6XSSOHPHQWV WR (XURSHDQ 6WURNH 2UJDQLVDWLRQ *XLGHOLQH RQ $SKDVLD 5HKDELOLWDWL

Table of Contents

Supplement 1: Module working group members and disclosures

Author	Discipline and affiliation	Intellectual and financial disclosures
Marian Brady	PhD FRCSLT Glasgow Caledonian University, Glasgow, UK	PI of the Cochrane review of SLT for Aphasia after stroke (2016), the RELEASE Collaboration papers, and co-author of Big CACTUS and Ora trials included in the Guideline.
Claire Mills (Research Fellow, non-voting member)	PhD, MRCSLT Speech & Language Therapy Department, Leeds Teaching Hospitals NHS Trust, UK Leeds Institute of Health Sciences, University of Leeds, Leeds, UK	CM is funded by a Health Education England and National Institute for Health Research (NIHR) Clinical Doctoral Research Fellowship (ICA-CDRF-2017-03-036) and an NIHR Development and Skills Enhancement Award (NIHR303777).
Hege Prag Ora (Research Fellow, non-voting member)	MD, PhD, specialist in Physical Medicine and Rehabilitation Sunnaas Rehabilitation Hospital and University of Oslo	Main author of an aphasia telerehabilitation RCT included in the guideline (Ora et al. 2020).
Natalia Novaes (Research Fellow, non-voting member)	Neurologie, Hôpital Sainte Anne, Paris, France	None.
Frank Becker	MD, PhD, specialist in Physical Medicine and Rehabilitation Sunnaas Rehabilitation Hospital and University of Oslo	PI of aphasia telerehabilitation RCT included in the guideline (Ora) Co-author of the RELEASE Collaboration papers included in this guideline. Leader of working group for Norwegian national stroke rehabilitation guidelines (Norwegian Directorate of Health)
Fofi Constantinidou	Professor of Language Disorders & Clinical Neuropsychology, University of Cyprus	None
Agnes Flöel	Department of Neurology, University Medicine Greifswald, Greifswald, Germany	None
Katharina Stibrant Sunnerhagen	Physician, Rehabilitation medicine, Professor University of Gothenburg, Sweden.	None
Jytte Isaksen	Department of Culture and Language, University of Southern Denmark, Odense, Denmark and Neurorehabilitation Research and Knowledge Centre, Rigshospitalet, Copenhagen, Denmark	None
Caroline Jagoe	Speech & Language Therapy, Department of Clinical Speech & Language Studies, Trinity College, The University of Dublin	None
Luis M.T. Jesus	School of Health Sciences, Institute of Electronics and Informatics Engineering of Aveiro and Intelligent Systems Associate Laboratory, University of Aveiro, Aveiro, Portugal	Co-author of the RELEASE Collaboration papers included in this guideline.
Paola Marangolo	Professor of Psychobiology and Psychophysiology and Neuropsychology – Department of Humanities Studies, University Federico II, Naples, Italy	None
Marcus Meinzer	Department of Neurology, University Medicine Greifswald, Ferdinand-Sauerbruch-Str.1, 17475, Greifswald, Germany	RELEASE Collaborator and PI and author of the Meinzer RCT included in this guideline and author on Flöel et al. 2011.
Ineke van der Meulen	PhD, Clinical linguist Rijndam rehabilitation centre, Rotterdam, the Netherlands and Erasmus MC, Erasmus University Medical Centre, Dep. Rehabilitation, Rotterdam, the Netherlands	Co-author of the RELEASE Collaboration papers included in this guideline.
Pauline Campbell (Non-voting member)	Methodologist, PhD. Glasgow Caledonian University, Glasgow, UK	Co-author of the Cochrane review of SLT for Aphasia after stroke (2016)
Leonard Ho (Non-voting member)	Statistician, PhD, FHEA, FRSPH, MACE. Advanced Care Research Centre (ACRC), University of Edinburgh, Edinburgh, United Kingdom	None
Salman Hussain (Non-voting member)	European Stroke Organisation, Basel, Switzerland	None
Katerina Hilari	Speech and Language Therapist; City St George's, University of London	Co-Investigator and Co-author of the RELEASE Collaboration papers and of the Efstratiadou (2019) and Marshall (2020) trials included in the guideline. Developer of the Stroke and Aphasia Quality of Life (SAQOL-39) outcome measure.

Supplement 2: List and rating of the selected outcomes for each PICO question.

PICO	Outcome	Mean (median)
PICO 1 In people with aphasia after stroke is a higher dose of speech and language therapy (SLT) (≧20 hours) compared to a lower dose of SLT (< 20 hours) associated with greater improvements in language, communication or quality of life?	Overall language	7 (7)
	Expressive language - spoken (e.g., naming / sentence level)	8 (8)
	Auditory comprehension	7 (7)
	Reading	6 (7)
	Writing	6 (7)
	Functional communication	8 (9)
	Communication confidence	6 (6)
	Communicative participation	7 (6)
	Psychosocial / Quality of Life	7 (7)
PICO 2 In people with aphasia after stroke is a higher intensity of SLT (≧ 3 hours per week) compared to a lower intensity of SLT (< 3 hours per week) associated with greater improvements in language, communication or quality of life?	Overall language	7 (8)
	Expressive language - spoken (e.g., naming / sentence level)	8 (8)
	Auditory comprehension	7 (7)
	Reading	6 (7)
	Writing	6 (7)
	Functional communication	8 (9)
	Communication confidence	6 (6)
	Communicative participation	7 (6)
	Psychosocial / Quality of Life	7 (7)
PICO 3 In people with aphasia after stroke is a higher frequency of SLT (≧ 4 days per week) compared to a lower frequency of SLT (< 4 days per week) associated with greater improvements in language, communication or quality of life?	Overall language	7 (8)
	Expressive language - spoken (e.g., naming / sentence level)	8 (8)
	Auditory comprehension	7 (7)

	Reading	6 (7)
	Writing	6 (7)
	Functional communication	8 (9)
	Communication confidence	6 (6)
	Communicative participation	7 (7)
	Psychosocial / Quality of Life	7 (7)
PICO 4a In people with aphasia after stroke is digitally-delivered SLT (using telerehabilitation, virtual reality therapist or similar) compared to usual in-person SLT associated with similar improvements in language, communication or quality of life?	Overall language	7 (8)
	Expressive language - spoken (e.g., naming / sentence level)	8 (8)
	Auditory comprehension	7 (7)
	Reading	6 (7)
	Writing	6 (7)
	Functional communication	8 (9)
	Communication confidence	6 (7)
	Communicative participation	7 (7)
	Psychosocial / Quality of Life	7 (7)
PICO 4b In people with aphasia after stroke is in-person SLT plus digital augmentation (using computer or tablet-based software, virtual reality or similar) compared to usual in-person SLT associated with greater improvements in language, communication or quality of life?	Overall language	7 (7)
	Expressive language - spoken (e.g., naming / sentence level)	8 (8)
	Auditory comprehension	7 (7)
	Reading	6 (7)
	Writing	7 (7)
	Functional communication	8 (9)
	Communication confidence	6 (7)
	Communicative participation	7(7)
	Psychosocial / Quality of Life	7 (7)
PICO 5a	Overall language	7 (7)

In people with aphasia after stroke is group SLT compared to one-to-one SLT associated with similar improvements in language, communication or quality of life?		
	Expressive language - spoken (e.g., naming / sentence level)	7 (7)
	Auditory comprehension	7 (7)
	Reading	5 (6)
	Writing	5 (6)
	Functional communication	8 (9)
	Communication confidence	7 (7)
	Communicative participation	8 (8)
	Psychosocial / Quality of Life	8 (8)
PICO 5b In people with aphasia after stroke is one-to-one plus group SLT compared to one-to-one SLT alone associated with greater improvements in language, communication or quality of life?	Overall language	7 (7)
	Expressive language - spoken (e.g., naming / sentence level)	7 (7)
	Auditory comprehension	7 (7)
	Reading	5 (6)
	Writing	5 (6)
	Functional communication	8 (9)
	Communication confidence	7 (7)
	Communicative participation	7 (8)
	Psychosocial / Quality of Life	8 (8)
PICO 6 a-f In people with aphasia after stroke is SLT plus tDCS compared to SLT plus sham tDCS associated with greater improvements in language and communication with no changes to safety?	Overall language	8 (9)
	Expressive language - spoken (e.g., naming / sentence level)	8 (8)
	Auditory comprehension	7 (7)
	Reading	6 (7)
	Writing	6 (7)
	Functional communication	8 (8)
	Communication confidence	6 (6)

	Communicative participation	6 (6)
	Psychosocial / Quality of Life	6 (7)
PICO 7a In people with aphasia after stroke is individually-tailored SLT by functional relevance compared to non-tailored SLT associated with greater improvements in language, communication or quality of life?	Overall language	7 (8)
	Expressive language - spoken (e.g., naming / sentence level)	7 (7)
	Auditory comprehension	7 (7)
	Reading	6 (7)
	Writing	6 (7)
	Functional communication	9 (9)
	Communication confidence	6 (7)
	Communicative participation	7 (7)
	Psychosocial / Quality of Life	7 (7)
PICO 7b In people with aphasia after stroke is individually-tailored SLT by level of language task difficulty, compared to non-tailored SLT associated with greater improvements in language, communication or quality of life	Overall language	7 (8)
	Expressive language - spoken (e.g., naming / sentence level)	8 (8)
	Auditory comprehension	7 (7)
	Reading	6 (7)
	Writing	6 (7)
	Functional communication	8 (9)
	Communication confidence	6 (7)
	Communicative participation	7 (7)
	Psychosocial / Quality of Life	7 (7)

Supplement 3: Search strategies for PICOs 1-5 and 7

ESO Aphasia Rehabilitation Guideline
Search strategies for speech-language therapy PICO
Ovid MEDLINE(R) ALL <1946 to March 10, 2023>

#	search string
1	exp aphasia/
2	language disorders/ or speech disorders/ or anomia/
3	(aphasi$ or dysphasi$ or anomia or anomic).tw.
4	((speech or language or linguistic) adj5 (disorder$ or impair$ or problem$ or dysfunction)).tw.
5	or/1-4
6	exp aphasia/rh, th or language disorders/rh, th or speech disorders/rh, th or anomia/rh, th
7	((speech or language$ or linguistic or aphasi$ or dysphasi$ or anomia or anomic) adj5 (therap$ or train$ or rehabilitat$ or treat$ or remediat$ or intervention$ or pathol$)).tw.
8	speech-language pathology/ or exp "rehabilitation of speech and language disorders"/ or exp Speech Therapy/ or exp Language Therapy/ or Aphasia therapy*.mp. or exp stroke rehabilitation/ or exp occupational therapy/ or exp rehabilitation, vocational/
9	(SLT or SLP).tw.
10	or/6-9
11	5 and 10
12	randomized controlled trial.pt.
13	controlled clinical trial.pt.
14	randomized.ab.
15	placebo.ab.
16	randomly.ab.
17	trial.ti.
18	groups.ab.
19	or/12-18
20	11 and 19
21	(pediatric or paediatric or infant or infants or child or children$ or childhood or neonat$ or juvenile$ or toddler$).ti.
22	(child/ or child, preschool/ or adult children/ or adolescent/ or exp infant/) not exp adult/

23	21 or 22
24	20 not 23
42	limit 24 to yr="2015 -Current"

Ovid Embase(R) ALL <1974 to March 10, 2023>

#	search string
1	exp aphasia/ or dysphasia/
2	language disability/ or speech disorder.mp.
3	(aphasi$ or dysphasi$ or anomia or anomic).tw.
4	((speech or language$ or linguistic or communicat$) adj5 (disorder$ or impair$ or problem$ or dysfunction or difficult$)).tw.
5	or/1-4
6	exp aphasia/rh, th, dm or dysphasia/rh, th, dm or language disability/rh, th, dm or speech disorder/rh, th, dm
7	exp speech rehabilitation/
8	((speech or language$ or linguistic or aphasi$ or dysphasi$ or anomia or anomic) adj5 (therap$ or train$ or rehabilitat$ or treat$ or remediat$ or intervention$ or pathol$)).tw.
9	(SLT or SLP).tw.
10	exp speech therapy/ or exp language therapy/
11	or/6-10
12	5 and 11
13	Randomized Controlled Trial/ or "randomized controlled trial (topic)"/
14	Randomization/
15	Controlled clinical trial/ or "controlled clinical trial (topic)"/
16	control group/ or controlled study/
17	clinical trial/ or "clinical trial (topic)"/ or phase 1 clinical trial/ or phase 2 clinical trial/ or phase 3 clinical trial/ or phase 4 clinical trial/
18	Crossover Procedure/
19	Double Blind Procedure/

20	Single Blind Procedure/ or triple blind procedure/
21	placebo/ or placebo effect/
22	(random$ or RCT or RCTs).tw.
23	(controlled adj5 (trial$ or stud$)).tw.
24	(clinical$ adj5 trial$).tw.
25	((control or treatment or experiment$ or intervention) adj5 (group$ or subject$ or patient$)).tw.
26	(quasi-random$ or quasi random$ or pseudo-random$ or pseudo random$).tw.
27	((control or experiment$ or conservative) adj5 (treatment or therapy or procedure or manage$)).tw.
28	((singl$ or doubl$ or tripl$ or trebl$) adj5 (blind$ or mask$)).tw.
29	(cross-over or cross over or crossover).tw.
30	(placebo$ or sham).tw.
31	trial.ti.
32	(assign$ or allocat$).tw.
33	controls.tw.
34	or/13-33
35	12 and 34
36	(exp animals/ or exp invertebrate/ or animal experiment/ or animal model/ or animal tissue/ or animal cell/ or nonhuman/) not (human/ or normal human/ or human cell/)
37	35 not 36
38	(paediatric or paediatric or infant or infants or child or children$ or childhood or neonate$ or juvenile$ or toddler$).mp.
39	(child/ or juvenile/ or exp infant/ or preschool child/ or school child/ or toddler/) not (adult/ or aged/ or middle aged/ or young adult/)
40	38 or 39
41	37 not 40
42	limit 41 to yr="2015 -Current"

CINAHL search strategy
CINAHL (EBSCO) from inception to 10th March 2023

#	search string
S1	(MH "Aphasia+") or (MH "Speech Disorders") or (MH "Language Disorders") or (MH "Anomia") OR TI (aphasi* or dysphasi* or anomia or anomic) or AB (aphasi* or dysphasi* or anomia or anomic) or TI ((speech or language* or linguistic or communicat*) N5 (disorder* or impair* or problem* or dysfunction or difficult*)) or AB ((speech or language* or linguistic or communicat*) N5 (disorder* or impair* or problem* or dysfunction or difficult*))
S2	(MH "Aphasia+/RH/TH") or (MH "Speech Disorders/RH/TH ") or (MH "Language Disorders/RH/TH ") or (MH "Anomia/RH/TH ") or (MH "Rehabilitation, Speech and Language") or (MH "Speech-Language Pathologists") or (MH "Speech-Language Pathology") or (MH "Speech Therapy+") or (MH "Language Therapy") or TI ((speech or language or linguistic or aphasi* or dysphasi* or anomia or anomic) N5 (therap* or train* or rehabilitat* or treat* or remediat* or intervention* or pathol*)) or AB ((speech or language or linguistic or aphasi* or dysphasi* or anomia or anomic) N5 (therap* or train* or rehabilitat* or treat* or remediat* or intervention* or pathol*)) or TI (SLT or SLP) or AB (SLT or SLP)
S3	(MH "Randomized Controlled Trials") or (MH "Random Assignment") or (MH "Random Sample+") or (MH "Clinical Trials") or (MH "Intervention Trials") or (MH "Therapeutic Trials") or (MH "Double-Blind Studies") or (MH "Single-Blind Studies") or (MH "Triple-Blind Studies") or (MH "Control (Research)") or (MH "Control Group") or (MH "Placebos") or (MH "Placebo Effect") or (MH "Crossover Design") or (MH "Quasi-Experimental Studies") or PT (clinical trial or randomized controlled trial) OR TI (random* or RCT or RCTs) or AB (random* or RCT or RCTs) or TI (controlled N5 (trial* or stud*)) or AB (controlled N5 (trial* or stud*)) or TI (clinical* N5 trial*) or AB (clinical* N5 trial*) or TI ((control or treatment or experiment* or intervention) N5 (group* or subject* or patient*)) or AB ((control or treatment or experiment* or intervention) N5 (group* or subject* or patient*)) or TI ((control or experiment* or conservative) N5 (treatment or therapy or procedure or manage*)) or AB ((control or experiment* or conservative) N5 (treatment or therapy or procedure or manage*)) or TI ((singl* or doubl* or tripl* or trebl*) N5 (blind* or mask*)) or AB ((singl* or doubl* or tripl* or trebl*) N5 (blind* or mask*)) or TI (cross-over or cross over or crossover) or AB (cross-over or cross over or crossover) or TI (placebo* or sham) or AB (placebo* or sham) or TI trial or TI (assign* or allocat*) or AB (assign* or allocat*) or TI controls or AB controls or TI (quasi-random* or quasi random* or pseudo-random* or pseudo random*) or AB (quasi-random* or quasi random* or pseudorandom*or pseudo random*)
S4	S1 AND S2 AND S3
S5	TI (pediatric or paediatric or infant or infants or child or children* or childhood or neonat* or juvenile* or toddler*) or ((MH "Adolescence+") or (MH "Child+") or (MH "Infant+")) not (MH "Adult")

S6	S4 NOT S5 with publication date restriction: Jan. 2015 to March 2023

PsycINFO search from inception to 10th March 2023

#	search string
S22	S21: Limiters - Publication Year: 2015-2023
S21	S14 AND S20
S20	S17 OR S18 OR S19 OR S20 OR S21
S19	random allocation
S18	single blind method
S17	double blind, randomized study
S16	clinical trials or randomized controlled trials or controlled clinical trails
S15	randomised controlled trial* or randomized controlled trial* or rct
S14	(S12) AND (S13)
S13	(S6 OR S7 OR S8 OR S9 OR S10 OR S11)
S12	(S1 OR S2 OR S3 OR S4 OR S5)
S11	speech therapy or speech-language therapy or language therapy
S10	speech therapy or treatment or intervention
S9	speech disorder prevention
S8	language disorder treatment or language disorders intervention
S7	aphasia rehabilitation
S6	aphasia treatment or therapy or intervention
S5	language disorders or language impairment or specific language disorder
S4	language disability/ or speech disorder/
S3	(aphasi* or dysphasi*)
S2	(aphasia or dysphasia or anomia or anomic).ti,ab.
S1	exp aphasia/ or dysphasia/

Supplement 4: Search strategies for PICO 6

Search strategies for brain stimulation PICO

Ovid MEDLINE(R) ALL <2018 to March 10, 2023>

#	search string
1	exp aphasia/
2	language disorders/ or speech disorders/ or anomia/
3	(aphasi$ or dysphasi$ or anomia or anomic).tw.
4	((speech or language or linguistic) adj5 (disorder$ or impair$ or problem$ or dysfunction)).tw.
5	or/1-4
6	Electric$ Stimulation Therapy/
7	Electric$ Stimulation/
8	Transcranial Alternating Current Stimulation/ or tACS.tw.
9	(transcranial adj5 direct current adj5 stimulation).tw.
10	(transcranial adj5 DC adj5 stimulation).tw.
11	(transcranial adj5 electric$ adj5 stimulation).tw.
12	(tDCS or A-tDCS or C-tDCS or S-tDCS or electrode$ or anode or anodes or anodal or cathode or cathodes or cathodal).tw.
13	Transcranial Magnetic Stimulation/or TMS.tw.
14	Transcranial Direct Current Stimulation/ or tDCS.tw.
15	rTMS.ti,ab.
16	"Transcranial Magnetic Stimulation".ti,ab.
17	"Transcranial Direct Current Stimulation".ti,ab.
18	"noninvasive brain stimulation".ti,ab.
19	"non-invasive brain stimulation".ti,ab.
20	NIBS.ti,ab.
21	"electromagnetic induction".ti,ab.

22	"repetitive TMS".ti,ab.
23	or/6-22
24	5 and 48
25	randomized controlled trial.pt.
26	controlled clinical trial.pt.
27	randomized.ab.
28	placebo.ab.
29	randomly.ab.
30	trial.ti.
31	groups.ab.
32	or/25-31
33	24 and 32
34	(pediatric or paediatric or infant or infants or child or children$ or childhood or neonat$ or juvenile$ or toddler$).ti.
35	(child/ or child, preschool/ or adult children/ or adolescent/ or exp infant/) not exp adult/
36	34 or 35
37	33 not 36
38	(exp animals/ or exp invertebrate/ or animal experiment/ or animal model/ or animal tissue/ or animal cell/ or nonhuman/) not (human/ or normal human/ or human cell/)
39	limit 38 to yr="2018 -Current"

Ovid Embase(R) ALL <1974 to March 10, 2023>

#	search string
1	exp aphasia/ or dysphasia/
2	language disability/ or speech disorder.mp.
3	(aphasi$ or dysphasi$ or anomia or anomic).tw.
4	((speech or language$ or linguistic or communicat$) adj5 (disorder$ or impair$ or problem$ or dysfunction or difficult$)).tw.
5	or/1-4
6	transcranial direct current stimulation/
7	Transcranial Direct Current Stimulation/
8	Transcranial Alternating Current Stimulation/ or tACS.tw.
9	(transcranial adj5 direct current adj5 stimulation).tw.
10	(transcranial adj5 DC adj5 stimulation).tw.
11	(transcranial adj5 electric$ adj5 stimulation).tw.
12	(tDCS or A-tDCS or C-tDCS or S-tDCS or anode or anodes or anodal or cathode or cathodes or cathodal).tw.
13	exp speech therapy/ or exp language therapy/
14	"non-invasive brain stimulation".ti,ab.
15	"noninvasive brain stimulation".ti,ab.
16	NIBS.ti,ab.
17	"electromagnetic induction".ti,ab.
18	"repetitive TMS".ti,ab.
19	or/6-18
20	5 and 19
21	Randomized Controlled Trial/ or "randomized controlled trial (topic)"/
22	Randomization/
23	Controlled clinical trial/ or "controlled clinical trial (topic)"/
24	control group/ or controlled study/

25	clinical trial/ or "clinical trial (topic)"/ or phase 1 clinical trial/ or phase 2 clinical trial/ or phase 3 clinical trial/ or phase 4 clinical trial/
26	Crossover Procedure/
27	Double Blind Procedure/
28	Single Blind Procedure/ or triple blind procedure/
29	placebo/ or placebo effect/
30	(random$ or RCT or RCTs).tw.
31	(controlled adj5 (trial$ or stud$)).tw.
32	(clinical$ adj5 trial$).tw.
33	((control or treatment or experiment$ or intervention) adj5 (group$ or subject$ or patient$)).tw.
34	(quasi-random$ or quasi random$ or pseudo-random$ or pseudo random$).tw.
35	((control or experiment$ or conservative) adj5 (treatment or therapy or procedure or manage$)).tw.
36	((singl$ or doubl$ or tripl$ or trebl$) adj5 (blind$ or mask$)).tw.
37	(cross-over or cross over or crossover).tw.
38	(placebo$ or sham).tw.
39	trial.ti.
40	(assign$ or allocat$).tw.
41	controls.tw.
42	or/21-41
43	5 and 20 and 42
44	(exp animals/ or exp invertebrate/ or animal experiment/ or animal model/ or animal tissue/ or animal cell/ or nonhuman/) not (human/ or normal human/ or human cell/)
45	43 not 44
46	(paediatric or paediatric or infant or infants or child or children$ or childhood or neonate$ or juvenile$ or toddler$).mp.
47	(child/ or juvenile/ or exp infant/ or preschool child/ or school child/ or toddler/) not (adult/ or aged/ or middle aged/ or young adult/)
48	46 or 47

49	45 not 48
50	limit 49 to yr="2018 -Current"

CINAHL search strategy

CINAHL (EBSCO) from inception to 10 March 2023

#	search string
S1	(MH "Aphasia+") or (MH "Speech Disorders") or (MH "Language Disorders") or (MH "Anomia") OR TI (aphasi* or dysphasi* or anomia or anomic) or AB (aphasi* or dysphasi* or anomia or anomic) or TI ((speech or language* or linguistic or communicat*) N5 (disorder* or impair* or problem* or dysfunction or difficult*)) or AB ((speech or language* or linguistic or communicat*) N5 (disorder* or impair* or problem* or dysfunction or difficult*))
S2	(MH "Electric Stimulation") or (MH "Electrical Stimulation, Functional") or (MH "Electrical Stimulation, Neuromuscular") or TI (transcranial N5 direct current N5 stimulation) or AB (transcranial N5 direct current N5 stimulation) or TI (transcranial N5 alternating current N5 stimulation) OR AB (transcranial N5 alternating current N5 stimulation) or TI (transcranial N5 electric N5 stimulation) or AB (transcranial N5 electric N5 stimulation) or TI (tDCS or tACS or A-tDCS or C-tDCS or S-tDCS or electrode* or anode or anodes or anodal or cathode or cathodes or cathodal) or AB (tDCS or tACS or A-tDCS or C-tDCS or S-tDCS or electrode* or anode or anodes or anodal or cathode or cathodes or cathodal)
S3	(MH "Randomized Controlled Trials") or (MH "Random Assignment") or (MH "Random Sample+") or (MH "Clinical Trials") or (MH "Intervention Trials") or (MH "Therapeutic Trials") or (MH "Double-Blind Studies") or (MH "Single-Blind Studies") or (MH "Triple-Blind Studies") or (MH "Control (Research)") or (MH "Control Group") or (MH "Placebos") or (MH "Placebo Effect") or (MH "Crossover Design") or (MH "Quasi-Experimental Studies") or PT (clinical trial or randomized controlled trial) OR TI (random* or RCT or RCTs) or AB (random* or RCT or RCTs) or TI (controlled N5 (trial* or stud*)) or AB (controlled N5 (trial* or stud*)) or TI (clinical* N5 trial*) or AB (clinical* N5 trial*) or TI ((control or treatment or experiment* or intervention) N5 (group* or subject* or patient*)) or AB ((control or treatment or experiment* or intervention) N5 (group* or subject* or patient*)) or TI ((control or experiment* or conservative) N5 (treatment or therapy or procedure or manage*)) or AB ((control or experiment* or conservative) N5 (treatment or therapy or procedure or manage*)) or TI ((singl* or doubl* or tripl* or trebl*) N5 (blind* or mask*)) or AB ((singl* or doubl* or tripl* or trebl*) N5 (blind* or mask*)) or TI (cross-over or cross over or crossover) or AB (cross-over or cross over or crossover) or TI (placebo* or sham) or AB (placebo* or sham) or TI trial or TI (assign* or allocat*) or AB (assign* or allocat*) or TI controls or AB controls or TI (quasi-random* or quasi random* or pseudo-random* or pseudo random*) or AB (quasi-random* or quasi random* or pseudorandom*or pseudo random*)
S4	S1 AND S2 AND S3

S5	TI (pediatric or paediatric or infant or infants or child or children* or childhood or neonat* or juvenile* or toddler*) or ((MH "Adolescence+") or (MH "Child+") or (MH "Infant+")) not (MH "Adult")
S6	S4 NOT S5 with publication date restriction: Jan. 2018 to March 2023

PsycINFO search from inception to 10th March 2023

#	search string
S21	S20: Limiters - Publication Year: 2018-2023
S20	S18 AND S19
S19	S6 AND S12
S18	(S13 OR S14 OR S15 OR S16 OR S17)
S17	random allocation
S16	single blind method
S15	double blind, randomized study
S14	clinical trials or randomized controlled trials or controlled clinical trails
S13	randomised controlled trial* or randomized controlled trial* or rct
S12	(S6 OR S7 OR S8 OR S9 OR S10 OR S11)
S11	repetitive transcranial magnetic stimulation or rtms
S10	electromagnetic induction
S9	non-invasive brain stimulation or nibs
S8	transcranial alternating current stimulation or tacs
S7	transcranial direct current stimulation or tdcs
S6	(S1 OR S2 OR S3 OR S4 OR S5)
S5	language disorders or language impairment or specific language disorder
S4	language disability/ or speech disorder/
S3	(aphasi* or dysphasi*)
S2	(aphasia or dysphasia or anomia or anomic).ti,ab.
S1	exp aphasia/ or dysphasia/

6XSSOHPHQW 3,&2 JURXS¶V GHILQLWLRQ DQG GHWDLOHG **criteria**

PICO	Definition	Inclusion criteria/ Exclusion criteria
PICOs 1-3 Dose, Intensity, Frequency of the SLT	**Dose:** total number of hours of intervention **Intensity:** number of intervention hours per week **Frequency:** number of intervention days per week.	Inclusion: • Does the intervention in one arm differ in terms of dose or intensity or frequency from the intervention in the other arm(s)?
PICO 4a Digital SLT versus in-person SLT	Studies that compare an intervention group with people with aphasia after stroke receiving fully digitally delivered SLT (e.g. telerehabilitation, computer-based aphasia therapy, SLT apps) with a control group receiving in-person SLT.	**Intervention** Inclusion: • Any form of digital deliverance of SLT. Exclusion: • Any intervention not delivered fully digital. • Digital tools that do not concern treatment (e.g software/apps to facilitate communication). **Comparator** Inclusion: • Any in-person SLT intervention not using digital intervention. Exclusion: • Any form of digital deliverance of SLT.
PICO 4b Digitally-augmented SLT versus SLT	Studies that compare an intervention group with people with aphasia after stroke receiving any combination of in-person SLT and digitally delivered SLT (e.g. telerehabilitation, computer-based aphasia therapy, SLT apps) with a control group receiving only in-person SLT	**Intervention** Inclusion: • any form of SLT using both in-person SLT and digital augmentation Exclusion: • interventions where the in-person contact/digital augmentation does not concern treatment (treatment meaning direct treatment sessions or feedback on digital training performance and digital training planning) **Comparator** Inclusion:

		• Any in-person SLT intervention not using digital intervention Exclusion: • Any form of digital intervention
PICO 5a Group SLT versus one-to-one SLT	Studies that compare people with aphasia after stroke receiving any form of sole group SLT with two or more people with aphasia (≧ 2 PWA) with a control group receiving only one-to-one SLT.	**Intervention** Inclusion: • Any form of group SLT with two or more people with aphasia (≧ 2 PWA). • Participants interact with each other in therapy task and conversation. Exclusion: • Any form of one-to-one SLT. **Comparator** Inclusion: • Any one-to-one SLT intervention Exclusion: • Any form of group SLT
PICO 5b One-to-one plus group SLT versus one-to-one SLT	Studies that compare people with aphasia after stroke receiving any form and combination of one-to-one plus group SLT (≧ 2 PWA) with a control group receiving only one-to-one SLT.	**Intervention** Inclusion: 1. Any form of one-to-one SLT together with group therapy Exclusion: • Only ono-to-one SLT • Only group SLT **Comparator** Inclusion: • Any one-to-one SLT intervention delivered alone Exclusion: • Any form of group SLT or one-to-one therapy together with group SLT.
PICO 6 a-f SLT augmented with tDCS brain stimulation versus SLT plus control condition	**Brain stimulation:** transcranial direct current stimulation, tDCS. **Control condition**: accepted control conditions comprise: placebo (sham) stimulation, including, e.g., intensity < 0.3 mA for tDCS; 30s stimulation only for tDCS; or otherwise	Inclusion: • Does the intervention in one arm offer SLT plus brain stimulation, in the other arm(s) SLT plus control condition? Exclusion: • Stimulation techniques other than tDCS

	ineffective type of stimulation; active stimulation sites outside of the target network.	
PICO 7a Tailoring according to functional relevance	Studies that compare people with aphasia after stroke receiving a tailored and individualized intervention according to functional relevance (e.g. situational/words/materials) compared to a control group with a non-tailored intervention.	Inclusion: • Do the individuals in the intervention group have a tailored and individualised intervention by functional relevance e.g. situational/words/materials used? • Control group should have a non-tailored intervention.
PICO 7b Tailoring according to level of difficulty	Studies that compare people with aphasia after stroke receiving a tailored, individualised, or titrated intervention according to level of language difficulty (e.g. nouns with different frequency of use/nouns from one semantic category/concrete vs abstract nouns/pictures vs line drawings/complexity of concepts) compared to a control group with a non-tailored intervention.	Inclusion: • Do the individuals in the intervention group have a tailored, individualized, or titrated intervention according to level of language difficulty e.g. nouns with different frequency of use/nouns from one semantic category/concrete vs abstract nouns/pictures vs line drawings/complexity of concepts? • Control group should have a non-tailored intervention.

Supplement 6: Data extraction headings

PICOs 1, 2, 3, 4a, 4b, 5a, 5b, 7a, 7b:

- Trial label
- Reviewer
- Study design
- PICO Group:
    - 1 – Dose
    - 2 – Intensity
    - 3 – Frequency
    - 4a – Digital versus in-person
    - 4b – Digitally augmented versus SLT
    - 5a – Group vs SLT
    - 5b – One-to-one plus group SLT
    - 7a – Functional relevance
    - 7b – Level of difficulty
- Participant Demographics:
    - Total randomised participants (n)
    - Age (years)
    - Sex (% male)
    - Stroke type (% ischaemic)
    - Time post-stroke at baseline (days)
    - Aphasia severity at baseline
    - Intervention 1:
        - Short Label
        - Short description
        - Participants (n)
        - Dose (total SLT hours)
        - Intensity (hours per week)
        - Frequency (days per week)
        - Only digitally delivered (if yes add details)
        - Digitally augmented (if yes add details)
        - In-person SLT (y/n)
        - Group SLT (y/n)
        - One-to-one SLT (y/n)
        - Tailoring by functional relevance (y/n)
        - Tailoring by level of difficulty (y/n)
    - Intervention 2 (sub-headings as for Intervention 1)
    - Comparator (sub-headings as for Intervention 1)
    - Relevant outcome measurements
    - Post treatment data collection timepoints
    - Intervention 1 Group Summary Data:
        - First post-treatment timepoint (specify)
            - Participants (n)
            - Timepoint
            - Mean
            - SD

                - If unavailable please specify and enter any available group summary data e.g. Median (IQR), min-max range, count (%)
            - Second post-treatment timepoint (specify) – sub-headings as per Intervention 1 Group Summary Data.
            - Third post-treatment timepoint (specify) – sub-headings as per Intervention 1 Group Summary Data.
        - Intervention 2 Group Summary Data (sub-headings as for Intervention 1 Group Summary Data)
        - Comparator Group Summary Data (sub-headings as for Intervention 1 Group Summary Data)
        - Any other comments or notes

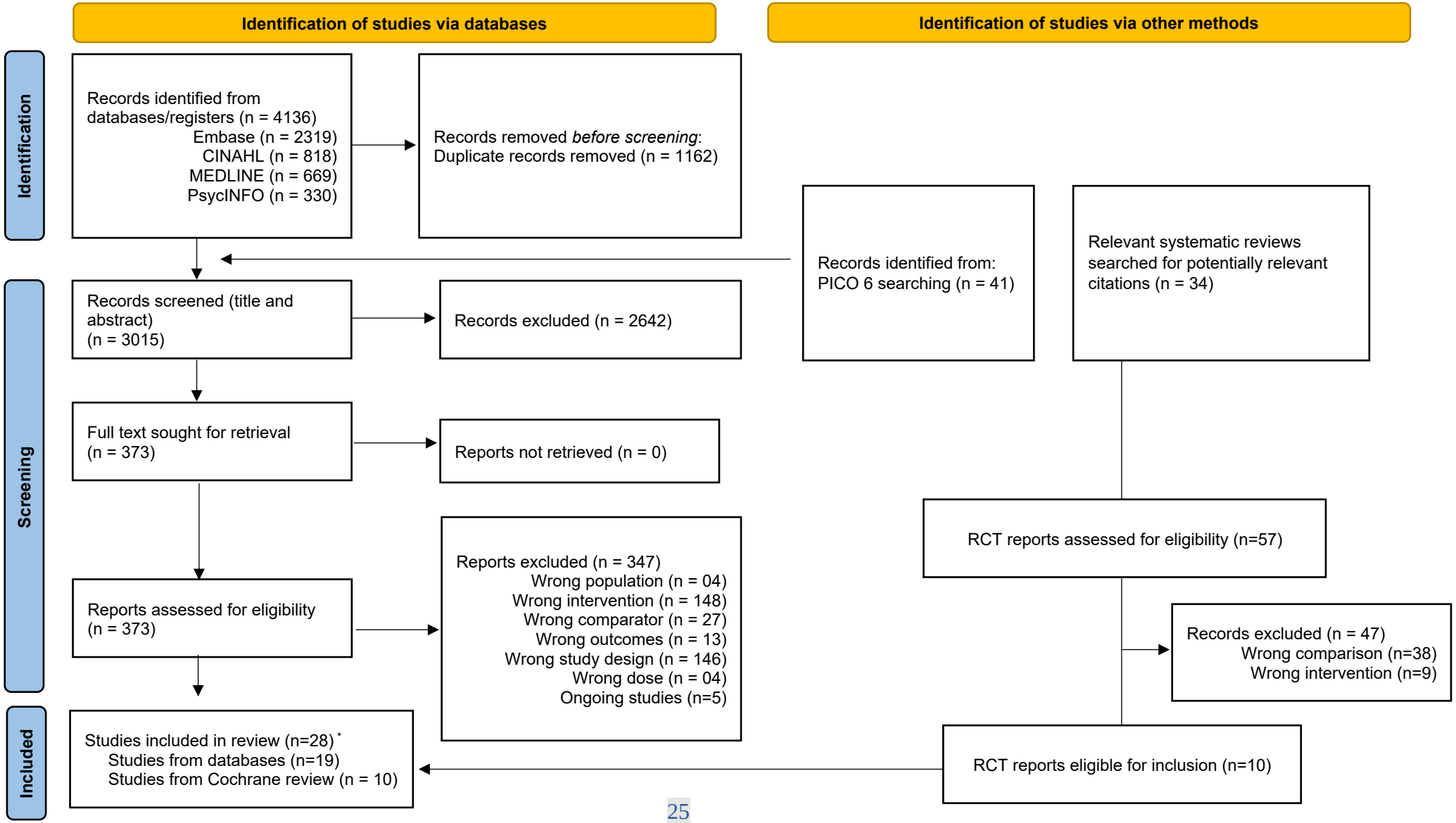
PICO 6:

- Trial label
- Reviewer
- Study design
- PICO Group:
    - 6 – Brain stimulation
- Participant Demographics:
    - Total randomised participants (n)
    - Age (years)
    - Sex (% male)
    - Stroke type (% ischaemic)
    - Time post-stroke at baseline (days)
    - Aphasia severity at baseline
    - Lesion:
        - Location
        - Mean size (mm3)
    - Intervention 1:
        - Short Label
        - Short description
        - Participants (n)
        - Dose (total SLT hours)
        - Intensity (hours per week)
        - Frequency (days per week)
        - SLT timing (before/during/after brain stimulation)
        - Brain stimulation:
            - Type (tDCS)
            - Target
            - Intensity (mA)
            - Duration
            - Stimulation Target
            - Type of anode-cathode
            - Location of anode/cathode
            - Size of anode/cathode
            - Focal, non-focal stimulation set-up
            - Number of sessions

                - Frequency of sessions
                - Intensity of treatment schedule
    - Intervention 2 (sub-headings as for Intervention 1)
    - Comparator:
        - Short Label
        - Short description
        - Participants (n)
        - Dose (total SLT hours)
        - Intensity (hours per week)
        - Frequency (days per week)
        - SLT timing (before/during/after brain stimulation)
        - Sham Brain stimulation:
            - Type (tDCS)
            - Target
            - Intensity (mA)
            - Duration
            - Stimulation target (brain region)
            - Type of anode-cathode
            - Location of anode/cathode
            - Size of anode/cathode
            - Focal, non-focal stimulation set-up
            - Number of sessions
            - Frequency of sessions
            - Intensity of treatment schedule
    - Relevant outcome measurement instruments
    - Type of outcome
    - Post treatment data collection timepoint(s)
    - Intervention 1 Group Summary Data:
        - First post-treatment timepoint (specify)
            - Participants (n)
            - Timepoint
            - Mean
            - SD
            - If unavailable please specify and enter any available group summary data e.g. Median (IQR), min-max range, count (%)
        - Second post-treatment timepoint (specify) – sub-headings as per Intervention 1 Group Summary Data.
        - Third post-treatment timepoint (specify) – sub-headings as per Intervention 1 Group Summary Data.
    - Intervention 2 Group Summary Data (sub-headings as for Intervention 1 Group Summary Data)
    - Comparator Group Summary Data (sub-headings as for Intervention 1 Group Summary Data)
    - Safety Results/Serious Adverse Event Data
        - Outcome measure instrument or count data
        - Result

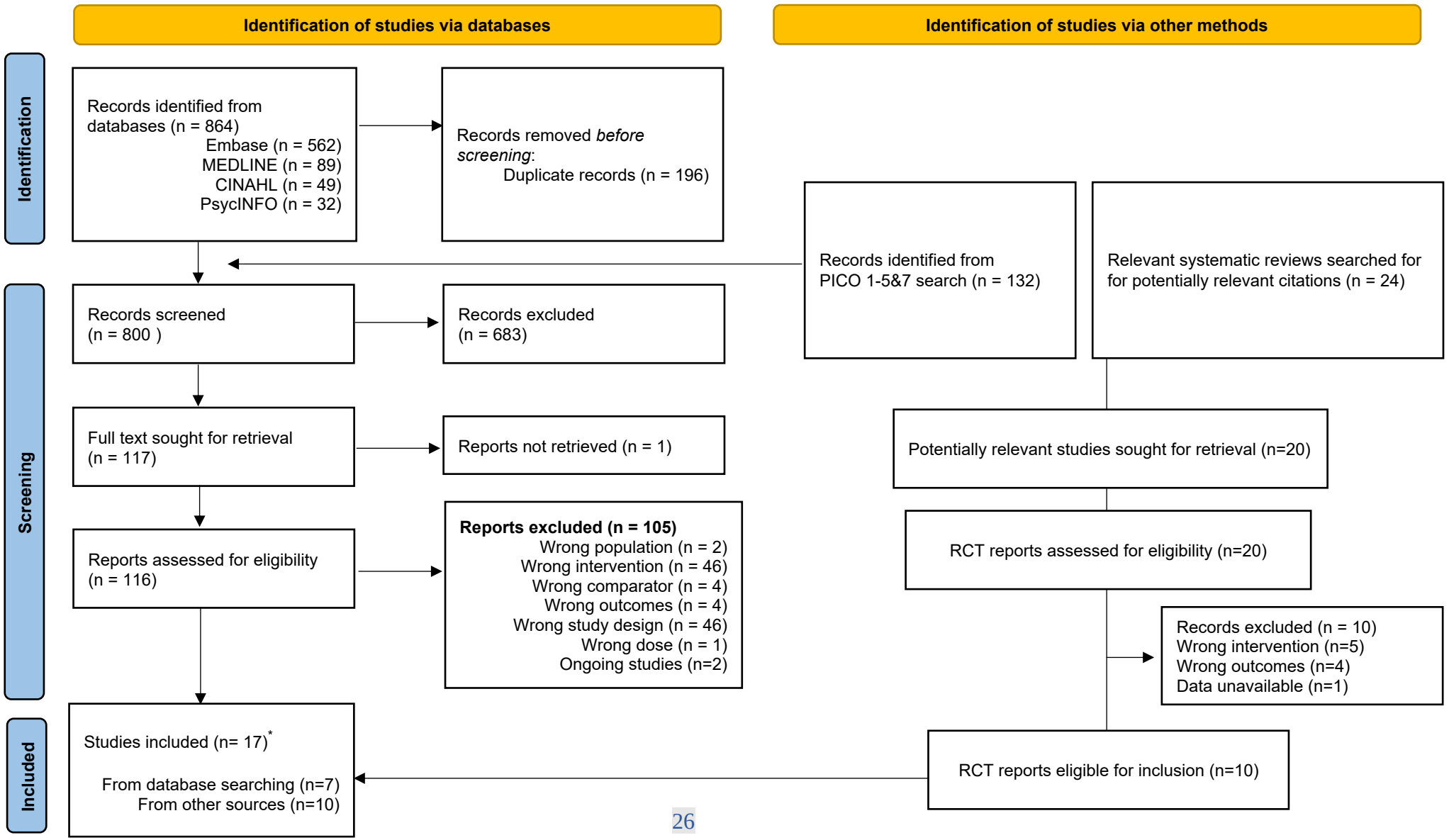
- Safety Results/Adverse Event Data
  - Outcome measure instrument or count data
  - Result
- Any other comments or notes

Supplement 7: PRISMA diagram PICO 1-5 and 7



*In some cases individual studies were informed by multiple reports

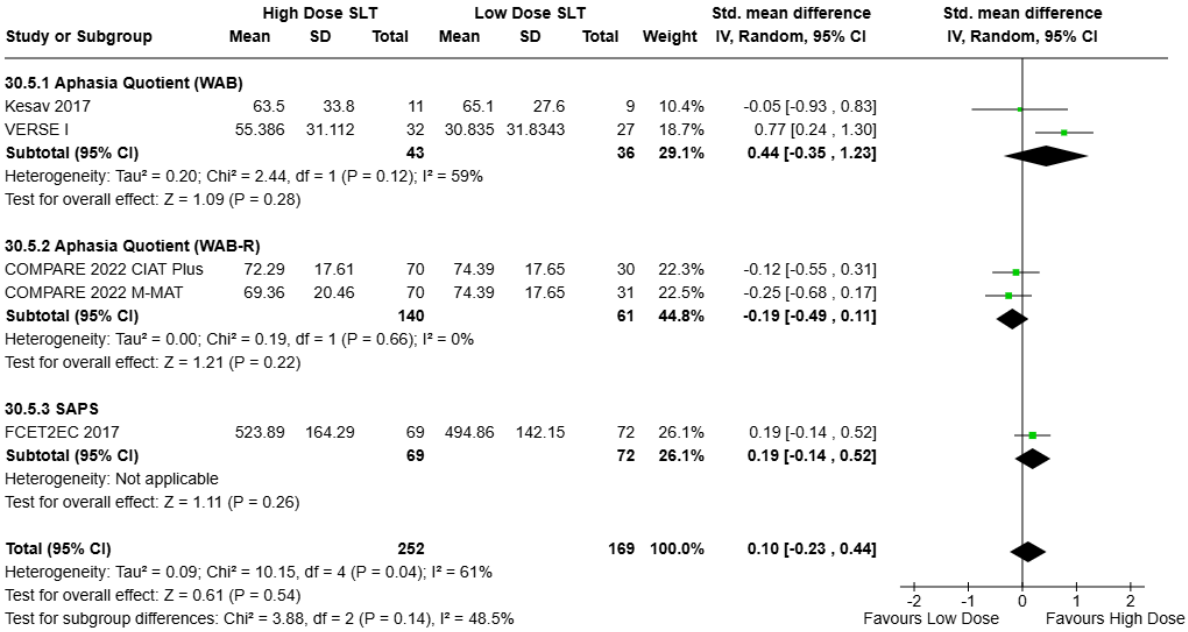
Supplement 8: PRISMA diagram PICO 6



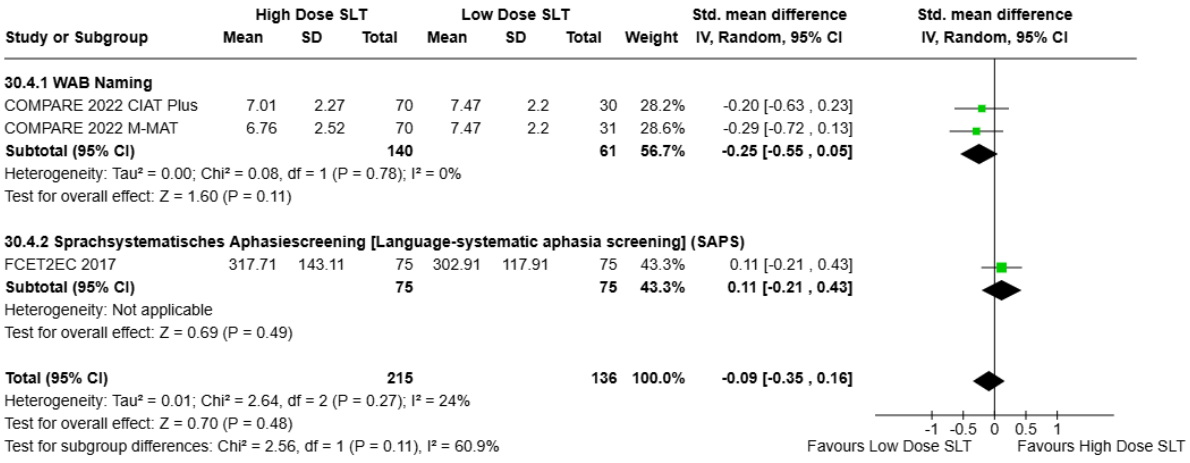
*In some cases individual studies were informed by multiple reports

