹⁹ While it may be anticipated that supervision is important for client care, findings from a recent randomised control trial in the nursing field failed to demonstrate a relationship between supervision, care quality and client outcomes in all but one location (out of 17 trial sites).²⁰

Overall a review of the current synthesised literature reveals a gap regarding synthesised evidence for the effect of supervision for allied health professionals. The Joanna Briggs Institute (JBI), Cochrane databases, CINAHL and Medline databases have been searched and besides the systematic reviews outlined previously; no other relevant comprehensive systematic reviews on the specific topic of supervision across allied health disciplines could be identified. Previous systematic reviews within the supervision and professional development field have investigated effects within the context of psychotherapists and counsellors (where other allied health have been excluded)¹³, mental health nursing²¹, medical education¹⁷ and social work²², however there is a lack of synthesis of the available research in allied health professions broadly. Additionally, the proposed review aims to elucidate the state of research on distance modes of professional support and effects of professional support in regional, rural or remote settings; in addition to highlighting findings across individual and group formats of professional support.

In order to support best practice professional support interventions for allied health professionals across the health care industry, there is merit to systematically review and analyse the current evidence. A synthesis of evidence across the allied health disciplines is timely in light of a recent draft Queensland Health Professional Support Implementation Standard (2011) which specifies a mandatory requirement for allied health professional to participate in one-on-one supervision, peer group supervision or mentoring. Findings will inform practice and support provided to allied health professionals working in regional, rural and remote health care settings nationally and internationally.

Inclusion criteria

Types of participants

Both qualitative and quantitative components of this review will consider all research studies that include allied health professionals including Audiology, Clinical Measurement Sciences, Dietetics and Nutrition, Exercise Physiology, Medical Radiations Professions, Occupational Therapy, Orthoptics, Pharmacy, Physiotherapy, Podiatry, Prosthetics and Orthotics, Physiotherapy, Podiatry, Psychology, Social Work and Speech

Pathology in all health care settings (private practice, community health and hospital settings) working in regional, rural or remote locations.

Defining what constitutes regional, rural and remote (non-metropolitan) within a world wide context is difficult, hence for this review regional, rural and remote practice will be defined as working in geographical or professional isolation. This may include any studies undertaken outside metropolitan areas or where participants are identified as working professionally isolated, for example being the only physiotherapist in a specific location.

Exclusion criteria

- Students who are not employed as an allied health professional (e.g. allied health, medical and nursing students on clinical placements will be excluded)
- Medical clinicians
- Nursing clinicians
- Health workers (other than allied health)
- Allied Health Assistants

Phenomena of interest/Types of intervention(s)

The focus of both qualitative and quantitative components of the review is professional supervision. For this review professional supervision is defined as “*a working alliance between two or more professional members in which the aim is to achieve a range of goals that can be broadly categorised into themes relating to (a) organisational/administrative functions, (b) clinical practice, and (c) provision of personal support to the employee*”.¹⁰ (p. 136). This review will include all styles of professionals supervision such as face-to-face, telephone, videoconference or online to both individuals and groups.

Exclusion criteria

- Line management, operational supervision other than the definitions provided earlier
- Journal club (without other supervisory activities)
- Professional development, educational meetings, training activities or in-services (without other components of supervision as defined earlier)
- Audit
- Mentoring
- Feedback only (without other components of supervision)

Types of studies

This review will consider quantitative and qualitative research study designs. Papers published or unpublished in English between 2000 and 2011 will be considered for inclusion.

Qualitative component

Qualitative studies for consideration will include but not be limited to phenomenology, grounded theory, narrative, ethnographic or action research studies.

Quantitative Component

Quantitative studies, including controlled trials (RCT's), quasi-experimental studies or observational studies are eligible for inclusion.

Types of outcomes

This review will consider qualitative and quantitative research studies that investigate the experiences and effectiveness of professional supervision of allied health staff in non-metropolitan locations, as well as clinical outcomes.

Qualitative component

Studies investigating experiences with professional supervision that include specific topics such as models of supervision, the supervisory relationship, good and bad supervisors, training, cross-cultural dynamics, process and roles within rural and remote settings will be reviewed.

Quantitative Component

Studies reporting the effect of supervision on professional practice or client outcomes using standardised and validated scales will be included. From an initial scoping search, quantitative outcomes of interest are levels of self-perceived ability and competence as a practitioner as measured by Supervisee Levels Questionnaire²³ and Counseling Self-Estimate Inventory (CPSE) - supervisee²⁴. In addition, outcomes in terms of health practitioner functioning and wellbeing such as the Maslach Burnout Inventory²⁵ and client outcomes such as the General Health Questionnaire (GHQ)²⁶ will be included. Other quantitative measures with reported psychometrics will be included in the review if they are relevant to effects of professional supervision on either allied health practitioner outcomes or client outcomes.

