

Appendix E1. Characteristics of studies included in the evidence synthesis

[see Appendix I for Abbreviations used in the report]

Study details	Population	Bowen therapy intervention arm(s)	Comparator arm(s)	Outcomes (* = selected for synthesis)
Aslam 2023 [BO-001-S] Country: Pakistan Setting (detail): hospital - outpatient (physiotherapy department) Study design: RCT	No. randomised [eligible treatment arms] (age; sex): 58 adults (B. 37 years, C. 41 [mean]; B. 69% female, C. 48%) Treatment goal: relieve symptoms of a condition (neck pain) Inclusion criteria: Neck pain > 3 months; working as a dentist > 5 hours per week Exclusion criteria: Fracture, radiculopathy, shoulder or neck surgery ICD code: MG30.02 Chronic primary cervical pain	Name: Bowen + TENS What – procedure: 15 mins of TENS and moist heat followed by Bowen therapy targeting muscles: upper trapezius, levator scapulae, tight pectoralis major, sternocleidomastoid, longissimus capitis, splenius capitis and cervical multifidus When & how much: 1 x session (duration NR) Who administered (provider); training: NR (therapist (unspecified)); NR Co-intervention(s): see comparator arm	Name: active - massage + TENS What – procedure: 15 minutes of transcutaneous electrical nerve stimulation (TENS) and moist heat followed by deep, transverse friction massage and cervical muscles stretching using ulnar border of both palms to release the fascia When & how much: as per Bowen therapy group Who administered (provider): provider administered No. arms included in synthesis (treatment & control): 2 Ineligible arms: none	Eligible outcomes: <i>Pain:</i> (neck) pain intensity (NPRS)* <i>Function - disability:</i> physical functioning (NDI)* Ineligible outcomes: <i>Biomechanical outcomes:</i> craniovertebral angle, cervical range of motion (results NR) Timing of outcome measurement: post-intervention* (timing NR; 'acute' suggests immediately after Tx)
Chee 2023 [BO-002-S] Country: Hong Kong Setting (detail): hospital - outpatient (NTEC Family Medicine Clinic or Pain Clinic) Study design: RCT	No. randomised [eligible treatment arms] (age; sex): 90 adults (B. 54 years, C. 53 [mean]; B. 73% female, C. 77%) Treatment goal: relieve symptoms of a condition (myofascial neck pain) Inclusion criteria: myofascial pain on one or both sides of neck >6 weeks Exclusion criteria: conventional non-pharmacological treatment; pregnancy, major psychiatric illness, malignancy, infectious disease, severe cardiovascular disease; concurrent use of anti-coagulant ICD code: ME84.0 Cervical spine pain (>6 weeks)	Name: Bowen What – procedure: Bowen therapy as per neck pain protocol + usual pharmacological treatment When & how much: 8 x 15-30 minute sessions over 12 weeks (weekly for 4 weeks, bi-weekly for 8 weeks; 120-240 minutes total) Who administered (provider); training: provider administered (allied health practitioner); certificate Co-intervention(s): n/a	Name: inactive - usual care What – procedure: neck care education pamphlet + usual care (e.g. pharmacological or physical therapies, acupuncture, self-management) When & how much: as per usual care Who administered (provider): n/a No. arms included in synthesis (treatment & control): 2 Ineligible arms: none	Eligible outcomes: <i>Pain:</i> (neck) pain intensity (NPRS - lowest, average*, highest scores) <i>Emotional functioning/mental health:</i> depression symptoms (PHQ-9)*, anxiety symptoms (GAD-7) <i>HR-QoL:</i> overall HR-QoL (SF-12 - emotional component*, SF-12 - physical component) <i>Function - disability:</i> physical functioning (NDI*) Ineligible outcomes: <i>Other:</i> pressure pain threshold (algometer); <i>Biomechanical outcomes:</i> cervical range of motion (6 directions) Timing of outcome measurement: 12 weeks (end of intervention period)*, 24 weeks