Supplement 9: Results of PICO 1 Meta-Analyses

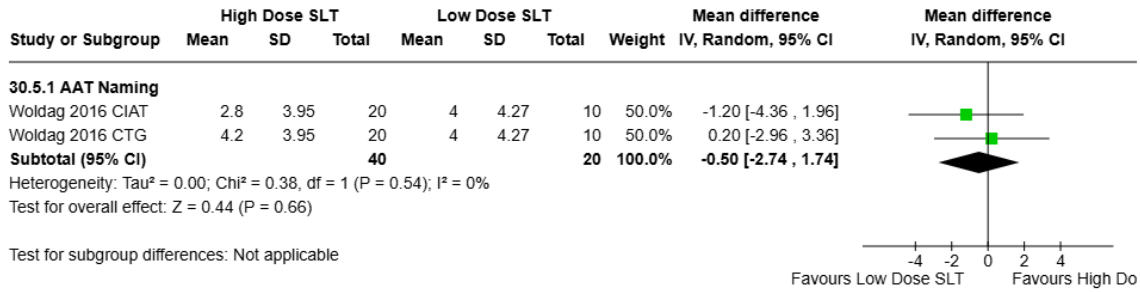
PICO 1. Overall language



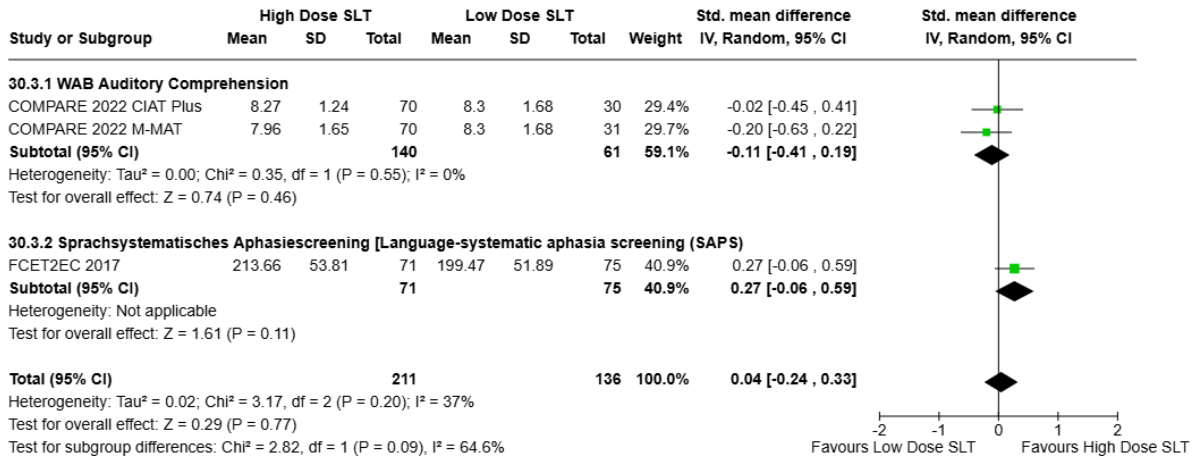
PICO 1. Expressive language (naming)



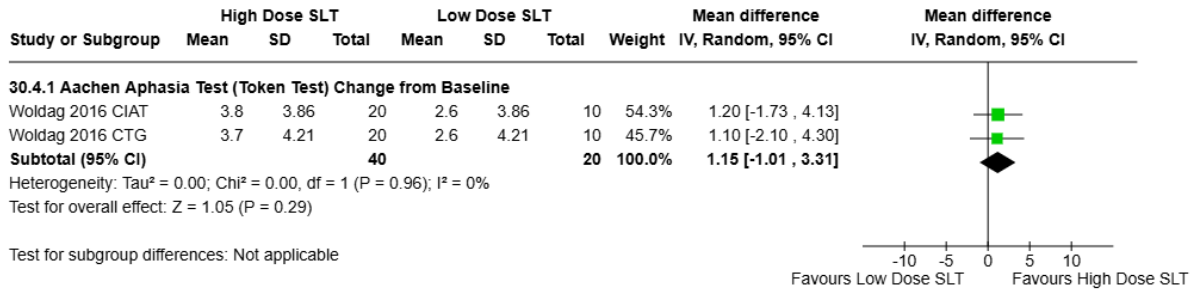
PICO 1. Expressive language (naming) change from baseline scores



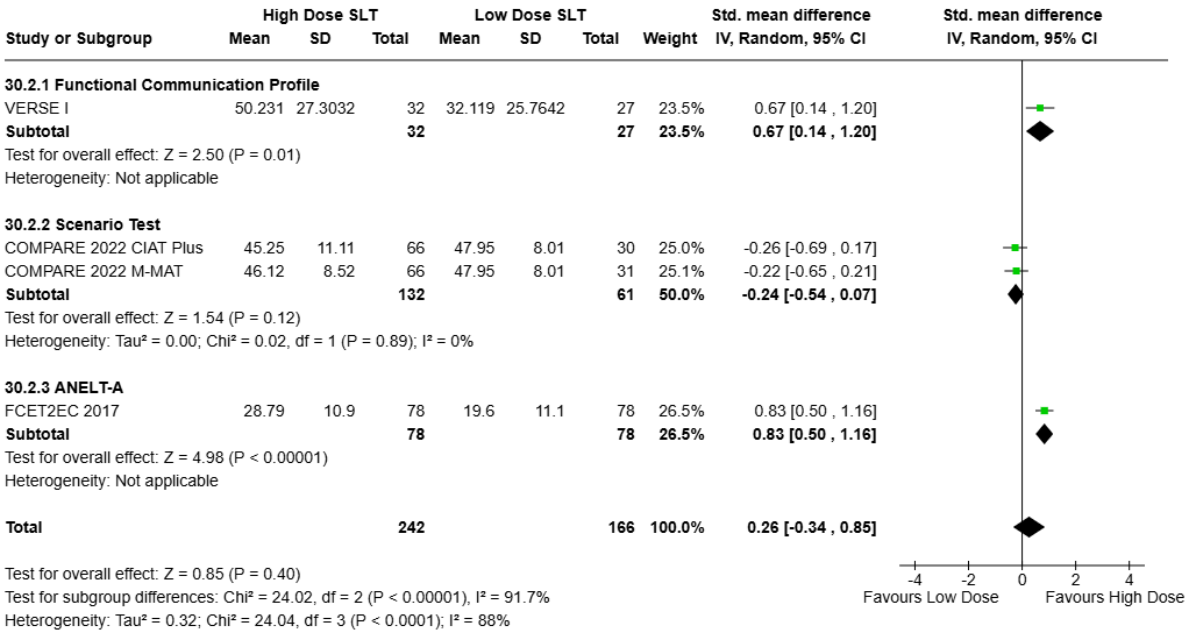
PICO 1. Auditory comprehension



PICO 1. Auditory comprehension (change from baseline scores)

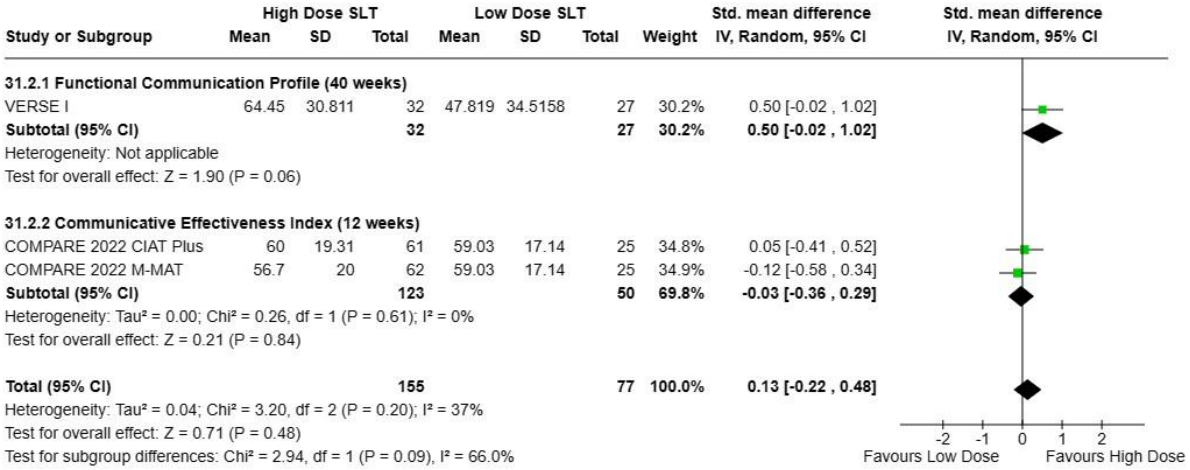


PICO 1. Functional communication (sensitivity analysis COMPARE trial Scenario Test data)

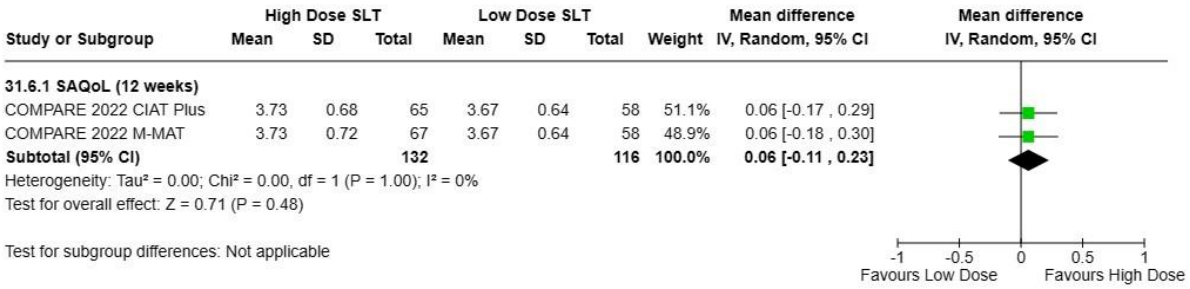


PICO 1 Follow-up

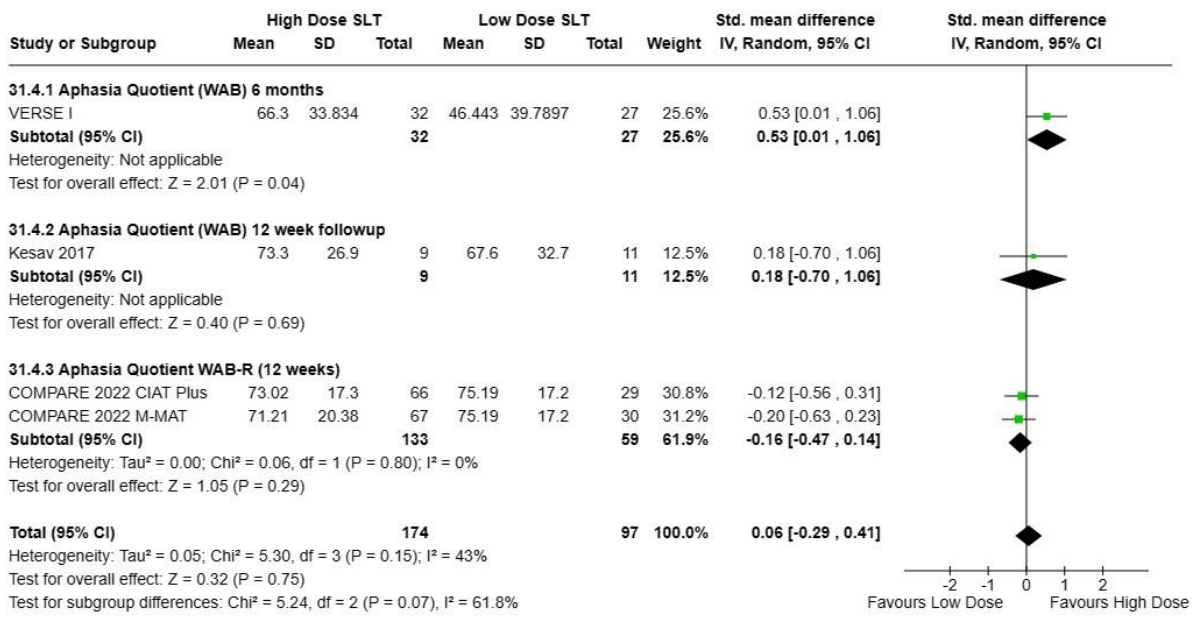
PICO 1. Functional communication follow-up



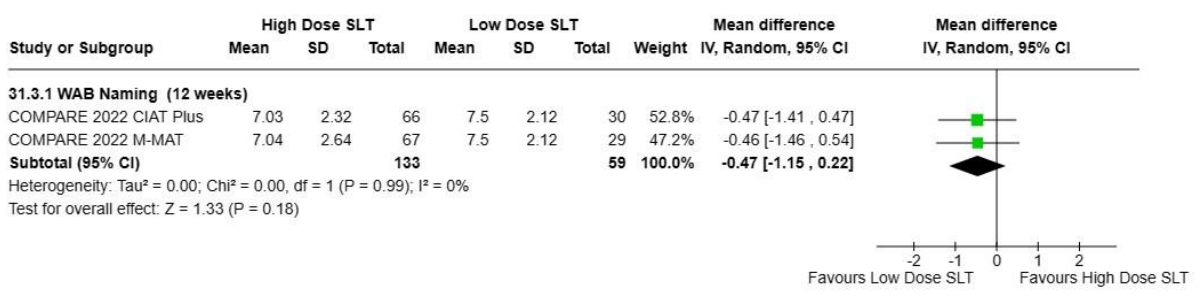
PICO 1. Quality of life follow-up



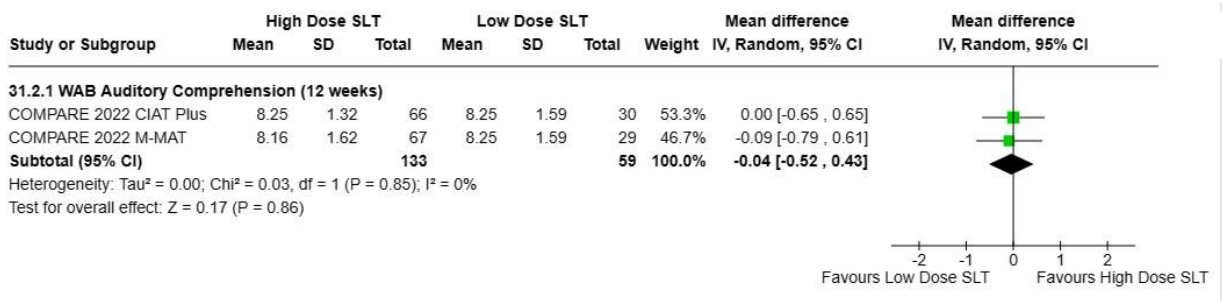
PICO 1. Overall language follow-up



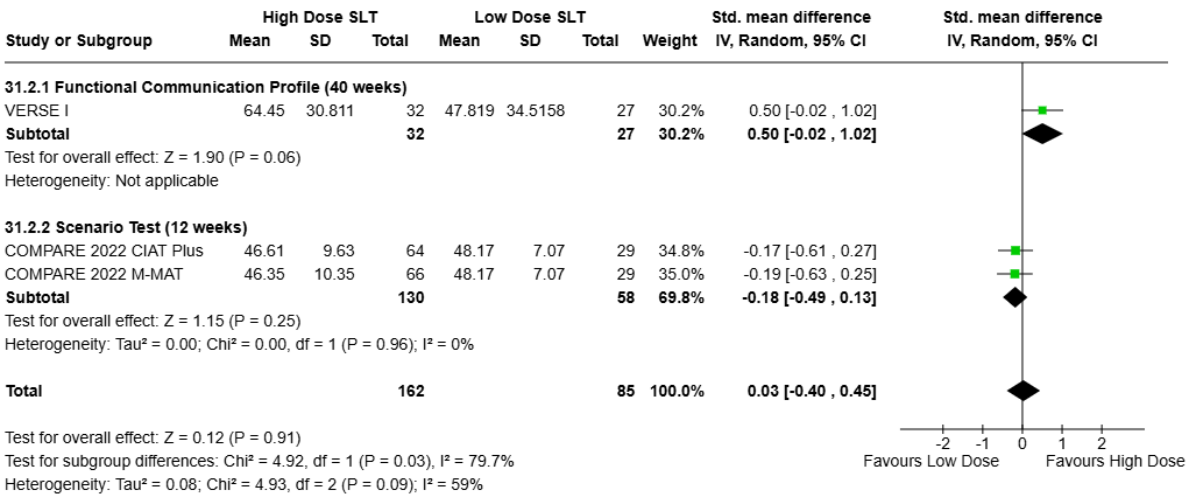
PICO 1. Expressive language (naming) follow-up



PICO 1. Auditory comprehension follow up

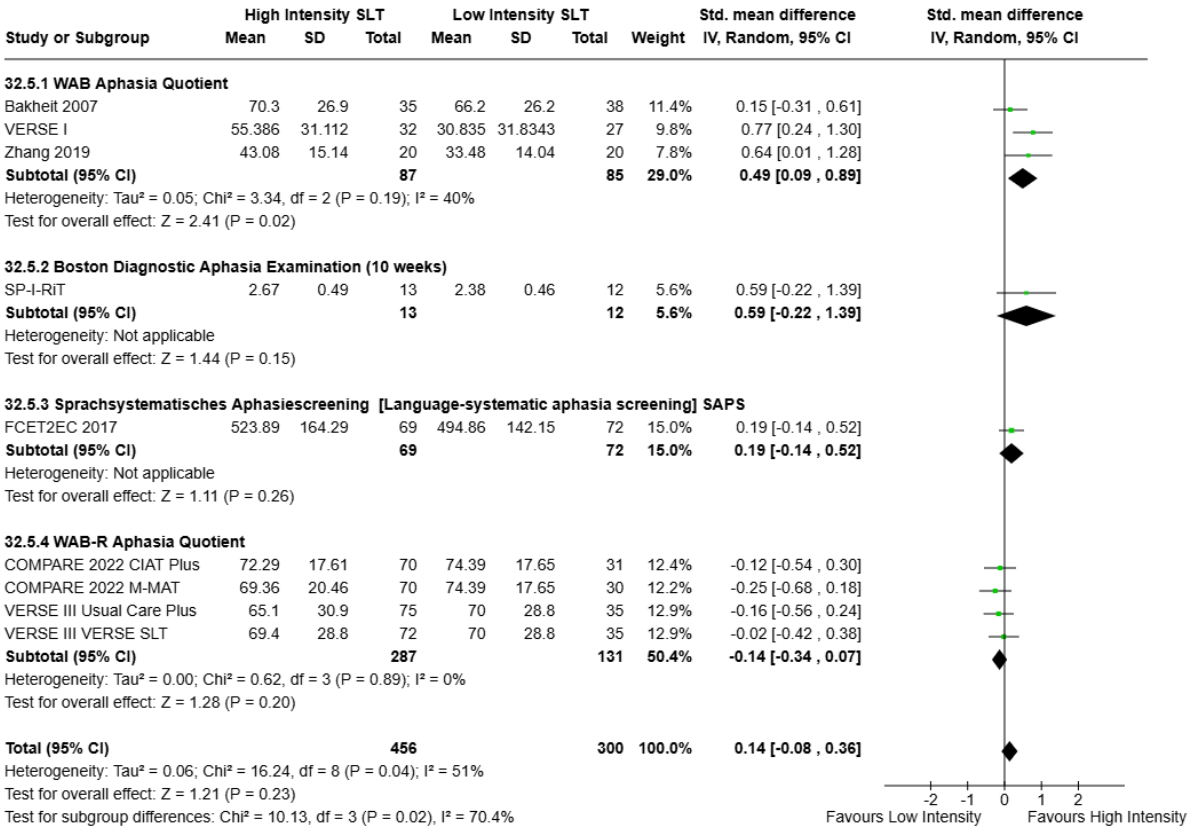


PICO 1. Functional communication follow-up (sensitivity analysis COMPARE trial Scenario Test data)



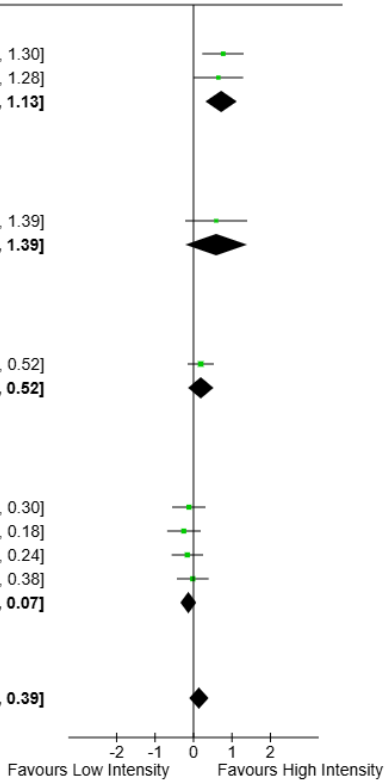
Supplement 10: Results of PICO 2 Meta-Analyses

PICO 2. Overall language



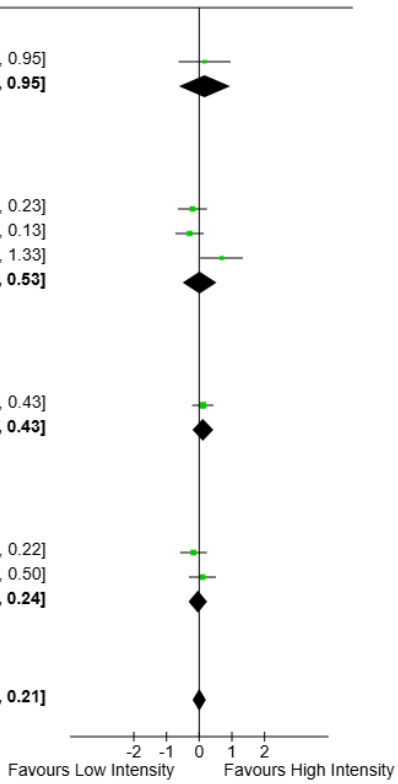
PICO 2. Overall language (sensitivity analysis excluding Bakheit 2007 trial)

Study or Subgroup	High Intensity SLT Mean	SD	Total	Low Intensity SLT Mean	SD	Total	Weight	Std. mean difference IV, Random, 95% CI
32.6.1 WAB Aphasia Quotient								
VERSE I	55.386	31.112	32	30.835	31.8343	27	11.3%	0.77 [0.24 , 1.30]
Zhang 2019	43.08	15.14	20	33.48	14.04	20	9.2%	0.64 [0.01 , 1.28]
Subtotal			**52**			**47**	**20.5%**	**0.72 [0.31 , 1.13]**
Test for overall effect: Z = 3.45 (P = 0.0006)								
Heterogeneity: Tau² = 0.00; Chi² = 0.09, df = 1 (P = 0.77); I² = 0%								
32.6.2 Boston Diagnostic Aphasia Examination (10 weeks)								
SP-I-RiT	2.67	0.49	13	2.38	0.46	12	6.8%	0.59 [-0.22 , 1.39]
Subtotal			**13**			**12**	**6.8%**	**0.59 [-0.22 , 1.39]**
Test for overall effect: Z = 1.44 (P = 0.15)								
Heterogeneity: Not applicable								
32.6.3 Sprachsystematisches Aphasiescreening [Language-systematic aphasia screening] SAPS								
FCET2EC 2017	523.89	164.29	69	494.86	142.15	72	16.4%	0.19 [-0.14 , 0.52]
Subtotal			**69**			**72**	**16.4%**	**0.19 [-0.14 , 0.52]**
Test for overall effect: Z = 1.11 (P = 0.26)								
Heterogeneity: Not applicable								
32.6.4 WAB-R Aphasia Quotient								
COMPARE 2022 CIAT Plus	72.29	17.61	70	74.39	17.65	31	13.9%	-0.12 [-0.54 , 0.30]
COMPARE 2022 M-MAT	69.36	20.46	70	74.39	17.65	30	13.7%	-0.25 [-0.68 , 0.18]
VERSE III Usual Care Plus	65.1	30.9	75	70	28.8	35	14.4%	-0.16 [-0.56 , 0.24]
VERSE III VERSE SLT	69.4	28.8	72	70	28.8	35	14.4%	-0.02 [-0.42 , 0.38]
Subtotal			**287**			**131**	**56.4%**	**-0.14 [-0.34 , 0.07]**
Test for overall effect: Z = 1.28 (P = 0.20)								
Heterogeneity: Tau² = 0.00; Chi² = 0.62, df = 3 (P = 0.89); I² = 0%								
Total			**421**			**262**	**100.0%**	**0.14 [-0.11 , 0.39]**
Test for overall effect: Z = 1.10 (P = 0.27)								
Test for subgroup differences: Chi² = 15.47, df = 3 (P = 0.001), I² = 80.6%								
Heterogeneity: Tau² = 0.07; Chi² = 16.19, df = 7 (P = 0.02); I² = 57%								

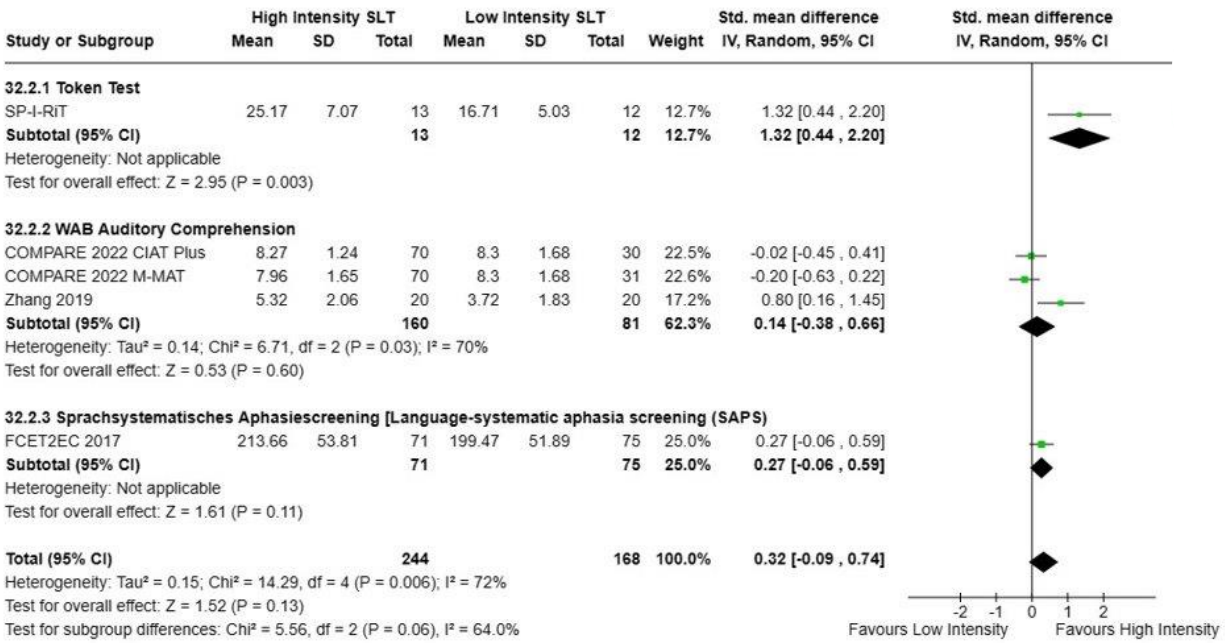


PICO 2. Expressive language (mixed)

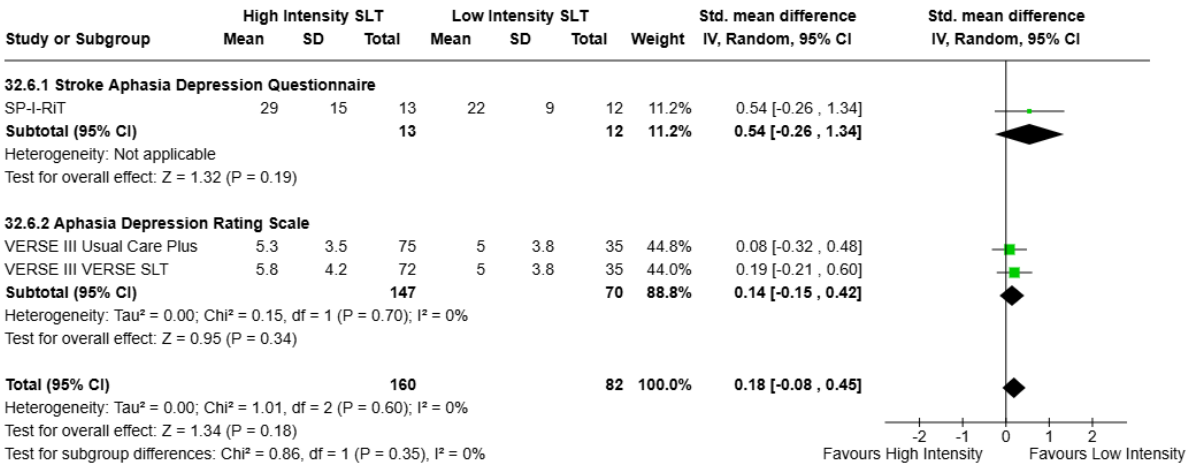
Study or Subgroup	High Intensity SLT Mean	SD	Total	Low Intensity SLT Mean	SD	Total	Weight	Std. mean difference IV, Random, 95% CI
32.4.1 Lisbon Aphasia Assessment Battery								
SP-I-RiT	7.67	2.53	13	7.25	2.4	12	5.9%	0.16 [-0.62 , 0.95]
Subtotal (95% CI)			**13**			**12**	**5.9%**	**0.16 [-0.62 , 0.95]**
Heterogeneity: Not applicable								
Test for overall effect: Z = 0.41 (P = 0.68)								
32.4.2 WAB Naming								
COMPARE 2022 CIAT Plus	7.01	2.27	70	7.47	2.2	30	15.3%	-0.20 [-0.63 , 0.23]
COMPARE 2022 M-MAT	6.76	2.52	70	7.47	2.2	31	15.5%	-0.29 [-0.72 , 0.13]
Zhang 2019	2.49	1.5	20	1.56	1.13	20	8.3%	0.69 [0.05 , 1.33]
Subtotal (95% CI)			**160**			**81**	**39.1%**	**0.01 [-0.51 , 0.53]**
Heterogeneity: Tau² = 0.15; Chi² = 6.77, df = 2 (P = 0.03); I² = 70%								
Test for overall effect: Z = 0.04 (P = 0.96)								
32.4.3 Sprachsystematisches Aphasiescreening [Language-systematic aphasia screening] (SAPS)								
FCET2EC 2017	317.71	143.11	75	302.91	117.91	75	21.8%	0.11 [-0.21 , 0.43]
Subtotal (95% CI)			**75**			**75**	**21.8%**	**0.11 [-0.21 , 0.43]**
Heterogeneity: Not applicable								
Test for overall effect: Z = 0.69 (P = 0.49)								
32.4.4 Boston Naming Test								
VERSE III Usual Care Plus	27.6	21.5	75	31.3	18.8	35	16.7%	-0.18 [-0.58 , 0.22]
VERSE III VERSE SLT	33.2	19.9	72	31.3	18.8	35	16.5%	0.10 [-0.31 , 0.50]
Subtotal (95% CI)			**147**			**70**	**33.2%**	**-0.04 [-0.33 , 0.24]**
Heterogeneity: Tau² = 0.00; Chi² = 0.89, df = 1 (P = 0.35); I² = 0%								
Test for overall effect: Z = 0.28 (P = 0.78)								
Total (95% CI)			**395**			**238**	**100.0%**	**0.00 [-0.20 , 0.21]**
Heterogeneity: Tau² = 0.02; Chi² = 8.68, df = 6 (P = 0.19); I² = 31%								
Test for overall effect: Z = 0.02 (P = 0.99)								
Test for subgroup differences: Chi² = 0.61, df = 3 (P = 0.89), I² = 0%								



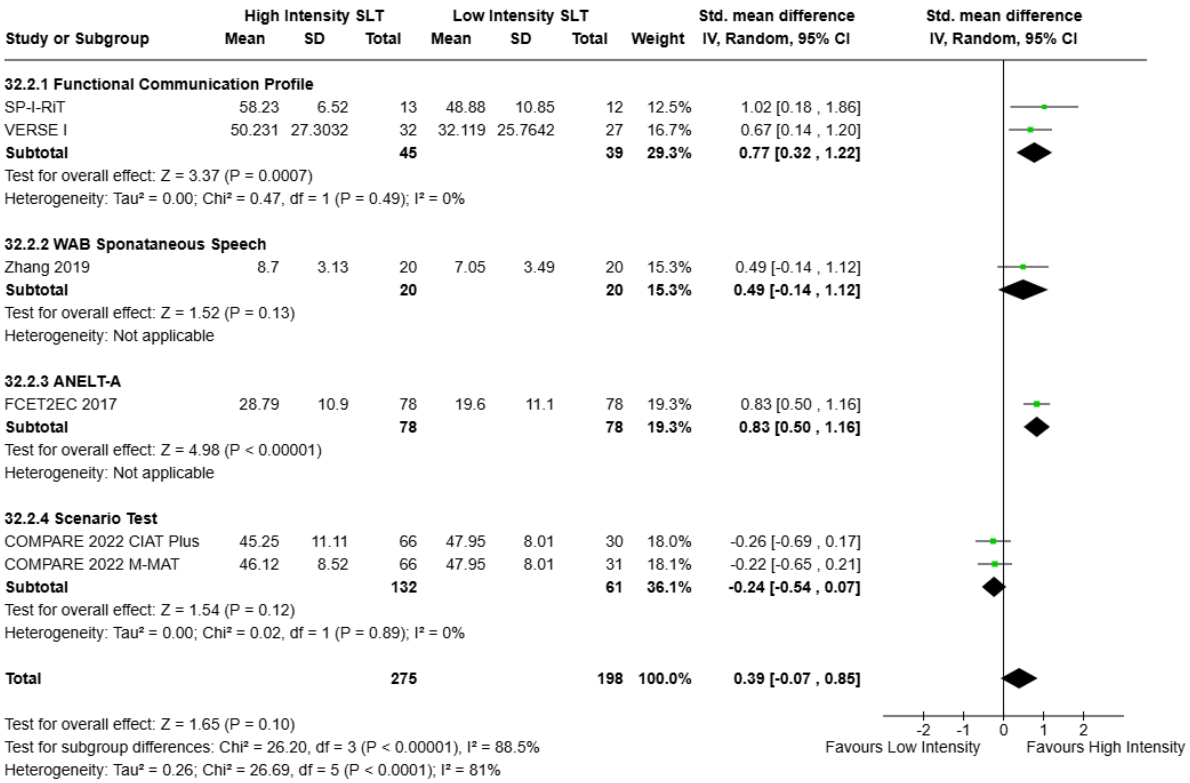
PICO 2. Auditory comprehension



PICO 2. Emotional and social wellbeing

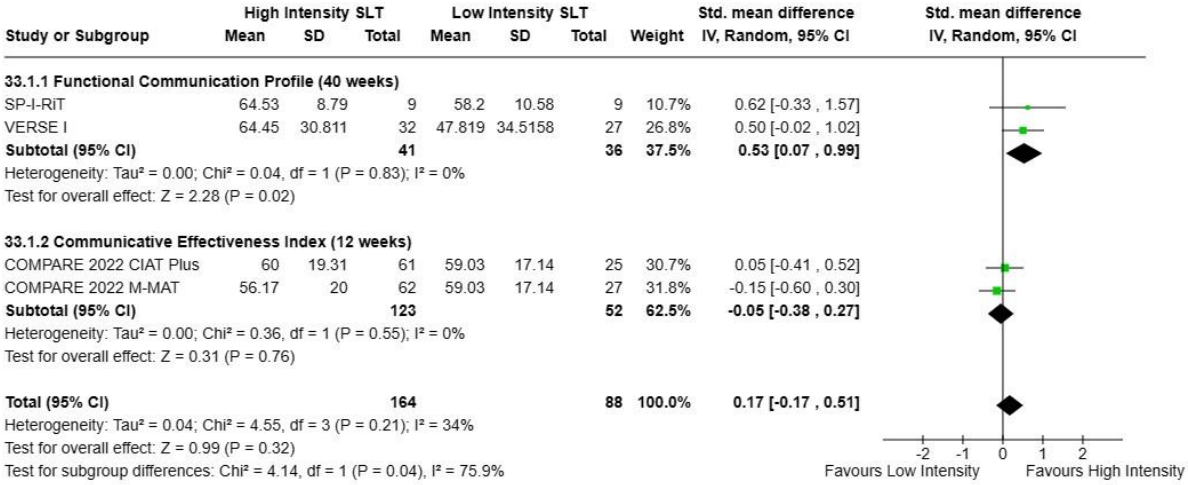


PICO 2. Functional communication (sensitivity analysis COMPARE trial Scenario Test data)

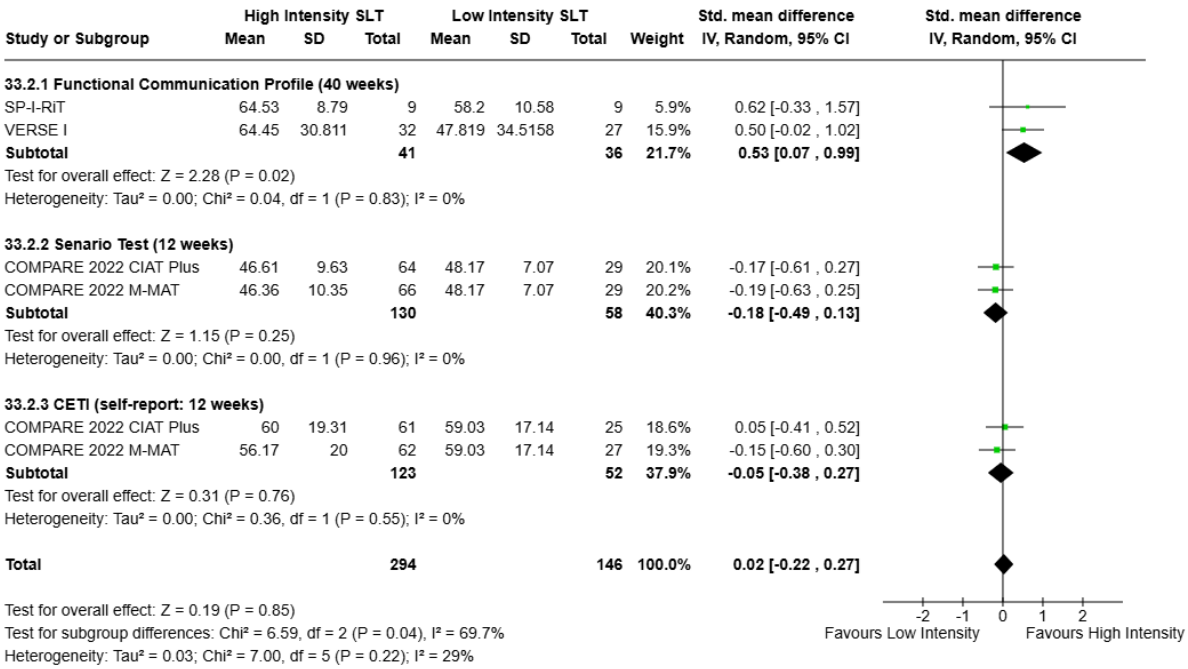


PICO 2 Follow-up

PICO 2. Functional communication follow-up

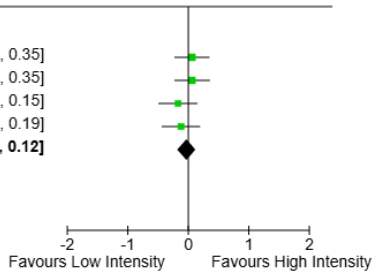


PICO 2. Functional communication follow-up (sensitivity analysis COMPARE trial Scenario Test data)



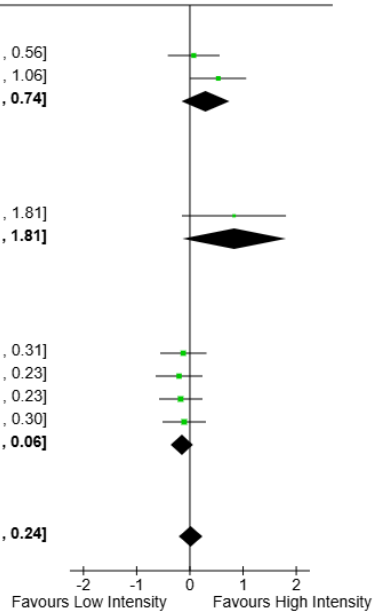
PICO 2 Quality of life follow-up

Study or Subgroup	High intensity SLT Mean	SD	Total	Low intensity SLT Mean	SD	Total	Weight	Mean difference IV, Random, 95% CI
33.7.1 SALQoL (COMPARE 12 weeks; VERSE III 26 weeks)								
COMPARE 2022 CIAT Plus	3.73	0.68	65	3.67	0.64	29	27.7%	0.06 [-0.23 , 0.35]
COMPARE 2022 M-MAT	3.73	0.72	67	3.67	0.64	29	26.9%	0.06 [-0.23 , 0.35]
VERSE III Usual Care Plus	3.48	0.86	75	3.65	0.76	35	22.3%	-0.17 [-0.49 , 0.15]
VERSE III VERSE SLT	3.53	0.8	72	3.65	0.76	35	23.1%	-0.12 [-0.43 , 0.19]
Subtotal (95% CI)			**279**			**128**	**100.0%**	**-0.03 [-0.18 , 0.12]**
Heterogeneity: Tau² = 0.00; Chi² = 1.81, df = 3 (P = 0.61); I² = 0%								
Test for overall effect: Z = 0.43 (P = 0.67)								
Test for subgroup differences: Not applicable								

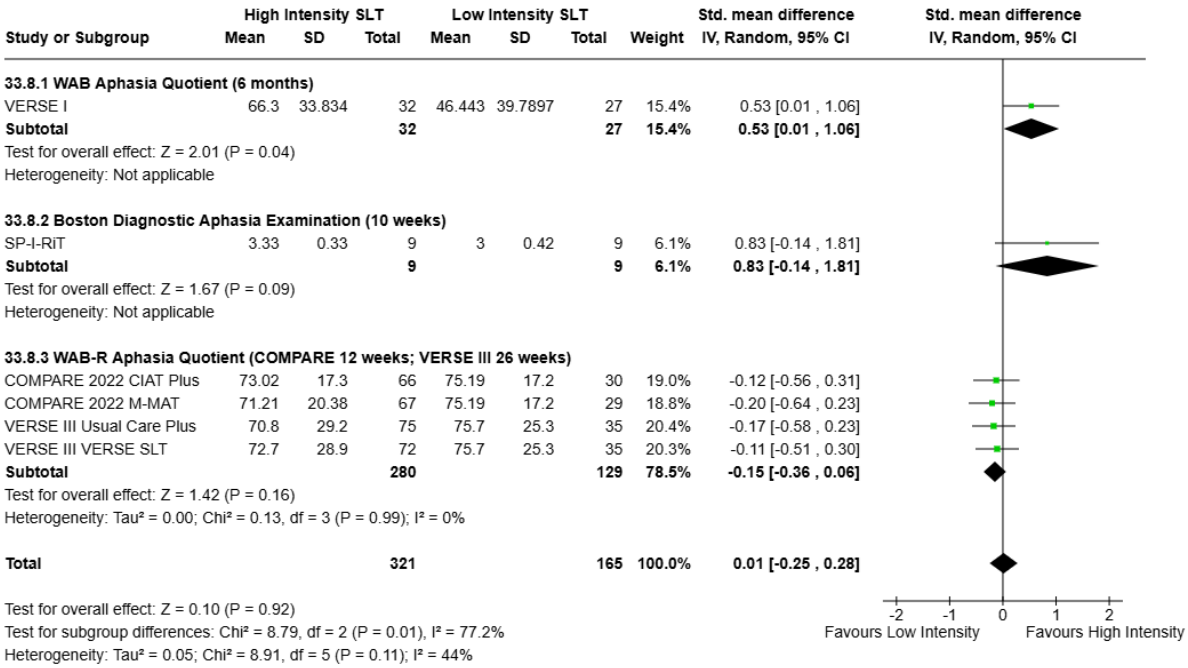


PICO 2. Overall language follow-up

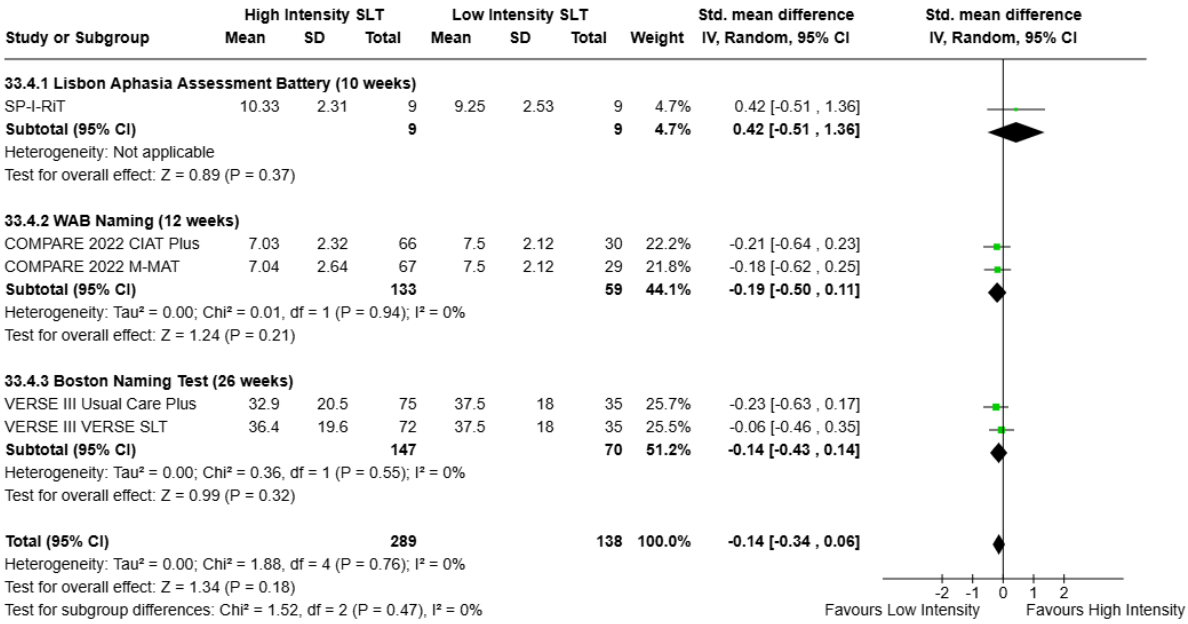
Study or Subgroup	High Intensity SLT Mean	SD	Total	Low Intensity SLT Mean	SD	Total	Weight	Std. mean difference IV, Random, 95% CI
33.5.1 WAB Aphasia Quotient (6 months)								
Bakheit 2007	69.9	25.2	31	68	26.3	35	14.2%	0.07 [-0.41 , 0.56]
VERSE I	66.3	33.834	32	46.443	39.7897	27	12.8%	0.53 [0.01 , 1.06]
Subtotal (95% CI)			**63**			**62**	**27.0%**	**0.29 [-0.16 , 0.74]**
Heterogeneity: Tau² = 0.04; Chi² = 1.62, df = 1 (P = 0.20); I² = 38%								
Test for overall effect: Z = 1.27 (P = 0.20)								
33.5.2 Boston Diagnostic Aphasia Examination (10 weeks)								
SP-I-RiT	3.33	0.33	9	3	0.42	9	4.6%	0.83 [-0.14 , 1.81]
Subtotal (95% CI)			**9**			**9**	**4.6%**	**0.83 [-0.14 , 1.81]**
Heterogeneity: Not applicable								
Test for overall effect: Z = 1.67 (P = 0.09)								
33.5.3 WAB-R Aphasia Quotient (COMPARE 12 weeks; VERSE III 26 weeks)								
COMPARE 2022 CIAT Plus	73.02	17.3	66	75.19	17.2	30	16.4%	-0.12 [-0.56 , 0.31]
COMPARE 2022 M-MAT	71.21	20.38	67	75.19	17.2	29	16.2%	-0.20 [-0.64 , 0.23]
VERSE III Usual Care Plus	70.8	29.2	75	75.7	25.3	35	17.9%	-0.17 [-0.58 , 0.23]
VERSE III VERSE SLT	72.7	28.9	72	75.7	25.3	35	17.8%	-0.11 [-0.51 , 0.30]
Subtotal (95% CI)			**280**			**129**	**68.4%**	**-0.15 [-0.36 , 0.06]**
Heterogeneity: Tau² = 0.00; Chi² = 0.13, df = 3 (P = 0.99); I² = 0%								
Test for overall effect: Z = 1.42 (P = 0.16)								
Total (95% CI)			**352**			**200**	**100.0%**	**0.01 [-0.21 , 0.24]**
Heterogeneity: Tau² = 0.03; Chi² = 9.04, df = 6 (P = 0.17); I² = 34%								
Test for overall effect: Z = 0.12 (P = 0.90)								
Test for subgroup differences: Chi² = 6.25, df = 2 (P = 0.04), I² = 68.0%								



