

Quality Assessment of RCTs

Author Year Country	Risk of bias from randomization process	Risk of bias from deviation from intended interventions (assignment)	Risk of bias from deviation from intended interventions (adherence)	Risk of bias from missing outcome data	Risk of bias in measurement of the outcome	Risk of bias in selection of the reported result	Quality Rating (Good, Fair, Poor)
Agado 2012 ²⁶	Some concerns Randomization using random number generator; ppts aware of tx or control group; ultrasonic tx group had worse periodontal disease than hand instrument but not control group at baseline.	Some concerns Ppts & providers aware of tx or control group; unclear if there were any deviations from intended interventions	Low Similar infection control & rinsing/dental suction procedures across tx groups (control group received no tx), no indication of lack of adherence.	Some concerns Unclear if all ppts' completed follow-up assessments.	Low Validated measurements used; ppts completed surveys using confidential code in private location to blind outcome assessment	Some concerns No protocol readily available.	Fair Ppts and providers aware of tx assignment; unclear if all ppts completed follow-up assessments.
Das 2019 ³⁰	Some concerns Block randomization; ppts & providers aware of tx group; unclear if there were differences between groups at baseline as limited data (only age & sex) were presented and differences not statistically evaluated.	Some concerns Ppts & providers aware of tx or control group; unclear if there were any deviations from intended interventions	Some concerns No changes to diabetes diet or medication in either group but no information about dental cointerventions; no indication of lack of adherence	Low All ppts completed follow-up assessments (flowchart 1)	Some concerns Authors do not report how diabetes-related outcomes were measured but presumably this was done using a blood test.	Some concerns Authors state protocol was approved, but no protocol readily available.	Fair Ppts and providers aware of tx assignment, unclear if there were differences between groups at baseline.



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El-Makaky 2019 ³¹	Some concerns Randomization process not described but “random series” was produced and allocation concealed by using closed envelopes; groups similar at baseline	Some concerns Unclear if ppts blinded but some study staff were; unclear if there were any deviations from intended interventions	Low Unclear if there were differences in cointerventions; no drop-outs.	Low All ppts attended follow-up visit.	Low Appropriate measurement of HbA1c; outcome assessors blinded.	Low No outcomes described in protocol missing from published study.	Fair Ppts presumably aware of intervention status, randomization process not described.
Lee 2020 ³⁶	Some concerns Randomization from rolling dice; unclear if ppts were blinded; no significant differences between groups at baseline	Some concerns Unclear if ppts blinded but some study staff were; unclear if there were any deviations from intended interventions	Some concerns Unclear if there were differences in cointerventions; 15/75 (20%) dropout rate due to “old age and the long intervention period.”	Some concerns Since older people dropped out, missing outcome data may be biased	Low Appropriate measurement of outcomes; outcome assessors blinded.	Some concerns Authors refer to protocol but it is not readily available.	Fair Ppts presumably aware of intervention status and high dropouts (20%), some of which were due to old age.



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Mizuno 2020 ³⁸	Some concerns Block randomization based on HbA1c level and # of medications; unclear if ppts blinded; groups similar at baseline but not statistically evaluated	Some concerns Unclear if ppts blinded but study staff were; 3 ppl assigned to intervention group did not complete intervention (could not be contacted)	Some concerns Unclear if there were differences in cointerventions; 30% drop out rate	Some concerns High drop-out but complete data for those who stayed in study	Low Appropriate measurements used; laboratory personnel & PI who conducted analyses blinded	Low No outcomes described in protocol missing from published study.	Fair Ppts presumably aware of tx assignment; high drop-out (30%)
Vergnes 2018 ⁴⁵	Some concerns Block randomization by center; ppts aware of tx or control group; unclear if there were differences between groups at baseline as this was not analyzed statistically.	Some concerns Ppts & providers aware of tx or control group; unclear if there were any deviations from intended interventions.	Low Unclear if there were differences in cointerventions; low rate of drop-outs in both groups.	Low A few ppts missed V4 visits, but this was similar across groups.	Low Validated measurements used for QoL and OHRQoL; outcome assessors likely knew ppts' group assignment.	Low No outcomes described in protocol missing from published study.	Fair Ppts and providers aware of tx assignment; unclear if groups were different at baseline as this was not statistically assessed.

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Wang 2019 ⁴³	Some concerns Block randomization; unclear if ppts were aware of intervention status; no significant differences between groups at baseline	Some concerns PI blinded but unclear if ppts were; unclear if there were any deviations from intended interventions	Low No changes to diabetes or hypertension medications and no notable lifestyle changes, unclear whether there were dental cointerventions; low rate of drop-outs across groups	Some concerns In addition to drop-outs, 3 people who did not have echo-cardiographic data were excluded from ITT analyses.	Low Appropriate measurements and outcome assessors blinded to allocation	Some concerns Some outcomes from protocol are missing from published study (cholesterol, creatine)	Fair 3 people who did not have echocardiographic data were excluded from ITT analysis; ppts presumably aware of intervention status
Zhou 2014 ⁴⁶	Low Block randomization using computer-generated list; allocation by programmer not involved in study implementation; individuals involved in study blinded to assignment; baseline characteristics similar between groups	Some concerns Ppts aware of which tx they received but providers masked to COPD status; unclear if there were any deviations from intended interventions	Low Unclear if there were any differences in cointerventions; Low rate of drop-outs across groups	Low Low rates of missing data (Fig 1)	Low Validated, clinical measurements used to assess lung function & COPD exacerbation	Some concerns Authors refer to protocol but it is not readily available.	Fair No readily available protocol

Tx= Treatment, Ppts= participants, Ppl= People, V4= 3 month follow-up visit QOL= Quality of life, OHRQoL= Oral health-related quality of life, ITT= Intention to treat, COPD= Chronic obstructive pulmonary disease