Search strategy

The search strategy aims to find both published and unpublished studies. A three-step search strategy will be utilised in each component of this review.

1. An initial limited search of MEDLINE and CINAHL will be undertaken followed by analysis of the text words contained in the title and abstract, and of the index terms used to describe article.
2. A second search using all identified keywords and index terms will then be undertaken across all included databases.

The databases to be searched include:

Medline

CINAHL

Psychinfo

Clinical Evidence

Cochrane Library
JBI Library of Systematic Reviews
EMBASE
ERIC
PEDro
TRIP
DARE
OT Seeker
Speech Bite
Psych Bite
IBBS

The search for unpublished studies will include:

Known reports and unpublished studies
Dissertation Abstracts International
ProQuest Dissertations and Theses
Conference Proceedings
Mednar

3. Thirdly, the reference list of all identified reports and articles will be searched for additional studies.
4. Finally, reference lists of relevant systematic reviews from the Cochrane Library and JBI will be searched for relevant primary research studies.

Initial keywords to be used will be:

(supervision or professional support or supervisee) and (allied health or mental health or psychol\$ or physiot\$ or speech therap\$ or speech patholo\$ or occupational therap\$ or social work\$ or or pharmac\$ or podiat\$ or nutrition\$ or diete\$ or dieti\$ or radiog\$ or medical imaging or medical techn\$ or medical radiation\$ or audiolog\$ or counsel\$ or therap\$ or clinical measurement\$ or exercise physiology\$ or orthoptic\$ or orthotic\$ or prosthetic\$)

Assessment of methodological quality

Papers selected for retrieval will be assessed by two independent reviewers (W.D & S.P.) for methodological validity prior to inclusion in the review using the standardised critical appraisal instruments from the Joanna Briggs Institute System for the Unified Management, Assessment and Review of Information package (JBI-SUMARI).

Qualitative papers selected for retrieval will be assessed by two independent reviewers for methodological validity prior to inclusion in the review using standardised critical appraisal instruments from the Joanna Briggs Institute Qualitative Assessment and Review Instrument (JBI-QARI) (Appendix I).

Quantitative studies will be grouped into one of the following categories: experimental studies; quasi-experimental studies; descriptive studies; descriptive-correlational studies.

These will be assessed for validity using the tools from JBI - Meta Analysis of Statistics Assessment and Review Instrument (MAStARI) (Appendix I).

Any disagreements that arise between the reviewers will be resolved through discussion, or with a third reviewer.

Data extraction

Quantitative and qualitative data will be extracted from papers included in the review using standardised data extraction tools from the Joanna Briggs Institute JBI-MAStARI and JBI-QARI (Appendix II).

Data synthesis

Qualitative component

Qualitative research findings will, where possible be pooled using the Qualitative Assessment and Review Instrument (JBI-QARI). This will involve the aggregation or synthesis of findings to generate a set of statements that represent that aggregation, through assembling the findings (Level 1 findings) rated according to their quality, and categorising these findings on the basis of similarity in meaning (Level 2 findings). These categories are then subjected to a meta-synthesis in order to produce a single comprehensive set of synthesised findings (Level 3 findings) that can be used as a basis for evidence-based practice. Where textual pooling is not possible the findings will be presented in narrative form.

Quantitative Component

Data from quantitative studies will be pooled, where possible, in statistical meta-analysis using the Meta-Analysis of Statistics Assessment and Review Instrument (JBI-MAStARI). All results will be double entered to minimise risk of data entry error. Narrative form will be used to present findings if statistical pooling is not possible.

Conflicts of interest

None to declare

Acknowledgements to the Allied Health Education and Training Department at the Cunningham Centre, Queensland Health who have formed a working group and have provided content expertise to develop this systematic review protocol (in alphabetical order)

LuJuana Abernathy – Assistant Director Allied Health Education and Training (Speech Pathologist), Katie Bauer - Project Officer (Radiographer), Mary Casey - Principal Project Officer (Social Worker), Wendy Ducat - Project Officer (Psychologist), Hayley Farry – Project Officer, Peter Fuelling – Program Coordinator (Physiotherapist), Jane Hawkless – Project Officer (Occupational Therapist), Vanessa Richardson – Principal Project Officer – Allied Health (Dietitian), Melinda Stone – Program Coordinator (Occupational Therapist)

Additional Invited Content Experts

Karen Bell – Allied Health Education Coordinator (Physiotherapist), Fiona Hall – Professional Leader (Psychologist), Frances Mattocks – Project Officer (Occupational Therapist), Prue Smeaton – Project Officer (Speech Pathologist), Dr Ans Van Erp – Director Cunningham Centre (Physiotherapist)