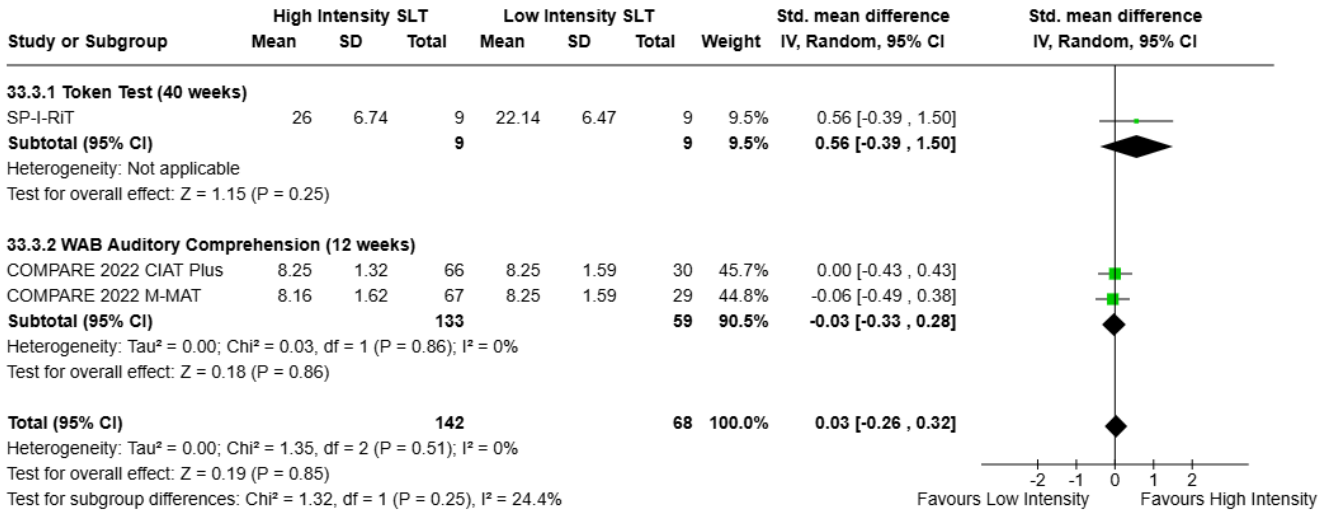
PICO 2. Overall language follow-up (sensitivity analysis excluding Bakheit 2007 trial)



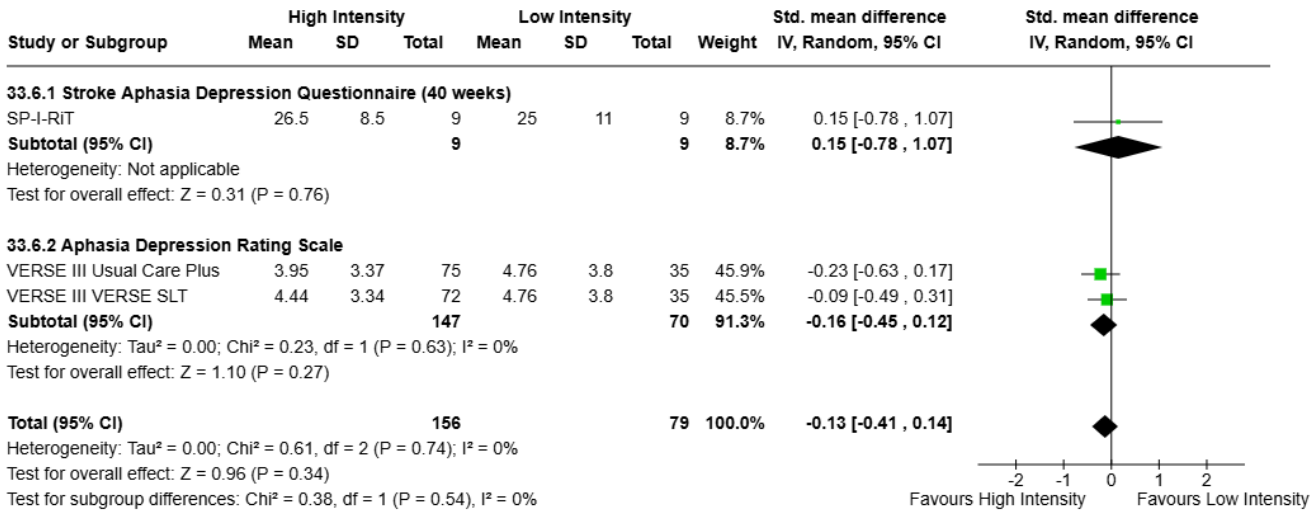
PICO 2. Expressive language (mixed) follow-up



PICO 2. Auditory comprehension follow-up

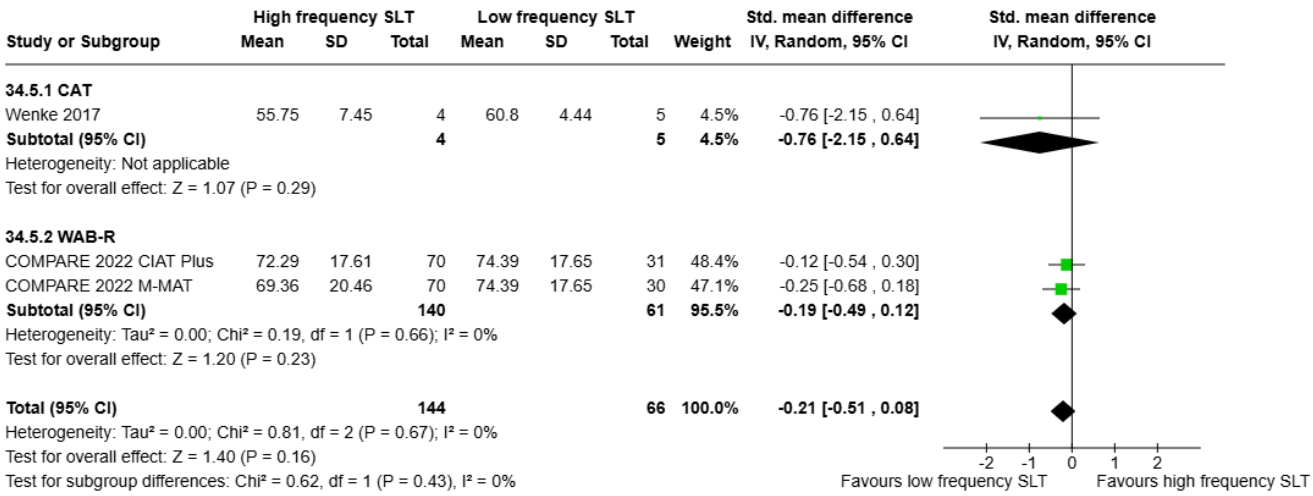


PICO 2. Emotional and social wellbeing follow-up

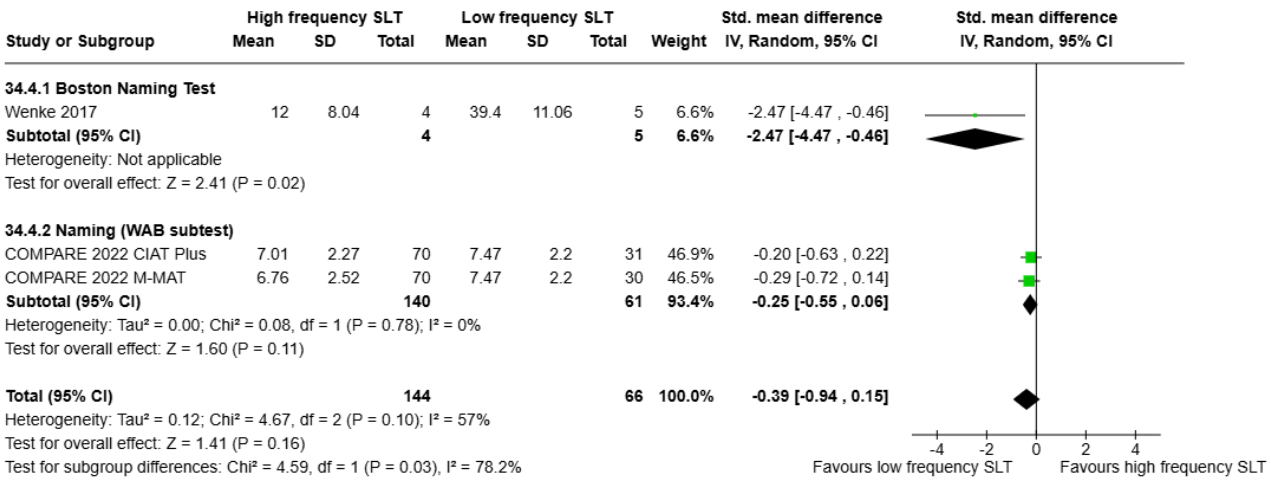


Supplement 11: Results of PICO 3 Meta-Analyses

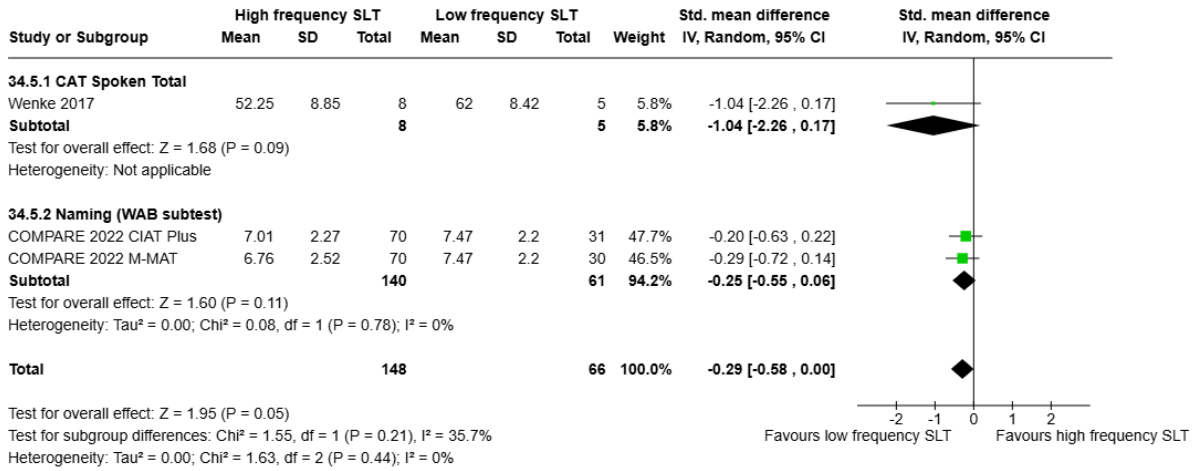
PICO 3. Overall language



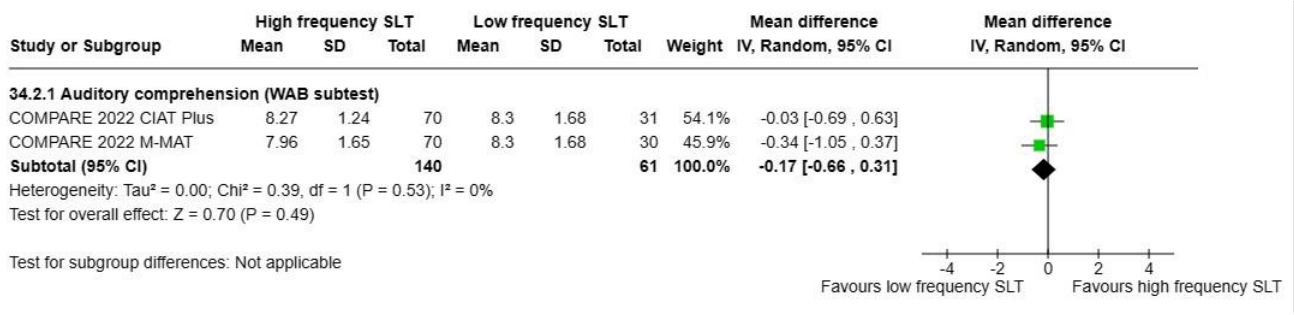
PICO 3. Expressive language - naming



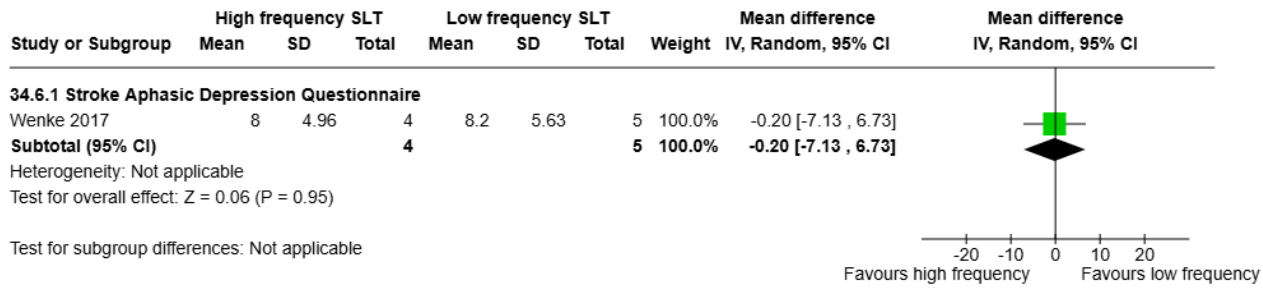
PICO 3. Expressive language (sensitivity analysis Wenke 2017 CAT spoken data)



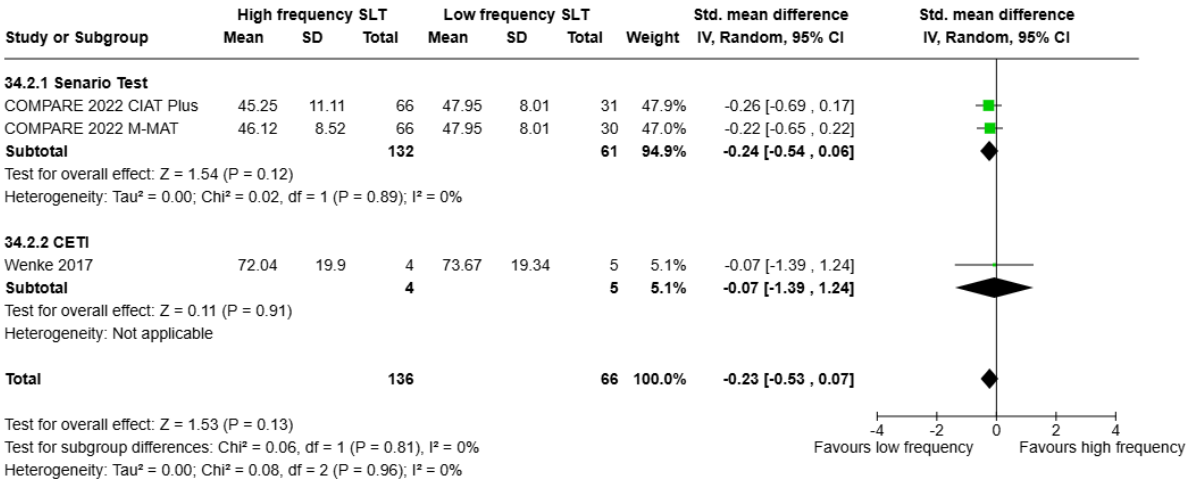
PICO 3. Auditory comprehension



PICO 3. Emotional and social wellbeing

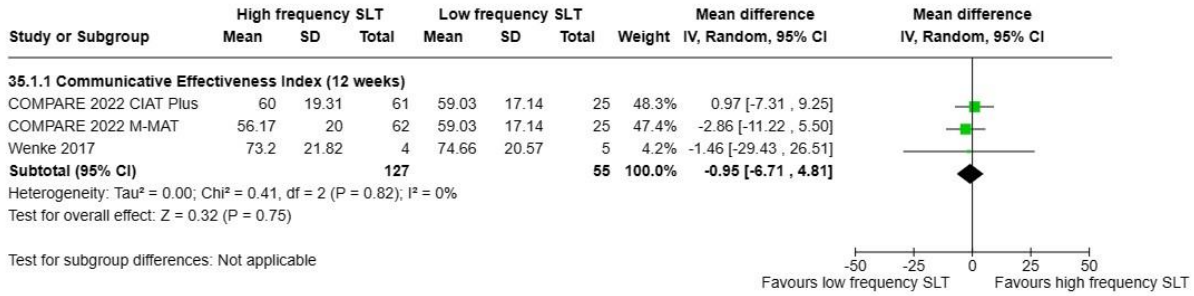


PICO 3. Functional communication (sensitivity analysis COMPARE trial Scenario Test data)

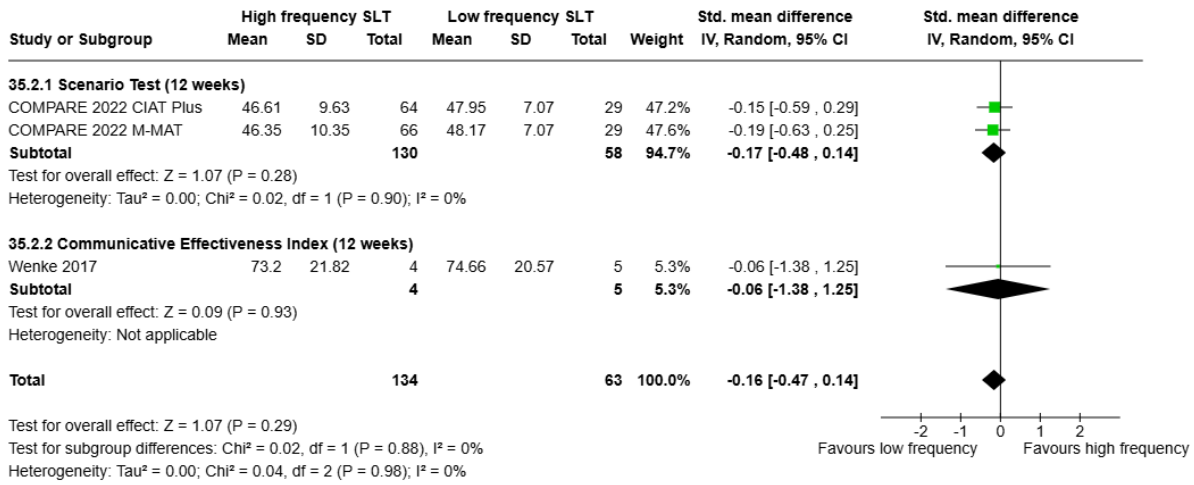


PICO 3 Follow-up

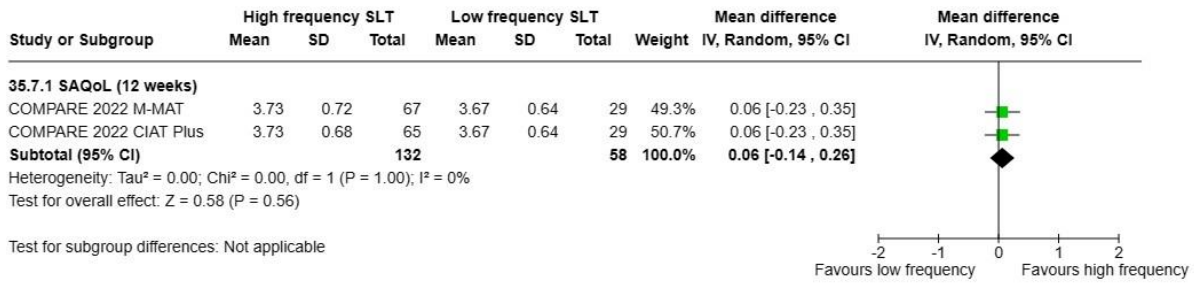
PICO 3. Functional communication follow-up



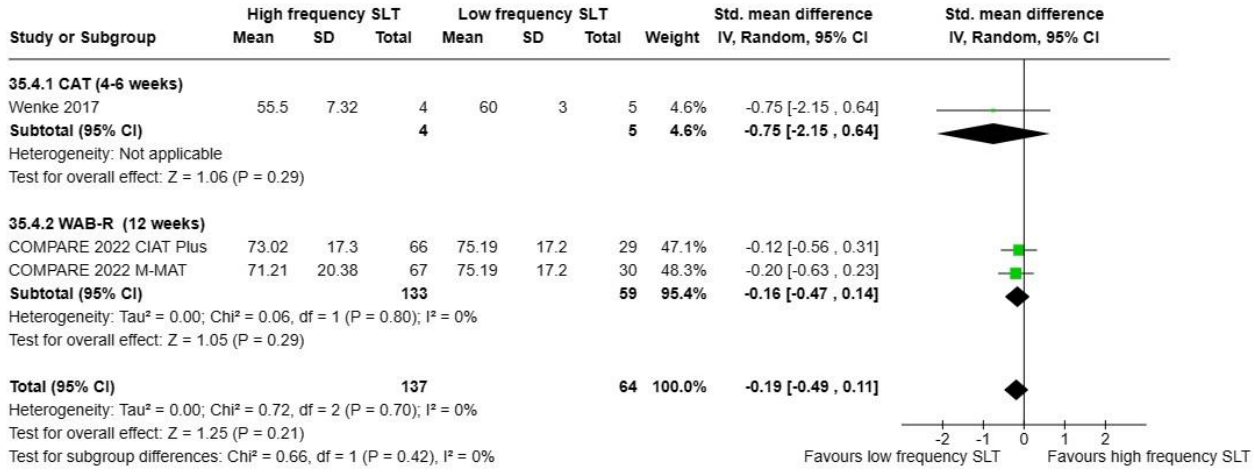
PICO 3. Functional communication follow-up (sensitivity analysis COMPARE trial Scenario Test data)



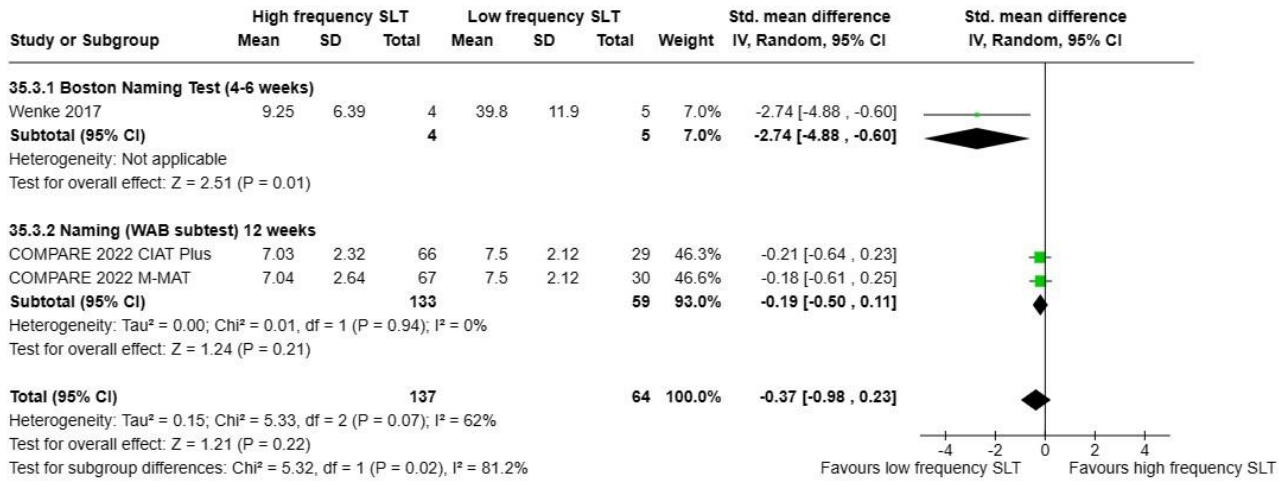
PICO 3. Quality of life follow-up



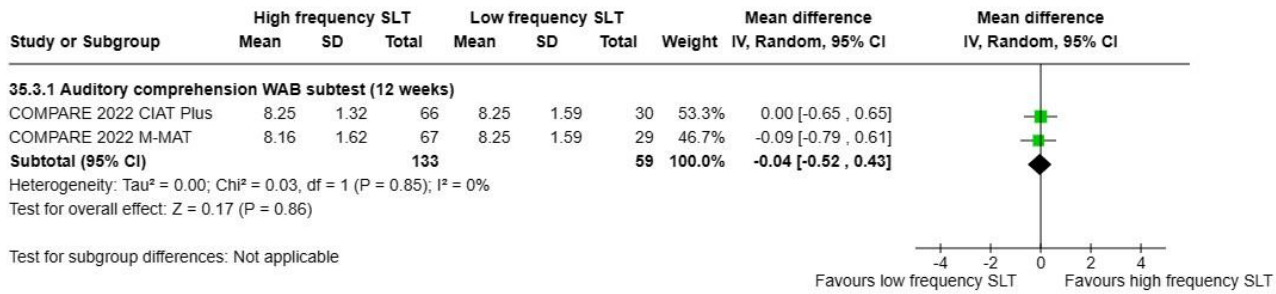
PICO 3 Overall language follow-up



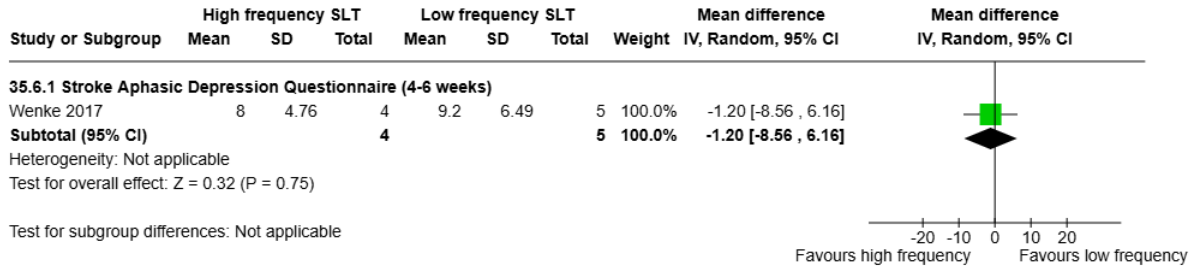
PICO 3. Expressive language (naming) follow-up



PICO 3. Auditory comprehension follow-up

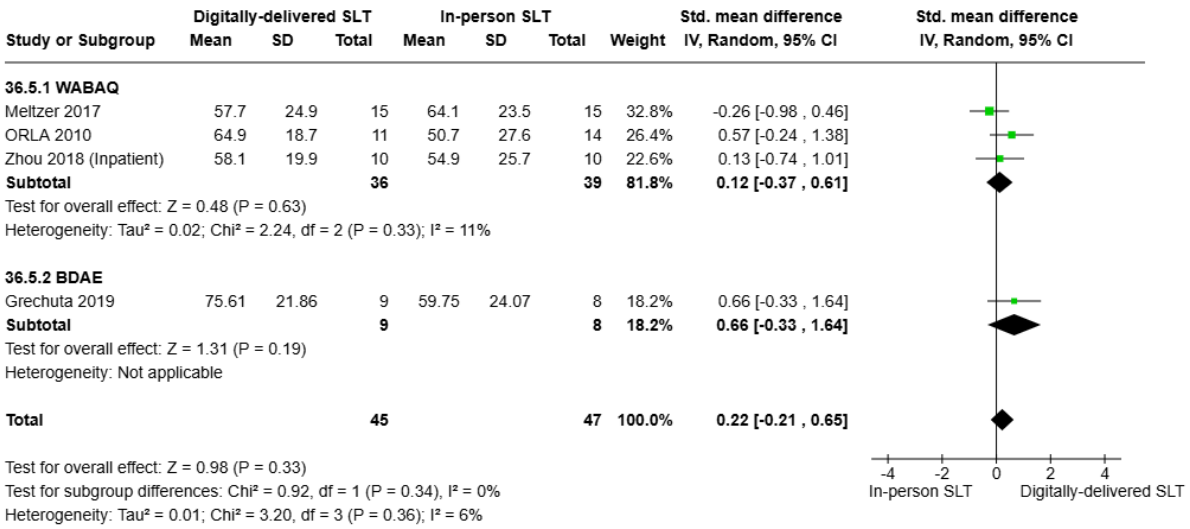


PICO 3. Emotional and social wellbeing follow-up

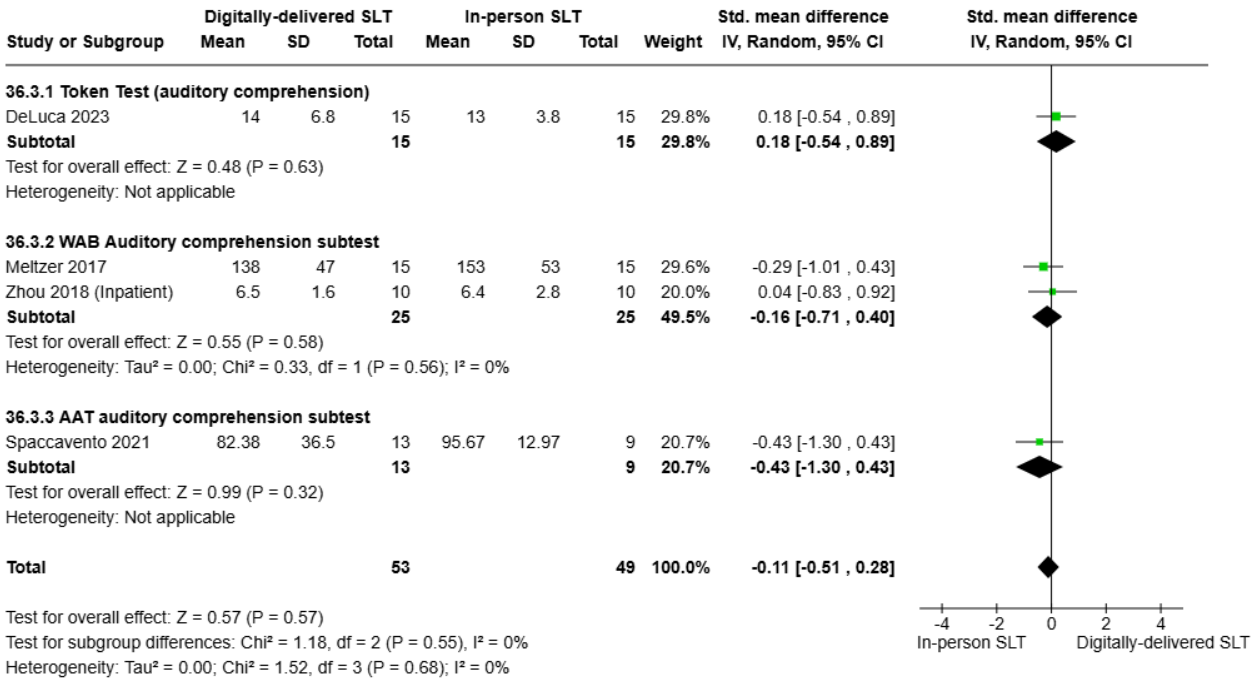


Supplement 12: Results of PICO 4a Meta-Analyses

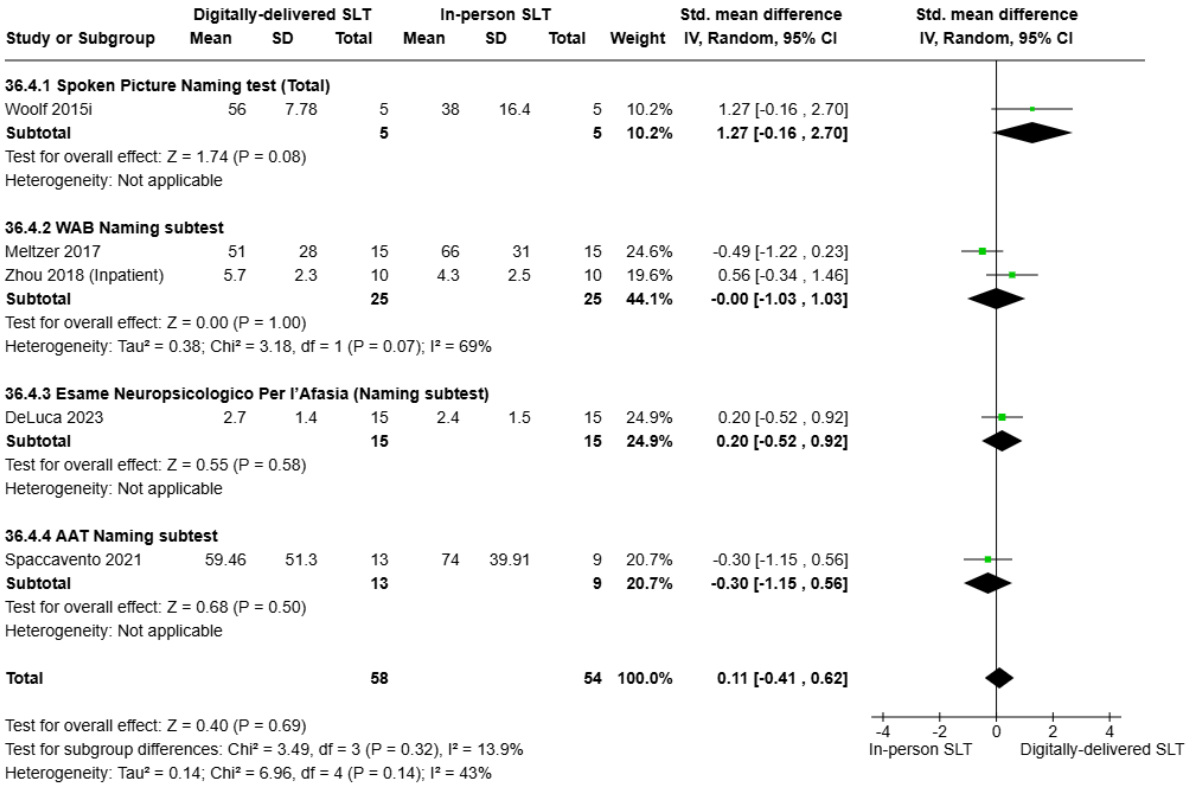
PICO 4a. Overall language



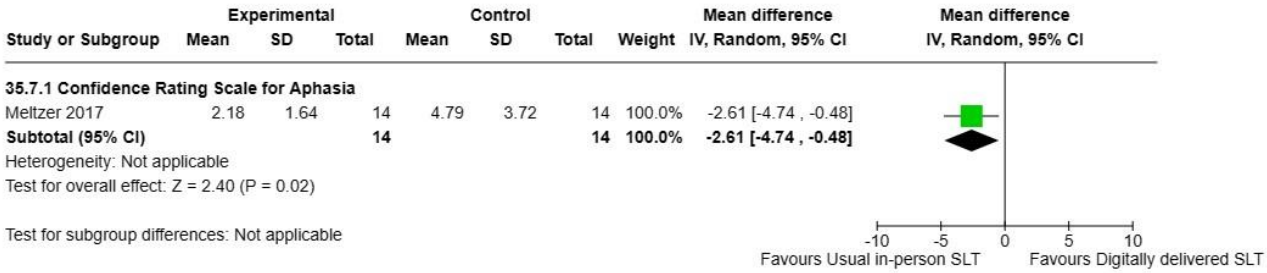
PICO 4a. Auditory comprehension



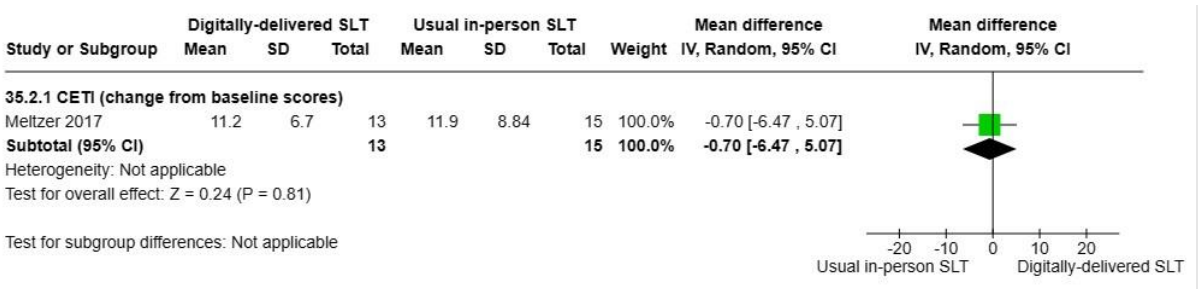
PICO 4a. Expressive language - naming



PICO 4a. Communication confidence

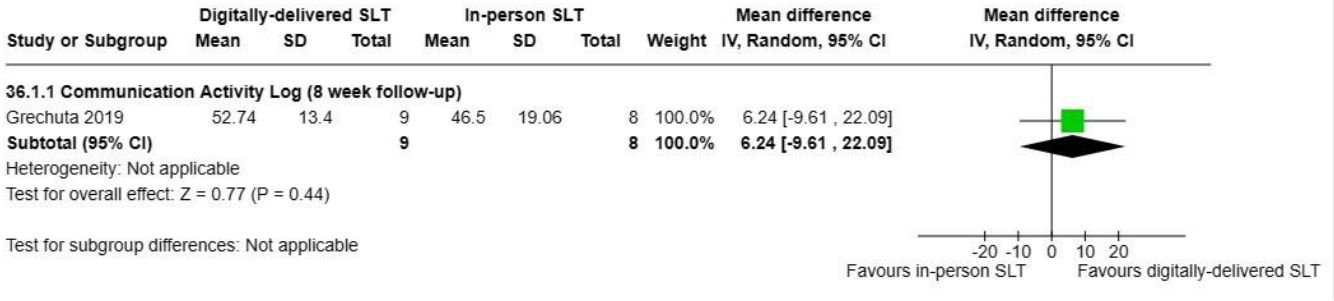


PICO 4a. Functional communication change from baseline scores

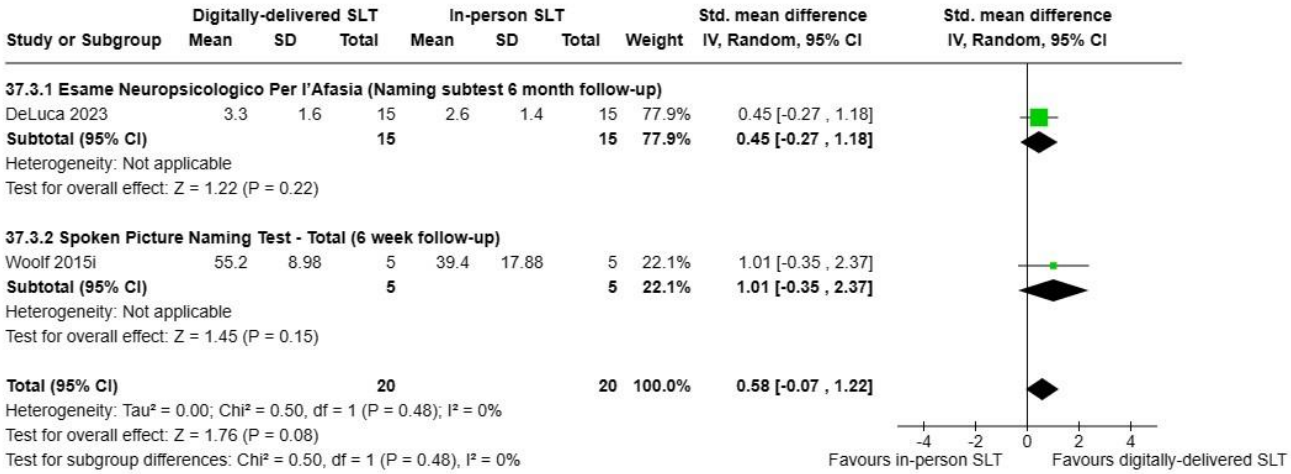


PICO 4a Follow up

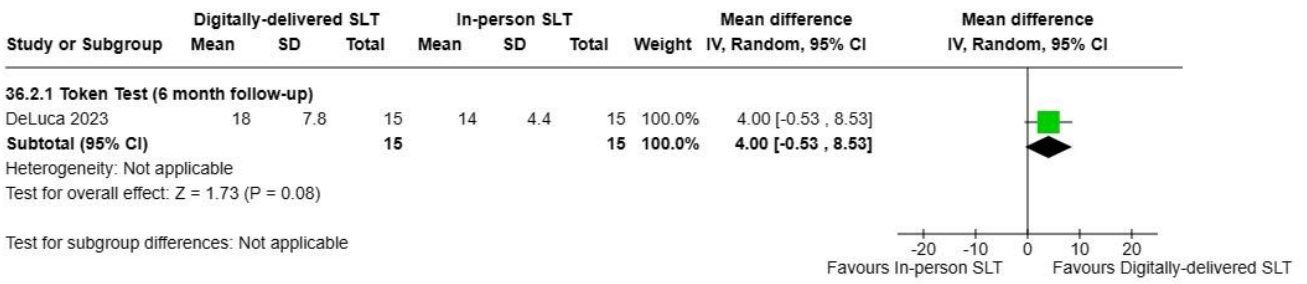
PICO 4a. Functional communication follow up



PICO 4a. Expressive language - naming follow-up

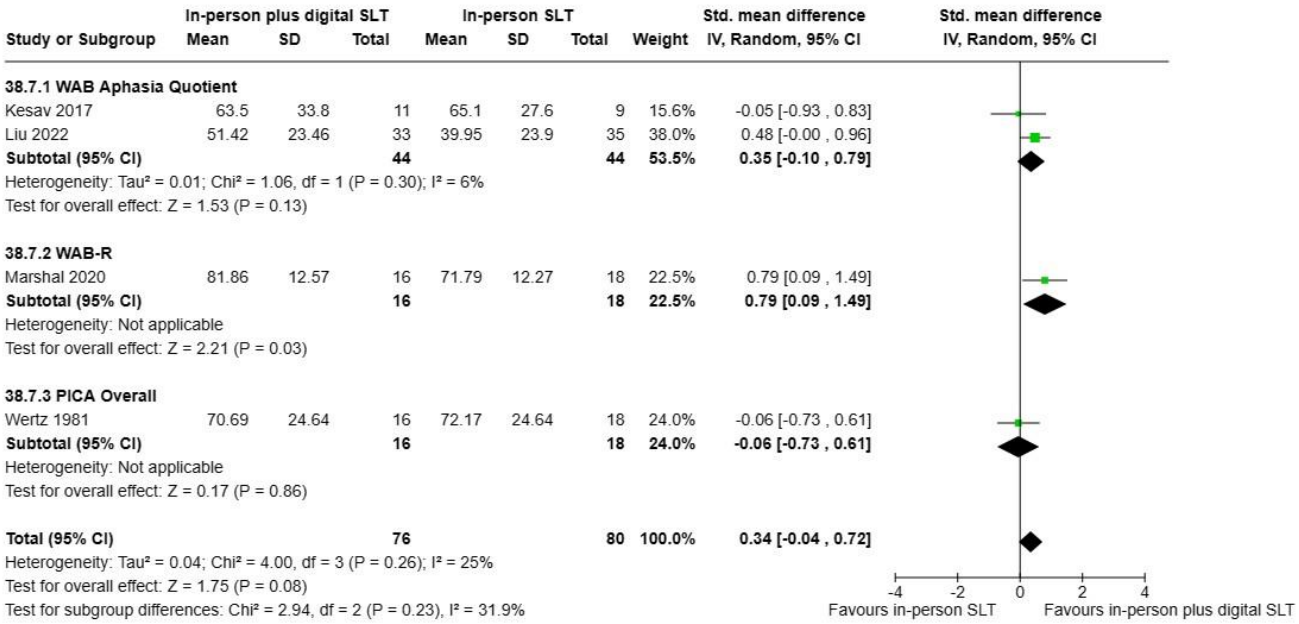


PICO 4a. Auditory comprehension follow-up

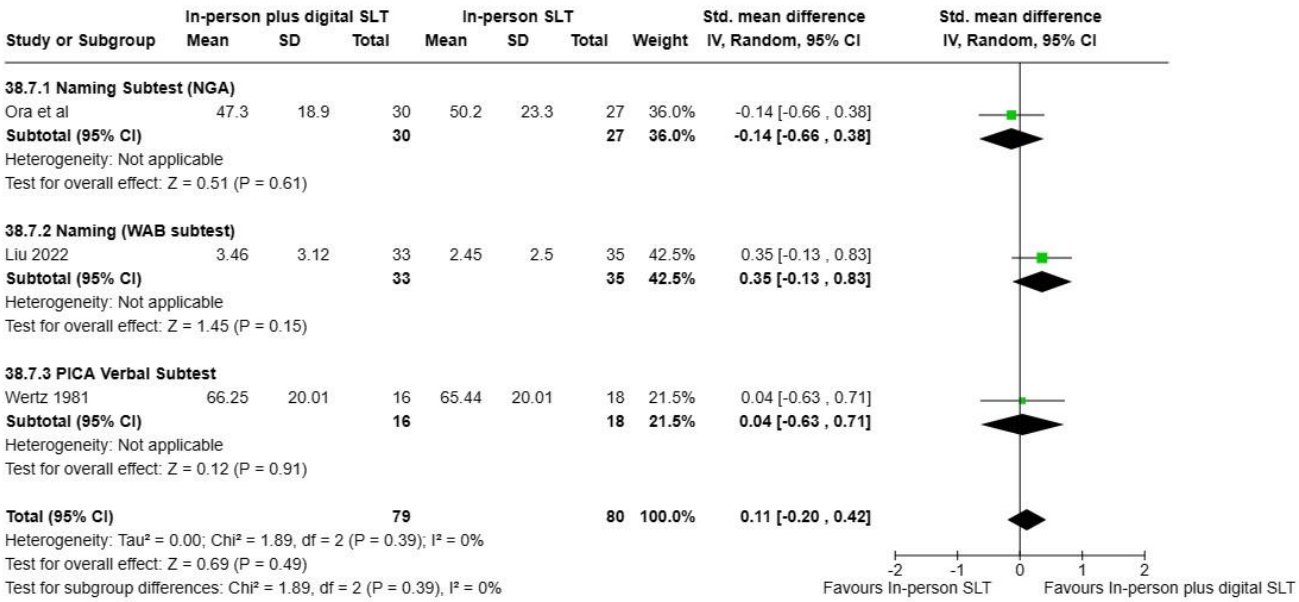


Supplement 13: Results of PICO 4b Meta-Analyses

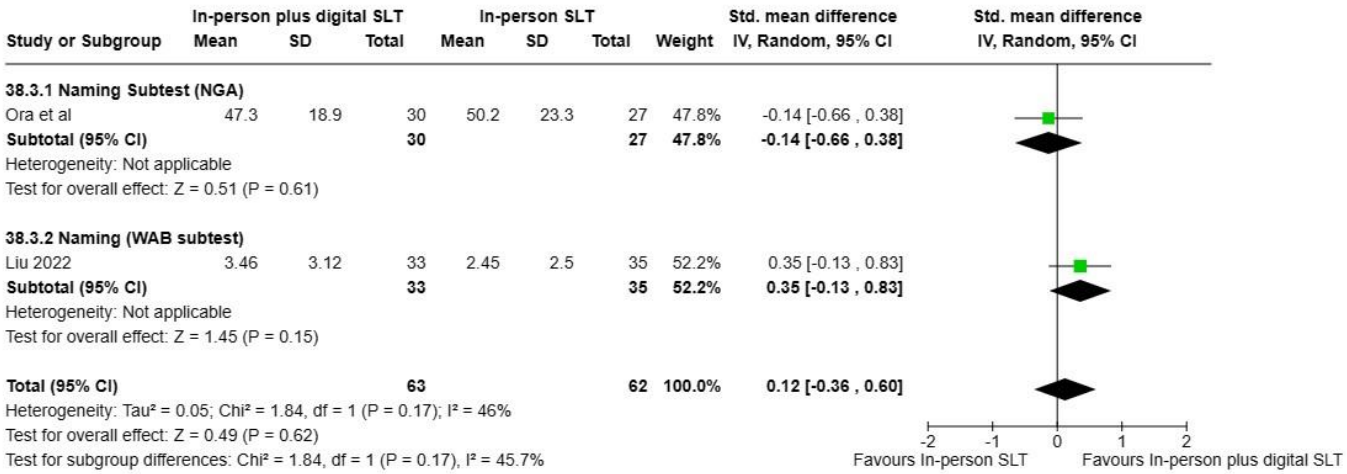
PICO 4b. Overall language



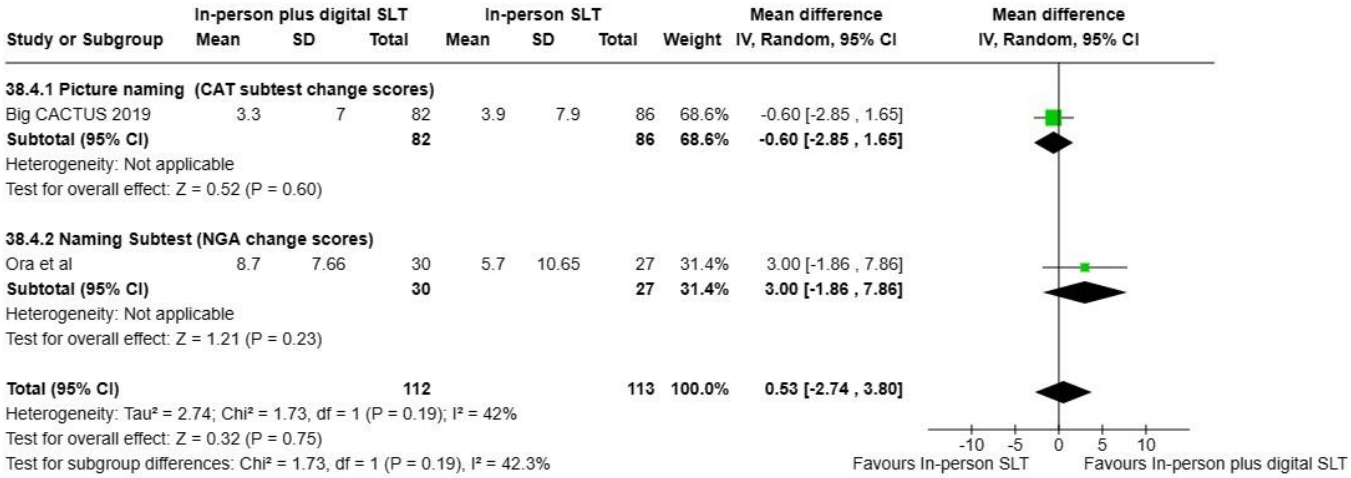
PICO 4b. Expressive language (mixed).