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<p>Dalal 2020 [BO-003-S]</p> <p>Country: India</p> <p>Setting (detail): hospital - outpatient (Physiotherapy OPD, Tertiary Health Care Centre)</p> <p>Study design: RCT</p>	<p>No. randomised [eligible treatment arms] (age; sex): 48 adults (age, sex NR)</p> <p>Treatment goal: relieve symptoms of a condition (neck pain)</p> <p>Inclusion criteria: acute non-specific neck pain (<3 months) with palpable tender spot/ trigger point</p> <p>Exclusion criteria¹: cervical radiculopathy; healing fractures in neck and upper back region; history of orthopaedic surgery to neck; long-term anticoagulant therapy or clotting disorders; corticosteroid therapy (<6 months)</p> <p>ICD code: ME84.0 Cervical spine pain (non-specific, acute)</p>	<p>Name: Bowen therapy + conventional therapy</p> <p>What – procedure: Bowen therapy as per protocol, targeted muscles NR</p> <p>When & how much: 4 x 20-minute sessions over alternate days for one week (80 minutes total)</p> <p>Who administered (provider); training: provider administered (NR); NR</p> <p>Co-intervention(s): see comparator arm</p>	<p>Name: C1 active - ischaemic compression + conventional therapy C2 active - myofascial release + conventional therapy</p> <p>What – procedure: C1-application of gradually increasing pressure to trigger point for 90 seconds followed by 10-second release, repeated 3 times [all groups received conventional therapy: active neck exercises + ultrasound + hot pack] C2-10 mins of deep transverse friction followed by myofascial stretching of muscles held for 90 seconds and repeated 3 times, followed by myofascial release using ulnar border of both palms [all groups received conventional therapy: active neck exercises + ultrasound + hot pack]</p> <p>When & how much: C1-7 x ~10-minute sessions (~70 minutes total) over one week [frequency of sessions NR; probably daily] C2-7 x ~15-minute sessions (~105 minutes total) over one week [frequency of sessions NR; probably daily]</p> <p>Who administered (provider): C1-provider administered C2-provider administered</p> <p>No. arms included in synthesis (treatment & control): 3</p> <p>Ineligible arms: none</p>	<p>Eligible outcomes: <i>Pain:</i> (neck) pain intensity (VAS)* <i>Function - disability:</i> physical functioning (NDI)*</p> <p>Ineligible outcomes: <i>Other:</i> pressure pain threshold (algometer); <i>Biomechanical outcomes:</i> cervical range of motion</p> <p>Timing of outcome measurement: immediately after end of treatment period (day 7)*</p>

¹ The eligibility criteria as per the study report are “Both males and females 20-40 years of age, with acute nonspecific neck pain (<3months) and a palpable tender spot/ trigger point and willing to participate in study were included and patients with cervical radiculopathy, healing fractures over neck and upper back region, history of orthopaedic surgery to neck, long term anticoagulant therapy or clotting disorders and corticosteroid therapy (<6 months).” We have concluded that the study authors have mistakenly not written “were excluded” at the end of the eligibility criteria sentence. We considered all criteria reported after the text “and patients with” to be exclusion criteria.