References

1. Milne D, Reiser R, Aylott H, Dunkerley C, Fitzpatrick H, Wharton S. *The systematic review as an empirical approach to improving CBT supervision*. International Journal of Cognitive Therapy. 2010 Sep;3(3):278-94.
2. White E, Winstanley J. *Does clinical supervision lead to better patient outcomes in mental health nursing?* Nurs Times. [Multicenter Study Randomized Controlled Trial]. 2010 Apr 27-May 3;106(16):16-8.
3. Steenbergen K, Mackenzie L. *Professional support in rural New South Wales: perceptions of new graduate occupational therapists*. Australian Journal of Rural Health. 2004 Aug;12(4):160-5.
4. Struber JC. *Recruiting and retaining Allied Health Professionals in rural Australia: why is it so difficult?* Internet Journal of Allied Health Sciences & Practice. 2004;2(2):[1-13].
5. Schoo AM, Stagnitti KE, Mercer C, Dunbar J. *A conceptual model for recruitment and retention: allied health workforce enhancement in Western Victoria, Australia*. Rural & Remote Health. [Research Support, Non-U.S. Gov't]. 2005 Oct-Dec;5(4):477.
6. Stagnitti K, Schoo A, Reid C, Dunbar J. *Retention of allied health professionals in the south-west of Victoria*. Australian Journal of Rural Health. [Research Support, Non-U.S. Gov't]. 2005 Dec;13(6):364-5.
7. Brown L, Williams L, Capra S. *Going rural but not staying long: Recruitment and retention issues for the rural dietetic workforce in Australia*. Nutrition & Dietetics. 2010;67(4):294-302.
8. Rourke J. *WHO Recommendations to improve retention of rural and remote health workers - important for all countries*. Rural & Remote Health. [Editorial]. 2010 Oct-Dec;10(4):1654.
9. Keane S, Smith TN, Lincoln M, Wagner SR, Lowe SE. *The rural allied health workforce study (RAHWS): background, rationale and questionnaire development*. Rural & Remote Health. [Portraits]. 2008 Oct-Dec;8(4):1132.
10. Spence SH, Wilson J, Kavanagh D, Strong J, Worrall L. *Clinical supervision in four mental health professions: A review of the evidence*. Behaviour Change. 2001;18(3):135-55.
11. Hall T, Cox D. *Clinical supervision: An appropriate term for physiotherapists?* Learning in Health and Social Care. 2009 Dec;8(4):282-91.
12. Cox DL, Araoz G. *The experience of therapy supervision within a UK multi-centre randomized controlled trial*. Learning in Health and Social Care. 2009 Dec;8(4):301-14.

13. Wheeler S, Richards K. *The impact of clinical supervision on counsellors and therapists, their practice and their clients. A systematic review of the literature.* Counselling & Psychotherapy Research. 2007 Mar;7(1):54-65.
14. Forsetlund L, Bjorndal A, Rashidian A, Jamtvedt G, O'Brien MA, Wolf F, et al. *Continuing education meetings and workshops: effects on professional practice and health care outcomes.* Cochrane Database Syst Rev. [Meta-Analysis Review]. 2009(2):CD003030.
15. O'Brien MA, Freemantle N, Oxman AD, Wolf F, Davis DA, Herrin J. *Continuing education meetings and workshops: effects on professional practice and health care outcomes.* Cochrane Database Syst Rev. [Review]. 2001(2):CD003030.
16. O'Brien MA, Rogers S, Jamtvedt G, Oxman AD, Odgaard-Jensen J, Kristoffersen DT, et al. *Educational outreach visits: effects on professional practice and health care outcomes.* Cochrane Database Syst Rev. [Meta-Analysis Review]. 2007(4):CD000409.
17. Kilminster SM, Jolly BC. *Effective supervision in clinical practice settings: a literature review.* Med Educ. [Review]. 2000 Oct;34(10):827-40.
18. Reese RJ, Aldarondo F, Anderson CR, Lee S-J, Miller TW, Burton D. *Telehealth in clinical supervision: a comparison of supervision formats.* J Telemed Telecare. [Comparative Study]. 2009;15(7):356-61.
19. Steinhelber J, Patterson V, Cliffe K, LeGoullon M. *An investigation of some relationships between psychotherapy supervision and patient change.* J Clin Psychol. 1984 Nov;40(6):1346-53.
20. White E, Winstanley J. *A randomised controlled trial of clinical supervision: Selected findings from a novel Australian attempt to establish the evidence base for causal relationships with quality of care and patient outcomes, as an informed contribution to mental health nursing practice development.* Journal of Research in Nursing. 2010 Mar;15(2):151-67.
21. Buus N, Gonge H. *Empirical studies of clinical supervision in psychiatric nursing: A systematic literature review and methodological critique.* Int J Ment Health Nurs. 2009 Aug;18(4):250-64.
22. Bogo M, McKnight K. *Clinical Supervision in Social Work: A Review of the Research Literature.* The Clinical Supervisor. 2005;24(1-2):49-67.
23. McNeill BW, Stoltenberg CD, Pierce RA. *Supervisees' perceptions of their development: A test of the counselor complexity model.* Journal of Counseling Psychology. 1985 Oct;32(4):630-3.
24. Larson LM, Suzuki LA, Gillespie KN, Potenza MT, Bechtel MA, Toulouse AL. *Development and validation of the Counseling Self-Estimate Inventory.* Journal of Counseling Psychology. 1992 Jan;39(1):105-20.
25. Maslach C, Jackson SE, Leiter MP. *Maslach Burnout Inventory: Third edition.* In *Evaluating stress: A book of resources.* Lanham, MD: Scarecrow Education; US; 1997. p. 191-218.
26. Goldberg DP, Hillier V. *A scaled version of the General Health Questionnaire.* Psychological Medicine: A Journal of Research in Psychiatry and the Allied Sciences. 1979 Feb;9(1):139-45.