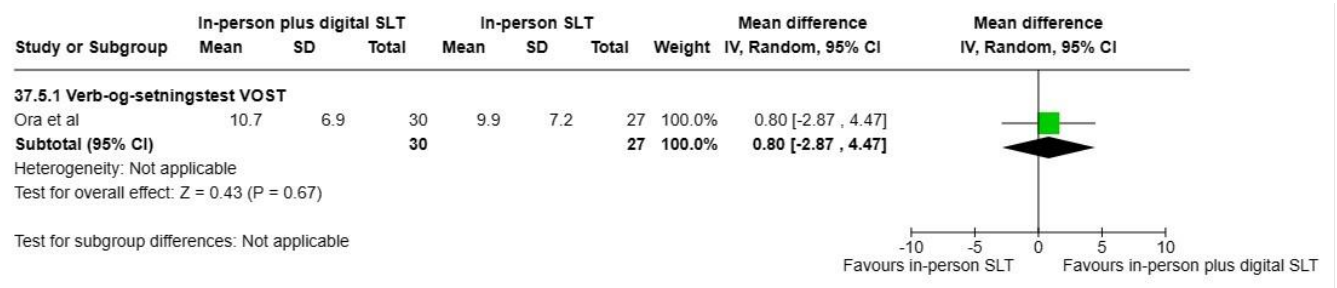
PICO 4b. Expressive language ±naming



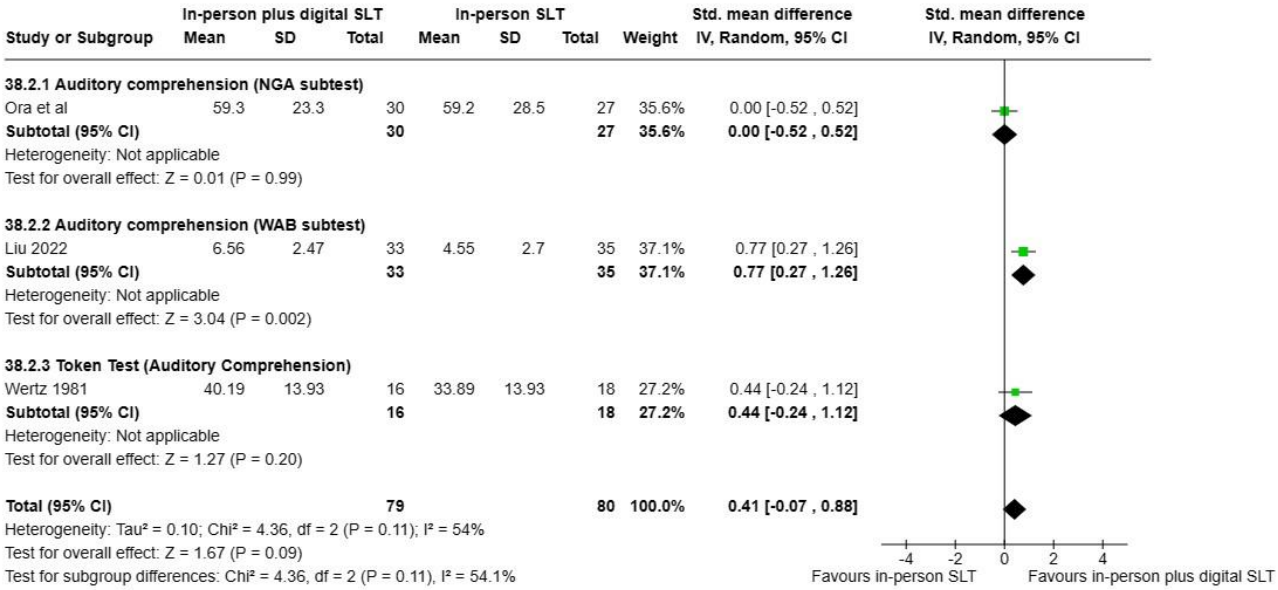
PICO 4b. Expressive language - naming (change from baseline scores)



PICO 4b. Expressive language ±sentence production

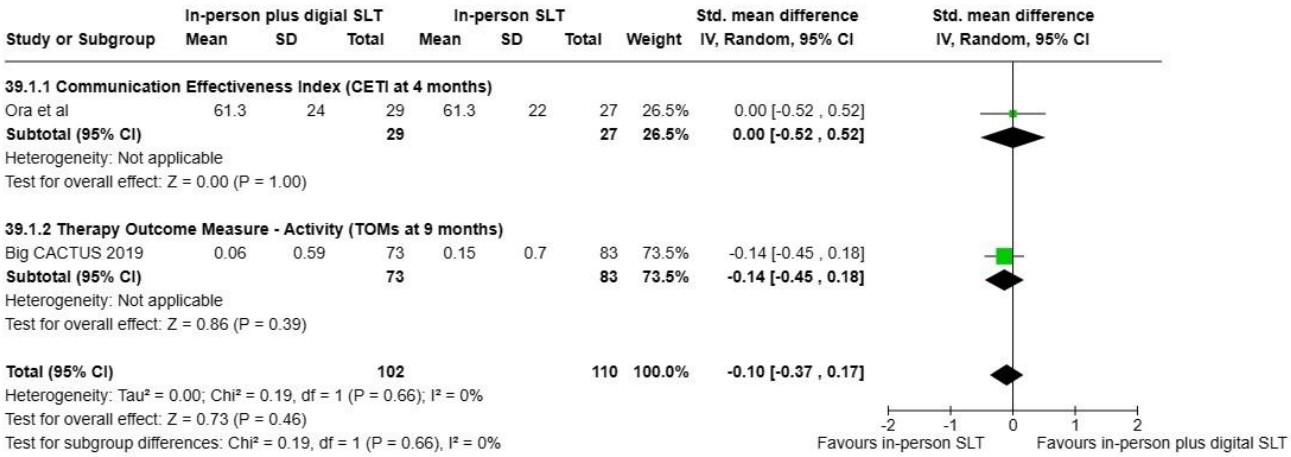


PICO 4b. Auditory comprehension

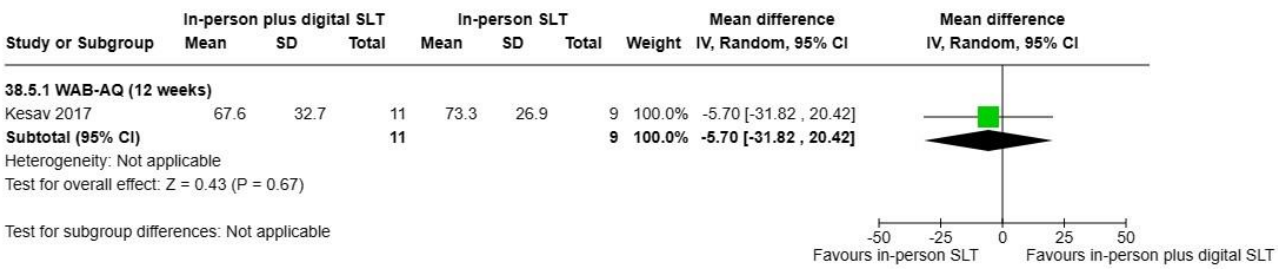


PICO 4b Follow-up

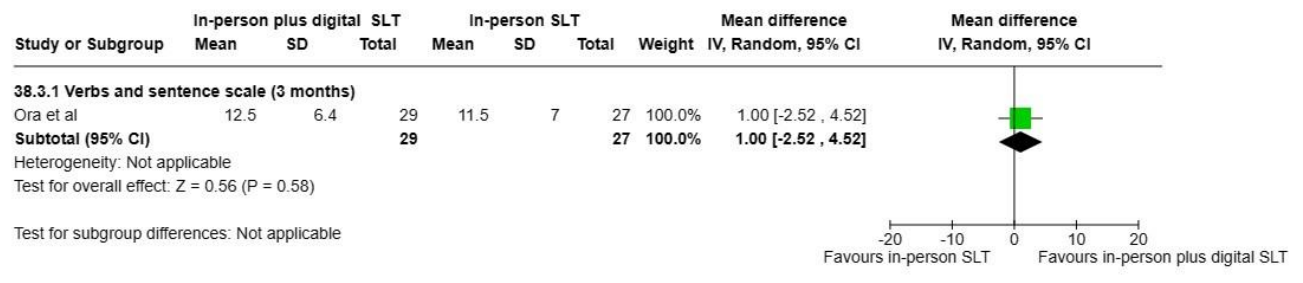
PICO 4b. Functional communication follow-up



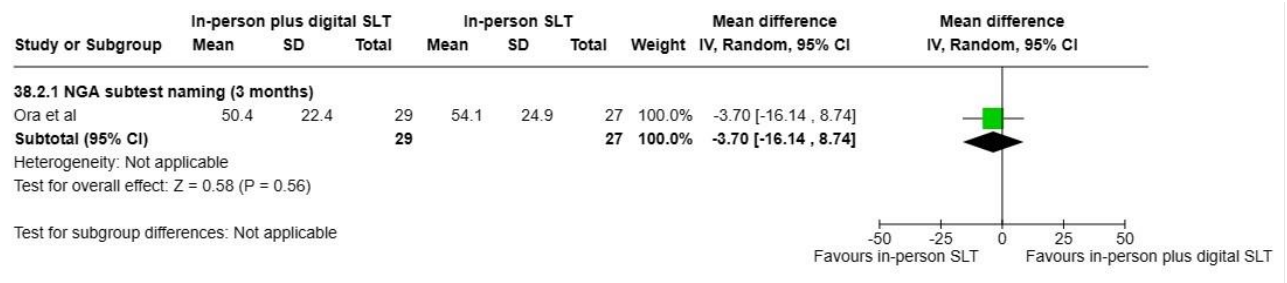
PICO 4b. Overall language ability follow up



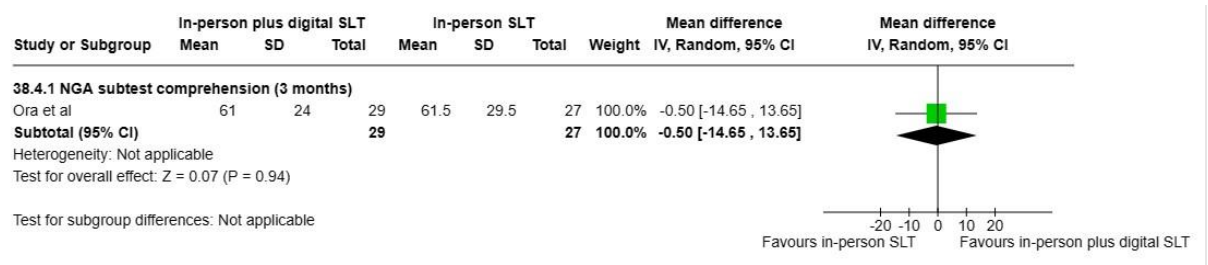
PICO 4b. Expressive language - sentences follow up



PICO 4b. Expressive language ±naming follow-up

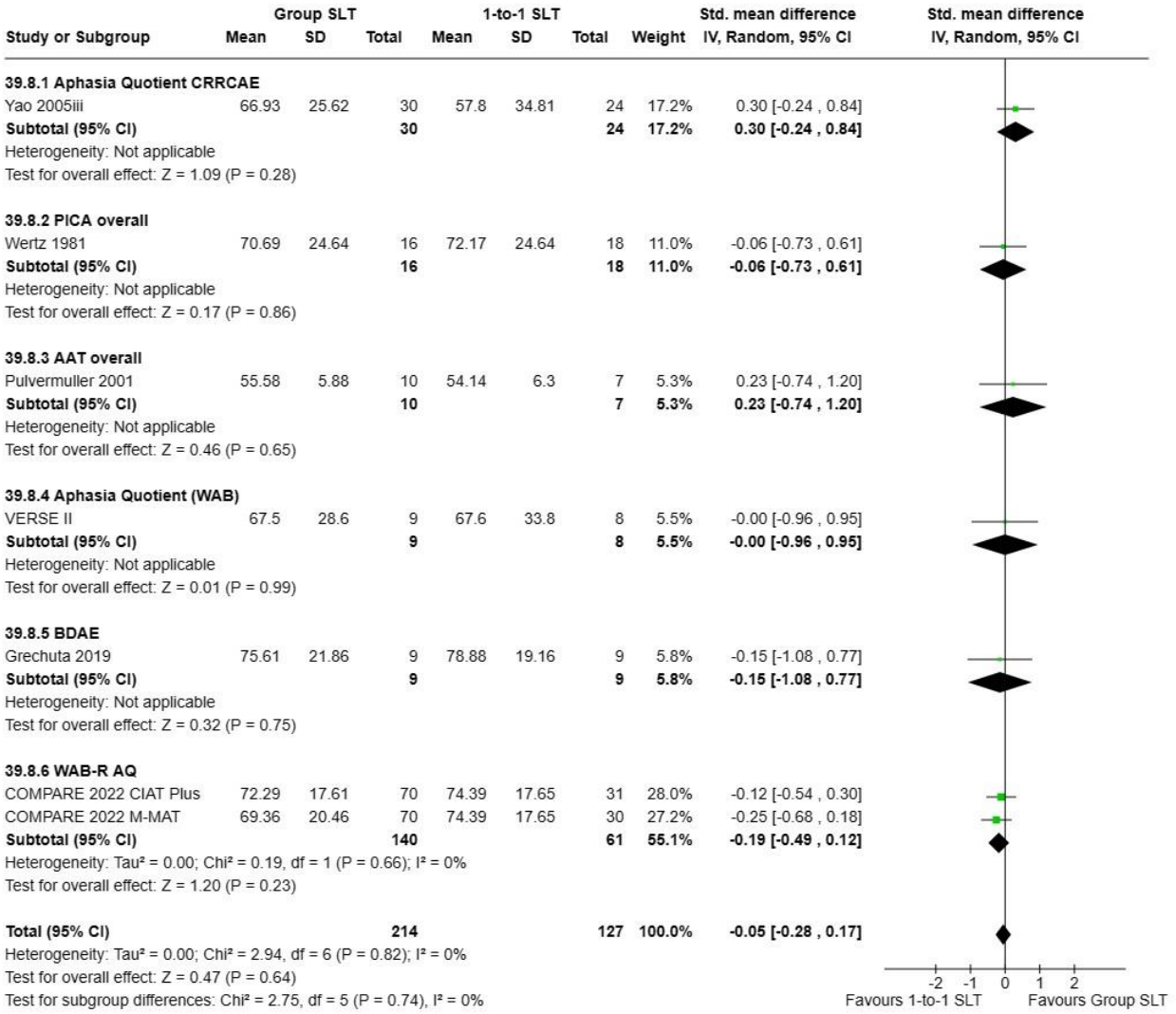


PICO 4b. Auditory comprehension follow up

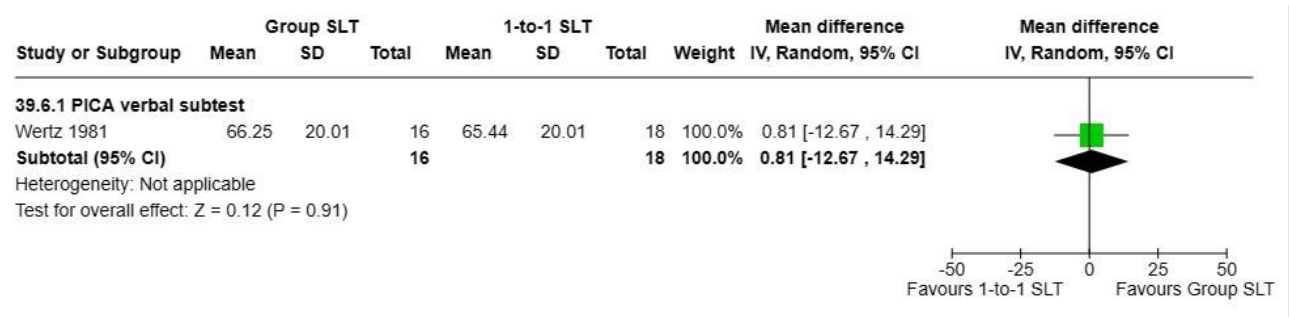


Supplement 14: Results of PICO 5a Meta-Analyses

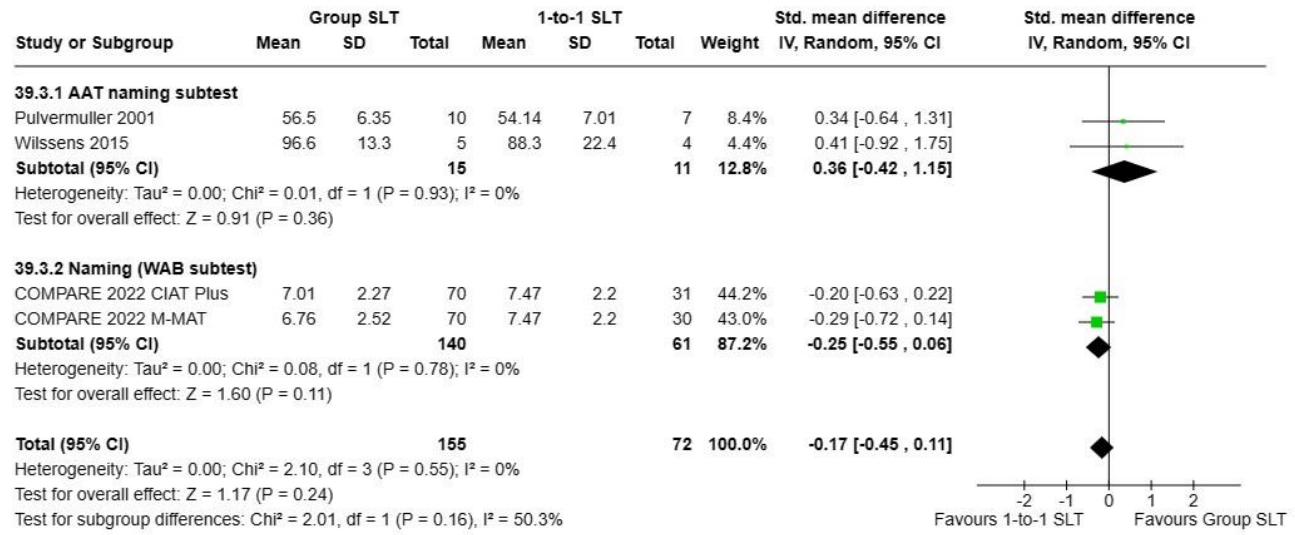
PICO 5a. Overall language



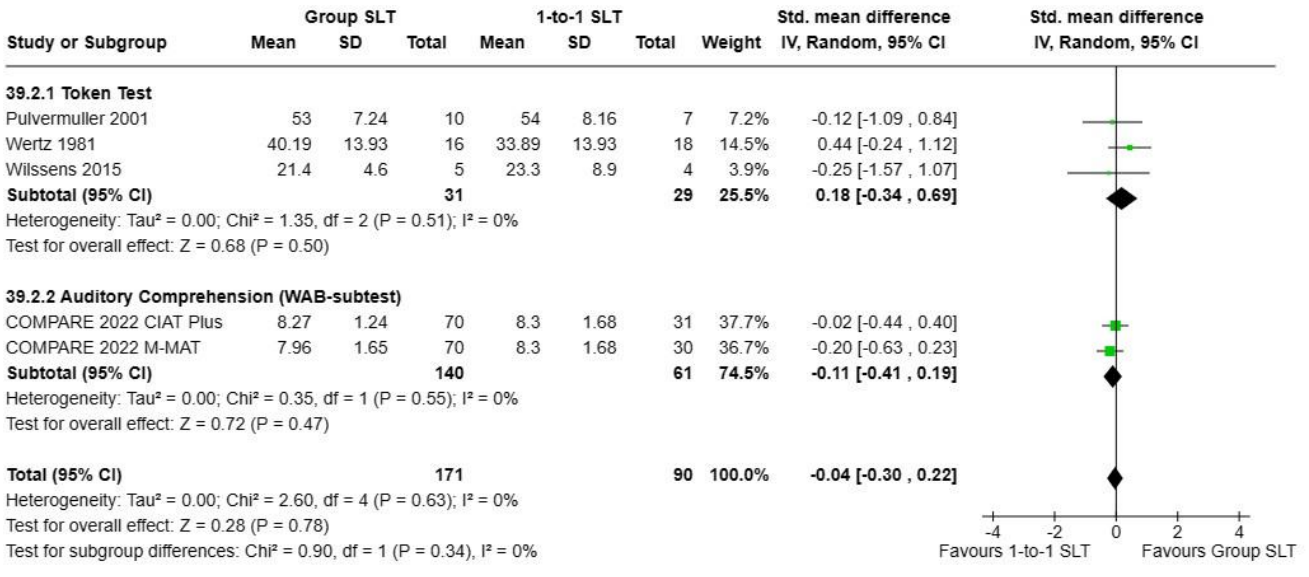
PICO 5a. Expressive language ±general



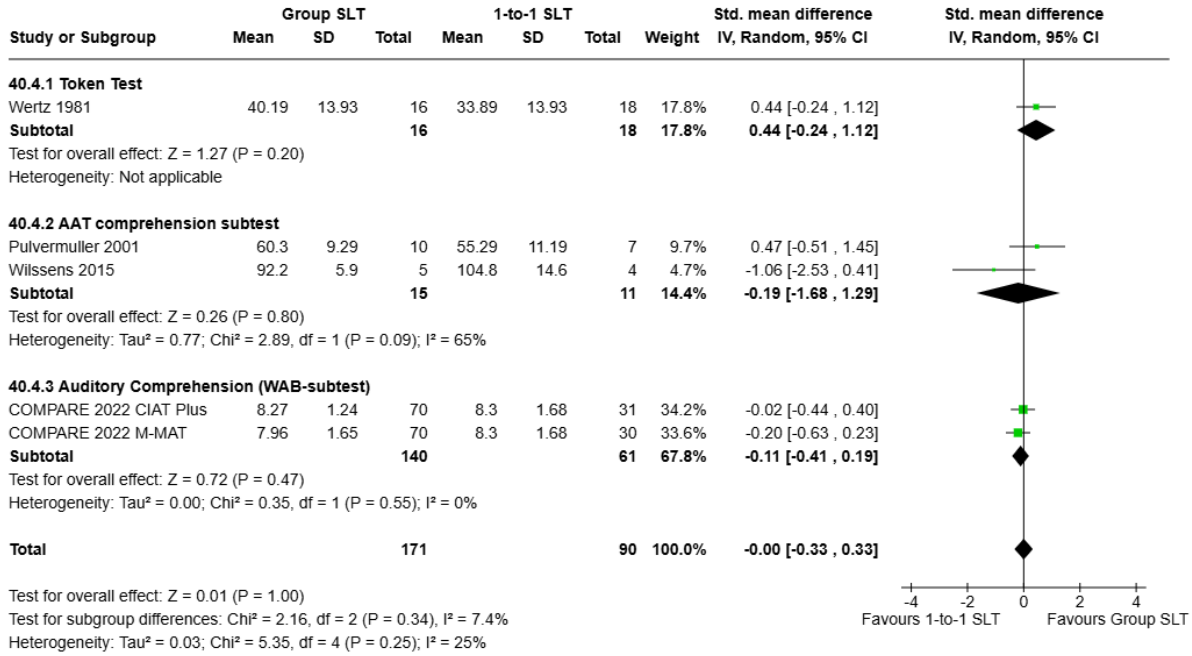
PICO 5a. Expressive language - naming



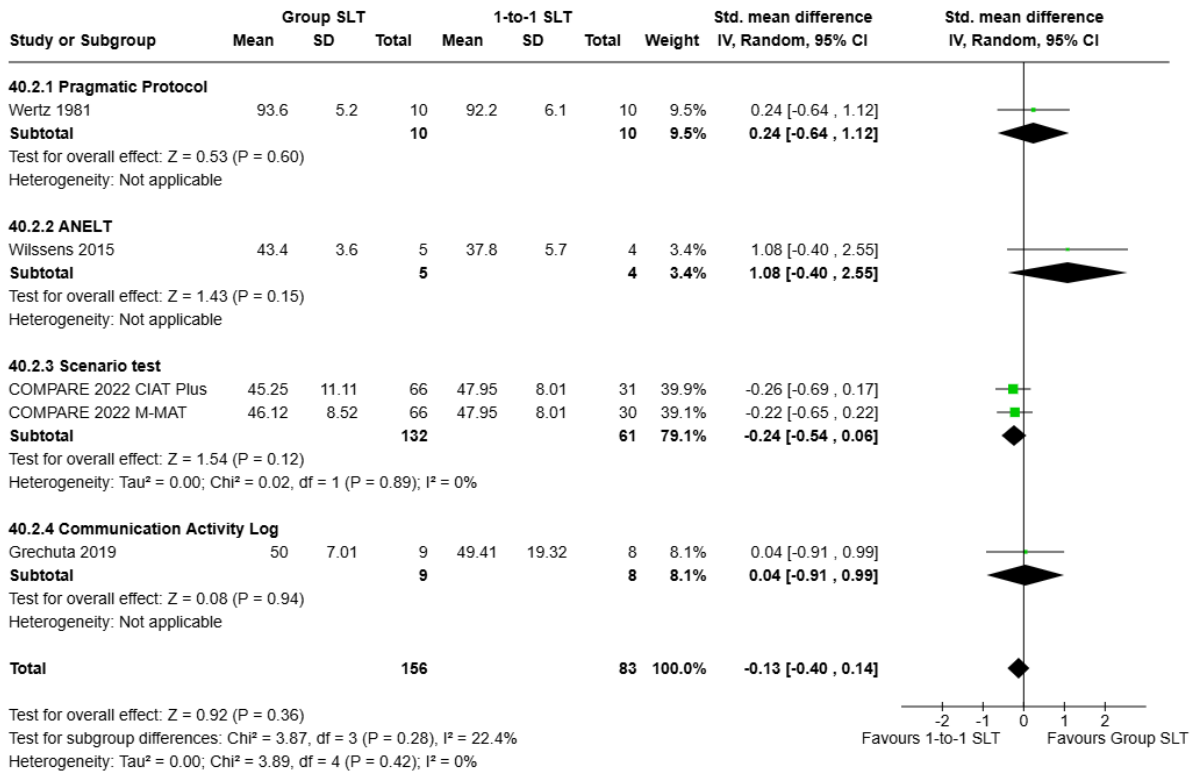
PICO 5a. Auditory comprehension



PICO 5a. Auditory Comprehension (sensitivity analysis Pulvermuller 2001 and Wilssens 2015 AAT data)

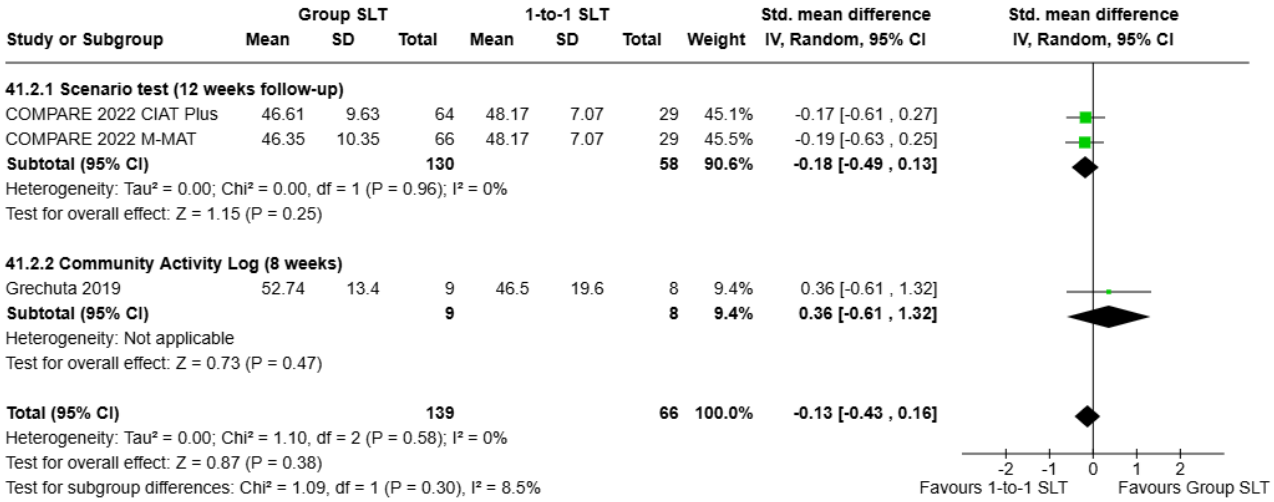


PICO 5a. Functional Communication (sensitivity analysis COMPARE Scenario data)

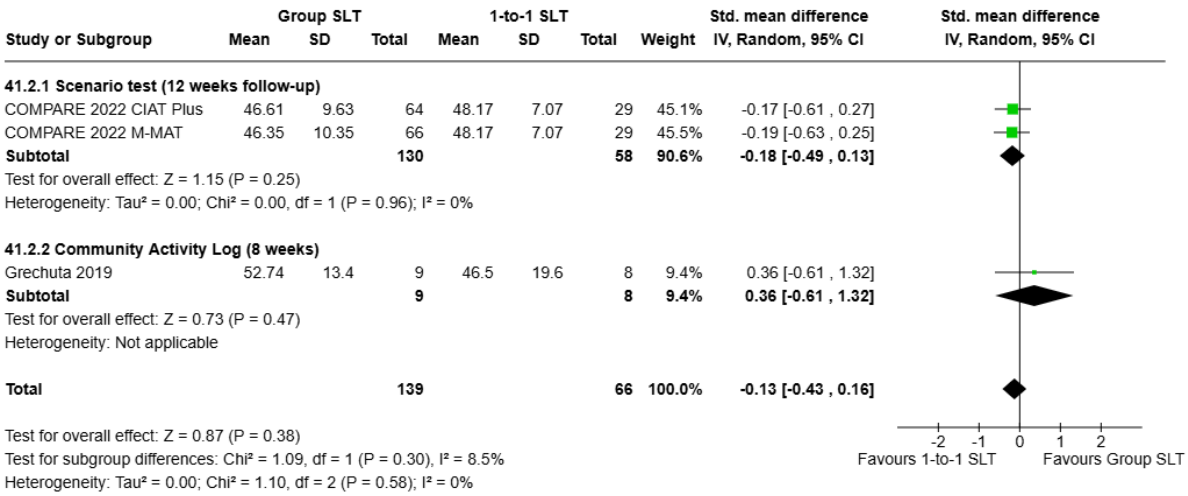


PICO 5a Follow up data

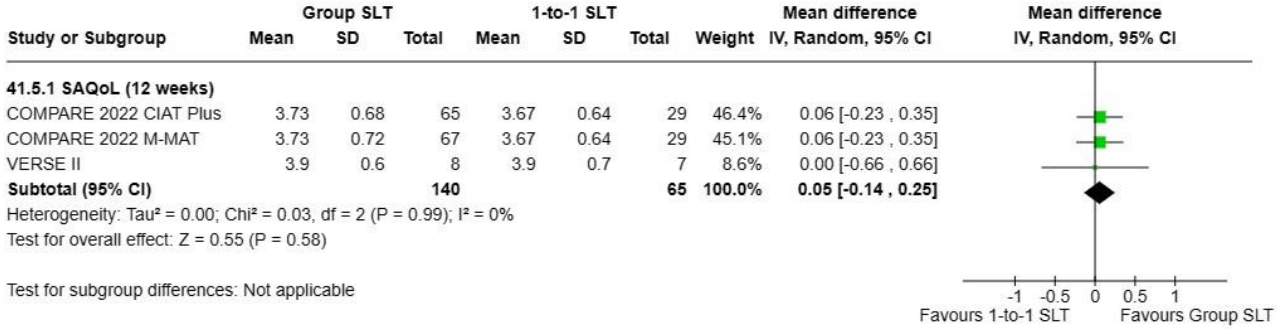
PICO 5a. Functional communication follow up



PICO 5a. Functional Communication follow-up (sensitivity analysis COMPARE Scenario data)



PICO 5a. Quality of life follow up



Study or Subgroup	Group SLT Mean	SD	Total	1-to-1 SLT Mean	SD	Total	Weight	Mean difference IV, Random, 95% CI
41.5.1 SAQoL (12 weeks)								
COMPARE 2022 CIAT Plus	3.73	0.68	65	3.67	0.64	29	46.4%	0.06 [-0.23 , 0.35]
COMPARE 2022 M-MAT	3.73	0.72	67	3.67	0.64	29	45.1%	0.06 [-0.23 , 0.35]
VERSE II	3.9	0.6	8	3.9	0.7	7	8.6%	0.00 [-0.66 , 0.66]
Subtotal (95% CI)			**140**			**65**	**100.0%**	**0.05 [-0.14 , 0.25]**

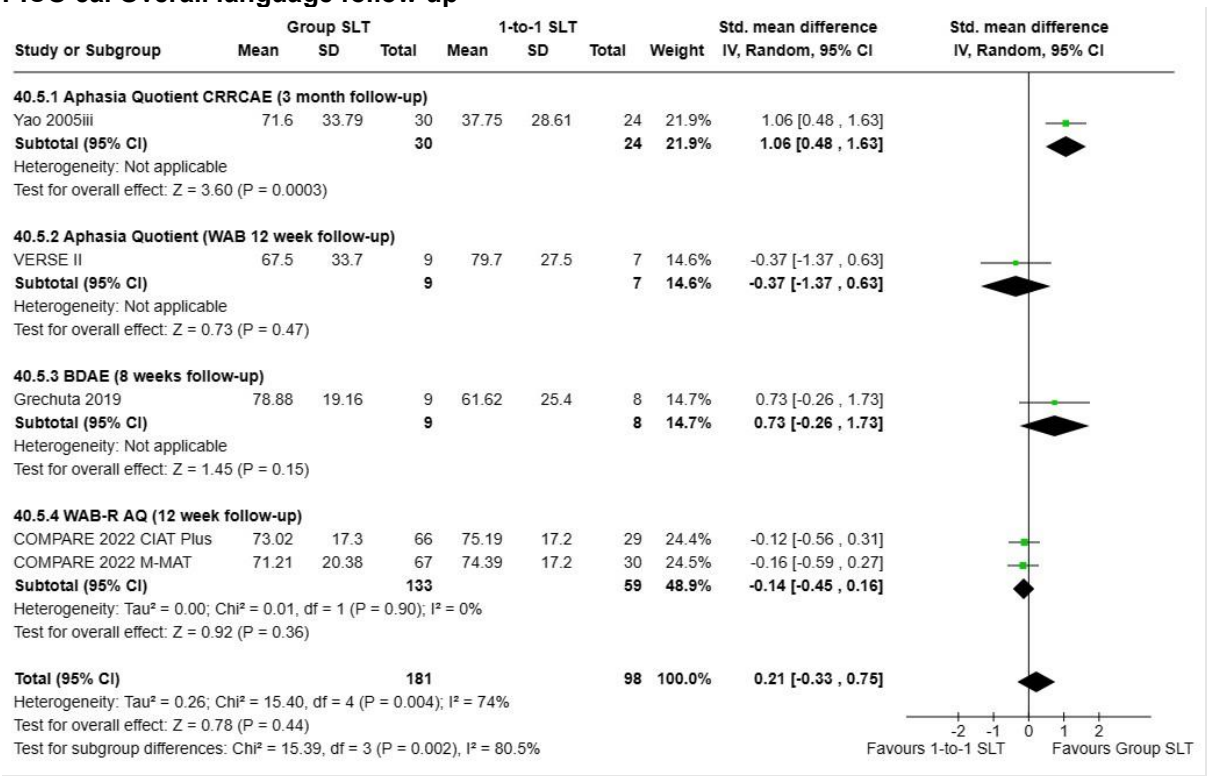
Heterogeneity: Tau² = 0.00; Chi² = 0.03, df = 2 (P = 0.99); I² = 0%
Test for overall effect: Z = 0.55 (P = 0.58)

Test for subgroup differences: Not applicable

Mean difference IV, Random, 95% CI

-1 -0.5 0 0.5 1
Favours 1-to-1 SLT Favours Group SLT

PICO 5a. Overall language follow up

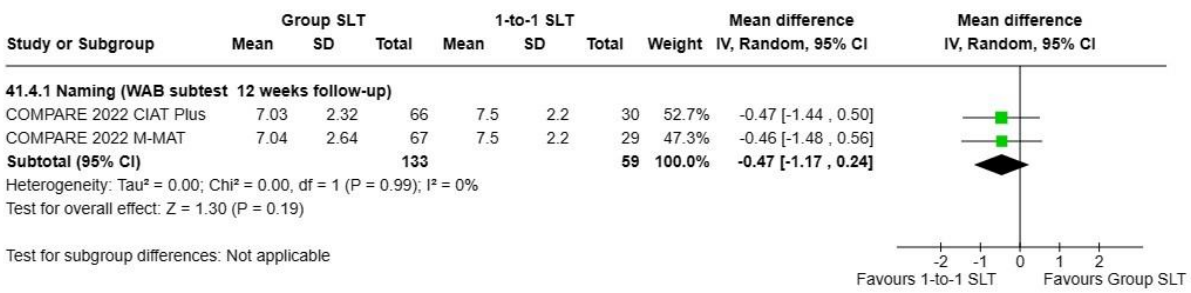


Study or Subgroup	Group SLT Mean	SD	Total	1-to-1 SLT Mean	SD	Total	Weight	Std. mean difference IV, Random, 95% CI
40.5.1 Aphasia Quotient CRRCAE (3 month follow-up)								
Yao 2005iii	71.6	33.79	30	37.75	28.61	24	21.9%	1.06 [0.48 , 1.63]
Subtotal (95% CI)			**30**			**24**	**21.9%**	**1.06 [0.48 , 1.63]**
Heterogeneity: Not applicable								
Test for overall effect: Z = 3.60 (P = 0.0003)								
40.5.2 Aphasia Quotient (WAB 12 week follow-up)								
VERSE II	67.5	33.7	9	79.7	27.5	7	14.6%	-0.37 [-1.37 , 0.63]
Subtotal (95% CI)			**9**			**7**	**14.6%**	**-0.37 [-1.37 , 0.63]**
Heterogeneity: Not applicable								
Test for overall effect: Z = 0.73 (P = 0.47)								
40.5.3 BDAE (8 weeks follow-up)								
Grechuta 2019	78.88	19.16	9	61.62	25.4	8	14.7%	0.73 [-0.26 , 1.73]
Subtotal (95% CI)			**9**			**8**	**14.7%**	**0.73 [-0.26 , 1.73]**
Heterogeneity: Not applicable								
Test for overall effect: Z = 1.45 (P = 0.15)								
40.5.4 WAB-R AQ (12 week follow-up)								
COMPARE 2022 CIAT Plus	73.02	17.3	66	75.19	17.2	29	24.4%	-0.12 [-0.56 , 0.31]
COMPARE 2022 M-MAT	71.21	20.38	67	74.39	17.2	30	24.5%	-0.16 [-0.59 , 0.27]
Subtotal (95% CI)			**133**			**59**	**48.9%**	**-0.14 [-0.45 , 0.16]**
Heterogeneity: Tau² = 0.00; Chi² = 0.01, df = 1 (P = 0.90); I² = 0%								
Test for overall effect: Z = 0.92 (P = 0.36)								
Total (95% CI)			**181**			**98**	**100.0%**	**0.21 [-0.33 , 0.75]**
Heterogeneity: Tau² = 0.26; Chi² = 15.40, df = 4 (P = 0.004); I² = 74%								
Test for overall effect: Z = 0.78 (P = 0.44)								
Test for subgroup differences: Chi² = 15.39, df = 3 (P = 0.002), I² = 80.5%								

Std. mean difference IV, Random, 95% CI

-2 -1 0 1 2
Favours 1-to-1 SLT Favours Group SLT

PICO 5a. Expressive language - naming follow up



Study or Subgroup	Group SLT Mean	SD	Total	1-to-1 SLT Mean	SD	Total	Weight	Mean difference IV, Random, 95% CI
41.4.1 Naming (WAB subtest 12 weeks follow-up)								
COMPARE 2022 CIAT Plus	7.03	2.32	66	7.5	2.2	30	52.7%	-0.47 [-1.44 , 0.50]
COMPARE 2022 M-MAT	7.04	2.64	67	7.5	2.2	29	47.3%	-0.46 [-1.48 , 0.56]
Subtotal (95% CI)			**133**			**59**	**100.0%**	**-0.47 [-1.17 , 0.24]**

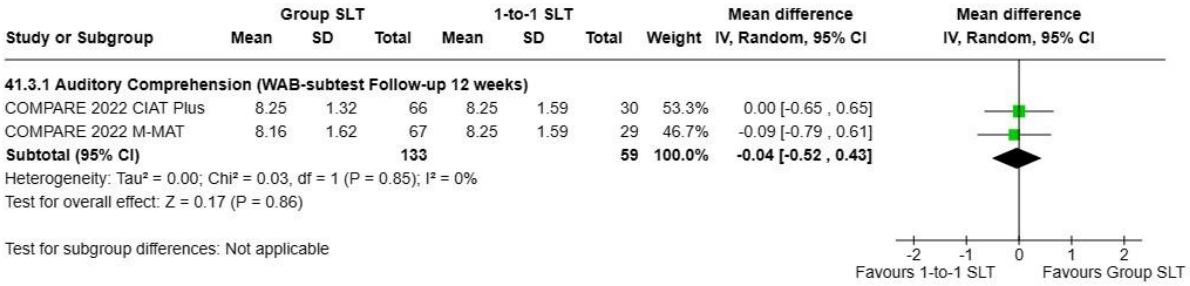
Heterogeneity: Tau² = 0.00; Chi² = 0.00, df = 1 (P = 0.99); I² = 0%
Test for overall effect: Z = 1.30 (P = 0.19)

Test for subgroup differences: Not applicable

Mean difference IV, Random, 95% CI

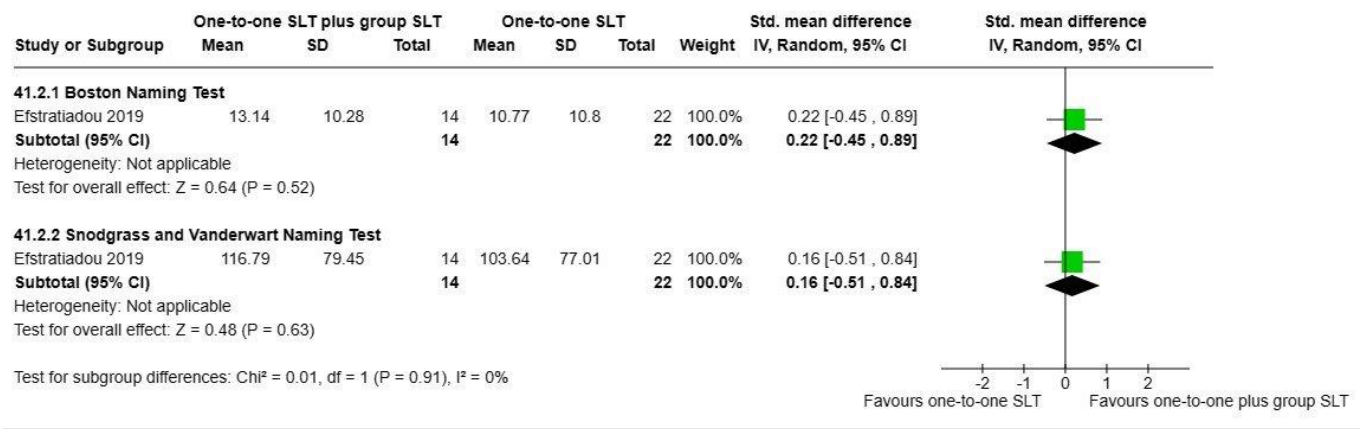
-2 -1 0 1 2
Favours 1-to-1 SLT Favours Group SLT