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Lee 2020 [BO-004-S] Country: New Zealand Setting (detail): other (university campus) Study design: RCT	No. randomised [eligible treatment arms] (age; sex): 31 adults (B. 54 years, C. 47; B. 69% female, C. 67%) Treatment goal: relieve symptoms of a condition (any multisite pain) Inclusion criteria: Stable pain (previous 3 months) in multiple locations (upper limb or neck, and lower limb or back), pain score ≥ 3 on most days; consistent use of analgesics Exclusion criteria: Severe or unstable medical or psychiatric conditions ICD code: MG30.0 Chronic primary pain	Name: Bowen therapy What – procedure: Bowen therapy using individually tailored protocol for each session; targeted muscles NR When & how much: 6 x 45-60 minute sessions over 8 weeks (weekly for 3 weeks, then every 2 weeks; 270-360 minutes total) Who administered (provider); training: provider administered (reflexologist); other training Co-intervention(s): n/a	Name: inactive - sham What – procedure: as per Bowen therapy group, with exception that for each move, practitioner did not progress beyond step 1, locating. When & how much: as per Bowen therapy group Who administered (provider): provider administered No. arms included in synthesis (treatment & control): 2 Ineligible arms: none	Eligible outcomes: <i>Pain:</i> pain intensity [most painful area, average pain over last week], (NRS*, SFMPQ-II); pain relief (number of participants with reduction in NRS pain of $>30\%$ and $>50\%$) <i>Function - disability:</i> lower limb function (LLTQ - ADL section)*, upper limb function (DASH) Ineligible outcomes: <i>Other:</i> pressure pain threshold (algometer), temporal summation of pain threshold, heat pain threshold (thermal probe), temporal summation of heat pain threshold; <i>Physiological function & signs:</i> HR variability, electrodermal activity Timing of outcome measurement: week 9 (~1 week after end of intervention period (mean 6.3 days)*, week 14 (~6 weeks after end of intervention period)
Qamar 2023 [BO-005-S] Country: Pakistan Setting (detail): hospital - outpatient (neurology department, medical complex) Study design: RCT	No. randomised [eligible treatment arms] (age; sex): 44 adults (25 years [mean]; 60% female) Treatment goal: relieve symptoms of a condition (tension-type headache) Inclusion criteria: pain for the last three months; regular analgesic medication Exclusion criteria: significant structural acquired or congenital changes in the spine; pregnancy; postural changes; significant neurological, musculoskeletal or cardiac disease ICD code: 8A81.2 Chronic tension-type headache	Name: Bowen therapy What – procedure: Bowen therapy; targeted muscles NR When & how much: 6 x 15-20 minute sessions over 2 weeks (90-120 minutes total) Who administered (provider); training: provider administered (allied health practitioner); NR Co-intervention(s): n/a	Name: inactive - sham What – procedure: sham therapy not described When & how much: as per Bowen therapy group Who administered (provider): provider administered No. arms included in synthesis (treatment & control): 2 Ineligible arms: none	Eligible outcomes: <i>Pain:</i> headache intensity [timeframe NR] (VAS)*, headache frequency (per week) Ineligible outcomes: <i>Other:</i> pressure pain threshold (algometer) Timing of outcome measurement: end of 2-week intervention period*
Seemal (Noor) 2022 [BO-006-S] Country: Pakistan	No. randomised [eligible treatment arms] (age; sex): 22 adults (B. 26 years, C. 26; 64% female)	Name: Bowen + MET What – procedure:	Name: inactive control - muscle energy technique (MET) What – procedure:	Eligible outcomes: <i>Pain:</i> (neck) pain intensity (NPRS)* <i>Function - disability:</i> physical functioning (NDI)*

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Setting (detail): hospital - outpatient (NR) Study design: RCT	Treatment goal: relieve symptoms of a condition (text neck syndrome) Inclusion criteria: neck pain and stiffness (NPRS ≥5, NDI ≥10, CVA <50°, RSA >52°); smartphone use >2 hours/day Exclusion criteria: spinal infection or inflammatory disorder, neck surgery, trauma, torticollis, scoliosis, malignancy, pregnancy, diagnosed cases of disc prolapse, stenosis, herniation, spondylolisthesis, osteoporosis; current use of any medication or physical therapy treatment ICD code: ME84.0 Cervical spine pain (text neck syndrome)	<p>Bowen therapy (not described), plus muscle energy technique (MET) as per comparator group</p> <p>When & how much: 3 x 15-20 minute sessions per week over 6 weeks (18 sessions total; 270-360 minutes total)</p> <p>Who administered (provider); training: provider administered (NR); NR</p> <p>Co-intervention(s): see comparator arm</p>	<p>hot pack on neck/upper back (7-10 mins) followed by MET using post isometric relaxation method on muscles: upper trapezius, levator scapulae, scalenus, and sternocleidomastoid muscles</p> <p>When & how much: as per Bowen therapy + MET group</p> <p>Who administered (provider): provider administered</p> <p>No. arms included in synthesis (treatment & control): 2</p> <p>Ineligible arms: none</p>	<p>Ineligible outcomes: <i>Biomechanical outcomes:</i> cervical range of motion (goniometer), postural assessment of CVA and RSA</p> <p>Timing of outcome measurement: week 3 (mid-intervention), week 6* (end of intervention period) and week 9</p>