Appendix I: Appraisal Instruments

QARI Appraisal Instrument

Assessment for : Name of Assessment

Type: Primary

User: qari

Criteria

	Yes	No	Unclear
1) There is congruity between the stated philosophical perspective and the research methodology.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2) There is congruity between the research methodology and the research question or objectives.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3) There is congruity between the research methodology and the methods used to collect data.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4) There is congruity between the research methodology and the representation and analysis of data.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5) There is congruity between the research methodology and the interpretation of results.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6) There is a statement locating the researcher culturally or theoretically.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7) The influence of the researcher on the research, and vice-versa, is addressed.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8) Participants, and their voices, are adequately represented.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9) The research is ethical according to current criteria or, for recent studies, there is evidence of ethical approval by an appropriate body .	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10) Conclusions drawn in the research report do appear to flow from the analysis, or interpretation, of the data.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Include

Reason

MAStARI Appraisal Instruments

Assessment for : Name of Assessment

Type: Primary

User: Default

Design: Randomised Control Tables / Psuedo-randomised Trial

Criteria	Yes	No	Unclear
1) Was the assignment to treatment groups truly random?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2) Were participants blinded to treatment allocation?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3) Was allocation to treatment groups concealed from the allocator?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4) Were the outcomes of people who withdrew described and included in the analysis ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5) Were those assessing outcomes blind to the treatment allocation?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6) Were the control and treatment groups comparable at entry?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7) Were groups treated identically other than for the named interventions?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8) Were outcomes measured in the same way for all groups?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9) Were outcomes measured in a reliable way?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10) Was appropriate statistical analysis used?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Include

Reason

Assessment for : Name of Assessment

Type: Primary

User: Default

Design: Descriptive / Case Series Studies

Criteria	Yes	No	Unclear
1) Was study based on a random or pseudo-random sample?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2) Were the criteria for inclusion in the sample clearly defined?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3) Were confounding factors identified and strategies to deal with them stated?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4) Were outcomes assessed using objective criteria?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5) If comparisons are being made, was there sufficient descriptions of the groups?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6) Was follow up carried out over a sufficient time period?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7) Were the outcomes of people who withdrew described and included in the analysis?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8) Were outcomes measured in a reliable way?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9) Was appropriate statistical analysis used?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Include

Reason

Appendix II – JBI Data Extraction Instrument

QARI Extraction Instrument

Extraction Details : Extraction Name

Methodology:	<input type="text"/>
Method:	<input type="text"/>
Interventions:	<input type="text"/>
Setting:	<input type="text"/>
Geographical:	<input type="text"/>
Cultural:	<input type="text"/>
Participants:	<input type="text"/>
Data Analysis:	<input type="text"/>
Authors Conclusion:	<input type="text"/>
Reviewers Comments:	<input type="text"/>
Complete	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

MAStARI data extraction instrument

Extraction Details : Extraction Name [] - Randomised Control Tables / Psuedo-randomised Trial
Study Information

Method	<input type="text"/>
Setting	<input type="text"/>
Participants	<input type="text"/>
# Participants	Group A: <input type="text"/> Group B: <input type="text"/>
Interventions	Interventions A: <input type="text"/>
	Interventions B: <input type="text"/>
Authors Conclusion	<input type="text"/>
Reviewers Comments	<input type="text"/>
Complete	<input type="text" value="No"/> <input type="text" value="No"/> <input type="text" value="Yes"/>

Extraction Details : Extraction Name [] - Descriptive / Case Series Studies
Study Information

Method	<input type="text"/>
Setting	<input type="text"/>
Participants	<input type="text"/>
# Participants	<input type="text"/>
Interventions	<input type="text"/>
Authors Conclusion	<input type="text"/>
Reviewers Comments	<input type="text"/>
Complete	<input type="text" value="No"/> <input type="text" value="No"/> <input type="text" value="Yes"/>