PICO 5a. Auditory comprehension follow up

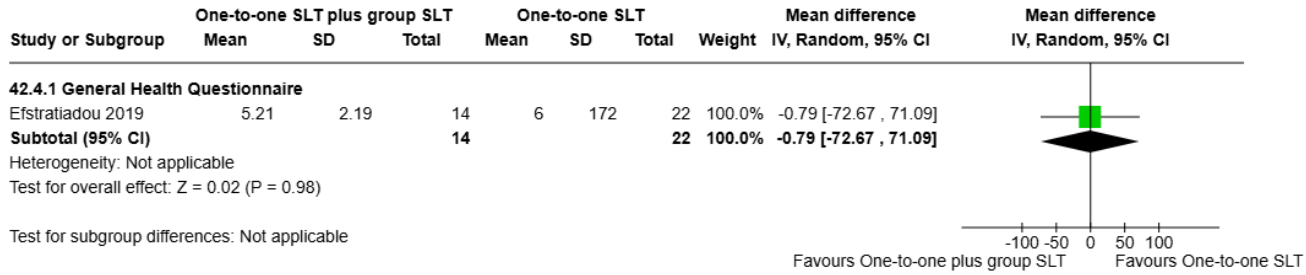


Supplement 15: Results of PICO 5b Meta-Analyses

PICO 5b. Expressive language ±naming



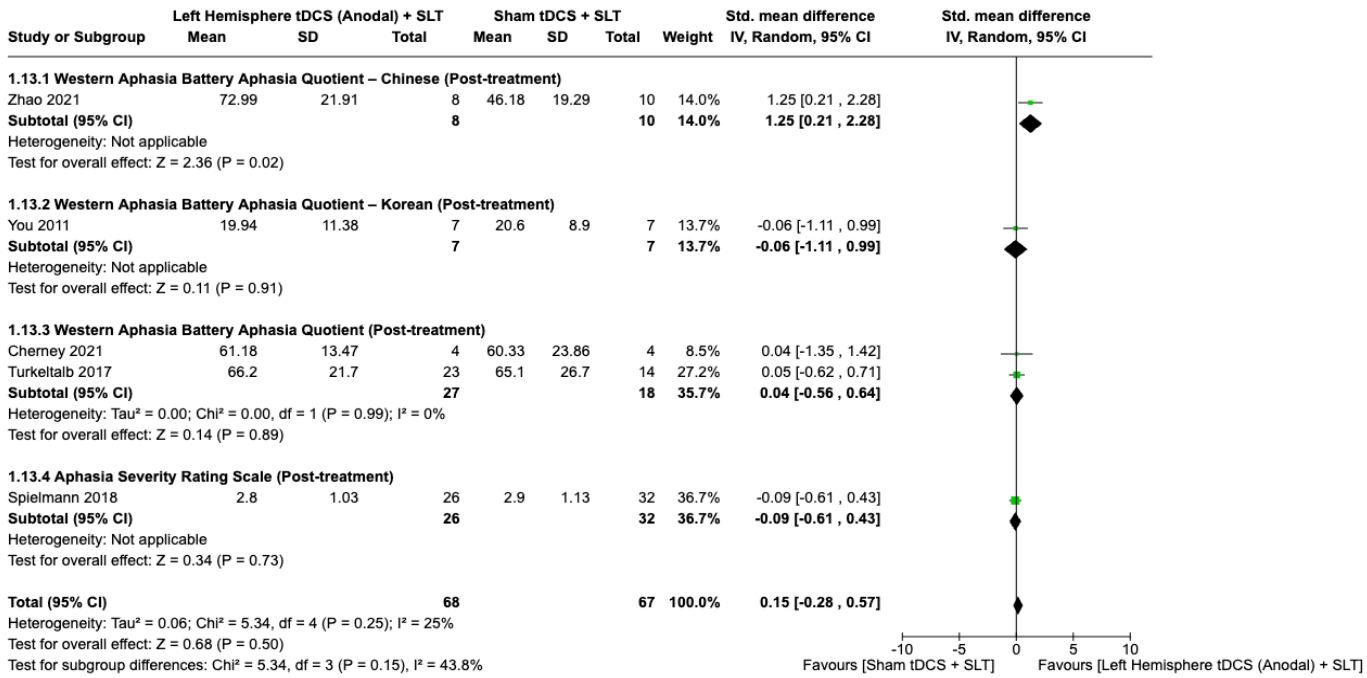
PICO 5b. Emotional and social wellbeing (mood)



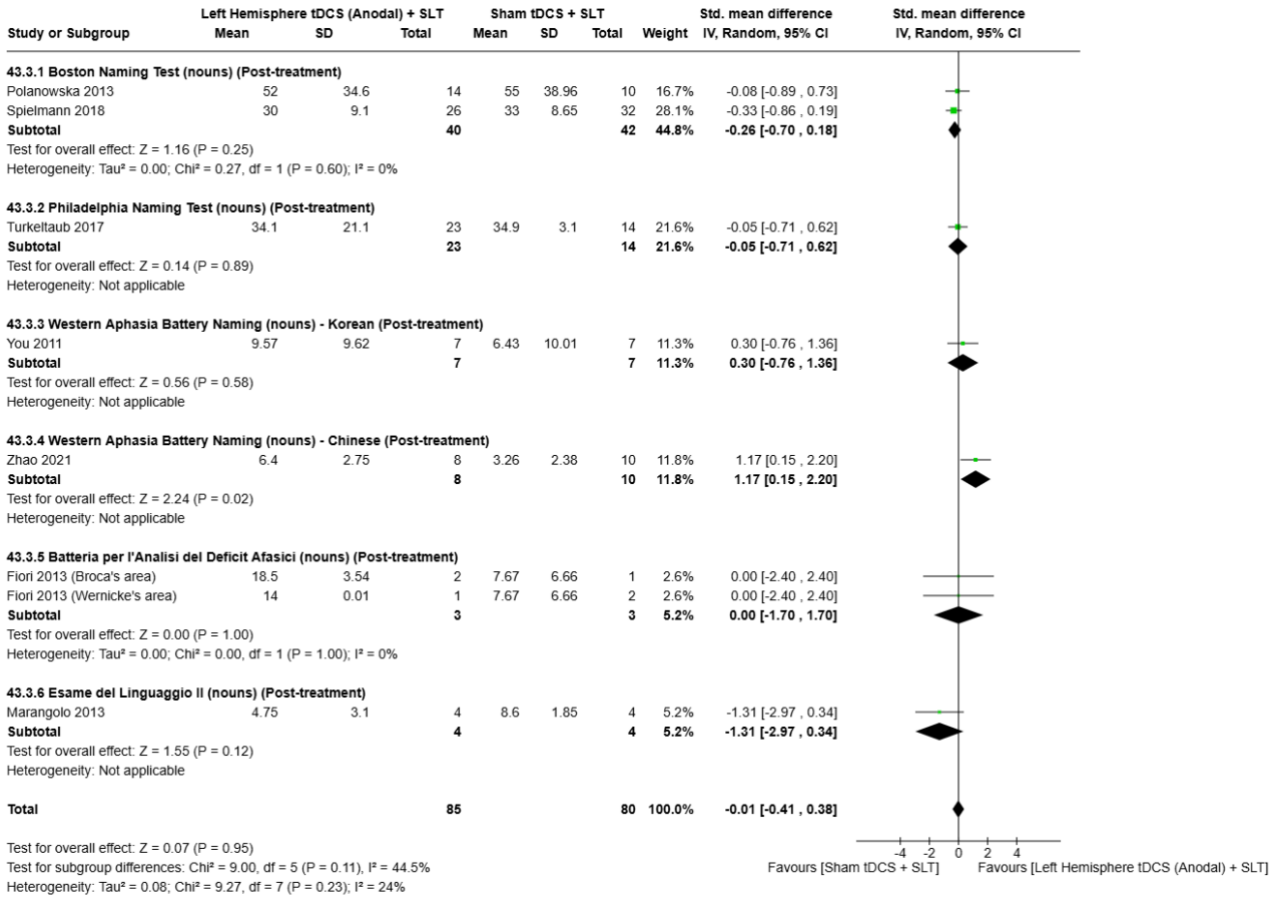
Supplement 16: Results of PICO 6 Meta-Analyses

PICO6 a. Left Hemisphere tDCS (Anodal) plus SLT versus Sham tDCS plus SLT

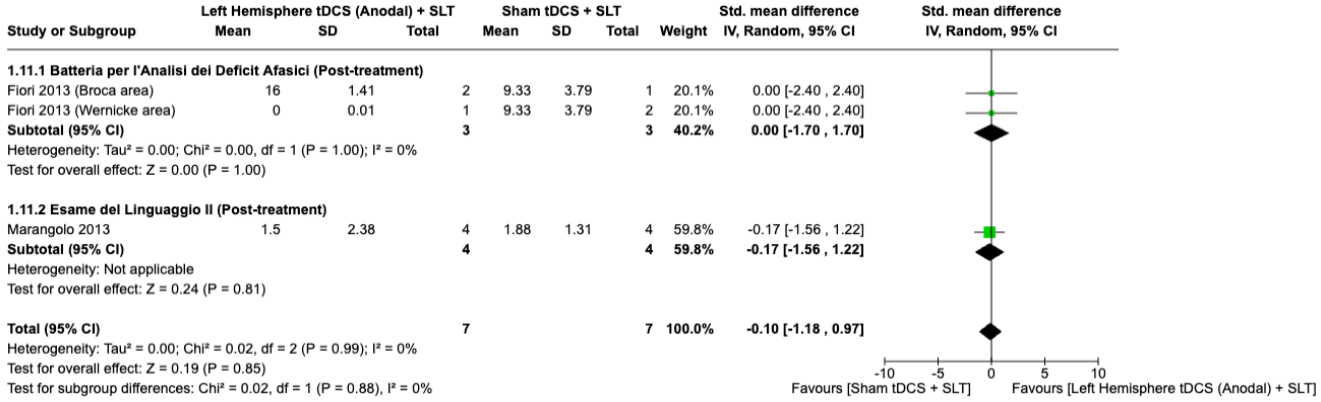
PICO 6a. Overall language



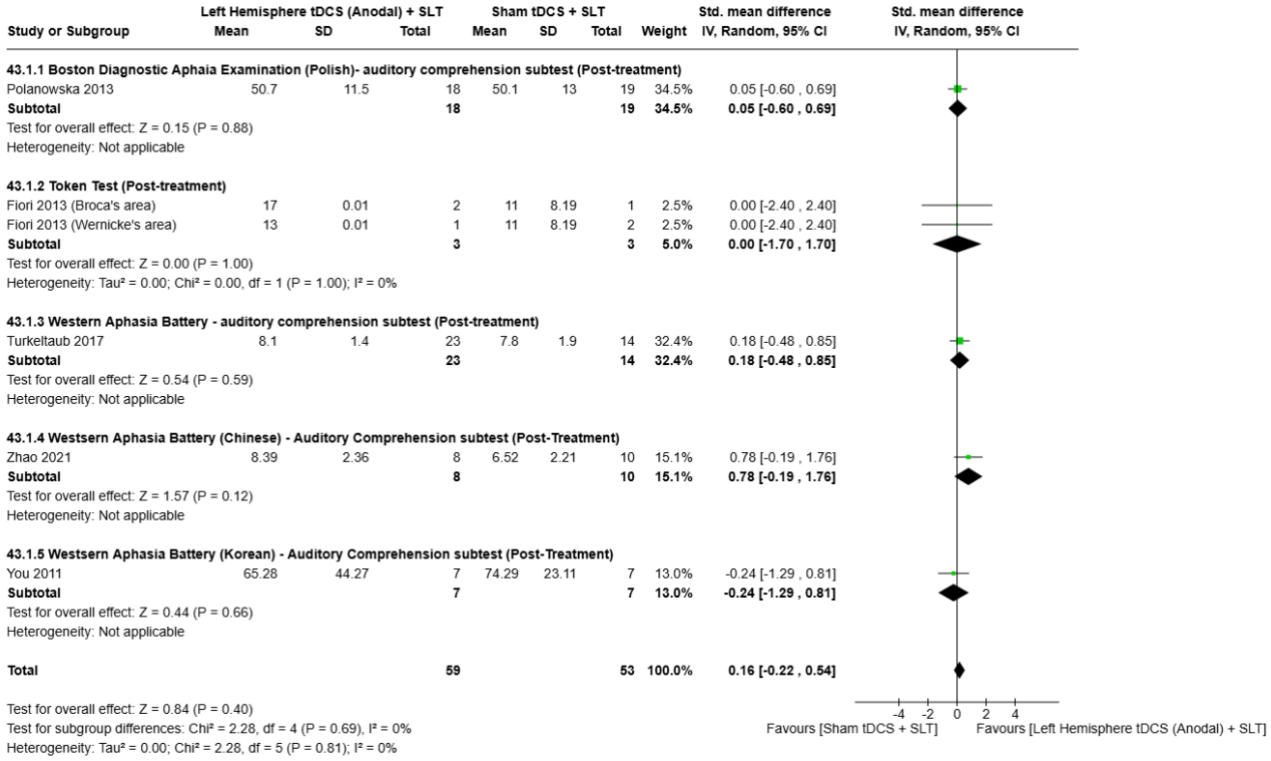
PICO 6a. Expressive language ±naming (nouns)



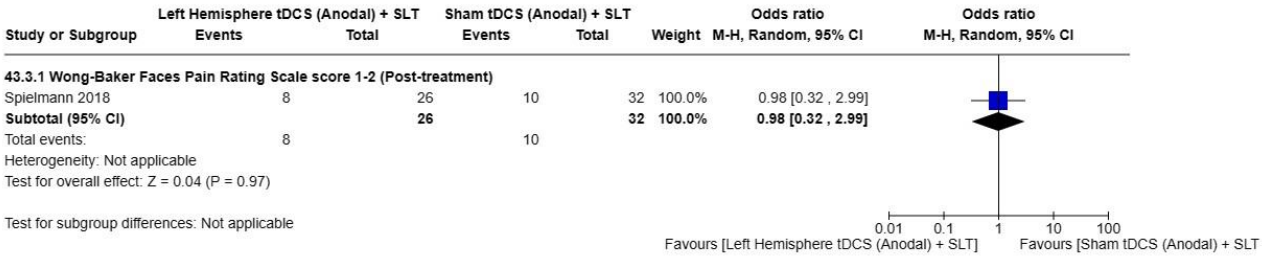
PICO 6a. Expressive language - naming (verbs)



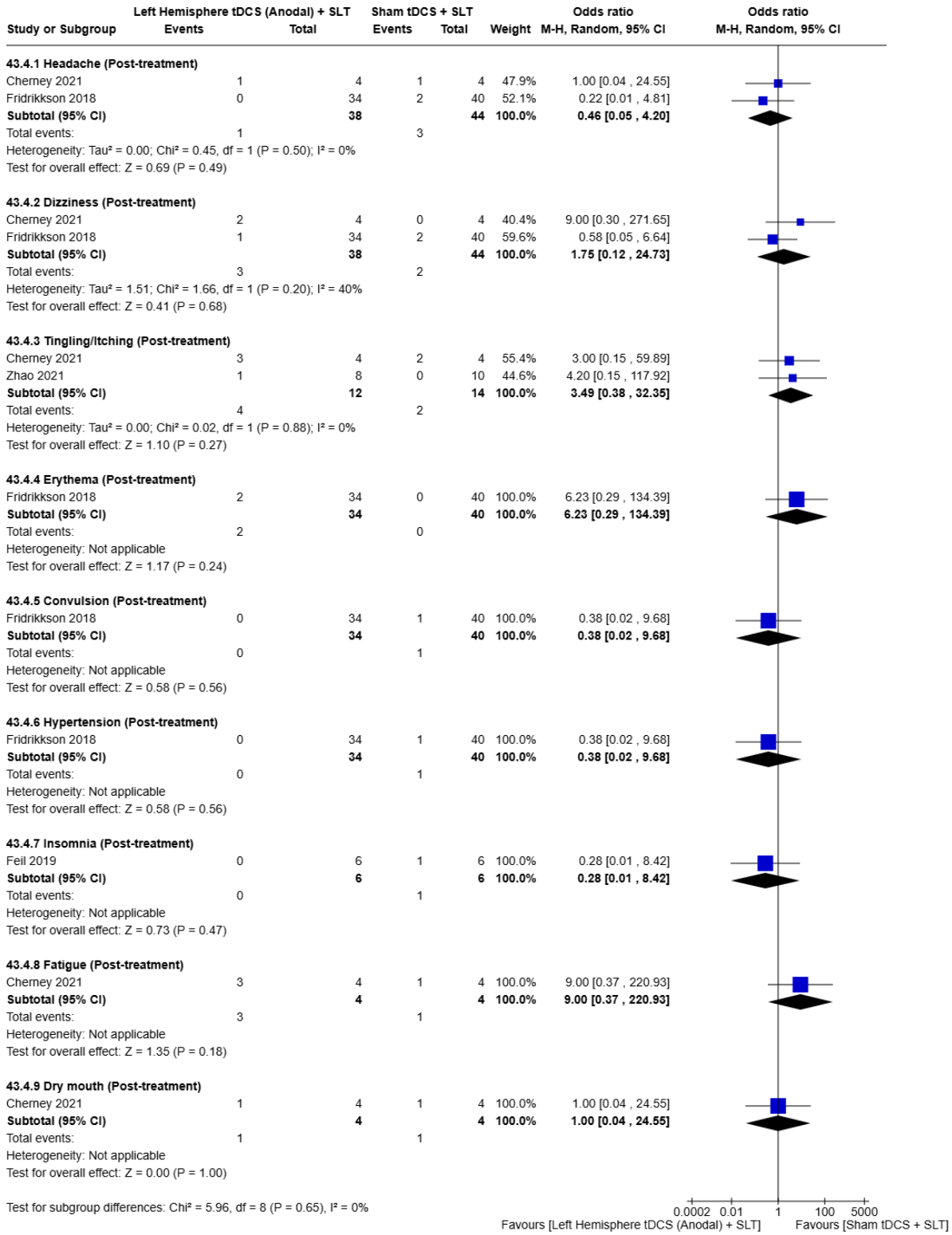
PICO 6a. Auditory Comprehension



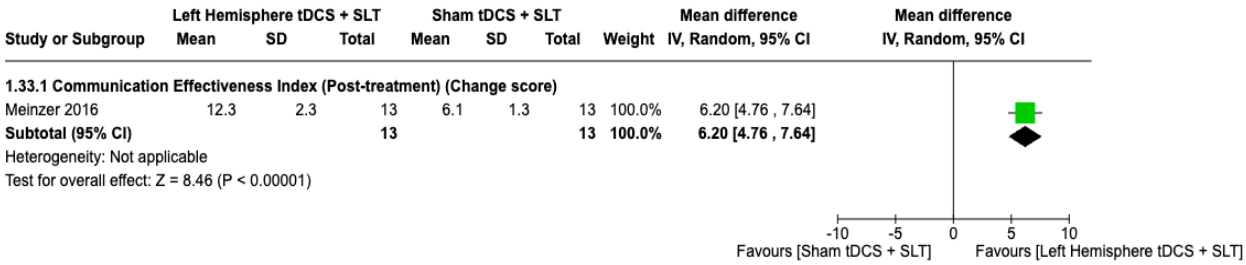
PICO 6a. Adverse events ±pain



PICO 6a. Reported side effects

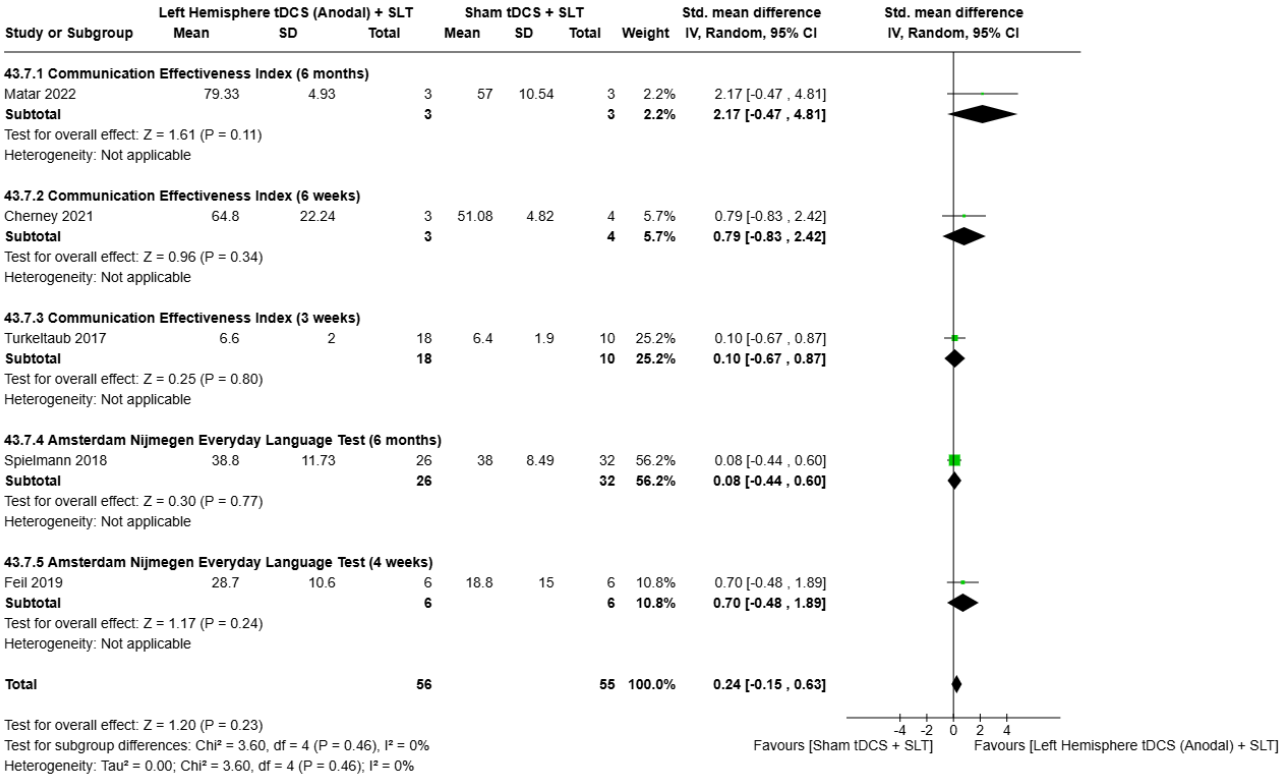


PICO 6a. Functional communication ±change scores

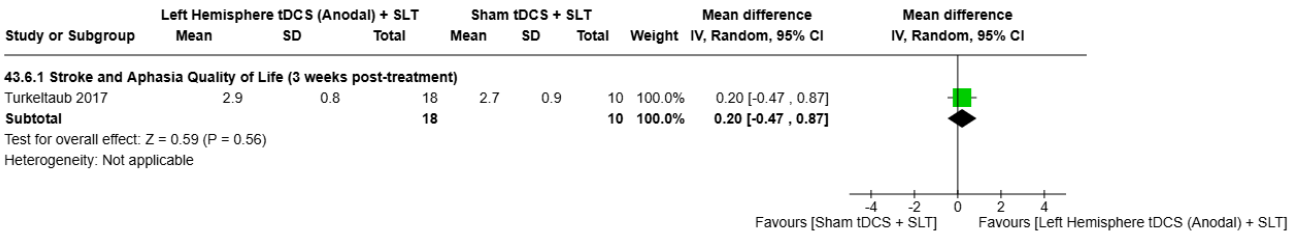


PICO 6a. Follow-up Left Hemisphere tDCS (anodal) plus SLT versus Sham tDCS plus SLT

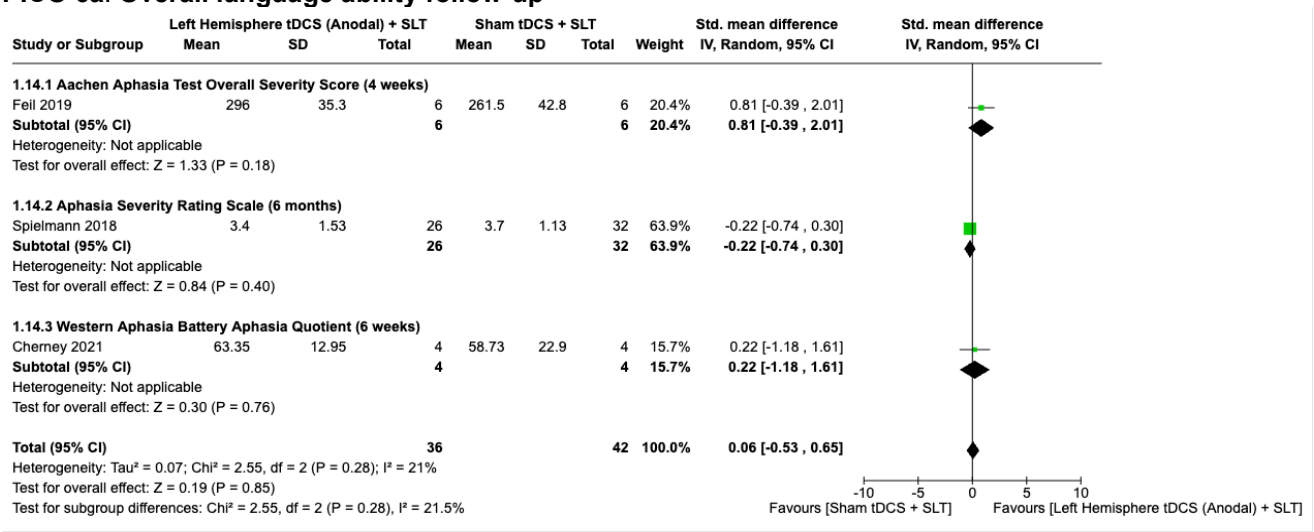
PICO 6a. Functional communication follow up



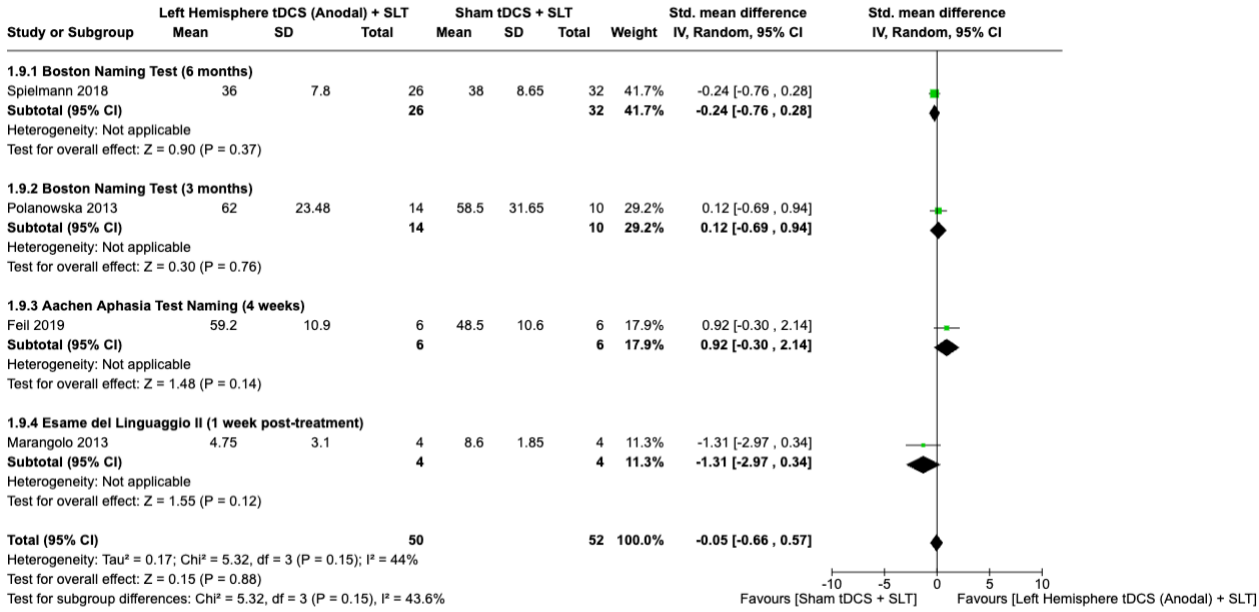
PICO 6a. Quality of life follow up



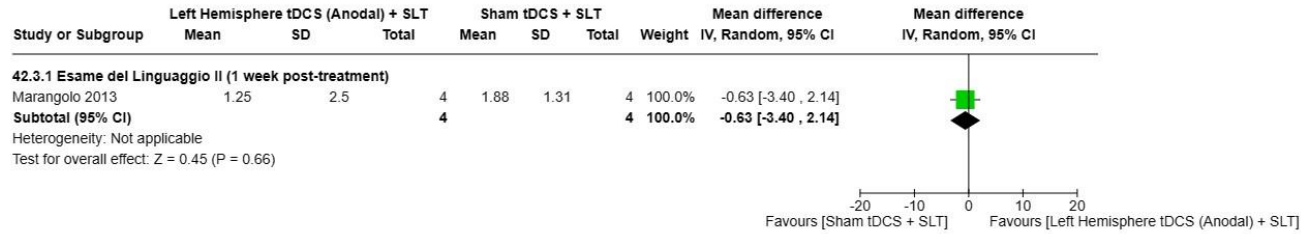
PICO 6a. Overall language ability follow-up



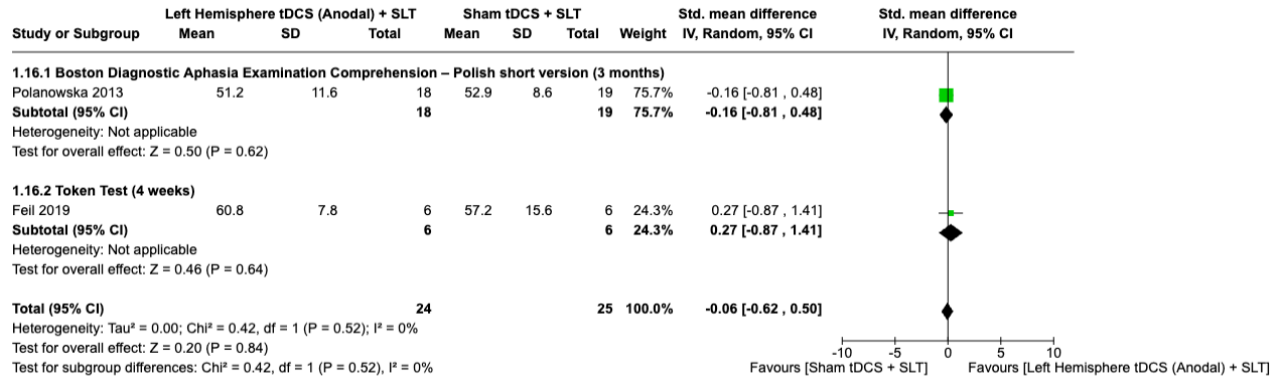
PICO 6a. Expressive language - naming (general) follow-up



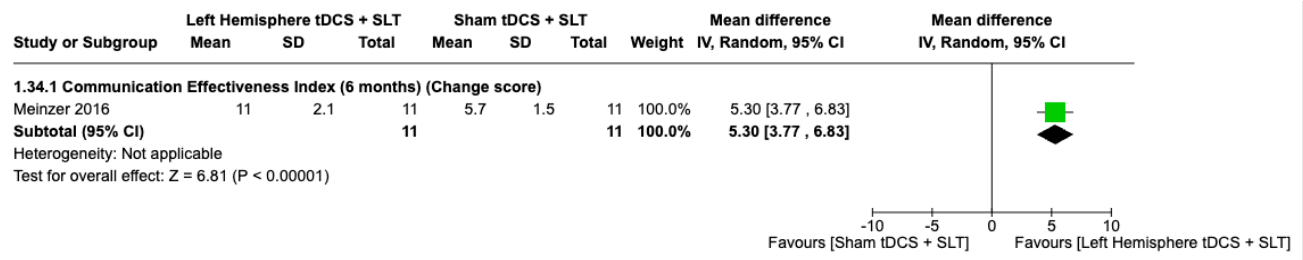
PICO 6a. Expressive language - naming (verbs) follow-up



PICO 6a. Auditory comprehension follow up

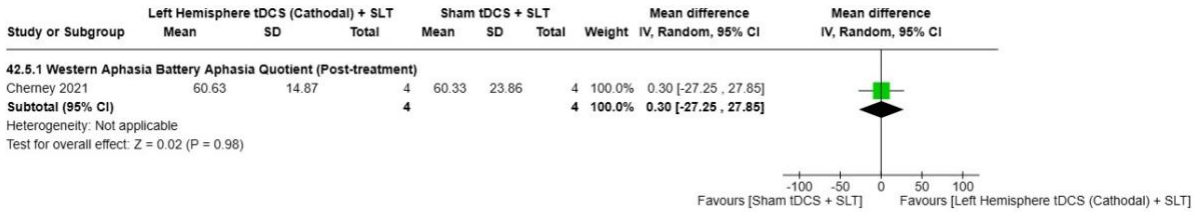


PICO 6a. Functional communication ±change from baseline score follow-up (6 months)

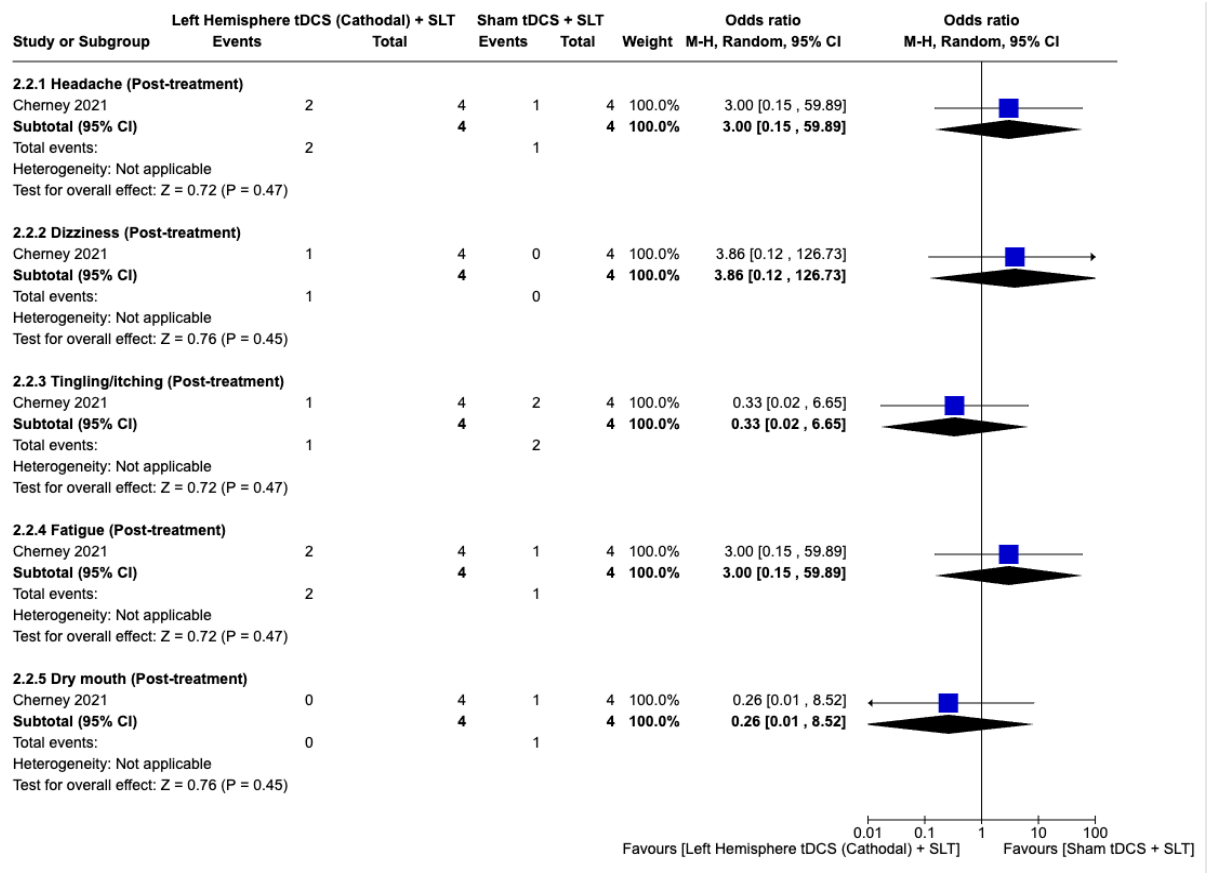


PICO 6b. Left Hemisphere tDCS (Cathodal) plus SLT versus Sham tDCS plus SLT

PICO 6b. Overall language

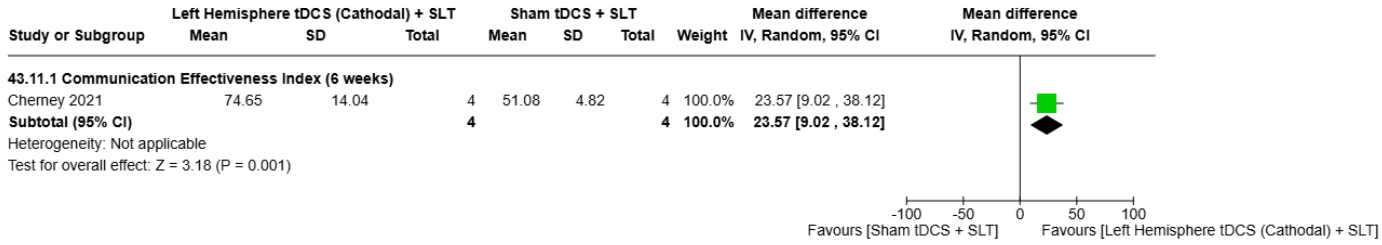


PICO 6b. Side effects

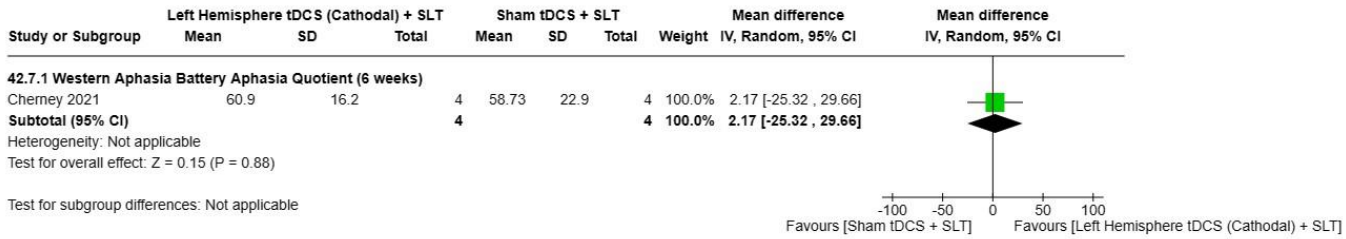


PICO 6b. Follow-up Left Hemisphere tDCS (Cathodal) plus SLT versus Sham tDCS plus SLT

PICO 6b. Functional Communication follow-up

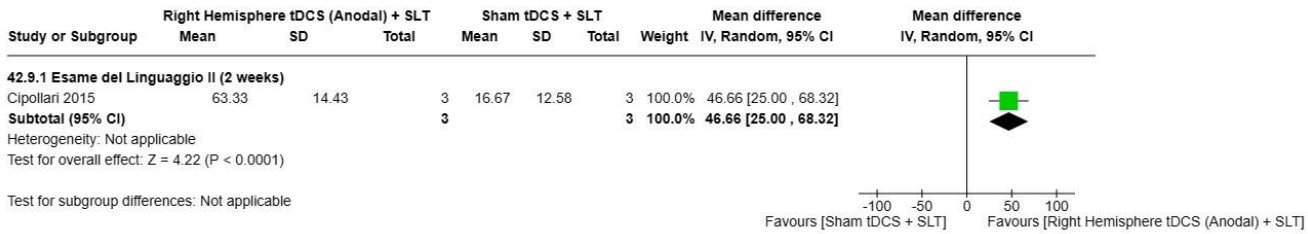


PICO 6b. Overall language follow-up

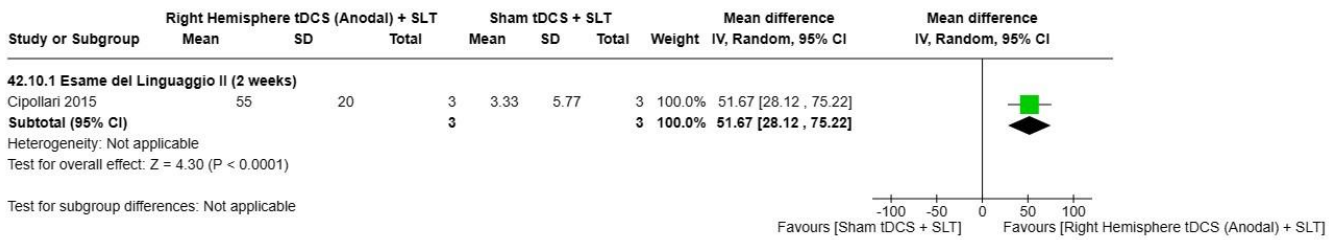


PICO 6c. Right Hemisphere tDCS (Anodal) and SLT (reference on contralateral frontopolar cortex) versus Sham tDCS and SLT

PICO 6c. Expressive language - naming (nouns)

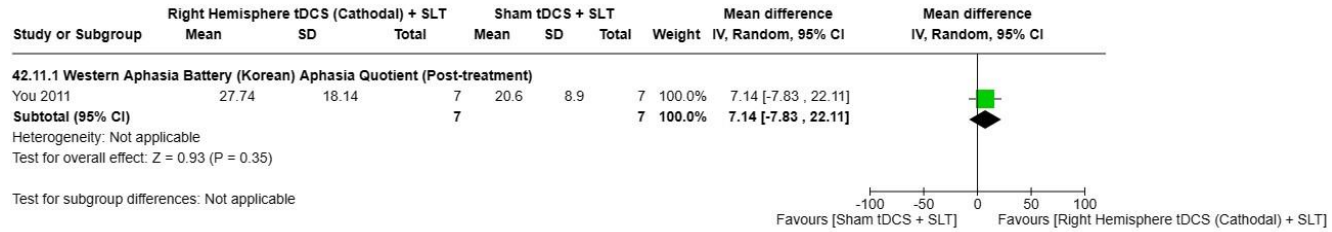


PICO 6c. Expressive language naming (verbs)

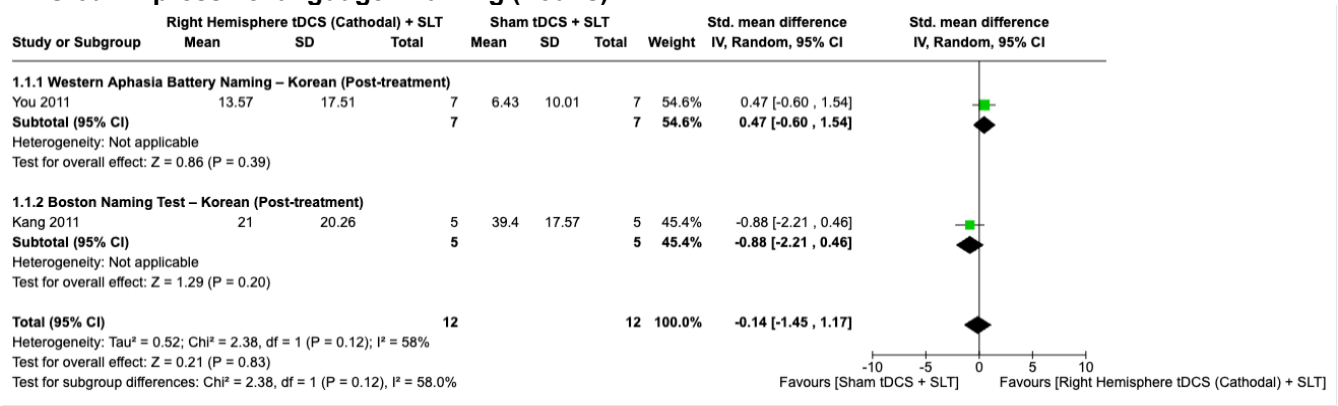


PICO 6d. Right Hemisphere tDCS (Cathodal) + SLT vs Sham tDCS + SLT

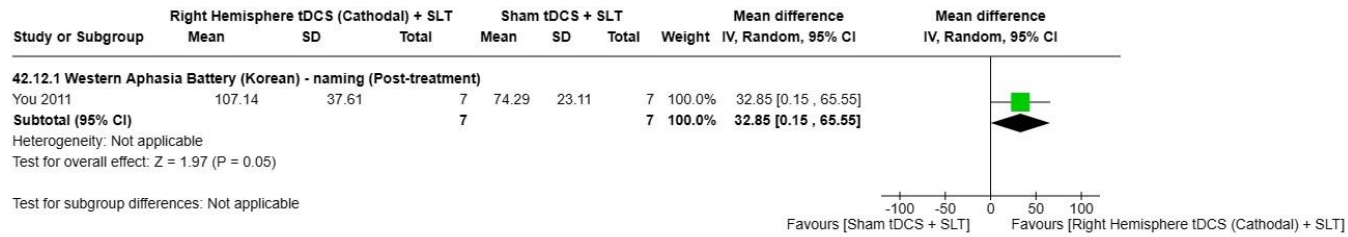
PICO 6d. Overall Language



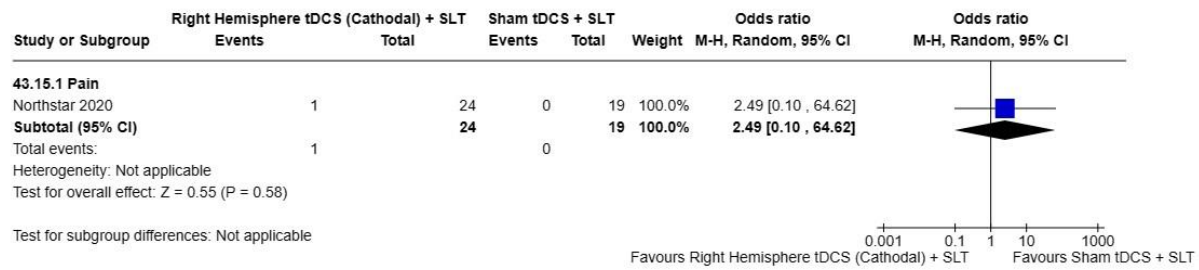
PICO 6d. Expressive language - naming (nouns)



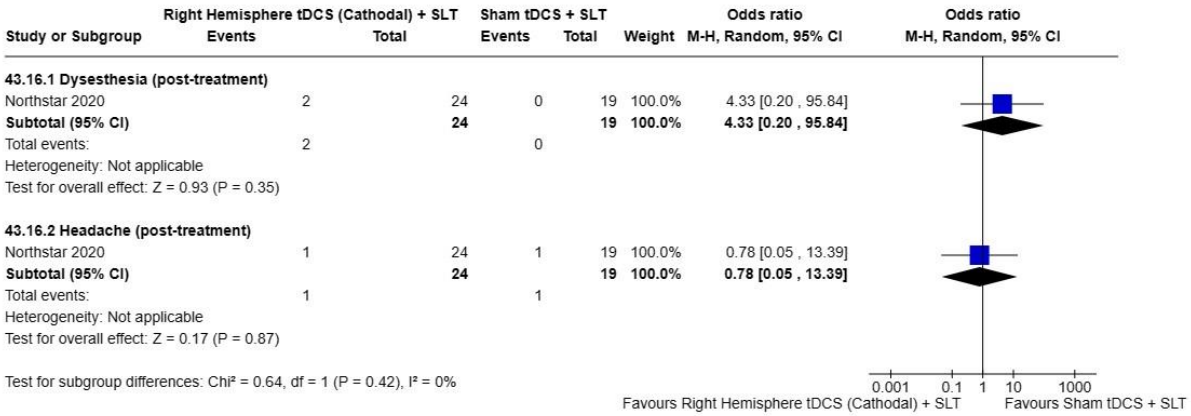
PICO 6d. Auditory comprehension



PICO 6d. Adverse events

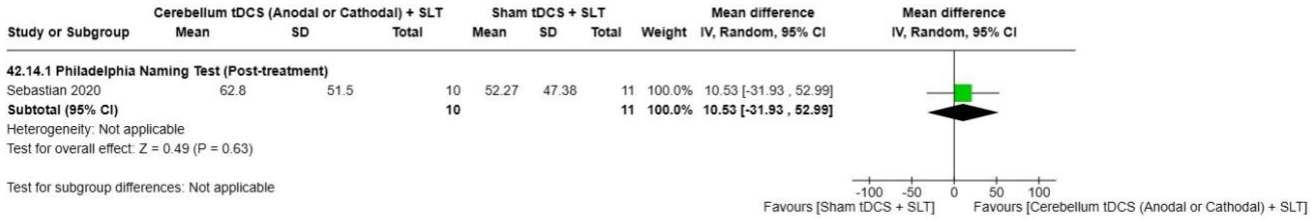


PICO 6d. Reported side effects

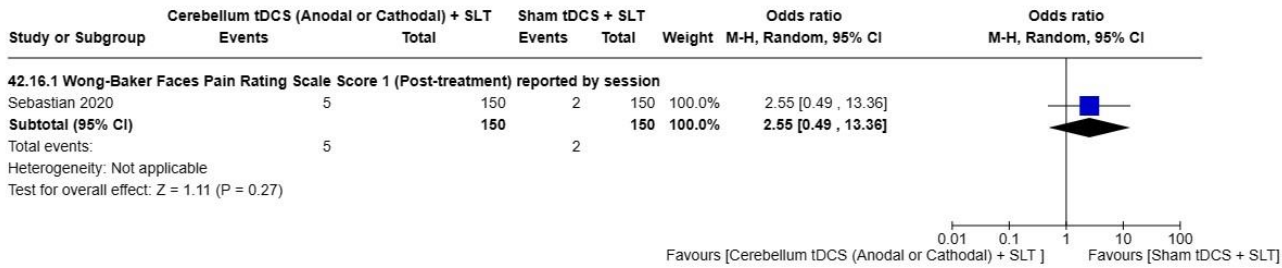


PICO 6e. Cerebellum tDCS (Anodal or Cathodal) and SLT versus Sham tDCS and SLT

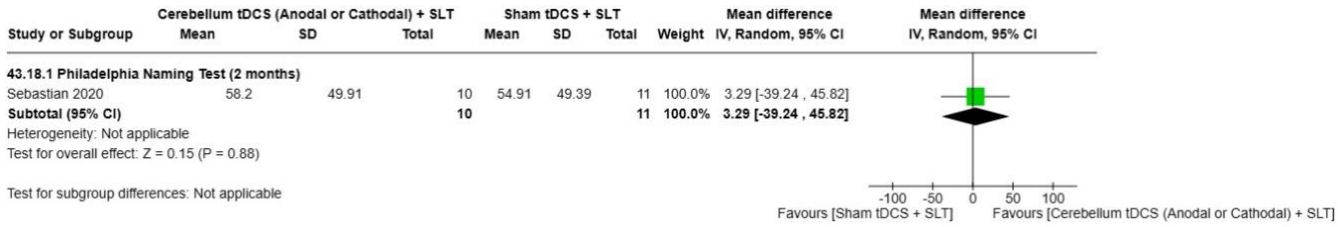
PICO 6e. Expressive language - naming (nouns)



PICO 6e. Adverse Event - Pain

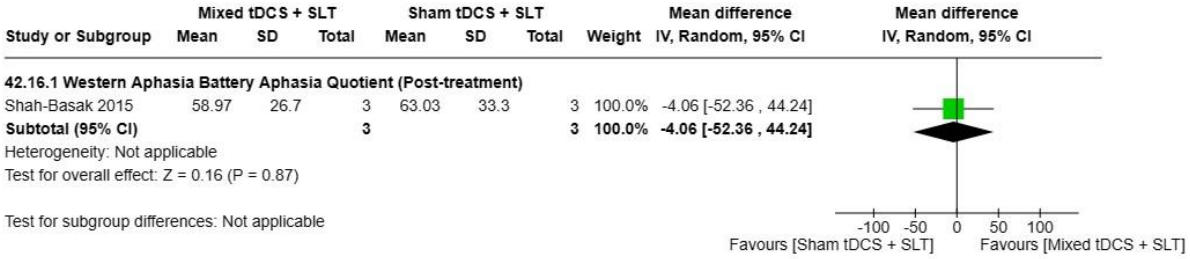


PICO 6e. Expressive language - naming (nouns) follow-up

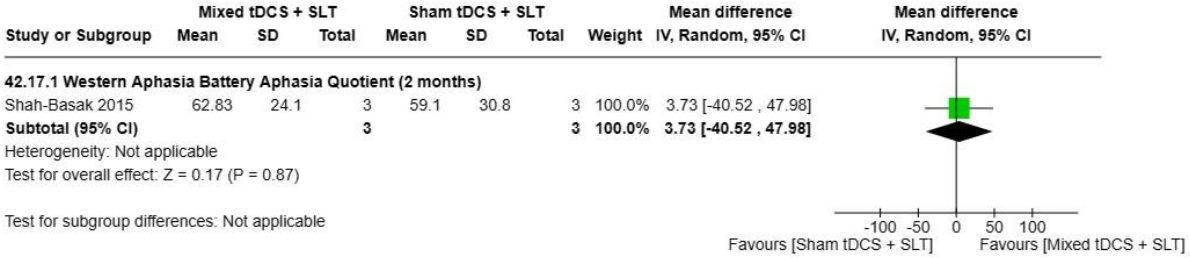


PICO 6f. Individualised Left Hemisphere tDCS (anodal or cathodal) plus SLT versus Sham tDCS plus SLT

PICO 6f. Overall language

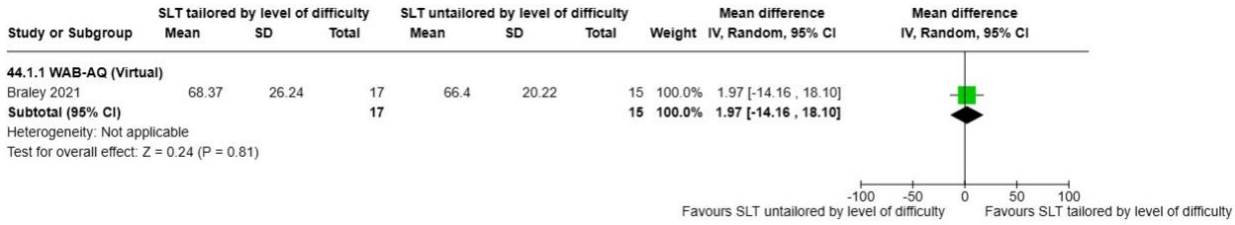


PICO 6f. Overall language follow-up

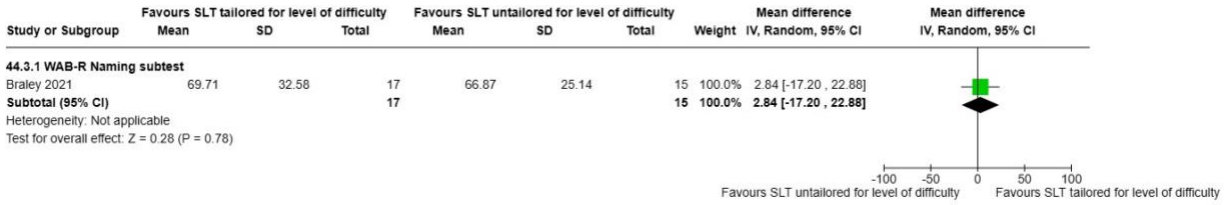


Supplement 17: Results of PICO 7b Meta-Analyses

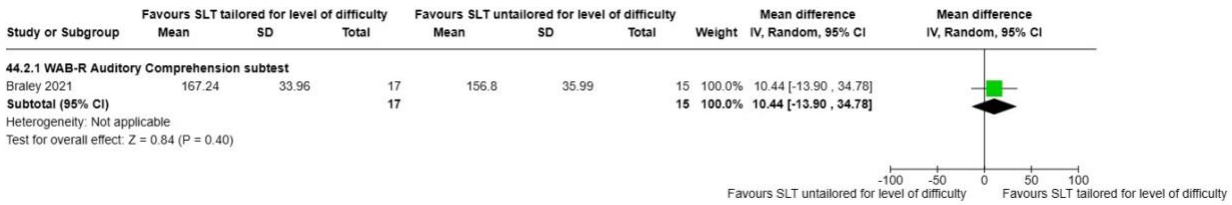
PICO 7b. Overall Language



PICO 7b. Expressive language ±naming



PICO 7b. Auditory comprehension



Supplement 18: GRADE profiles

Table 1. GRADE evidence profile for PICO 1

In people with aphasia after stroke is a higher dose of speech and language therapy (SLT) (> or = to 20 hours) compared to a lower dose of SLT (< 20 hours) associated with greater improvements in language, communication or quality of life?

Certainty assessment							‹ RI SDUWLFLSD		Absolute Effect		Certainty	Importance
‹ RI VWXC >‹ RI 53&	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Intervention	Comparator	SMD (95% CI)	MD (95% CI)		
Overall language (Immediately post-intervention; Better indicated by higher values)												
4 [5]	randomised trials	serious[a]	serious[b]	not serious	not serious	none	252	169	0.10 (-0.23, 0.44)	-	⊕⊕⊖⊖ **Low**	Critical
Expressive language (naming) (Immediately post-intervention; Better indicated by higher values)												
2 [3]	randomised trials	serious[c]	not serious	not serious	serious[d]	none	215	136	-0.09 (-0.35, 0.16)	-	⊕⊕⊖⊖ **Low**	Critical
Auditory comprehension (Immediately post-intervention; Better indicated by higher values)												
2 [3]	randomised trials	serious[c]	not serious	not serious	serious[d]	none	211	136	0.04 (-0.24, 0.33)	-	⊕⊕⊖⊖ **Low**	Critical
Auditory comprehension (Change from baseline scores; Immediately post-intervention; Better indicated by higher values)												
1 [2]	randomised trials	serious[e]	not serious	serious[f]	serious[g]	none	40	20	1.15 (-1.01, 3.31)	-	⊕⊖⊖⊖ **Very low**	Critical
Functional communication (Immediately post-intervention; Better indicated by higher values)												
3 [4]	randomised trials	serious[h]	serious[i]	not serious	not serious	none	242	160	0.41 (-0.02, 0.84)	-	⊕⊕⊖⊖ **Low**	Critical
Quality of life / Health-related quality of life (Immediately post-intervention; Better indicated by higher values)												
2 [3]	randomised trials	serious[c]	not serious	not serious	serious[d]	none	216	139	-	0.17 (0.04, 0.30)	⊕⊕⊖⊖ **Low**	Critical

CI: confidence interval; **MD:** mean difference; **RPC:** randomised paired comparisons; **SMD:** standardised mean difference

Explanations

a. Evidence downgraded by 1 due to serious risk of bias. Selection bias (randomisation) was low risk of bias in all studies and low risk of bias for allocation concealment in 3 studies and unclear risk of bias in 1 study; Performance bias was judged as high risk of bias in all studies; Detection bias was low risk of bias in 3 studies and unclear risk of bias in 1 study; Selective bias was judged as low risk of bias in 3 studies and high risk of bias in 1 study; Other types of bias: 1 study was judged as low risk of bias and unclear risk of bias in 3 studies.
b. Evidence downgraded by 1 due to serious inconsistency (I^2 = 61%)
c. Evidence downgraded by 1 due to serious risk of bias. Selection bias (randomisation and allocation concealment) was low risk of bias in both studies; Performance bias was judged as high risk of bias in both studies; Detection bias, attrition bias and reporting bias was low risk of bias in both studies; Other types of bias was judged as unclear risk of bias in both studies.
d. Evidence downgraded by 1 due to serious risk of imprecision (wide confidence intervals and modest sample size).
e. Evidence downgraded by 1 due to serious risk of bias. Selection bias (randomisation and allocation concealment) was low risk of bias; Performance bias was judged as high risk of bias; Detection bias, attrition bias and reporting bias was judged as low risk of bias; Other types of bias was judged as unclear risk of bias.
f. Evidence downgraded by 1 due to indirectness as participants in this trial were in the acute stage of recovery and trialists report that “spontaneous recovery” could not be ruled out.
g. Evidence downgraded by 1 due to serious risk of imprecision (wide confidence intervals and modest sample size).
h. Evidence downgraded by 1 due to serious risk of bias. Selection bias (randomisation and allocation concealment) low risk of bias in all studies; Performance bias: high risk of bias in all studies; Detection bias, attrition bias and reporting bias: low risk of bias in all studies; Other types of bias: low risk of bias in one study and unclear risk of bias in two studies.
i. Evidence downgraded by 1 due to serious inconsistency (I^2=75%)

Table 2. GRADE evidence profile for PICO 1 (at follow-up)

In people with aphasia after stroke is a higher dose of speech and language therapy (SLT) (> or = to 20 hours) compared to a lower dose of SLT (< 20 hours) associated with greater improvements in language, communication or quality of life?

Certainty assessment							‹ RI SDUWLFLSDQ'		Absolute Effect		Certainty	Importance
‹ RI studies >‹ RI RPC]	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Intervention	Comparator	SMD (95% CI)	MD (95% CI)		
Overall language (Follow-up* 12 ±26 weeks; Better indicated by higher values)												
3 [4]	randomised trials	serious[a]	not serious	not serious	serious[b]	none	174	97	0.06 (-0.29, 0.41)	-	⊕⊕⊖⊖ **Low**	Critical
Expressive language: naming (Follow-up 12 weeks; Better indicated by higher values)												
1 [2]	randomised trials	serious[c]	not serious	not serious	serious[d]	none	133	59		-0.47 (-1.15, 0.22)	⊕⊕⊖⊖ **Low**	Critical
Auditory comprehension (Follow-up 12 weeks; Better indicated by higher values)												
1 [2]	randomised trials	serious[c]	not serious	not serious	serious[d]	none	133	59		-0.04 (-0.52, 0.43)	⊕⊕⊖⊖ **Low**	Critical
Functional communication (Follow-up 12 ±40 weeks; Better indicated by higher values)												
2 [3]	randomised trials	serious[e]	serious	not serious	serious[f]	none	155	77	0.13 (-0.22, 0.48)	-	⊕⊕⊖⊖ **Low**	Critical
Quality of life / Health-related quality of life (Immediately post-intervention; Better indicated by higher values)												
1 [2]	randomised trials	serious[c]	not serious	not serious	serious[d]	none	132	116	-	0.06 (-0.11, 0.23)	⊕⊕⊖⊖ **Low**	Critical

CI: confidence interval; **MD:** mean difference; **RPC:** randomised paired comparisons; **SMD:** standardised mean difference

*follow-up after a period of no treatment post-therapy

Explanations

a. Evidence downgraded by 1 due to risk of bias. Selection bias (randomisation): low risk of bias in all studies, and low risk of bias for allocation concealment in 2 studies and unclear risk of bias in 1 study; Performance bias: high risk of bias in all studies; Detection bias: low risk of bias in 2 studies and unclear risk of bias in 1 study; Attrition bias: low risk of bias in all studies; Selective reporting: low risk of bias in 2 studies and high risk of bias in 1 study; Other types of bias: low risk of bias in 1 study and unclear risk of bias in 2 studies.

b. Evidence downgraded by 1 due to inconsistency (wide confidence intervals and modest sample size).
c. Evidence downgraded by 1 due to risk of bias. Single-blinded trial; Unclear risk of bias as groups were not comparable at baseline (usual care arm had participants who were more independent, younger, no participants with severe aphasia and high discourse and naming scores).
d. Evidence downgraded by 1 due to imprecision (wide confidence intervals and modest sample size).
e. Evidence downgraded by 1 due to risk of bias. Selection bias (randomisation and allocation concealment): low risk of bias in both studies; Performance bias: high risk of bias in both studies; Low risk of bias in both studies for detection bias, attrition bias and selective reporting; Other types of bias: low risk of bias in 1 study and unclear risk of bias in 1 study.
f. Evidence downgraded by 1 due to imprecision (wide confidence intervals and modest sample size).

Table 3. GRADE evidence profile for PICO 2

In people with aphasia after stroke is a higher intensity of SLT (> or = to 3 hours per week) compared to a lower intensity of SLT (< 3 hours per week) associated with greater improvements in language, communication or quality of life?

Certainty assessment							‹ RI SDUWLFLSD		Absolute Effect		Certainty	Importance
‹ RI VWXG >‹ RI 53&	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Intervention	Comparator	SMD (95% CI)	MD (95% CI)		
Overall language (Immediately post-intervention; Better indicated by higher values)												
7 (9)	randomised trials	serious[a]	serious[b]	not serious	not serious	none	456	300	0.14 (-0.08, 0.36)	-	⊕⊕⊖⊖ **Low**	Critical
Expressive language (mixed including naming) (Immediately post-intervention; Better indicated by higher values)												
5 [7]	randomised trials	serious[c]	not serious[d]	not serious	not serious	none	395	238	0.00 (-0.20, 0.21)	-	⊕⊕⊕⊖ **Moderate**	Critical
Auditory comprehension (Immediately post-intervention; Better indicated by higher values)												
4 [5]	randomised trials	serious[e]	serious[f]	not serious	not serious	none	244	168	0.32 (-0.09, 0.74)	-	⊕⊕⊖⊖ **Low**	Critical
Functional communication (Immediately post-intervention; Better indicated by higher values)												
5 [6]	randomised trials	serious[g]	serious[h]	not serious	not serious	none	275	192	0.49 (0.15, 0.82)	-	⊕⊕⊖⊖ **Low**	Critical
Emotional and social wellbeing (Immediately post-intervention; Better indicated by lower values)												
2 [3]	randomised trials	serious[i]	not serious	not serious	serious[j]	none	160	82	0.18 (-0.08, 0.45)		⊕⊕⊖⊖ **Low**	Critical
Quality of life (Immediately post-intervention; Better indicated by higher values)												
4 [6]	randomised trials	serious[k]	serious[l]	not serious	not serious	none	371	217	0.05 (-0.24, 0.35)	-	⊕⊕⊖⊖ **Low**	Critical

CI: confidence interval; **MD:** mean difference; **RPC:** randomised paired comparisons; **SMD:** standardised mean difference

Explanations

a. Evidence downgraded by 1 due to serious risk of bias. Selection bias (randomisation): low risk of bias in all studies; Selection bias (allocation concealment): low risk of bias in 6 studies and unclear risk of bias in 1 study; Performance bias: high risk of bias in all studies; Detection bias: low risk of bias in all studies; Attrition bias: judged as low risk of bias in 6 studies and high risk of bias in 1 study; Reporting bias: low risk of bias in 6 studies and unclear risk of bias in 1 study; Other types of bias: low risk of bias in 2 studies and unclear risk of bias in 5 studies.

b. Evidence downgraded by 1 due to risk of serious inconsistency (I^2 = 51%)
c. Evidence downgraded by 1 due to serious risk of bias. Selection bias (randomisation): low risk of bias in all studies; Selection bias (allocation concealment): low risk of bias in 4 studies and unclear risk of bias in 1 study; Performance bias: high risk of bias in all studies; Detection bias and Attrition bias: judged as low risk of bias all studies; ; Reporting bias: judged as low risk of bias in 4 studies and unclear risk of bias in 1 study; Other types of bias: unclear risk of bias in 4 studies.
d. Heterogeneity (I^2=31%) judged as not serious
e. Evidence downgraded by 1 due to serious risk of bias. Selection bias (randomisation): low risk of bias in all studies; Selection bias (allocation concealment): low risk of bias in 3 studies and unclear risk of bias in 1 study. Performance bias: high risk of bias in all studies; Detection bias and Attrition bias: low risk of bias in all studies; Reporting bias: low risk of bias in 3 studies and unclear risk of bias in 1 study. Other sources of bias: unclear risk of bias in all studies.
f. Evidence downgraded by 1 due to serious risk of inconsistency (I^2=72%)
g. Evidence downgraded by 1 due to serious risk of bias. Selection bias (randomisation): low risk of bias in all studies; Selection bias (allocation concealment): low risk of bias in 4 studies and unclear risk of bias in 1 study; Performance bias: high risk of bias in all studies; Detection bias and attrition bias: judged as low risk of bias in all studies; Reporting bias: judged as low risk of bias in 4 studies and unclear risk of bias in 1 study; Other types of bias: low risk of bias in 1 study and unclear risk of bias in 4 studies.
h. Evidence downgraded by 1 due to serious risk of inconsistency (I^2=63%)
i. Evidence downgraded by 1 due to serious risk of bias. Selection bias (randomisation and allocation concealment): low risk of bias in all studies; Performance bias: high risk of bias in all studies; Detection bias: low risk of bias in 2 studies and unclear risk of bias in 1 study; Attrition bias and selective reporting bias: low risk of bias in both studies; Other types of bias: low risk of bias in 1 study and unclear risk of bias in 1 study.
j. Evidence downgraded by 1 due to serious risk of serious imprecision (modest sample size).
k. Evidence downgraded by 1 due to risk of bias. Selection bias (randomisation and allocation concealment): low risk of bias in all studies; Performance bias: high risk of bias in all studies; Detection bias and Attrition bias: low risk of bias in all studies; Reporting bias: low risk of bias in 3 studies and unclear risk of bias in 1 study; Other types of bias: low risk of bias in 1 study and unclear risk of bias in 3 studies.
l. Evidence downgraded by 1 due to serious risk of inconsistency (I^2=63%)

Table 4. GRADE evidence profile for PICO 2 (follow-up),

In people with aphasia after stroke is a higher intensity of SLT (> or = to 3 hours per week) compared to a lower intensity of SLT (< 3 hours per week) associated with greater improvements in language, communication or quality of life?

Certainty assessment							‹ R participants		Absolute Effect		Certainty	Importance
‹ R studies > ‹ R RPC]	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Intervention	Comparator	SMD (95% CI)	MD (95% CI)		
Overall language ability (Follow-up*: 12-62 weeks; Better indicated by higher values)												
5 [7]	randomised trials	serious[a]	not serious[b]	not serious	not serious	none	352	200	0.01 (-0.21, 0.24)	-	⊕⊕⊕⊖ **Moderate**	Critical
Expressive language (mixed including naming) (Follow-up: 12-62 weeks; Better indicated by higher values)												
3 [5]	randomised trials	serious[c]	not serious	not serious	not serious	none	289	138	-0.14 (-0.34, 0.06)	-	⊕⊕⊕⊖ **Moderate**	Critical
Auditory comprehension (Follow-up: 12 ≤40 weeks; Better indicated by higher values)												
2 [3]	randomised trials	serious[d]	not serious	not serious	serious[e]	none	142	68	0.03 (-0.26, 0.32)	-	⊕⊕⊖⊖ **Low**	Critical
Functional communication (observer-rated) (Follow-up: 12 ≤40 weeks; Better indicated by higher values)												
3 [4]	randomised trials	serious[f]	not serious	not serious	serious[g]	none	164	88	0.17 (-0.17, 0.51)	-	⊕⊕⊖⊖ **Low**	Critical
Emotional and social wellbeing (Follow-up: 40 weeks; Better indicated by lower values)												
2 [3]	randomised trials	serious[h]	not serious	not serious	serious[i]	none	156	79	-0.13 (-0.41, 0.14)		⊕⊕⊖⊖ **Low**	Critical
Quality of life (Follow-up: 12 weeks Better indicated by higher values)												
2 [4]	randomised trials	serious[j]	not serious	not serious	not serious	none	279	128		-0.03 (-0.18, 0.12)	⊕⊕⊕⊖ **Moderate**	Critical

CI: confidence interval; **MD:** mean difference; **RPC:** randomised paired comparisons; **SMD:** standardised mean difference

*follow-up after a period of no treatment post-therapy

Explanations

a. Evidence downgraded by 1 due to risk of bias. Selection bias (randomisation and allocation concealment) low risk of bias for all studies; Performance bias: high risk of bias for all studies; Detection bias:low risk of bias for all studies; Attrition bias: low risk of bias in 4 studies and high risk of bias in 1 study; Reporting bias: low risk of bias for all studies: Other types of bias: low risk of bias in 2 studies and unclear risk of bias in 3 studies.
b. Heterogeneity (I^2=34%) judged as not serious
c. Evidence downgraded by 1 due to risk of bias. Selection bias (randomisation and allocation concealment): low risk of bias in all studies; Performance bias: high risk of bias in all studies; Detection bias, attrition bias and reporting bias: low risk of bias in all studies; Other types of bias: low risk of bias in 1 study and unclear risk of bias in 2 studies.
d. Evidence downgraded by 1 due to risk of bias: Selective bias (randomisation and allocation concealment): low risk of bias in both studies; Performance bias: high risk of bias in both studies; Detection bias, attrition bias and selective reporting: low risk of bias in all studies; Other types of bias: unclear risk of bias both studies
e. Evidence downgraded by 1 due to risk of serious imprecision (modest sample size).
f. Evidence downgraded by 1 due to risk of bias. Selection bias (randomisation and allocation concealment): low risk of bias for all studies; Performance bias: high risk of bias for all studies; Detection bias, attrition bias and selective reporting bias: low risk of bias; Other types of bias: low risk of bias in 1 study and unclear risk of bias in 2 studies.
g. Evidence downgraded by 1 due to risk of serious imprecision (modest sample size).
h. Evidence downgraded by 1 due to risk of bias. Selection bias (randomisation and allocation concealment): low risk of bias in both studies; Performance bias: high risk of bias in both studies; Detection bias, attrition bias and selective reporting: low risk of bias in both studies; Other types of bias: low risk of bias in 1 study and unclear risk of bias in one study.
i. Evidence downgraded by 1 due to risk of serious imprecision (modest sample size).
j. Evidence downgraded by 1 due to risk of bias. Selection bias (randomisation and allocation concealment): low risk of bias in both studies; Performance bias: high risk of bias in both studies; Detection bias, attrition bias and selective reporting: low risk of bias in both studies; Other types of bias: low risk of bias in 1 study and unclear risk of bias in one study.

Table 5. GRADE evidence profile for PICO 3

In people with aphasia after stroke is a higher frequency of SLT (> or = to 4 days per week) compared to a lower frequency of SLT (< 4 days per week) associated with greater improvements in language, communication or quality of life?

Certainty assessment							‹ RI SDUWLFLSD		Absolute Effect		Certainty	Importance
‹ RI VWXG >‹ RI 53&	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Intervention	Comparator	SMD (95% CI)	MD (95% CI)		
Overall language ability (Immediately post-intervention; Better indicated by higher values)												
2 [3]	randomised trials	serious[a]	not serious	not serious	serious[b]	none	144	66	-0.21 (-0.51, 0.08)	-	⊕⊕⊖⊖ **Low**	Critical
Expressive language (naming) (Immediately post-intervention Better indicated by higher values)												
2 [3]	randomised trials	serious[a]	serious[c]	not serious	serious[b]	none	144	66	-0.39 (-0.94, 0.15)	-	⊕⊖⊖⊖ **Very low**	Critical
Auditory comprehension (Immediately post-intervention; Better indicated by higher values)												
1 [2]	randomised trials	serious[d]	not serious	not serious	serious[e]	none	140	61	-	-0.17 (-0.66, 0.31)	⊕⊕⊖⊖ **Low**	Critical
Functional communication (Immediately post-intervention; Better indicated by higher values)												
2 [3]	randomised trials	serious[a]	not serious	not serious	serious[b]	none	136	60	-	-0.90 (-4.53, 6.33)	⊕⊕⊖⊖ **Low**	Critical
Emotional and social wellbeing (Immediately post-intervention; Better indicated by lower values)												
1	randomised trials	serious[f]	not serious	not serious	very serious[g]	none	4	5	-	-0.20 (-7.13, 6.73)	⊕⊖⊖⊖ **Very Low**	Critical
Quality of life / Health-related Quality of life (Immediately post-intervention; Better indicated by higher values)												
2 [3]	randomised trials	serious[h]	not serious	not serious	serious[i]	none	146	69	-	0.23 (-0.06, 0.52)	⊕⊕⊖⊖ **Low**	Critical

CI: confidence interval; **MD:** mean difference; **RPC:** randomised paired comparisons; **SMD:** standardised mean difference

Explanations

a. Evidence downgraded by 1 due to serious risk of bias. Both studies were single-blinded trials; High risk of bias for attrition bias in one study; Reporting bias: unclear risk of bias in one study: Other bias judged as unclear risk of bias in one study and high risk of bias in one study as groups were not comparable at baseline.
b. Evidence downgraded by 1 due to risk of serious imprecision (modest sample size)
c. Evidence downgraded by 1 due to serious inconsistency (I^2=57%)
d. Evidence downgraded by 1 due to serious risk of bias. Randomisation (sequence generation and allocation concealment): low risk of bias; Performance bias: high risk of bias; Detection bias, attrition bias and reporting bias: low risk of bias; Other types of bias: unclear risk of bias .
e. Evidence downgraded by 1 due to serious risk of serious imprecision (modest sample size).
f. Evidence downgraded by 1 due to serious risk of bias. Single-blinded trial; High risk of bias for attrition bias; Reporting bias: unclear risk of bias; Other bias: high risk of bias as the two groups were not well-matched for aphasia severity, type and time post-onset at baseline.
g. Evidence downgraded by 2 due to risk of very serious imprecision (wide confidence intervals and small sample size).
h. Evidence downgraded by 1 due to serious risk of bias. Randomisation (sequence generation and allocation concealment): low risk of bias in both studies; Performance bias: high risk of bias in both studies; Detection bias and attrition bias: low risk of bias in both studies; Selective reporting bias: low risk of bias in 1 study and unclear risk of bias in 1 study; Other types of bias: low risk of bias in 1 study and unclear risk of bias in 1 study
i. Evidence downgraded by 1 due to serious risk of serious imprecision (modest sample size).

Table 6. GRADE evidence profile for PICO 3 (follow-up)

In people with aphasia after stroke is a higher frequency of SLT (> or = to 4 days per week) compared to a lower frequency of SLT (< 4 days per week) associated with greater improvements in language, communication or quality of life?

Certainty assessment							‹ RI SDUWLFLSD		Absolute Effect		Certainty	Importance
‹ RI VWXG >‹ RI 53&	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Intervention	Comparator	SMD (95% CI)	MD (95% CI)		
Overall language ability (Follow-up: 4-12 weeks; Better indicated by higher values)												
2 [3]	randomised trials	serious[a]	not serious	not serious	serious[b]	none	137	64	-0.19 (-0.49, 0.11)	-	⊕⊕⊖⊖ **Low**	Critical
Expressive language (naming) (Follow-up: 4-12 weeks; Better indicated by higher values)												
2 [3]	randomised trials	serious[a]	serious[c]	not serious	serious[b]	none	137	64	-0.37 (-0.98, 0.23)	-	⊕⊖⊖⊖ **Very Low**	Critical
Auditory comprehension (Follow-up; 12 weeks; Better indicated by higher values)												
1 [2]	randomised trials	serious[d]	not serious	not serious	serious[e]	none	133	59	-	-0.04 (-0.52, 0.43)	⊕⊕⊖⊖ **Low**	Critical
Functional communication (Follow-up: 12 weeks; Better indicated by higher values)												
2 [3]	randomised trials	serious[a]	not serious	not serious	serious[b]	none	127	55	-	-0.95 (-6.71, 4.81)	⊕⊕⊖⊖ **Low**	Critical
Emotional and social wellbeing (Follow-up:4-6 weeks; Better indicated by lower values)												
1	randomised trials	serious[f]	not serious	not serious	very serious[g]	none	4	5	-	-1.20 (-8.56, 6.16)	⊕⊖⊖⊖ **Very Low**	Critical
Quality of life (Follow-up: 4-12 weeks; Better indicated by higher values)												
1 [2]	randomised trials	serious[c]	not serious	not serious	serious[d]	none	132	58	-	0.06 (-0.14, 0.26)	⊕⊕⊖⊖ **Low**	Critical

CI: confidence interval; **MD:** mean difference; **RPC:** randomised paired comparisons; **SMD:** standardised mean difference

Explanations

a.Evidence downgraded by 1 due to serious risk of bias. Both studies were single-blinded trials; High risk of bias for attrition bias in one study; Reporting bias: unclear risk of bias in one study: Other bias judged as unclear risk of bias in one study and high risk of bias in one study as groups were not comparable at baseline.

b. Evidence downgraded by 1 due to risk of serious imprecision (modest sample size)
c. Evidence downgraded by 1 due to serious inconsistency (I^2=62%)
d. Evidence downgraded by 1 due to serious risk of bias. Randomisation (sequence generation and allocation concealment): low risk of bias; Performance bias: high risk of bias; Detection bias, attrition bias and reporting bias: low risk of bias; Other types of bias: unclear risk of bias.
e. Evidence downgraded by 1 due to serious risk of serious imprecision (modest sample size).
f. Evidence downgraded by 1 due to serious risk of bias. Single-blinded trial; High risk of bias for attrition bias; Reporting bias: unclear risk of bias; Other bias: high risk of bias as the two groups were not well-matched for aphasia severity, type and time post-onset at baseline.
g. Evidence downgraded by 2 due to risk of very serious imprecision (wide confidence intervals and small sample size).

Table 7. GRADE evidence profile for PICO 4a (immediately post-intervention)

In people with aphasia after stroke is digitally-delivered SLT (using telerehabilitation, virtual reality therapist or similar) compared to usual in-person SLT associated with similar improvements in language, communication or quality of life?

Certainty assessment							‹ RI SDUWLFLSD		Absolute Effect		Certainty	Importance
‹ RI VWXC	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Intervention	Comparator	SMD (95% CI)	MD (95% CI)		
Overall language (Immediately post-intervention; Better indicated by higher values)												
4	randomised trials	serious[a]	not serious	not serious	serious[b]	none	45	47	0.22 (-0.21, 0.65)	-	⊕⊕⊖⊖ **Low**	Critical
Auditory comprehension (Immediately post-intervention; Better indicated by higher values)												
4	randomised trials	serious[c]	not serious	not serious	serious[b]	none	53	49	-0.11 (-0.51, 0.28)	-	⊕⊕⊖⊖ **Low**	Critical
Naming (Immediately post-intervention; Better indicated by higher values)												
5	randomised trials	serious[d]	not serious[e]	not serious	serious[b]	none	58	54	0.11 (-0.41, 0.62)	-	⊕⊕⊖⊖ **Low**	Critical
Functional communication (Immediately post-intervention; Better indicated by higher values)												
4	randomised trials	serious[f]	not serious	not serious	serious[b]	none	46	41	-0.09 (-0.51, 0.33)	-	⊕⊕⊖⊖ **Low**	Critical
Communication confidence (Immediately post-intervention; Better indicated by higher values)												
1	randomised trials	serious[g]	not serious	not serious	very serious[h]	none	14	14	-	-2.61 (-4.74, -0.48)	⊕⊖⊖⊖ **Very low**	Important
Quality of life / Health-related quality of life (Immediately post-intervention; Better indicated by higher values)												
1	randomised trials	serious[i]	not serious	not serious	very serious[h]	none	13	9	-	-12.34 (-39.54, 14.86)	⊕⊖⊖⊖ **Very low**	Critical

CI: confidence interval; **MD:** mean difference; **RPC:** randomised paired comparisons; **SMD:** standardised mean difference

Explanations

a. Evidence downgraded by 1 due to serious risk of bias. Selection bias (randomisation): low risk of bias in 1 study and unclear risk of bias in 3 studies, and allocation concealment judged as unclear risk of bias in all studies; Performance bias: unclear in 3 studies and high risk of bias in one; Detection bias: judged as unclear risk of bias in 3 studies and low risk of bias in 1 study; Attrition bias: judged as low risk of bias in 2 studies and unclear risk of bias in 2 studies; Reporting bias: judged as low risk of bias in 2 studies and unclear risk of bias in 2 studies; Other types of bias: low risk of bias in 3 studies and unclear risk of bias in 1 study.

b. Evidence downgraded by 1 due to risk of serious imprecision (modest sample size).

c. Evidence downgraded by 1 due to serious risk of bias. Selection bias (randomisation): low risk of bias in 1 study and unclear risk of bias in 3 studies, and allocation concealment judged as unclear risk of bias in all studies; Performance bias: unclear in 3 studies and high risk of bias in one; Detection bias: judged as unclear risk of bias in all studies; Attrition bias: judged as low risk of bias in 1 studies and unclear risk of bias in 3 studies; Reporting bias: judged as unclear risk of bias in all studies; Other types of bias: low risk of bias in 3 studies and unclear risk of bias in 1 study.
d. Evidence downgraded by 1 due to serious risk of bias. Selection bias (randomisation): low risk of bias in 2 studies and unclear risk of bias in 3 studies, and allocation concealment judged as low risk of bias in 1 study and unclear risk of bias in 4 studies; Performance bias: unclear in 3 studies and high risk of bias in 2; Detection bias: judged as low risk of bias in 1 study and unclear risk of bias in 4 studies; Attrition bias: judged as low risk of bias in 2 studies and unclear risk of bias in 3 studies; Reporting bias: judged as low risk of bias in 1 study and unclear risk of bias in 4 studies; Other types of bias: low risk of bias in 4 studies and unclear risk of bias in 1 study.
e. Heterogeneity (I^2=43%) judged as not serious
f. Evidence downgraded by 1 due to serious risk of bias. Selection bias (randomisation): low risk of bias in 2 studies and unclear risk of bias in 2 studies, and allocation concealment judged as unclear risk of bias in all studies; Performance bias: unclear in 3 studies and high risk of bias in 1; Detection bias: judged as low risk of bias in 1 study and unclear risk of bias in 3 studies; Attrition bias: judged as low risk of bias in 1 studies and unclear risk of bias in 3 studies; Reporting bias: judged as low risk of bias in 1 study and unclear risk of bias in 3 studies; Other types of bias: low risk of bias in 3 studies and unclear risk of bias in 1 study.
g. Evidence downgraded by 1 due to serious risk of bias. Selection bias (randomisation and allocation): unclear risk of bias; Performance bias: high risk of bias; Detection bias, attrition bias, reporting bias and other types of bias: unclear risk of bias
h. Evidence downgraded by 2 due to due to risk of serious imprecision (small sample size)
i. Evidence downgraded by 1 due to serious risk of bias. Low risk of bias for randomisation and other types of bias. Judged as unclear risk of bias for the following criteria (selection bias – allocation concealment; performance bias, detection bias, attrition bias, and reporting bias).

Table 8. GRADE evidence profile for PICO 4a (follow-up)

In people with aphasia after stroke is digitally-delivered SLT (using telerehabilitation, virtual reality therapist or similar) compared to usual in-person SLT associated with similar improvements in language, communication or quality of life?

Certainty assessment							‹ RI SDUWLFLSD		Absolute Effect		Certainty	Importance
‹ RI VWXC	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Intervention	Comparator	SMD (95% CI)	MD (95% CI)		
Auditory comprehension (Follow-up: 26 weeks; Better indicated by higher values)												
1	randomised trials	serious[a]	not serious	not serious	very serious[b]	none	15	15	-	4.00 (-0.53, 8.53)	⨁⊖⊖⊖ **Very low**	Critical
Naming (Follow-up: 6 ±26 weeks; Better indicated by higher values)												
2	randomised trials	serious[c]	not serious	not serious	very serious[b]	none	20	20	0.58 (-0.07, 1.22)	-	⨁⊖⊖⊖ **Very low**	Critical
Functional communication (Follow-up: 8 weeks; Better indicated by higher values)												
1	randomised trials	serious[d]	not serious	not serious	very serious[b]	none	9	8	-	6.24 (-9.61, 22.09)	⨁⊖⊖⊖ **Very low**	Critical

CI: confidence interval; **MD:** mean difference; **RPC:** randomised paired comparisons; **SMD:** standardised mean difference

Explanations

a. Evidence downgraded by 1 due to risk of bias. Low risk of bias for attrition bias and other types of bias; Unclear risk of bias for the following criteria (selection bias – randomisation and allocation concealment; performance bias, detection bias, and reporting bias).
b. Evidence downgraded by 2 due to risk of serious imprecision (small sample size)
c. Evidence downgraded by 1 due to serious risk of bias. Selection bias (randomisation): low risk of bias in 1 study and unclear risk of bias in 1 study; Selection bias (allocation concealment): low risk of bias in 1 study and unclear risk of bias in 1 study; Performance bias: unclear risk of bias in 1 study and high risk of bias in 1 study; Detection bias: unclear risk of bias in 1 study and unclear risk of bias in 1 study; Attrition bias: low risk of bias in both studies; Selective reporting: low risk of bias in 1 study and unclear risk of bias in 1 study; Other types of bias: low risk of bias in both studies.
d. Evidence downgraded by 1 due to serious risk of bias. Low risk of bias for selection bias (randomisation), detection bias, attrition bias, reporting bias and other types of bias; Unclear risk of bias for allocation concealment and performance bias.

Table 9. GRADE evidence profile for PICO 4b (immediately post-intervention)

In people with aphasia after stroke is in-person SLT plus digital augmentation (using computer or tablet-based software, virtual reality or similar) compared to usual in-person SLT associated with greater improvements in language, communication or quality of life?

Certainty assessment							‹ RI SDUWLFLSD		Absolute Effect		Certainty	Importance
‹ RI VWXC	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Intervention	Comparator	SMD (95% CI)	MD (95% CI)		
Overall language (Immediately post-intervention; Better indicated by higher values)												
4	randomised trials	serious[a]	not serious[b]	not serious	serious[c]	none	76	80	0.34 (-0.04, 0.72)	-	⊕⊕⊖⊖ **Low**	Critical
Naming (Immediately post-intervention; Better indicated by higher values)												
2	randomised trials	serious[d]	not serious	not serious	serious[e]	none	63	62	0.12 (-0.36, 0.60)	-	⊕⊕⊖⊖ **Low**	Critical
Naming (Change from baseline score) (Immediately post-intervention; Better indicated by higher values)												
2	randomised trials	serious[f]	not serious	not serious	serious[g]	none	112	113	-	0.53 (-2.74, 3.80)	⊕⊕⊖⊖ **Low**	Critical
Sentence production (Immediately post-intervention; Better indicated by higher values)												
1	randomised trials	serious[h]	not serious	not serious	very serious[i]	none	30	27	-	0.80 (-2.87, 4.47)	⊕⊖⊖⊖ **Very low**	Critical
Expressive language (overall) (Immediately post-intervention; Better indicated by higher values)												
3	randomised trials	serious[j]	not serious	not serious	serious[j]	none	79	80	0.11 (-0.20, 0.42)	-	⊕⊕⊖⊖ **Low**	Critical
Auditory comprehension (Immediately post-intervention; Better indicated by higher values)												
3	randomised trials	serious[j]	serious[k]	not serious	serious[j]	none	79	80	0.41 (-0.07, 0.88)	-	⊕⊖⊖⊖ **Very low**	Critical
Functional communication (Immediately post-intervention; Better indicated by higher values)												
5	randomised trials	serious[m]	not serious[n]	not serious	serious[o]	none	170	174	0.15 (-0.14, 0.43)	-	⊕⊕⊖⊖ **Low**	Critical

CI: confidence interval; **MD:** mean difference; **SMD:** standardised mean difference

Explanations

a. Evidence downgraded by 1 due to risk of bias. Selection bias (randomisation): low risk of bias in 3 studies and unclear risk of bias in 1 study; Selection bias (allocation concealment): unclear risk of bias in all studies. Performance bias: High risk of bias in all studies; Detection bias: low risk of bias in all studies; Attrition bias: low risk of bias in 2 studies and high risk of bias in 2 studies; Selective reporting: low risk of bias in 3 studies and unclear risk of bias in 1 study; Other types of bias: low risk of bias in 1 study and unclear risk of bias in 3 studies.
b. Heterogeneity (I^2=25%) judged as not serious
c. Evidence downgraded by 1 due to risk of serious imprecision (modest sample size).
d. Evidence downgraded by 1 due to risk of bias. Selection bias (randomisation): low risk of bias in both studies; Selection bias (allocation concealment): low risk of bias in 1 study and unclear risk of bias in 1 study; Performance bias: high risk of bias in both studies; Detection bias, attrition bias and selective reporting: low risk of bias in both studies; Other types of bias: low risk of bias in 1 study and unclear risk of bias in 1 study.
e. Evidence downgraded by 1 due to risk of serious imprecision (modest sample size).
f. Evidence downgraded by 1 due to risk of bias. Selection bias (randomisation and allocation concealment): low risk of bias in both studies; Performance bias: High risk of bias in both studies; Attrition bias: low risk of bias in one study and unclear risk of bias in one study; Selective reporting: low risk of bias in both studies; Other types of bias: unclear risk of bias in both studies.
g. Evidence downgraded by 1 due to risk of serious imprecision (modest sample size).
h. Evidence downgraded by 1 due to risk of bias. Selection bias (randomisation and allocation concealment): low risk of bias; Performance bias: high risk of bias; Detection bias, attrition bias, selective reporting bias: low risk of bias; Other types of bias: unclear risk of bias.
i. Evidence downgraded by 2 due to risk of serious imprecision (small sample size).
j. Evidence downgraded by 1 due to risk of bias. Selection bias (randomisation): low risk of bias in 2 studies and unclear risk of bias in 1 study; Selection bias (allocation concealment): low risk of bias in 1 study and unclear risk of bias in 2 studies; Performance bias: high risk of bias in all studies; Detection bias: low risk of bias in all studies; Attrition bias: low risk of bias in 2 studies and unclear risk of bias in 1 study; Selective reporting: low risk of bias in 2 studies and unclear risk of bias in 1 study; Other types of bias: low risk of bias in 1 study and unclear risk of bias in 2 studies.
k. Evidence downgraded by 1 due to serious risk of inconsistency (I^2=54%)
l. Evidence downgraded by 1 due to risk of serious imprecision (modest sample size).
m. Evidence downgraded by 1 due to serious risk of bias. Selection bias (randomisation): low risk of bias in 4 studies, and unclear risk of bias in 1 study; Selection bias (allocation concealment): low risk of bias in 2 studies and unclear risk of bias in 3 studies; Performance bias: high risk of bias in all studies; Detection bias: low risk of bias in all studies; Attrition bias: low risk of bias in 3 studies, unclear risk of bias in 1 study and high risk of bias in 1 study; Reporting bias: low risk of bias in 4 studies and unclear risk of bias in 1 study; Other types of bias: low risk of bias in 1 study and unclear risk of bias in 4 studies.
n. Heterogeneity (I^2=33%) judged as not serious
o. Evidence downgraded by 1 due to risk of serious imprecision (modest sample size).

Table 10. GRADE evidence profile for PICO 4b (follow-up)

In people with aphasia after stroke is in-person SLT plus digital augmentation (using computer or tablet-based software, virtual reality or similar) compared to usual in-person SLT associated with greater improvements in language, communication or quality of life?

Certainty assessment							‹ RI SDUWLFLSD		Absolute Effect		Certainty	Importance
‹ RI VWXC	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Intervention	Comparator	SMD (95% CI)	MD (95% CI)		
Functional communication (Follow-up: 4-9 months; Better indicated by higher values)												
2	randomised trials	serious[a]	not serious	not serious	serious[b]	none	102	110	-0.10 (-0.37, 0.17)		⊕⊕⊖⊖ **Low**	Critical
Expressive language (Naming) (Follow-up: 3 months; Better indicated by higher values)												
1	randomised trials	serious[c]	not serious	not serious	very serious[d]	none	29	27	-	-3.70 (-16.14, 8.74)	⊕⊖⊖⊖ **Very low**	Critical
Expressive language (sentences) (Follow-up: 3 months; Better indicated by higher values)												
1	randomised trials	serious[c]	not serious	not serious	very serious[d]	none	29	27	-	1.00 (-2.52, 4.52)	⊕⊖⊖⊖ **Very low**	Critical
Receptive language (Follow-up: 3 months; Better indicated by higher values)												
1	randomised trials	serious[c]	not serious	not serious	very serious[d]	none	29	27	-	-0.50 (-14.65, 13.65)	⊕⊖⊖⊖ **Very low**	Critical
Overall language ability (Follow-up: 12 weeks; Better indicated by higher values)												
1	randomised trials	serious[e]	serious	not serious	very serious[f]	none	11	9	-	-5.70 (-31.82, 20.42)	⊕⊖⊖⊖ **Very low**	Critical

CI: confidence interval; **MD:** mean difference; **RPC:** randomised paired comparisons; **SMD:** standardised mean difference

Explanations

a. Evidence downgraded by 1 due to risk of bias. Selection bias (randomisation and allocation concealment): low risk of bias in both studies; Performance bias: High risk of bias in both studies; Attrition bias: low risk of bias in one study and unclear risk of bias in one study; Selective reporting: low risk of bias in both studies; Other types of bias: unclear risk of bias in both studies.
b. Evidence downgraded by 1 due to imprecision (wide confidence intervals and modest sample size).
c. Evidence downgraded by 1 due to risk of bias. Selection bias (randomisation and allocation concealment): low risk of bias; Performance bias: high risk of bias; Detection bias, attrition bias and selective reporting: low risk of bias; Other types of bias: unclear risk of bias.
d. Evidence downgraded by 2 due to imprecision (wide confidence intervals and small sample size).
e. Evidence downgraded by 1 due to risk of bias. Selection bias (randomisation): low risk of bias; Selection bias (allocation concealment): unclear risk of bias; Performance bias: high risk of bias; Detection bias: low risk of bias; Attrition bias: high risk of bias; Selective reporting: low risk of bias; Other types of bias: unclear risk of bias.
f. Evidence downgraded by 2 due to imprecision (wide confidence intervals and small sample size).

Table 11. GRADE evidence profile for PICO 5a (immediately post-intervention)

In people with aphasia after stroke is one-to-one plus group SLT compared to one-to-one SLT alone associated with greater improvements in language, communication or quality of life?

Certainty assessment							‹ RI SDUWLFLSD		Absolute Effect		Certainty	Importance
‹ RI VWXG ><‹ RI 53&	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Intervention	Comparator	SMD (95% CI)	MD (95% CI)		
Overall language (Immediately post-intervention; Better indicated by higher)												
6 [7]	randomised trials	serious[a]	not serious	not serious	serious[b]	none	214	127	-0.05 (-0.28, 0.17)	-	⊕⊕⊖⊖ **Low**	Critical
Expressive language (Immediately post-intervention; Better indicated by higher)												
1	randomised trials	serious[c]	not serious	not serious	very serious[d]	none	16	18	-	0.81 (-12.67, 14.29)	⊕⊖⊖⊖ **Very low**	Critical
Naming (Immediately post-intervention; Better indicated by higher)												
3 [4]	randomised trials	serious[e]	not serious	not serious	serious[f]	none	155	72	-0.17 (-0.45, 0.11)	-	⊕⊕⊖⊖ **Low**	Critical
Auditory comprehension (Immediately post-intervention; Better indicated by higher)												
4 [5]	randomised trials	serious[g]	not serious	not serious	serious[h]	none	171	90	-0.04 (-0.30, 0.22)	-	⊕⊕⊖⊖ **Low**	Critical
Functional communication (observer-rated) (Immediately post-intervention; Better indicated by higher)												
4 [5]	randomised trials	serious[i]	not serious	not serious	not serious	none	288	138	-0.05 (-0.25, 0.16)	-	⊕⊕⊕⊖ **Moderate**	Critical
Quality of life / Health-related quality of life (Immediately post-intervention; Better indicated by higher values)												
2 [3]	randomised trials	serious[j]	not serious	not serious	serious[k]	none	146	69	-	0.10 (-0.08, 0.28)	⊕⊕⊖⊖ **Low**	Critical

CI: confidence interval; **MD:** mean difference; **RPC:** randomised paired comparisons**; SMD:** standardised mean difference

Explanations

a. Evidence downgraded by 1 due to serious risk of bias. Selection bias (randomisation): low risk of bias in 4 studies, and unclear risk of bias in 2 studies; Selection bias (allocation concealment): low risk of bias in 2 studies and unclear risk of bias in 4 studies; Performance bias: unclear risk of bias in 1 study and high risk of bias in 5 studies; Detection bias: low risk of bias in all studies; Attrition bias: low risk of bias in 5 studies and high risk of bias in 1 study; Reporting bias: low risk of bias in 5 studies and unclear risk of bias in 1 study; Other types of bias: low risk of bias in 1 study, unclear risk of bias in 4 studies and high risk of bias in 1 study.

b. Evidence downgraded by 1 due to risk of serious imprecision (wide confidence intervals and modest sample size).
c. Evidence downgraded by 1 due to serious risk of bias. Selection bias (randomisation and allocation concealment): unclear risk of bias; Performance bias: high risk of bias; Detection bias: low risk of bias; Attrition bias: high risk of bias: Reporting bias and other types of bias: unclear risk of bias.
d. Evidence downgraded by 2 due to risk of serious imprecision (wide confidence intervals and small sample size).
e. Evidence downgraded by 1 due to serious risk of bias: Selection bias (randomisation): low risk of bias in all studies; Selection bias (allocation concealment): low risk of bias in 2 studies and unclear risk of bias in 1 study; Performance bias: unclear risk of bias in 1 study, and high risk of bias in 2 studies; Detection bias: low risk of bias in 2 studies and unclear risk of bias in 1 study; Attrition bias and Reporting bias: low risk of bias in all studies; Other types of bias: low risk of bias in 1 study, unclear risk of bias in 1 study and high risk of bias in 1 study.
f. Evidence downgraded by 1 due to risk of serious imprecision (wide confidence intervals and modest sample size).
g. Evidence downgraded by 1 due to serious risk of bias: Selection bias (randomisation): low risk of bias in 3 studies and unclear risk of bias in 1 study; Selection bias (allocation concealment): low risk of bias in 2 studies and unclear risk of bias in 2 studies; Performance bias: high risk of bias in 3 studies and unclear risk of bias in 1 study; Detection bias: low risk of bias in 3 studies and unclear risk of bias in 1 study; Attrition bias: low risk of bias in 3 studies and high risk of bias in 1 study; Reporting bias: low risk of bias in 3 studies and unclear risk of bias in 1 study; Other types of bias: low risk of bias in 1 study, unclear risk of bias in 2 studies and high risk of bias in 1 study.
h. Evidence downgraded by 1 due to risk of serious imprecision (wide confidence intervals and modest sample size).
i. Evidence downgraded by 1 due to serious risk of bias: Selection bias (randomisation): low risk of bias in 3 studies and unclear risk of bias in 1 study; Selection bias (allocation concealment): low risk of bias in 2 studies and unclear risk of bias in 2 studies; Performance bias: high risk of bias in 2 studies and unclear risk of bias in 2 studies; Detection bias: low risk of bias in 3 studies and unclear risk of bias in 1 study; Attrition bias: low risk of bias in 3 studies and high risk of bias in 1 study; Reporting bias: low risk of bias in 3 studies and unclear risk of bias in 1 study; Other types of bias: low risk of bias in 2 studies and unclear risk of bias in 2 studies.
j. Evidence downgraded by 1 due to serious risk of bias. Selection bias (randomisation and allocation concealment): low risk of bias in both studies; Performance bias: high risk of bias in both studies; Detection bias, attrition bias and selective reporting: low risk of bias in both studies; Other types of bias: unclear risk of bias in both studies.
k. Evidence downgraded by 1 due to risk of serious imprecision (modest sample size).

Table 12. GRADE evidence profile for PICO 5a (follow-up)

In people with aphasia after stroke is one-to-one plus group SLT compared to one-to-one SLT alone associated with greater improvements in language, communication or quality of life?

Certainty assessment							‹ RI SDUWLFLSD		Absolute Effect		Certainty	Importance
‹ RI VWXC ><‹ RI 53&	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Intervention	Comparator	SMD (95% CI)	MD (95% CI)		
Overall language (Follow-up: 8 weeks ±3 months; Better indicated by higher values)												
4 [5]	randomised trials	serious[a]	serious[b]	not serious	serious[c]	none	181	98	0.21 (-0.33, 0.75)	-	⊕⊖⊖⊖ **Very low**	Critical
Naming (Follow-up: 12 weeks; Better indicated by higher values)												
1 [2]	randomised trials	serious[d]	not serious	not serious	serious[e]	none	133	59		-0.47 (-1.17, 0.24)	⊕⊕⊖⊖ **Low**	Critical
Auditory comprehension (Follow-up: 12 weeks; Better indicated by higher values)												
1 [2]	randomised trials	serious[d]	not serious	not serious	serious[e]	none	133	59		-0.04 (-0.52, 0.43)	⊕⊕⊖⊖ **Low**	Critical
Functional communication (Follow-up: 8-12 weeks; Better indicated by higher values)												
2 [3]	randomised trials	serious[f]	not serious	not serious	serious[g]	none	139	66		-0.13 (-0.43, 0.16)	⊕⊕⊖⊖ **Low**	Critical
Quality of life / Health-related quality of life (Follow-up: 12 weeks; Better indicated by higher values)												
2 [3]	randomised trials	serious[h]	not serious	not serious	serious[i]	none	140	65	-	0.05 (-0.14, 0.25)	⊕⊕⊖⊖ **Low**	Critical

CI: confidence interval; **MD:** mean difference; **SMD:** standardised mean difference

Explanations

a. Evidence downgraded by 1 due to serious risk of bias. Selection bias (randomisation): low risk of bias in 3 studies, and unclear risk of bias in 1 study; Selection bias (allocation concealment): low risk of bias in 2 studies and unclear risk of bias in 2 studies; Performance bias: high risk of bias in 3 studies and unclear risk of bias in 1 study; Detection bias, attrition bias and selective reporting: low risk of bias in all studies; Other types of bias: low risk of bias in 1 study and unclear risk of bias in 3 studies.
b. Evidence downgraded by 1 due to risk of serious inconsistency (I^2 = 74%)
c. Evidence downgraded by 1 due to risk of serious imprecision (modest sample size).
d. Evidence downgraded by 1 due to serious risk of bias. Single-blinded trial; Unclear risk of bias as groups were not comparable at baseline (usual care arm had participants who were more independent, younger, no participants with severe aphasia and high discourse and naming scores).
e. Evidence downgraded by 1 due to risk of serious imprecision (modest sample size).

f. Evidence downgraded by 1 due to serious risk of bias. Selection bias (randomisation): low risk of bias in both studies; Selection bias (allocation concealment): low risk of bias in 1 study and unclear risk of bias in 1 study; Performance bias: unclear risk of bias in 1 study and high risk of bias in 1 study; Detection bias, attrition bias and reporting bias: low risk of bias in both studies; Other types of bias: low risk of bias in 1 study and unclear risk of bias in 1 study.
g. Evidence downgraded by 1 due to risk of serious imprecision (modest sample size).
h. Evidence downgraded by 1 due to serious risk of bias. Selection bias (randomisation and allocation concealment): low risk of bias in both studies; Performance bias: high risk of bias in both studies; Detection bias, attrition bias and selective reporting: low risk of bias in both studies; Other types of bias: unclear risk of bias in both studies
i. Evidence downgraded by 1 due to risk of serious imprecision (modest sample size).

Table 13. GRADE evidence profile for PICO 5b

In people with aphasia after stroke is one-to-one plus group SLT compared to one-to-one SLT alone associated with greater improvements in language, communication or quality of life?

Certainty assessment							‹ RI SDUWLFLSD		Absolute Effect		Certainty	Importance
‹ RI VWXC	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Intervention	Comparator	SMD (95% CI)	MD (95% CI)		
Naming (Immediately post-intervention; Better indicated by higher values)												
1	randomised trials	serious[a]	not serious	not serious	very serious[b]	none	14	22	-	0.22 (-0.45, 0.89)	⊕⊖⊖⊖ **Very low**	Critical
Functional communication (Immediately post-intervention; Better indicated by higher values)												
1	randomised trials	serious[a]	not serious	not serious	very serious[b]	none	14	22	-	-0.11 (-0.75, 0.53)	⊕⊖⊖⊖ **Very low**	Critical
Emotional and social wellbeing (mood) (Immediately post-intervention; Better indicated by lower values)												
1	randomised trials	serious[a]	not serious	not serious	very serious[b]	none	14	22	-	-0.79 (-72.67, 71.09)	⊕⊖⊖⊖ **Very low**	Critical
Quality of life / Health-related quality of life (Immediately post-intervention; Better indicated by higher value)												
1	randomised trials	serious[a]	not serious	not serious	very serious[b]	none	14	22	-	1.07 (-10.36, 12.50)	⊕⊖⊖⊖ **Very low**	Critical

CI: confidence interval; **MD:** mean difference; **SMD:** standardised mean difference

Explanations

a. Evidence downgraded by 1 due to serious risk of bias. Selection bias (randomisation and allocation concealment): unclear risk of bias; Performance bias: high risk of bias; Detection bias: low risk of bias; Attrition bias: high risk of bias; Reporting bias: unclear risk of bias; Other types of bias: high risk of bias.
b. Evidence downgraded by 2 due to risk of very serious imprecision (small sample size).

Table 14. GRADE evidence profile for PICO 6

In people with aphasia after stroke is SLT plus tDCS brain stimulation compared to SLT with sham tDCS associated with greater improvements in language, communication and no changes to safety?

GRADE evidence profile for PICO 6a *Left Hemisphere tDCS (anodal) plus SLT versus sham tDCS plus SLT*: Post-treatment

Certainty assessment							‹ RI SDUWLFLSDC		Effect		Certainty	Importance
‹ RI VWXG >‹ RI 53&	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Intervention	Comparator	Relative (95% CI)	Absolute (95% CI)		
Overall language (Post-treatment; Better indicated by higher values)												
5	randomised trials	serious[a]	not serious	not serious	serious[b]	none	68	67	-	SMD 0.15 (-0.28, 0.57)	⊕⊕⊖⊖ **Low**	Critical
Expressive language (naming nouns only) (Post-treatment; Better indicated by higher values)												
7 [8]	randomised trials	serious[c]	not serious	not serious	serious[b]	none	85	80	-	SMD -0.01 (-0.41, 0.38)	⊕⊕⊖⊖ **Low**	Critical
Expressive language (naming verbs only) (Post-treatment; Better indicated by higher values)												
2 [3]	randomised trials	serious[d]	not serious	not serious	very serious[e]	none	7	7	-	SMD -0.10 (-1.18, 0.97)	⊕⊖⊖⊖ **Very low**	Critical
Auditory comprehension (Post-treatment; Better indicated by higher values)												
5 [6]	randomised trials	serious[f]	not serious	not serious	serious[b]	none	59	53	-	SMD 0.16 (-0.22, 0.54)	⊕⊕⊖⊖ **Low**	Critical
Functional communication (Post-treatment; Better indicated by higher values)												
5	randomised trials	serious[g]	not serious	not serious	serious[b]	none	62	60	-	SMD 0.26 (-0.11, 0.62)	⊕⊕⊖⊖ **Low**	Critical
Quality of life / Health-related quality of life (Post-treatment; Better indicated by higher value)												
1	randomised trials	not serious	not serious	not serious	very serious[e]	none	3	3	-	MD -10.33 (-31.30, 10.64)	⊕⊕⊖⊖ **Low**	Critical
Adverse event: Pain score (Post-treatment)												
1	randomised trials	not serious	not serious	not serious	very serious[e]	none	26	32	OR 0.98 (0.32, 2.99)	-	⊕⊕⊖⊖ **Low**	Critical
Reported side effects: Headache (Post-treatment)												
2	randomised trials	not serious	not serious	not serious	very serious[e]	none	38	44	OR 0.46 (0.05,4.20)	-	⊕⊕⊖⊖ **Low**	Critical
Reported side effects: Dizziness (Post-treatment)												
2	randomised trials	not serious	not serious	not serious	very serious[e]	none	38	44	OR 1.75 (0.12, 24.73)	-	⊕⊕⊖⊖ **Low**	Critical
Reported side effects: Tingling/Itching (Post-treatment)												
2	randomised trials	not serious	not serious	not serious	very serious[e]	none	12	14	OR 3.49 (0.38, 32.35)	-	⊕⊕⊖⊖ **Low**	Critical

Certainty assessment							‹ RI SDUWLFLSD		Effect		Certainty	Importance
‹ R istudies >‹ RI 53‹	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Intervention	Comparator	Relative (95% CI)	Absolute (95% CI)		
Reported side effects: Erythema (Post-treatment)												
1	randomised trials	not serious	not serious	not serious	very serious[e]	none	34	40	OR 6.23 (0.29, 134.39	_	⊕⊕⊖⊖ **Low**	Critical
Reported side effects: Convulsion (Post-treatment)												
1	randomised trials	not serious	not serious	not serious	very serious[e]	none	34	40	OR 0.38 (0.02, 9.68)	_	⊕⊕⊖⊖ **Low**	Critical
Reported side effects: Hypertension (Post-treatment)												
1	randomised trials	not serious	not serious	not serious	very serious[e]	none	34	40	OR 0.38 (0.02, 9.68)	_	⊕⊕⊖⊖ **Low**	Critical
Reported side effects: Insomnia (Post-treatment)												
1	randomised trials	not serious	not serious	not serious	very serious[e]	none	6	6	OR 0.28 (0.01, 8.42)	_	⊕⊕⊖⊖ **Low**	Critical
Reported side effects: Fatigue (Post-treatment)												
1	randomised trials	not serious	not serious	not serious	very serious[e]	none	4	4	OR 9.0 (0.37, 220.93)	_	⊕⊕⊖⊖ **Low**	Critical
Reported side effects: Dry mouth (Post-treatment)												
1	randomised trials	not serious	not serious	not serious	very serious[e]	none	4	4	OR 1.0 (0.04, 24.55)	_	⊕⊕⊖⊖ **Low**	Critical
Functional communication: Change scores (Post-treatment; Better indicated by higher value)												
1	randomised trials	serious[h]	not serious	not serious	very serious[e]	none	13	13	-	**MD** 6.20 (4.76, 7.64)	⊕⊖⊖⊖ **Very low**	Critical
Overall language ability (Follow-up 4 weeks ±6 months post-treatment; Better indicated by higher value)												
3	randomised trials	not serious	not serious	not serious	very serious[e]	none	36	42	_	**SMD** 0.06 (-0.53, 0.65)	⊕⊕⊖⊖ **Low**	Critical
Expressive language (Naming-general) (Follow-up 1 weeks ±6 months post-treatment; Better indicated by higher value)												
4	randomised trials	serious[i]	not serious	not serious	serious[b]	none	50	52	_	**SMD** -0.05 (-0.66, 0.57)	⊕⊕⊖⊖ **Low**	Critical
Expressive language (Naming-verbs) (Follow-up 1-week post-treatment; Better indicated by higher value)												
1	randomised trials	serious[j]	not serious	not serious	very serious[e]	none	4	4	_	**MD** -0.63 (-3.40, 2.14)	⊕⊖⊖⊖ **Very low**	Critical
Auditory comprehension (Follow-up 4-weeks-3 months post-treatment; Better indicated by higher value)												
2	randomised trials	not serious	not serious	not serious	very serious[e]	none	24	25	_	**SMD** -0.06 (-0.62, 0.50)	⊕⊕⊖⊖ **Low**	Critical
Functional communication (Follow-up 3-weeks-6 months post-treatment; Better indicated by higher value)												
5	randomised trials	serious[k]	not serious	not serious	serious[b]	none	56	55	_	**SMD 0.24** (-0.15, 0.63)	⊕⊕⊖⊖ **Low**	Critical

Certainty assessment							‹ R lparticipants		Effect		Certainty	Importance
‹ RI VWs>‹ RI 53&	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Intervention	Comparator	Relative (95% CI)	Absolute (95% CI)		
Functional communication (Change from baseline score; Follow-up 6 months post-treatment; Better indicated by higher value)												
1	randomised trials	serious[h]	not serious	not serious	very serious[e]	none	11	11	-	MD 5.30 (3.77, 6.83)	⊕⊖⊖⊖ **Very low**	Critical
Quality of Life (Follow-up 3 weeks post-treatment; Better indicated by higher value)												
1	randomised trials	serious[l]	not serious	not serious	very serious[e]	none	18	10	-	MD 0.20 (-0.47, 0.87)	⊕⊖⊖⊖ **Very low**	Critical

CI: **confidence interval;** MD: **mean difference;** OR**: odds ratio;** SMD: **standardised mean difference**

Explanations

a. Evidence downgraded by 1 due to serious risk of bias. Selection bias (randomisation and allocation) was low risk of bias in 3 studies and unclear risk of bias in 2 studies. Performance bias was low risk of bias in 3 studies and unclear risk of bias in 2 studies. Detection bias was low risk of bias in 5 studies. Attrition bias was low risk of bias in 3 studies and unclear risk of bias in 2 studies. Selective reporting bias was unclear risk of bias in 4 studies and high risk of bias in 1 study. Other types of bias were judged as low risk of bias in 3 studies and unclear risk of bias in 2 studies.

b. Evidence downgraded by 1 due to risk of serious imprecision (modest sample size)

c. Evidence downgraded by 1 due to serious risk of bias. Selection bias (randomisation and allocation) was low risk of bias in 3 studies and unclear risk of bias in 4 studies. Performance and detection bias was low risk of bias in 6 studies and unclear risk of bias in 1 study. Attrition bias was low risk of bias in 5 studies and unclear risk of bias in 2 studies. Selective reporting was unclear risk of bias in 6 studies and high risk of bias in 1 study. Other types of bias was low risk of bias in 6 studies and unclear risk of bias in 1 study.

d. Evidence downgraded by 1 due to serious risk of bias. Selection bias (randomisation and allocation) was unclear risk of bias in both studies. Performance bias was low risk of bias in both studies. Detection bias was low risk of bias in 1 study and unclear risk of bias in 1 study. Attrition bias was low risk of bias in both studies. Selective reporting bias was unclear risk of bias in both studies. Other types of bias were judged as low risk of bias in both studies.

e. Evidence downgraded by 2 due to risk of very serious imprecision (**wide confidence intervals and** small sample size)

f. Evidence downgraded by 1 due to serious risk of bias. Selection bias (randomisation and allocation) was low risk of bias in 2 studies and unclear risk of bias in 3 studies. Performance and detection bias was low risk of bias in 4 studies and unclear risk of bias in 1 study. Attrition bias was low risk of bias in 3 studies and unclear risk of bias in 2 studies. Selective reporting was unclear risk of bias in 4 studies and high risk of bias in 1 study. Other types of bias was judged as low risk of bias in 4 studies and unclear risk of bias in 1 study.

g. Evidence downgraded by 1 due to serious risk of bias. Selection bias (randomisation) was low risk of bias in 3 studies and unclear risk of bias in 2 studies. Selection bias (allocation concealment) was low risk of bias in 2 studies and unclear risk of bias in 3 studies. Performance bias was low risk of bias in 3 studies and unclear risk of bias in 2 studies. Detection bias was low risk of bias in all studies. Attrition bias was low risk of bias in 3 studies and unclear risk of bias in 2 studies. Selective reporting bias was unclear risk of bias in 4 studies and high risk of bias in 1 study. Other types of bias were judged as low risk of bias in 2 studies and unclear risk of bias in 3 studies.

h. Evidence downgraded by 1 due to serious risk of bias. Selection bias (randomisation and allocation concealment) was unclear risk of bias. Performance bias, detection bias, attrition bias, selective reporting bias and other types of bias were judged as low risk of bias.

i. Evidence downgraded by 1 due to serious risk of bias. Selection bias (randomisation) was low risk of bias in 3 studies and unclear risk of bias in 1 study. Selection bias (allocation concealment) was low risk of bias in 2 studies and unclear risk of bias in 2 studies. Performance bias, detection bias and attrition bias were low risk in all 4 studies. Selective reporting bias was unclear risk of bias in all 4 studies. Other types of bias were judged as low risk of bias in 3 studies and unclear risk of bias in 1 study.

j. Evidence downgraded by 1 due to serious risk of bias. Selection bias (randomisation and allocation concealment) was unclear risk of bias. Performance bias, detection bias, attrition bias and other types of bias were judged as low risk of bias. Selective reporting bias was judged as unclear risk of bias.

k. Evidence downgraded by 1 due to serious risk of bias. Selection bias (randomisation) was low risk of bias in 4 studies and unclear risk of bias in 1 study. Selection bias (allocation concealment) was low risk of bias in 3 studies and unclear risk of bias in 2 studies. Performance bias was low risk of bias in 4 studies and unclear risk of bias in 1 study. Detection bias was low risk of bias in all 5 studies. Attrition bias was low risk of bias in 4 studies and unclear risk of bias in 1 study. Selective reporting bias was unclear risk of bias in 4 studies and high risk of bias in 1 study. Other types of bias were judged as low risk of bias in 2 studies and unclear risk of bias in 3 studies.

l. Evidence downgraded by 1 due to serious risk of bias. Selection bias (randomisation and allocation): unclear risk of bias; Performance and detection bias: low risk of bias; Attrition bias: unclear risk of bias; Selective reporting: high risk of bias; Other types of bias: low risk of bias.

GRADE evidence profile for PICO 6b *Left Hemisphere tDCS (cathodal) plus SLT versus sham tDCS plus SLT*

Certainty assessment							‹ RI SDUWLFLSD(		Effect		Certainty	Importance
‹ RI VWX >‹ RI 53&	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Intervention	Comparator	Relative (95% CI)	Absolute (95% CI)		
Overall language (Post-treatment; Better indicated by higher values)												
1	randomised trials	not serious	not serious	not serious	very serious[a]	none	4	4	-	MD 0.30 (-27.25, 27.85)	⨁⨁⨀⨀ **Low**	Critical
Functional communication (Post-treatment; Better indicated by higher values)												
1	randomised trials	not serious	not serious	not serious	very serious[a]	none	4	4	-	MD 22.70 (8.62, 36.78)	⨁⨁⨀⨀ **Low**	Critical
Reported side effects: Headache (Post-treatment)												
1	randomised trials	not serious	not serious	not serious	very serious[a]	none	4	4	OR 3.00 (0.15, 59.89)	_	⨁⨁⨀⨀ **Low**	Critical
Reported side effects: Dizziness (Post-treatment)												
1	randomised trials	not serious	not serious	not serious	very serious[a]	none	4	4	OR 3.86 (0.12, 126.73)	_	⨁⨁⨀⨀ **Low**	Critical
Reported side effects: Tingling/Itching (Post-treatment)												
1	randomised trials	not serious	not serious	not serious	very serious[a]	none	4	4	OR 0.33 (0.02, 6.65)	_	⨁⨁⨀⨀ **Low**	Critical
Reported side effects: Fatigue (Post-treatment)												
1	randomised trials	not serious	not serious	not serious	very serious[a]	none	4	4	OR 3.00 (0.15, 59.89)	-	⨁⨁⨀⨀ **Low**	Critical
Reported side effects: Dry mouth (Post-treatment)												
1	randomised trials	not serious	not serious	not serious	very serious[a]	none	4	4	OR 0.26 (0.01, 8.52)	-	⨁⨁⨀⨀ **Low**	Critical
Overall language (Follow-up: 6 weeks post-treatment; Better indicated by higher values)												
1	randomised trials	not serious	not serious	not serious	very serious[a]	none	4	4	-	MD 2.17 (-25.32, 29.66)	⨁⨁⨀⨀ **Low**	Critical
Functional communication (Follow-up: 6 weeks post-treatment; Better indicated by higher values)												
1	randomised trials	not serious	not serious	not serious	very serious[a]	none	4	4	-	MD 23.57 (9.02, 38.12)	⨁⨁⨀⨀ **Low**	Critical

CI: confidence interval; **MD:** mean difference; **SMD:** standardised mean difference

Explanations

a. Evidence downgraded by 2 due to risk of very serious imprecision (wide confidence intervals and small sample size)

GRADE evidence profile for PICO 6c *Right Hemisphere tDCS (anodal) plus SLT versus sham tDCS plus SLT*

Certainty assessment							‹ RI SDUWLFLSD(		Effect		Certainty	Importance
‹ RI VWX(><RI 53&	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Intervention	Comparator	Relative (95% CI)	Absolute (95% CI)		
Expressive language (naming nouns) (2 weeks post-treatment; Better indicated by higher values)												
1	randomised trial	serious[a]	not serious	not serious	very serious[b]	none	3	3	-	MD 46.66 (25.00, 68.32)	⨁⊖⊖⊖ **Very low**	Critical
Expressive language (naming verbs) (2 weeks post-treatment; Better indicated by higher values)												
1	randomised trial	serious[a]	not serious	not serious	very serious[b]	none	3	3	-	MD 51.67 (28.12, 75.22)	⨁⊖⊖⊖ **Very low**	Critical

CI: confidence interval; **MD:** mean difference; **SMD:** standardised mean difference

Explanations

a. Evidence downgraded by 1 due to potential risk of bias. Selection bias (randomisation and allocation concealment): unclear risk of bias; Performance and detection bias: low risk of bias; Attrition bias and other sources of bias: unclear risk of bias and selective reporting: low risk of bias

b. Evidence downgraded by 2 due to risk of very serious imprecision (wide confidence intervals and small sample size)

GRADE evidence profile for PICO 6d *Right Hemisphere tDCS (cathodal) plus SLT versus sham tDCS plus SLT*

Certainty assessment							‹ R participants		Effect		Certainty	Importance
‹ RI VWS[X] >‹ RI 53&	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Intervention	Comparator	Relative (95% CI)	Absolute (95% CI)		
Expressive language (Overall Language Ability) (Post-intervention; Better indicated by higher values)												
1	randomised trial	serious[d]	not serious	not serious	very serious[c]	none	7	7	-	MD 7.14 (-7.83, 22.11)	⊕⊖⊖⊖ **Very low**	Critical
Expressive language (naming nouns) (Immediately post-intervention; Better indicated by higher values)												
2	randomised trials	serious[a]	serious[b]	not serious	very serious[c]	none	12	12		SMD -0.14 (-1.45, 1.17)	⊕⊖⊖⊖ **Very low**	Critical
Auditory Comprehension (Post-treatment; Better indicated by higher values)												
1	randomised trial	serious[d]	not serious	not serious	very serious[c]	none	7	7	-	MD 32.85 (0.15, 65.55)	⊕⊖⊖⊖ **Very low**	Critical
Functional communication (Post-treatment; Better indicated by higher values)												
1	randomised trial	serious[d]	not serious	not serious	very serious[c]	none	7	7	-	MD 0.86 (-2.00, 3.72)	⊕⊖⊖⊖ **Very low**	Critical
Adverse events: Pain (Post-treatment)												
1	randomised trial	not serious	not serious	not serious	very serious[c]	none	24	19	OR 2.49 (0.10, 64.62)	-	⊕⊕⊖⊖ **Low**	Critical
Reported side effects: Dysesthesia (Post-treatment)												
1	randomised trial	not serious	not serious	not serious	very serious[c]	none	24	19	OR 4.33 (0.20, 95.84)	-	⊕⊕⊖⊖ **Low**	Critical
Reported side effects: Headache (Post-treatment)												
1	randomised trial	not serious	not serious	not serious	very serious[c]	none	24	19	OR 0.78 (0.05, 13.39)	-	⊕⊕⊖⊖ **Low**	Critical

CI: confidence interval; **MD:** mean difference; **OR:** odds ratio; **SMD:** standardised mean difference

Explanations

a. Evidence downgraded by 1 due to serious risk of bias. Selection bias (randomisation and allocation concealment): unclear risk of bias in 2 studies. Performance bias: low risk of bias in 1 study and unclear risk of bias in 1 study; Detection bias: low risk of bias in 2 studies; Attrition bias: low risk of bias in 1 study and unclear risk of bias in 1 study; Selective reporting bias: low risk of bias in 1 study and unclear risk of bias in 1 study and Other types of bias: low risk of bias in 2 studies.

b. Evidence downgraded by 1 due to risk of serious inconsistency (I^2 = 58%)

c. Evidence downgraded by 1 due to risk of serious imprecision (wide confidence intervals and small sample size)

d. Evidence downgraded by 1 due to serious risk of bias. Selection bias (randomisation and allocation concealment): unclear risk of bias. Performance bias: unclear risk of bias; Detection bias: low risk of bias; Attrition bias and selective reporting: unclear risk of bias; Other types of bias: low risk of bias.

GRADE evidence profile for PICO 6e *Cerebellum tDCS (anodal or cathodal) plus SLT versus sham tDCS plus SLT*

Certainty assessment							‹ RI SDUWLFLS		Effect		Certainty	Importance
‹ RI VWXG\ >‹ RI 53&	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Intervention	Comparator	Relative (95% CI)	Absolute (95% CI)		
Naming nouns (post-treatment; Better indicated by higher values)												
1	randomised trial	not serious	not serious	not serious	very serious[a]	none	10	11	-	MD 10.53 (-31.93, 52.99)	⨁⨁⨀⨀ **Low**	Critical
Adverse events: Pain (Incidence reported by session)												
1	randomised trial	not serious	not serious	not serious	serious[b]	none	150 sessions	150 sessions	OR 2.55 (0.49, 13.36)	-	⨁⨁⨁⨀ **Moderate**	Critical
Naming nouns (Follow up at 2 months; Better indicated by higher values)												
1	randomised trial	not serious	not serious	not serious	very serious[a]	none	10	11	-	MD 3.29 (-39.24, 45.82)	⨁⨁⨀⨀ **Low**	Critical

CI: confidence interval; **MD:** mean difference; **OR**: odds ratio; **SMD:** standardised mean difference

Explanations

a. Evidence downgraded by 2 due to risk of very serious imprecision (wide confidence intervals and small sample size)
b. Evidence downgraded by 1 due to risk of serious imprecision (modest sample size)

GRADE evidence profile for PICO 6f *Individualised Left Hemisphere tDCS (anodal or cathodal) plus SLT versus sham tDCS plus SLT*

Individualised Left Hemisphere (anodal or cathodal) tDCS plus SLT versus sham tDCS plus SLT

Certainty assessment							‹ R lparticipants		Effect		Certainty	Importance
‹ R I V W s X G > ‹ R I 5 3 &	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Intervention	Comparator	Relative (95% CI)	Absolute (95% CI)		
Overall Language Ability (post-intervention; Better indicated by higher values)												
1	randomised trial	serious[a]	not serious	not serious	very serious[b]	none	3	3	-	MD -4.06 (-52.36, 44.24)	⨁⊖⊖⊖ **Very low**	Critical
Overall Language Ability (Follow up at 2 months; Better indicated by higher values)												
1	randomised trial	serious[a]	not serious	not serious	very serious[b]	none	3	3	-	MD 3.73 (-40.52, 47.98)	⨁⊖⊖⊖ **Very low**	Critical

CI: confidence interval; **MD:** mean difference; **SMD:** standardised mean difference

Explanations

a. Evidence downgraded by 1 due to potential risk of bias. Selection bias (randomisation and allocation concealment): unclear risk of bias; Performance and detection bias: low risk of bias; Attrition bias and reporting bias: unclear risk of bias and other types of bias: low risk of bias.

b. Evidence downgraded by 2 due to risk of very serious imprecision (wide confidence intervals and small sample size)

Table 15. GRADE evidence profile for PICO 7b

In people with aphasia after stroke is individually-tailored SLT by level of language task difficulty, compared to non-tailored SLT associated with greater improvements in language, communication or quality of life?

Certainty assessment							‹ RI SDUWLFLSD		Absolute Effect		Certainty	Importance
‹ RI VWXC	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Intervention	Comparator	SMD (95% CI)	MD (95% CI)		
Overall language (Immediately post-intervention; Better indicated by higher values)												
1	randomised trials	serious[a]	not serious	not serious	very serious[b]	none	17	15	-	1.97 (-14.16, 18.10)	⊕⊖⊖⊖ **very low**	Critical
Naming (Immediately post-intervention; Better indicated by higher values)												
1	randomised trials	serious[a]	not serious	not serious	very serious[b]	none	17	15	-	2.84 (-17.20, 22.88)	⊕⊖⊖⊖ **very low**	Critical
Auditory comprehension (Immediately post-intervention; Better indicated by higher values)												
1	randomised trials	serious[a]	not serious	not serious	very serious[b]	none	17	15	-	10.44 (-13.90, 34.78)	⊕⊖⊖⊖ **very low**	Critical
Quality of life / Health-related quality of life (Immediately post-intervention; Better indicated by higher values)												
1	randomised trials	serious[a]	not serious	not serious	very serious[b]	none	17	15	-	0.11 (-0.33, 0.55)	⊕⊖⊖⊖ **very low**	Critical

CI: confidence interval; **MD:** mean difference; **SMD:** standardised mean difference

Explanations

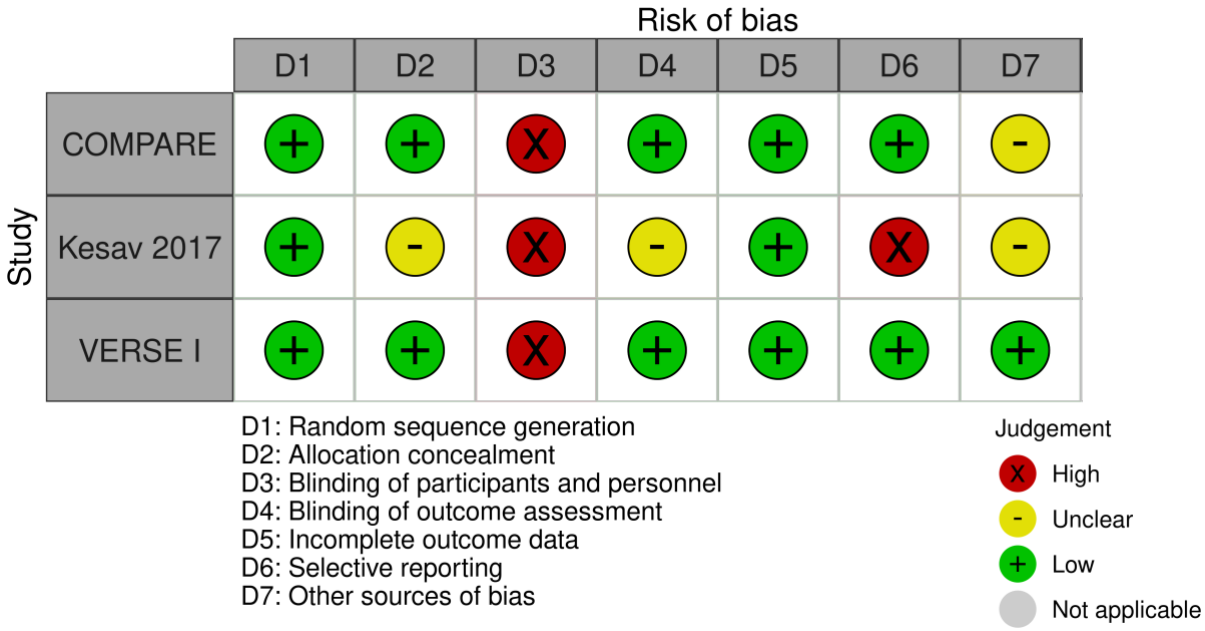
a. Evidence downgraded by 1 due to serious risk of bias. Selection bias: low risk for randomisation but insufficient information about allocation concealment; Performance bias: high risk of bias as not possible to blind participants and personnel; Detection bias: Unclear risk of bias as insufficient information about blinding of outcome assessors; All other criteria (attrition bias, reporting bias, and other types of bias) judged as low risk of bias

b. Evidence downgraded by 2 due to risk of very serious imprecision (small sample size).

Supplement 19: Risk of Bias at Follow up Tables

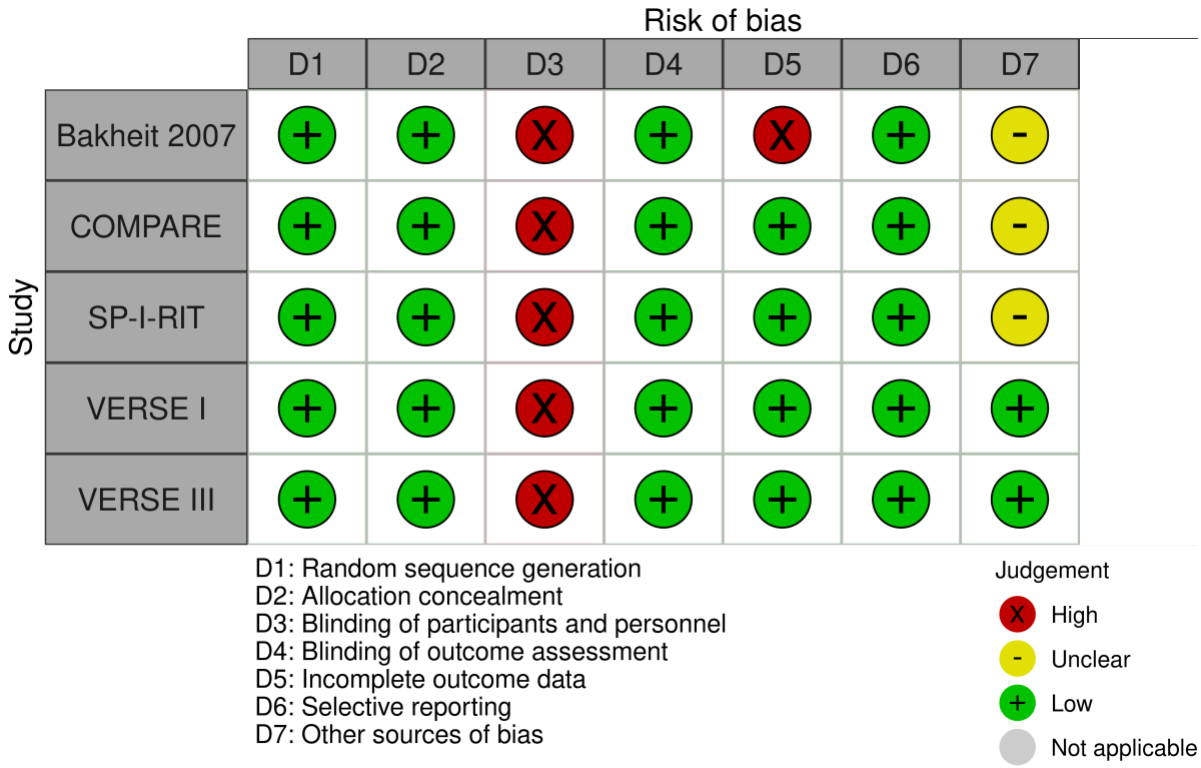
PICO 1 Risk of bias:
In people with aphasia after stroke is a higher dose of SLT • K R X U V compared to a lower dose of SLT (< 20 hours) associated with greater improvements in language, communication, or quality of life?

Figure 1. Risk of bias profile for studies included in PICO 1 (follow-up) analysis.



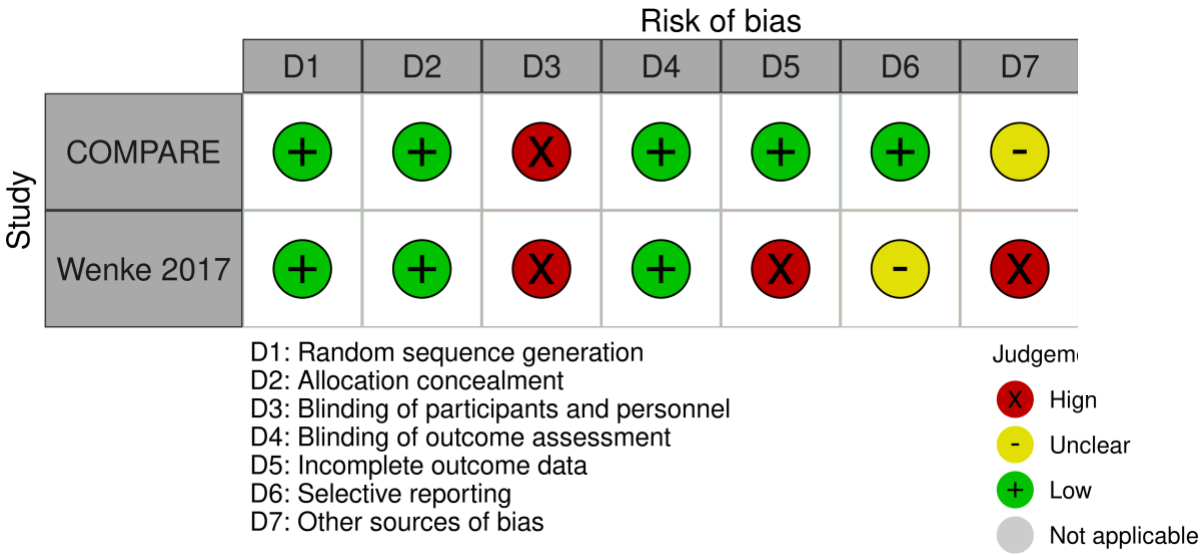
PICO 2 Risk of bias:
In people with aphasia after stroke is a higher intensity of SLT • KRXUV SHU ZHHN compared to a lower intensity of SLT (< 3 hours per week) associated with greater improvements in language, communication or quality of life?

Figure 2. Risk of bias profile for studies included in PICO 2 (follow-up) analysis.



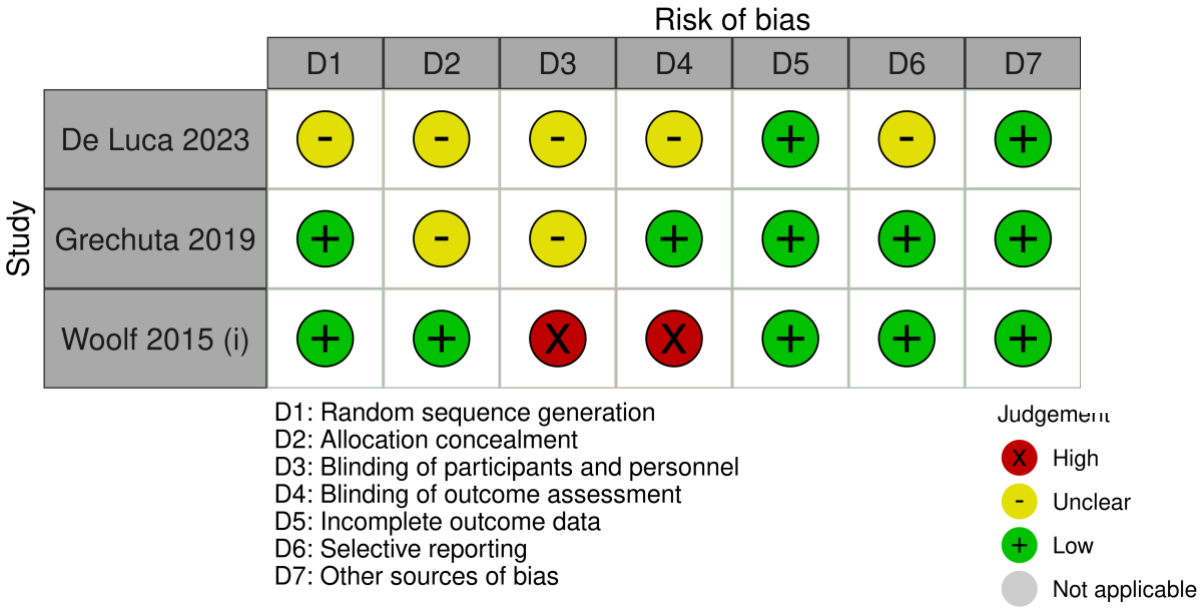
PICO 3 Risk of bias:
In people with aphasia after stroke is a higher frequency of SLT (> or = 4 days per week) compared to a lower frequency of SLT (< 4 days per week) associated with greater improvements in language, communication or quality of life?

Figure 3. Risk of bias profile for studies included in PICO 3 (follow-up) analysis.



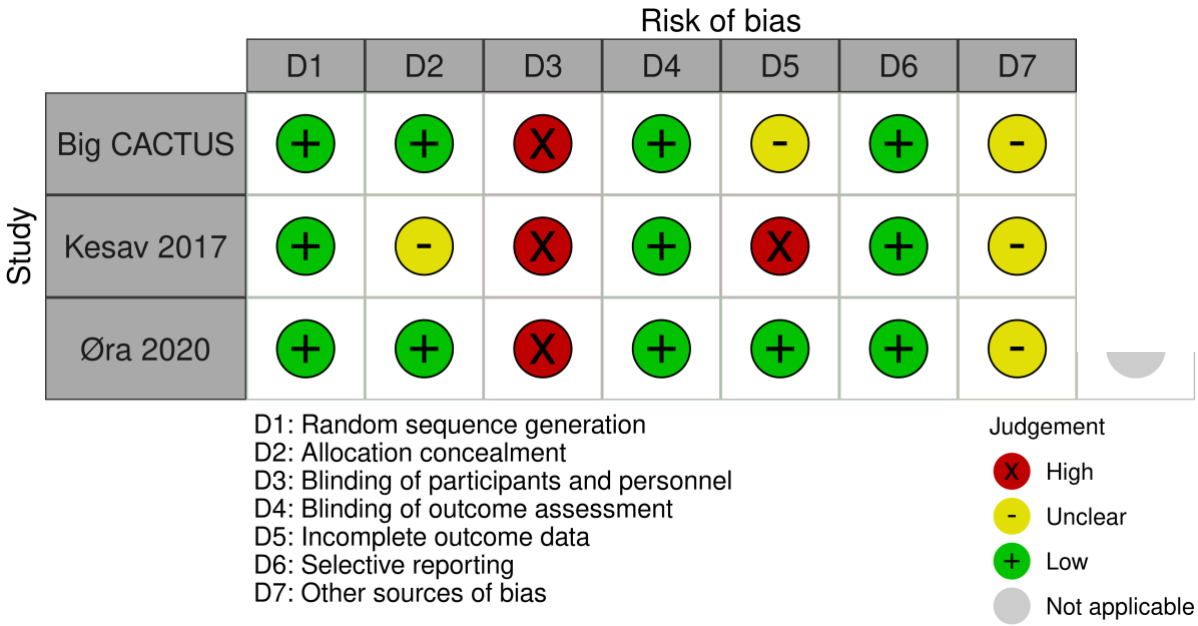
PICO 4a Risk of bias:
In people with aphasia after stroke is digitally-delivered SLT (using telerehabilitation, virtual reality therapist or similar) compared to usual in-person SLT associated with similar improvements in language, communication or quality of life?

Figure 4. Risk of bias profile for studies included in PICO 4a (follow-up) analysis.



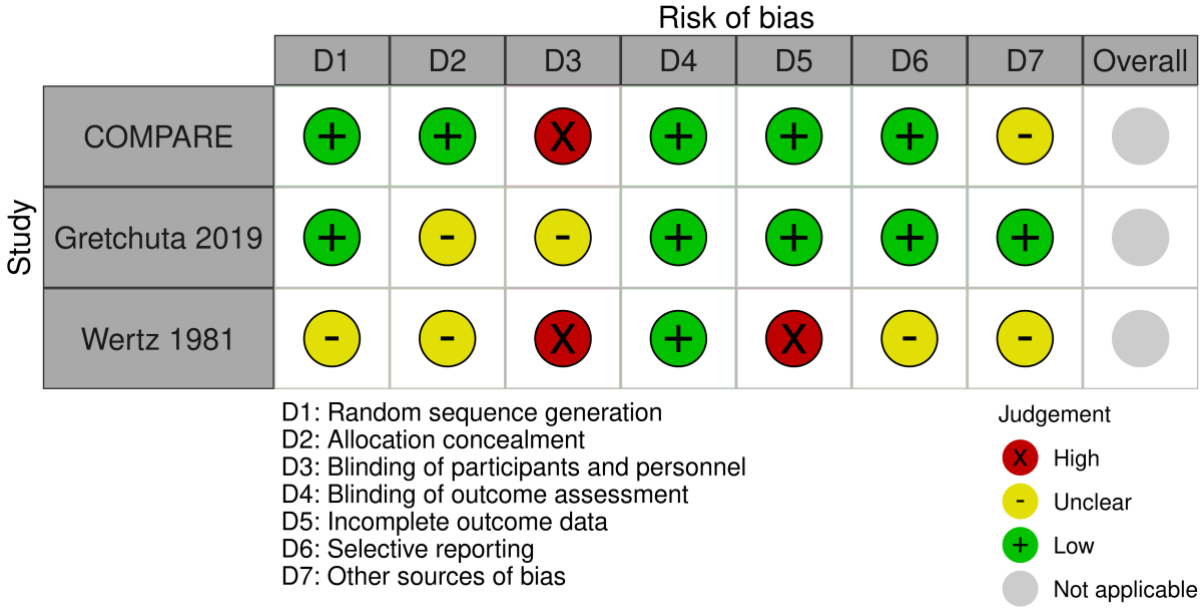
PICO 4b Risk of bias:
In people with aphasia after stroke is in-person SLT plus digital augmentation (using computer or tablet-based software, virtual reality or similar) compared to usual in-person SLT associated with greater improvements in language, communication or quality of life?

Figure 5. Risk of bias profile for studies included in PICO 4b (follow-up) analysis



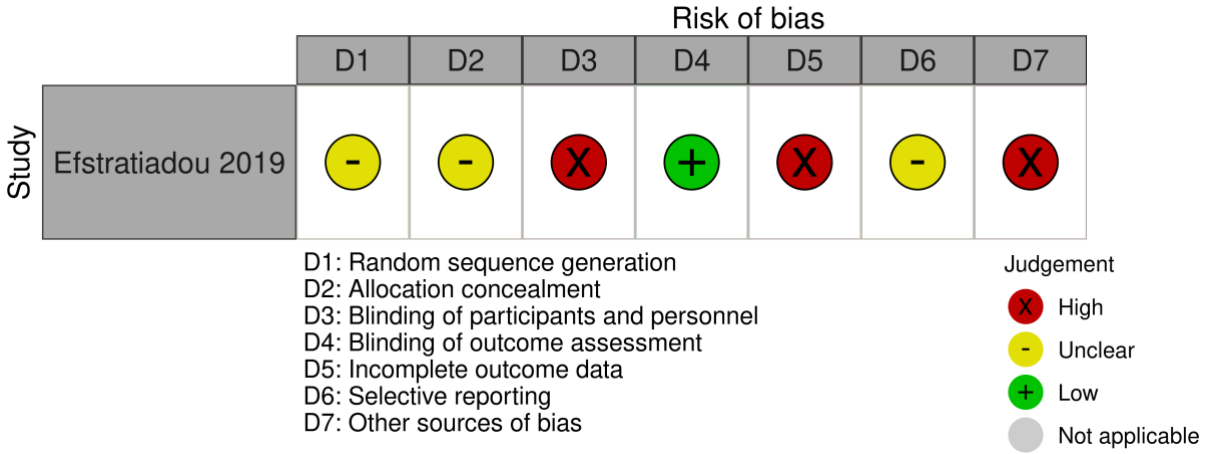
PICO 5a Risk of bias
In people with aphasia after stroke is group SLT compared to one-to-one SLT associated with similar improvements in language, communication or quality of life?

Figure 6. Risk of bias profile for studies included in PICO 5a (follow-up) analysis.



PICO 5b Risk of bias
In people with aphasia after stroke is one-to-one plus group SLT compared to one-to-one SLT alone associated with greater improvements in language, communication, or quality of life?

Figure 7. Risk of bias profile for studies included in PICO 5b



PICO 6 Risk of bias
In people with aphasia after stroke is SLT plus tDCS compared to SLT plus sham tDCS associated with greater improvements in language, communication and safety?

Figure 8. Risk of bias profile for studies included in PICO 6b

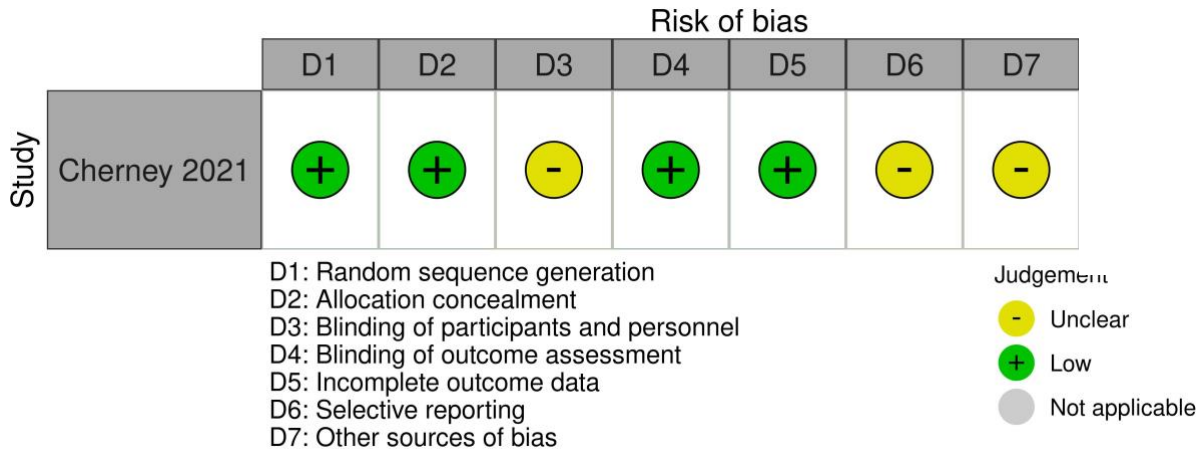


Figure 9. Risk of bias profile for studies included in PICO 6c

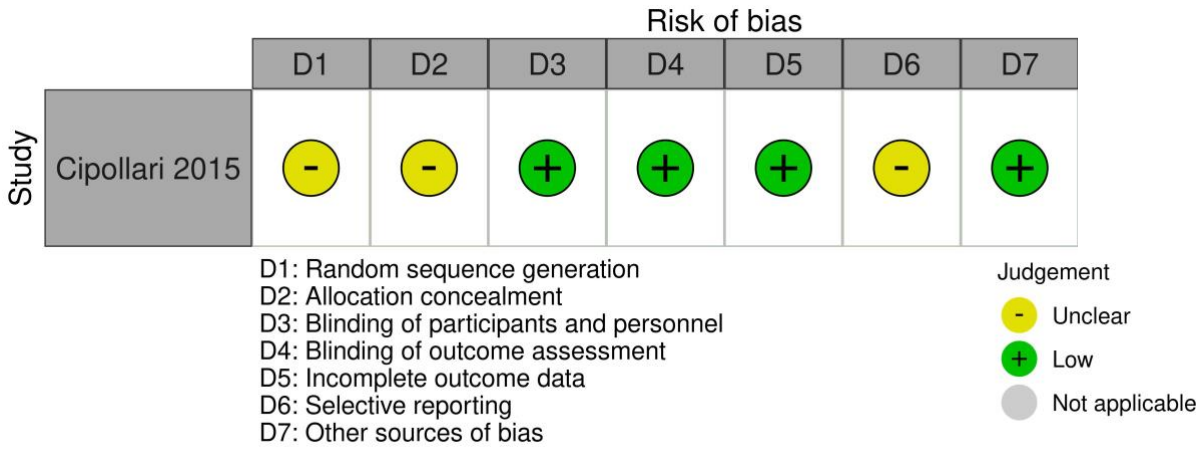


Figure 10. Risk of bias profile for studies included in PICO 6d

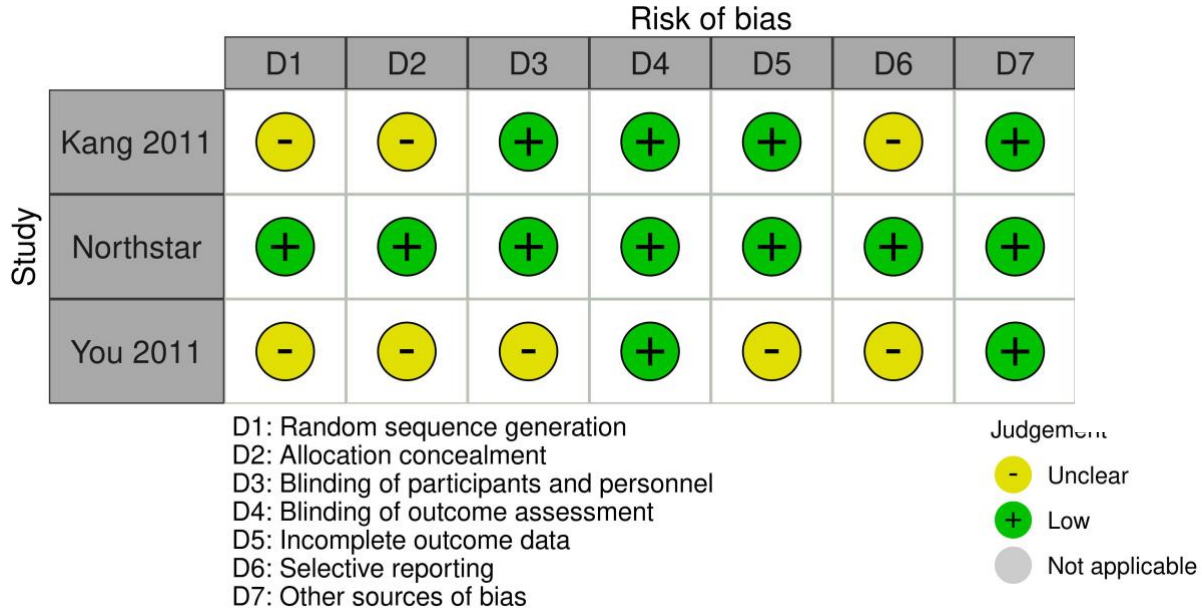


Figure 11. Risk of bias profile for studies included in PICO 6e

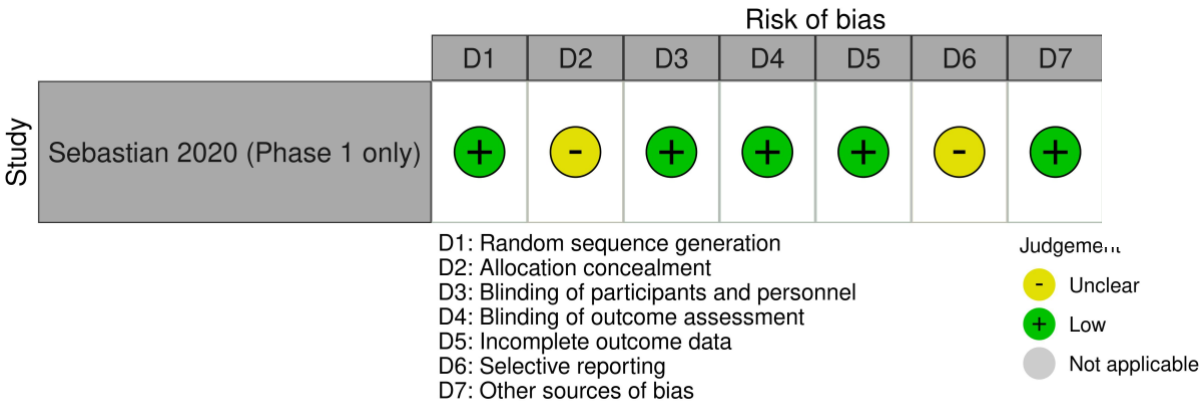
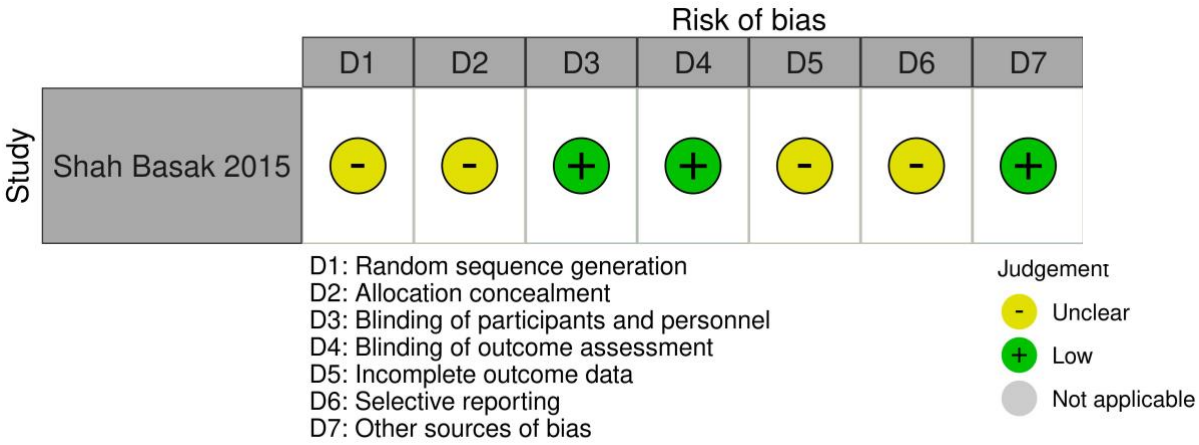
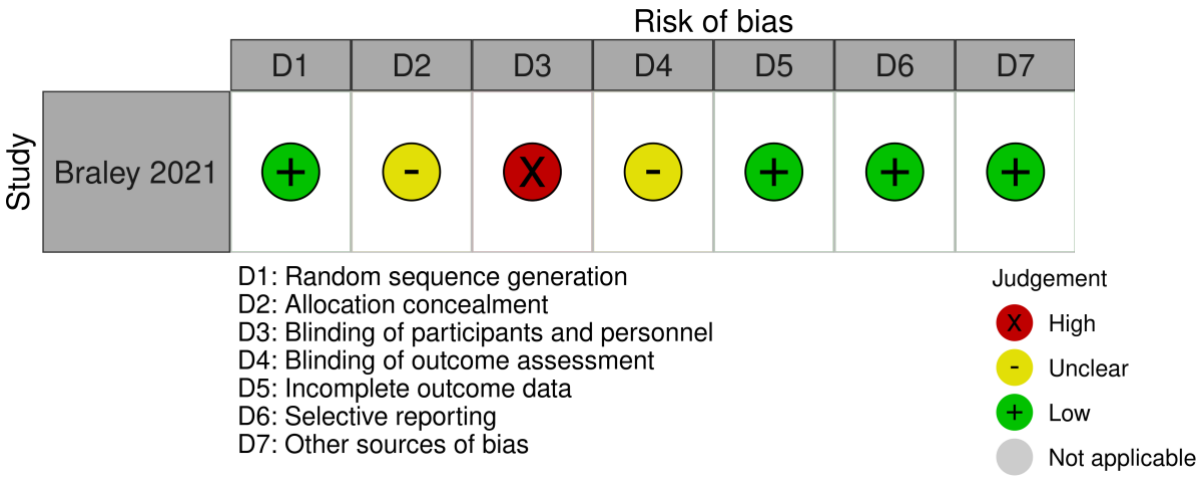


Figure 12. Risk of bias profile for studies included in PICO 6f



PICO 7b Risk of bias
In people with aphasia after stroke is individually-tailored SLT by level of language task difficulty, compared to non-tailored SLT associated with greater improvements in language, communication or quality of life?

Figure 19. Risk of bias profile for studies included in PICO 7a.



Supplement 20: PICO 1-7: Demographics of participants in randomised controlled comparisons eligible for inclusion.

Table 16. PICO 1 +LJKHU GRVH 6/7 • WR KRXUV YHUVXV ORZHU GRVH 6/7 KRXUV

Study ID	N	Male/female	Age in years Mean (SD) [range]	Time post onset Mean (SD) [range] in months	Aphasia severity at baseline Mean (SD) [range]
Breitenstein et al (2017)	158	Higher dose: 32/46 Lower dose: 24/54	Higher dose: 53.5 (9.0) [not reported] Lower dose: 52.9 (10.2) [not reported]	Higher dose: median 43.0 [IQR: 16.0-68.3] Lower dose: median 27.0 [IQR: 13.0-48.8]	**AAT profile height** *average of the weighted T-scores of the AAT subtests* Higher dose: 50.9 (6.6) [not reported] Lower dose: 52.3 (5.4) (not reported)
COMPARE (2022)	216	Higher dose CIAT: 46/25 Higher dose M-MAT: 53/22 Lower dose: 48/22	Higher dose CIAT: median 63.9 [IQR 19.79] Higher dose M-MAT: median 63.8 [IQR 21.0] Lower dose: median 63.2 [IQR 14.1]	Higher dose CIAT: median 2.41 [IQR: 4.22] years Higher dose M-MAT: median 2.9 [IQR 3.81] years Lower dose: median 2.58 [IQR 2.87] years	**WAB-R-AQ** Higher dose CIAT: 71.33 (16.98) [severe-above cut off] Higher dose M-MAT: 68.68 (19.57) [severe-above cut off] Lower dose: 72.69 (18.13) [severe-mild]
Kesav et al, (2017)	24	Higher dose: 7/4 Lower dose: 7/2	Higher dose: 56.27 (11.6) [not reported] Lower dose: 48.7 (11.8) [not reported]	Higher dose: 31.2 (31) days Lower dose: 29.3 (30) days	**WAB-AQ** Higher dose: 45.1 (28.4) [95% CI 26–64.2] Lower dose: 32.4 (25.8) [95% CI 12.5 – 52.3]

Woldag et al (2017)	62	Higher dose CIAT: 8/12 Higher dose CTG: 5/15 Lower dose: 11/9	Higher dose CIAT: 71.3 (7.2) [not reported] Higher dose CTG: 70.3 (11.2) [not reported] Lower dose: 63 (14.3) [not reported]	Higher dose CIAT: 20.6 (10.9) [not reported] days Higher dose CTG: 19.9 (10.1) [not reported] days Lower dose: 16.3 (6.2) [not reported] days	**AAT Token test** Higher dose CIAT: 50.2 (9.7) [not reported] Higher dose CTG: 50.3 (7.8) [not reported] Lower dose: 47.6 (7.7) [not reported]
Godecke et al (2012) VERSE I	60	Higher dose: 14/18 Lower dose: 15/12	Higher dose: 70.3 (12.8) [not reported] Lower dose: 67.7 (15.4) [not reported]	Higher dose: 3.2 (2.2) [not reported] days Lower dose: 3.4 (2.2) [not reported] days	**WAB-AQ** Higher dose: median 31.0 [IQR: 47] Lower dose: median 9.0 [IQR: 34.1]

N = number randomised; CTG = conventional treatment group; AAT T-score cut-offs: Severe ≤ 42.5; Moderate > 42.5 ≤ 52.5; Mild > 52.5 ≤62.5; Minimal/no aphasia > 62.5 based on stanines and percentiles from Huber et al. (1983) Aachen Aphasia Test. Gottingen: Hogrefe (https://www.testzentrale.de/shop/aachener-aphasie-test.html). WAB-R AQ = Western Aphasia Battery Revised Aphasia Quotient.

Table 17. PICO 2 Higher intensity SLT (• 3 hours per week) compared to lower intensity SLT (< 3 hours per week)

Study ID	N	Male/female	Age in years Mean (SD) [range]	Time post onset Mean (SD) [range] in months	Aphasia severity at baseline Mean (SD) [range]
Bakheit 2007	97	Higher intensity: 26/25 Lower intensity: 21/25	Higher intensity: 71.2 (14.9) [26-92] Lower intensity: 69.7 (15) [17-91]	Higher intensity: 34.2 (19.1) days Lower intensity: 28.1 (14.9) days	**WAB-AQ** Higher intensity: 44.2 (30.2) Lower intensity: 37.9 (27.2)
Breitenstein et al (2017)	158	Higher intensity: 32/46 Lower intensity: 24/54	Higher intensity: 53.5 (9.0) [not reported] Lower intensity: 52.9 (10.2) [not reported]	Higher intensity: median 43.0 [IQR: 16.0-68.3] Lower intensity: median 27.0 [IQR: 13.0-48.8]	**AAT profile height** *average of the weighted T-scores of the AAT subtests* Higher intensity: 50.9 (6.6) [not reported] Lower intensity: 52.3 (5.4) (not reported)
SP-I-RiT	30	Higher intensity: 10/5 Lower intensity: 9/6	Higher intensity: 58.3 (12.3) [40-77] Lower intensity: 64.3 (10.5) [42-79]	Higher intensity: 7.7 (3.0) [3-13] weeks Lower intensity: 7.5 (3.6) [4-15] weeks	**Lisbon Aphasia Battery - AQ** Higher intensity: 37.8 (25.9) [6.3-73.5] Lower intensity: 41.7 (24.0) [8.8-74.4]
COMPARE (2022)	216	Higher intensity CIAT: 46/25 Higher intensity M-MAT: 53/22 Lower intensity: 48/22	Higher intensity CIAT: median 63.9 [IQR 19.8] Higher intensity M-MAT: median 63.8 [IQR 21.0] Lower intensity: median 63.2 [IQR 14.1]	Higher intensity CIAT: median 2.4 [IQR: 4.2] years Higher intensity M-MAT: median 2.9 [IQR 3.8] years Lower intensity: median 2.6 [IQR 2.87] years	**WAB-R-AQ** Higher intensity CIAT: 71.3 (17.0) [severe-above cut off] Higher intensity M-MAT: 68.7 (19.6) [severe-above cut off] Lower intensity: 72.7 (18.1) [severe-mild]

Godecke et al (2012) VERSE I	60	Higher intensity: 14/18 Lower intensity: 15/12	Higher intensity: 70.3 (12.8) [not reported] Lower intensity: 67.7 (15.4) [not reported]	Higher intensity: 3.2 (2.2) [not reported] Lower intensity: 3.4 (2.2) [not reported] days	**WAB-AQ** Higher intensity: median 31.0 [IQR: 47] Lower intensity: median 9.0 [IQR: 34.1]
Godecke et al (2021) VERSE III	246	Higher intensity UC+: 45/36 Higher intensity VERSE: 39/44 Lower intensity: 38/43	Higher intensity UC+: 74 (23) [not reported] Higher intensity VERSE 76 (15.5) [not reported] Lower intensity: 76 (17) [not reported]	Higher intensity UC+: median 9 [IQR 5] days Higher intensity VERSE: median 10 [IQR 5] days Lower intensity: median 9 [IQR 4] days	**WAB-R-AQ** Higher intensity UC+: 41.0 (27.8) (not reported) Higher intensity VERSE: 40.1 (28.0) (not reported) Lower intensity: 42.4 (28.9) (not reported)
Simic et al (2021)	16	Higher intensity: 4/4 Lower intensity: 3/5	Higher intensity: 54.0 (13.2) [35-75] Lower intensity: 51.3 (10.0) [33-64]	Higher intensity: 4.1 (6.0) [0.8-18.5] years Lower intensity: 4.9 (5.5) [1-8.8] years	**WAB-R AQ** Higher intensity: 62.2 (15.8) [40.4 – 82.0] Lower intensity: 62.6 (11.7) [47.9 – 85.8]
Zhang et al (2019)	40	Higher intensity: 15/5 Lower intensity: 14/6	Higher intensity: 52.0 (10.2) [not reported] Lower intensity: 55.0 (11.8) [not reported] All participants [21-79]	Higher intensity: 0-1 Month (n=11); 1-3 months (n=7); 3-6 months (n=1); >6 months (n=1). Lower intensity: 0-1 month (n=10); 1-3 months (n=6); 3-6 months (n=3); >6 months (n=1).	**WAB-AQ** Lower intensity: 26.2 (12.3) [not reported] Higher intensity: 25.71 (12.6) [not reported]

N = number randomised; AAT T-score cut-offs: Severe ≤ 42.5; Moderate > 42.5 ≤ 52.5; Mild > 52.5 ≤62.5; Minimal/no aphasia > 62.5 based on stanines and percentiles from Huber et al. (1983) Aachen Aphasia Test. Gottingen: Hogrefe (https://www.testzentrale.de/shop/aachener-aphasie-test.html). WAB-R AQ = Western Aphasia Battery (Revised) Aphasia Quotient; UC+ = usual care plus.

Table 18. PICO 3 Higher SLT frequency (• to 4 days per week) versus lower SLT frequency (< 4 days per week)

Study ID	N	Male/female	Age Mean (SD) [range] years	Time post onset Mean (SD) [range] months	Aphasia severity at baseline Mean (SD) [range]
COMPARE (2022)	216	Higher frequency CIAT: 46/25 Higher frequency M-MAT: 53/22 Lower frequency: 48/22	Higher frequency CIAT: median 63.9 [IQR 19.8] Higher frequency M-MAT: median 63.8 [IQR 21.0] Lower frequency: median 63.2 [IQR 14.1]	Higher frequency CIAT: median 2.4 [IQR: 4.2] years Higher frequency M-MAT: median 2.9 [IQR 3.8] years Lower frequency: median 2.6 [IQR 2.9] years	**WAB-R-AQ** Higher frequency CIAT: 71.3 (17.0) [severe-above cut off] Higher frequency M-MAT: 68.7 (19.6) [severe-above cut off] Lower frequency: 72.7 (18.1) [severe-mild]
Simic et al (2021)	16	Higher frequency: 4/4 Lower frequency: 3/5	Higher frequency: 54.0 (13.2) [35-75] Lower frequency: 51.3 (10.0) [33-64]	Higher frequency: 4.1 (6.0) [0.8-18.5] years Lower frequency: 4.9 (5.5) [1-8.8] years	**WAB-R AQ** Higher frequency: 62.2 (15.8) [40.4 – 82.0] Lower frequency: 62.6 (11.7) [47.9 – 85.8]
Wenke et al (2017)	14	Higher frequency: 2/4 Lower frequency: 3/2	Higher frequency: 68.3 (10.4) [54-86] Lower frequency: 75.7 (10.7) [56-78]	Higher frequency: 8.8 (13.8) [1-36] Lower frequency: 22.4 (22.7) [3-57]	**CAT** Higher frequency: 54 (7.1) [43-62] Lower frequency: 58.2 (5.4) [50-63]

N = number randomised; CAT Comprehensive Aphasia Test. WAB-R AQ = Western Aphasia Battery Revised Aphasia Quotient.

Table 19. PICO 4a Digital SLT versus in-person SLT

Study ID	N	Male/female	Age in years Mean (SD) [range]	Time post onset Mean (SD) [range] in months	Aphasia severity at baseline Mean (SD) [range]
Cherney et al (2010)	25	Digital SLT: 8/3 In-person: 8/6	Digital SLT: 56.6 (9.2) [41.7-68] In-person: 61.1 (14.8) [35.2-81.7]	Digital SLT: 66.7 (71.5) [13.8-253.2] In-person: 41.3 (45.7) [12.2-166]	**WAB-AQ** Digital SLT: 62.0 (19.9) In-person: 47.3 (27.9)
De Luca et al (2023)	30	Digital SLT: 7/8 In-person: 7/8	Digital SLT: 51.1 (10.3) [not reported] In-person: 51.4 (12.7) [not reported]	Digital SLT: 6 (1.3) [not reported] In-person: 6 (0.9) [not reported]	**Esame Neuropsicologico Per l'Afasia** Digital SLT: 15.5 (1.5) [not reported] In-person: 16.7 (1) [not reported]
Grechuta et al (2019)	17	Digital SLT: 4/5 In-person: 5/3	Digital SLT: 55.7 (8.9) [39-64] In-person: 53.5 (12.1) [34-68]	Digital SLT: 61.7 (46.9) [6-144] In-person: 58 (52.0) [6-144]	**BDAE** Digital SLT: 68.6 (23.8) [36-96] In-person: 53.8 (24.7) [10-87]
Meltzer et al (2018)	33 (of 44 randomised across 4 groups)	Digital SLT: 10/7 In-person: 11/5	Digital SLT: 66.8 (11.2) [not reported] In-person: 62.9 (11.6) [not reported]	≥6 months.	**WAB-AQ** Digital SLT: 50.0 (24.4) [not reported] In-person: 57.5 (23.6) [not reported]

Spaccavento et al (2021)	22	Digital SLT: 9/4 In-person: 7/2	Digital SLT: 57.4 (9.2) [not reported] In-person: 64.1 (15.0) [not reported]	Digital SLT: 25.9 (26.0) [not reported] days In-person: 20 (10.7) [not reported] days	**AAT spontaneous language** Digital SLT: 10.85 (8.05) [95% CI 6.0 – 15.7] In-person: 10.44 (9.58) [95% CI 3.1 – 17.8]
Woolf et al (2016)	10 (of 15 randomised across 3 groups)	Digital SLT: 4/1 In-person: 3/2	Digital SLT: 58.6 (14.4) [not reported] In-person: 57.8 (15.1) [not reported]	Digital SLT: 31.8 (14.1) [not reported] In-person: 35.2 (33.2) [not reported]	**Comprehensive Aphasia Test** (semantic score) Digital SLT: 9.8 (0.5) [not reported] In-person: 8.4 (0.9) [not reported]
Zhou et al (2018)	20 (of 40 randomised across 4 groups)	Digital (inpatient): 7/3 In-person (inpatient): 3/7	Digital (inpatient): 58.6 (11.4) [not reported] In-person (inpatient): 56.1 (17.3) [not reported]	Digital (inpatient): 34.8 (20.7) [not reported] days In-person (inpatient): 29.9 (19.7) [not reported] days	**WAB AQ** Digital (inpatient): 31.5 (26.5) [not reported] In-person (inpatient): 40.8 (27.3) [not reported]

N = number randomised; AAT = Aachen Aphasia Test; BDAE = Boston Diagnostic Aphasia Examination; WAB AQ = Western Aphasia Battery Aphasia Quotient.

Table 20. PICO 4b Digitally-augmented SLT versus in-person SLT

Study ID	N	Male/female	Age in years Mean (SD) [range]	Time post onset Mean (SD) [range] in months	Aphasia severity at baseline Mean (SD) [range]
Big CACTUS (2019)	198 (of 278 randomised across 3 groups)	Digitally augmented: 47/36 In-person SLT: 54/32	Digitally augmented: 64·9 (13·0) [34·1–89·2] In-person SLT: 64·9 (13·0) [23·1–89·6]	Digitally augmented: 34.8 (34.8) [4.8 - 152.4] In-person SLT: 33.6 (31.2) [3.6-188.4]	**CAT comprehension impairment; count (%)** Digitally augmented: Normal 17 (21%); Mild 35 (42%); Moderate 26 (31%); Severe 5 (6%). In-person SLT: Normal 17 (20%); Mild 46 (54%); Moderate 20 (23%); Severe 3 (3%).
Kesav et al, (2017)	24	Digitally augmented: 7/4 In-person SLT: 7/2	Digitally augmented: 56.3 (11.6) [not reported] In-person SLT: 48.7 (11.8) [not reported]	Digitally augmented: 31.2 (31) days In-person SLT: 29.3 (30) days	**WAB-AQ** Digitally augmented: 45.1 (28.4) [95% CI 26–64.2] In-person SLT: 32.4 (25.8) [95% CI 12.5 – 52.3]
Liu et al (2022)	68	Digitally augmented: 23/10 In-person SLT: 26/9	Digitally augmented: 51.5 (15.1) [26-74] In-person SLT: 54.3 (12.8) [23-77]	Digitally augmented: 28.3 (not reported) [15-73] days In-person SLT: 30.2 (not reported) [18-90] days	**WAB-AQ** Digitally augmented: 35.3 (21.7) [not reported] In-person SLT: 34.8 (22.9) [not reported]
Marshall et al (2020)	34	Digitally augmented: 12/4 In-person SLT: 5/13	Digitally augmented: 53.1 (9.8) [40-76] In-person SLT: 62 (10.9) [46-77]	Digitally augmented: 59 (37.5) [10-135] In-person SLT: 62.9 (71.6) [8-238]	**WAB-R-AQ** Digitally augmented: 78.2 (13.2) [58-96.1] In-person SLT:

					70.5 (14.7) [42.4 – 90.8]
Ora et al (2020)	62	Digitally augmented: 19/13 In-person SLT: 22/8	Digitally augmented: 64.7 (11.7) [not reported] In-person SLT: 65.0 (12.2) [not reported]	Digitally augmented: ⩽3months 50.0% 3–12months 15.6% >12months 34.4% In-person SLT: ⩽3months 40.0% 3–12months 13.3% >12months 46.7%	**Norwegian Basic Aphasia Assessment - comprehension** Digitally augmented: 47.6 (19.8) [not reported] In-person SLT: 52.8 (24) [not reported]
Wertz et al (1981)	67	Digitally augmented: 35/0 In-person SLT:32/0	Digitally augmented: 57.1 [41-79] In-person SLT: 60.2 [40-79]	Recruitment 4 weeks post onset	**PICA overall percentile*** Digitally augmented: 45.6 [16-74] In-person SLT: 45.2 [15-74]

N = participants relevant to the PICO; * = from 15 weeks post-onset

Table 21. PICO 5a Group SLT versus to one-to-one SLT

Study ID	N	Male/female	Age in years Mean (SD) [range]	Time post onset Mean (SD) [range] in months	Aphasia severity at baseline Mean (SD) [range]
Ciccone et al (2016)	20	Group SLT: 9/3 One-to-one: 3/5	Group SLT: 69.4 (15.0) [not reported] One-to-one: 72.6 (14.1) [not reported]	Group SLT: 4.8 (2.3) [not reported] days One-to-one: 5.6 (2.3) [not reported] days	**WAB-AQ** Group SLT: 42.5 (27.2) [7.0-79.6] One-to-one: 45.1 (28.5) [5.6 – 81.9]
COMPARE (2022)	216	Group CIAT: 46/25 Group M-MAT: 53/22 One-to-one: 48/22	Group CIAT: median 63.9 [IQR 19.8] Group M-MAT: median 63.8 [IQR 21.0] One-to-one: median 63.2 [IQR 14.1]	Group CIAT: median 2.4 [IQR: 4.2] years Group M-MAT: median 2.9 [IQR 3.8] years One-to-one: median 2.6 [IQR 2.9] years	**WAB-R-AQ** Group CIAT: 71.3 (17.0) [severe-above cut off] Group M-MAT: 68.7 (19.6) [severe-above cut off] One-to-one: 72.7 (18.1) [severe-mild]
Grechuta et al (2019)	17	Group SLT: 4/5 One-to-one: 5/3	Group SLT: 55.7 (8.9) [39-64] One-to-one: 53.5 (12.1) [34-68]	Group SLT: 61.7 (46.9) [6-144] One-to-one: 58 (52.0) [6-144]	**BDAE** Group SLT: 68. 6 (23.8) [36-96] One-to-one: 53.75 (24.7) [10-87]
Pulvermuller et al (2001)	17	Group SLT: 6/4 One-to-one: 6/1	Group SLT: 55.4 (10.9) [39-72] One-to-one: 53.9 (7.4) [42-62]	Group SLT: 98.2 (74.2) [16-233] One-to-one: 24 (20.6) [2-58]	**AAT** Group SLT: 55.6 (5.9) [49-67.3] One-to-one: 54.1 (6.3) [45.3-63]

Wertz et al (1981)	67	Group SLT:32/0 One-to-one: 35/0	Group SLT: 60.2 [40-79] One-to-one: 57.1 [41-79]	Recruitment 4 weeks post onset	**PICA overall percentile*** Group SLT: 45.2 [15-74] One-to-one: 45.6 [16-74]
Wilssens et al (2015)	9	Group SLT: 2/3 One-to-one: 4/0	Group SLT: 63 (8) [54-73] One-to-one: 71 (9) [60-81]	Group SLT: 61(48) [17-138] One-to-one: 52 (25) [26-82]	**AAT Token Test‡** Group SLT: 33.2 (5.1) [28-39] One-to-one: 29.8 (6.5) [24-39]
Yao et al (2005)	54 (of 84 randomised across 3 groups)	Total randomised 50/34	Total randomised <40 = 3; 40s = 23; 50s = 23; 60s = 25; 70s = 8; > 80 years = 2	Not reported	**Aphasia Types** Group SLT: Expressive 10; Anomia 7; Receptive 6; Conductive 7. One-to-one: Expressive 11; Anomia 6; Receptive 3; Conductive 4.

N = participants relevant to the PICO; AAT T-score cut-offs; Severe: ≤ 42.5; Moderate: > 42.5 ≤ 52.5; Mild: > 52.5 ≤62.5; Minimal/no aphasia: > 62.5 based on stanines and percentiles from Huber W., Poeck K., Weniger D., Willmes K. (1983) Aachen Aphasia Test. Gottingen: Hogrefe (https://www.testzentrale.de/shop/aachener-aphasie-test.html). * Data gathered 15 weeks post- onset; ‡ Negative scoring.

Table 22. PICO 5b One-to-one plus group SLT versus one-to-one SLT

Study ID	N	Male/female	Age in years Mean (SD) [range]	Time post onset Mean (SD) [range] in months	Aphasia severity at baseline Mean (SD) [range]
Efstratiadou et al (2019)	36 (of 72 randomised across 3 groups).	One to one + group: 8/6 One to one: 16/6	One to one + group: 58.4 (11.7) [40 – 79] One to one: 58.3 (11.5) [38 – 84]	One to one + group: 33.3 (42.7) [4 – 127] One to one: 30.6 (46.0) [4 – 207]	**BDAE severity** One to one + group: Mild: n=4; Moderate: n=4; Severe: n=6 One to one: Mild: n=4; Moderate: n=6; Severe: n=12

N = participants relevant to the PICO.

Table 23. PICO 6 Randomised controlled comparisons of SLT plus tDCS compared to SLT plus sham tDCS as eligible for inclusion

Study ID	N	RCT comparison(s)	Male/female	Age in years Mean (SD) [range]	Time post onset Mean (SD) [range] in months	Aphasia severity at baseline Mean (SD) [range]
Cipollari 2015*	6	A-tDCS right hemisphere versus S-tDCS	A-tDCS: 2/1 S-tDCS: 1/2	A-tDCS: 60 (13.1) [51-75] S-tDCS: 58.3 (11.6) [46-69]	A-tDCS: 14.3 (3.8) [10-17] S-tDCS: 63.3 (23.8) [36-79]	**Token Test (max 36)** A-tDCS: 20 (4.6) [16-25] S-tDCS: 11 (3.5) [9-15]
Cherney 2021	12	A-tDCS left hemisphere versus C-tDCS left hemisphere versus S-tDCS	A-tDCS: 3/1 C-tDCS: 2/2 S-tDCS: 3/1	A-tDCS: 49.9(4.7) [46.1-55.7] C-tDCS: 59.7(3.6) [57.1- 64.9] S-tDCS: 60.6(7.61) [54.7-71.1]	A-tDCS: 20.1(14.5) [6.3-35.6] C-tDCS: 21.2(16.5) [6.2-50.9] S-tDCS: 55.6(70.2) [6.2-155.7]	**WAB-R AQ** A-tDCS: 56.0(12.0) [45.2-70.3] C-tDCS: 55.2(16.7) [38.7-74.3] S-tDCS: 55.5(23.9) [22.3-75.3]
Feil 2019	12	A-tDCS left hemisphere versus S-tDCS	A-tDCS: 4/2 S-tDCS: 6/0	A-tDCS: 59.2(11.6) [48-79] S-tDCS: 67.3(13.0) [44-82]	A-tDCS: 48.5 (18) [28-72] days S-tDCS: 47.5(27.1) [27-95] days	**AAT** A-tDCS: 272.7 (34.2) [230-320] S-tDCS: 244.3 (38.2) [199-285]
Fridrikkson 2018	74	A-tDCS left hemisphere versus S-tDCS	A-tDCS: 24/10 S-tDCS: 28/12	A-tDCS: 60 (11) [not reported] S-tDCS: 60 (10) [not reported]	A-tDCS: 44 (45) [not reported] S-tDCS: 40 (35) [not reported]	**WAB-R AQ** A-tDCS: 60 (19) [not reported] S-tDCS: 56 (20) [not reported]

Matar 2022	6	A-tDCS left hemisphere versus S-tDCS	A-tDCS: 1/2 S-tDCS:1/2	A-tDCS: 73.3 (5.8) [70-80] S-tDCS:1/2 66.7 (5.8) [60-70]	A-tDCS: 20 (4.0) [16-24] S-tDCS: 15.33 (2.1) [13-17]	**Language Screening Test** 0–5/15 = severe 6–10/15 = moderate 11–14/15 = mild A-tDCS: Moderate: 2; Mild:1 S-tDCS: Moderate: 1; Mild:2
Meinzer 2016	26	A-tDCS left hemisphere versus S-tDCS	A-tDCS: 7/6 S-tDCS: 11/2	A-tDCS: 59.2 (12.5) [38-77] S-tDCS: 60.8 (11.5) [41-78]	All participants had chronic aphasia (>12 months post-stroke)	**AAT** A-tDCS: Naming subtest 56(23.8) [16-99] Comprehension subtest 70.5 (16.2) [37-99] S-tDCS: Naming subtest 46.8 (27.3) [16-80] Comprehension subtest 73.5(11.4) [50-96]
Spielmann 2018	58	A-tDCS left hemisphere versus S-tDCS	A-tDCS: 18/8 S-tDCS: 22/10	A-tDCS: 57.9 (9.6) S-tDCS: 59.7(10.3)	A-tDCS:6.3 (2.3) weeks S-tDCS:7.1(2.9) weeks	**BDAE ASRS** A-tDCS: 2.5 (1.2) S-tDCS: 2.7 (1.1)
Turkeltaub 2017	38	A-tDCS left hemisphere (right hemisphere	A-tDCS: 16/8 S-tDCS: 9/5	A-tDCS: 60.0(10.8) S-tDCS: 59.8(8.7)	Not reported	**WAB-R AQ** A-tDCS: 66.2(21.7) (n=23) S-tDCS: 61.9(28.6) (n=14)

		cathodal) versus S-tDCS				
Zhao 2021	18	A-tDCS left hemisphere versus S-tDCS	A-tDCS: 2/6 S-tDCS: 0/10	A-tDCS: 58 (8.7) S-tDCS: 54.4 (9.4)	A-tDCS: 3.1(2.9) S-tDCS: 2.4(1.2)	**WAB-AQ** A-tDCS: 39.1 (17.9) S-tDCS: 32.1(18.8)
Kang 2011*	10	C-tDCS right hemisphere versus S-tDCS	C-tDCS:4/1 S-tDCS: 4/1	C-tDCS: 62 (10.07) [46-73] S-tDCS: 61.8 (8.2) [53-73]	C-tDCS: 22.9 (36.0) [6-87.3] S-tDCS: 81.9 (85.8) [6-180.6]	**K-WAB-AQ** C-tDCS: 33.2 (23.4) [11-71] S-tDCS: 45.8 (29.3) [14-79]
Sebastian 2020*	24	Cerebellar A/C-tDCS versus S-tDCS	A/C-tDCS :8/3 S-tDCS: 12/1	A/C-tDCS: 61 (10.6) [37-78] S-tDCS: 63.7 (11.1) [44-79]	A/C-tDCS: 38.6 (22.8) [6-83] S-tDCS: 28.6 (32.2) [6-118]	**BDAE ASRS** A/C-tDCS: 2.5 (1.0) [1-4] S-tDCS: 2.54 (0.78) [1-4]
Shah Basak 2015*	6 randomised from 12 enrolled	A or C-tDCS (Individually tailored stimulation protocol) versus Sham	10/2 (randomised groups specific data unreported)	63.6 (8.6) (randomised groups specific data unreported)	31 (29.7) [7-101] (randomised groups specific data unreported)	**WAB-AQ** 53.4 (23.6) [23.2-87.8] (randomised groups specific data unreported)
You 2011	21	A-tDCS left temporal versus C-tDCS right temporal versus S-tDCS	A-tDCS: 3/4 C-tDCS: 4/3 S-tDCS: 5/2	A-tDCS: 70.4 (9.2) [60-82] C-tDCS: 65.9 (13.3) [48-80] S-tDCS: 63.4 (9.8) [49-75]	A-tDCS: 24.7 (5.21) [18-31] C-tDCS: 27.1 (7.4) [20-36] S-tDCS: 25.3 (9.0) [16-38]	**K-WAB AQ** A-tDCS: 11.9 (9.6) [0.4-27.6] C-tDCS: 13.6 (8.2) [0.4-21.2] S-tDCS: 8.5 (3.2) [4.2-12.8]

Polanowska 2013	37	A-tDCS left hemisphere versus S-tDCS	A-tDCS: 11/7 S-tDCS: 13/6	A-tDCS: 57.6 (9.6) [34-75] S-tDCS: 62 (11.9) [35-75]	A-tDCS: 55.7 (44.8) [10-187] days S-tDCS: 63.5 (43.1) [10-175] days	**BDAE ASRS** A-tDCS: 2 (1.1) [1-4] S-tDCS: 2.3 (1) [1-4]
Fiori 2013*	7	A-tDCS (Broca's) versus A-tDCS (Wernicke's) versus S-tDCS	A-tDCS (B): 1/1 A-tDCS (W): 1/0 S-tDCS: 2/1	A-tDCS (B): 51.5 (10.6) [44-59] A-tDCS (W): 52 (0) [52] S-tDCS: 67 (4.6) [62-71]	A-tDCS (B): 61.5 (31.8) [39-84] A-tDCS (W): 9 (0) [9] S-tDCS: 30.3 (19.7) [18-53]	**Token test** A-tDCS (B): 15(1.4) [14-16] A-tDCS (W): 11(0) [11] S-tDCS: 12(9.2) [4-22]
Marangolo 2013*	8	A-tDCS left hemisphere versus S-tDCS	A-tDCS: 1/2 S-tDCS: 3/1	A-tDCS: 60.7 (1.2) [60-62] S-tDCS: 55.3 (8.7) [49-68]	A-tDCS: 54 (36.5) [30-96] S-tDCS: 26 (32.2) [6-74]	**Token test** A-tDCS: 10 (1) [9-11] S-tDCS: 12.3 (1.7) [10-14]
Northstar 2020	43 (of 63) relevant to PICO	C-tDCS right hemisphere versus S-tDCS	26/17	C-tDCS: 65.3 (13.2) S-tDCS: 67.4 (11.7)	C-tDCS: 20.4 (14.7) days S-tDCS: 15.9 (11.2) days	**Unified Aphasia Score‡**: C-tDCS: 45.2 (22.6) S-tDCS: 38.5 (26.7)

N = participants relevant to the PICO; *Crossover RCT data extracted up to cross-over point; ‡ Unified Aphasia Score is a standardised T-score based on the AAT (German), Protocole Montreal-Toulouse-86 (French) and the WAB (English) assessments. A-tDCS = Anodal tDCS, S-tDCS = Sham tDCS, C-tDCS = Cathodal tDCS; A/C-tDCS = Anodal or Cathodal tDCS; A-tDCS (B)/(W) = Anodal tDCS over Broca's or Wernnicke's area; AAT = Aachen Aphasia Test; WAB-R-AQ = Western Aphasia Battery-Revised Aphasia Quotient; K-WAB-AQ = Korean Western aphasia battery Aphasia Quotient; BDAE(ASRS) = Boston Diagnostic Aphasia Examination (Aphasia Severity Rating Scale); BNT = Boston Naming Test. Token Test (De Renzi and Faglioni 1978); AAT T-score cut-offs; Severe: ≤ 42.5; Moderate: > 42.5 ≤ 52.5; Mild: > 52.5 ≤62.5; Minimal/no aphasia: > 62.5 based on stanines and percentiles from Huber et al (1983) Aachen Aphasia Test. Gottingen: Hogrefe (https://www.testzentrale.de/shop/aachener-aphasie-test.html).

Table 24. PICO 7b SLT Tailored by level of difficulty versus untailored by level of difficulty

Study ID	N	Male/female	Age in years Mean (SD) [range]	Time post onset Mean (SD) [range] in months	Aphasia severity at baseline Mean (SD) [range]
Braley 2021	36	Tailored SLT: 10/7 Non-tailored SLT: 8/7 (4 unreported)	Tailored SLT: 58.9 (10) [43-81] Non-tailored SLT: 64.2 (9.9) [49-84]	Tailored SLT: 53 (56) [5-228] Non-tailored SLT: 38.1 (32) [8-131]	**WAB-R AQ** Tailored SLT: 61.62 (24.28) [9.2 – 87.2] Non-tailored SLT: 66.02 (19.08) [31.8-89.7]

N = participants randomised to comparison; WAB-R AQ = Western Aphasia Battery Revised Aphasia Quotient.

Supplement 21: Results of the votes for the Expert Consensus Statements

PICO 5b Expert Consensus Statement In people with aphasia following stroke where access to one-to-one therapy is constrained by resource availability, we suggest that group therapy delivered in addition to one-to-one SLT may facilitate increased therapy time, provide additional opportunities to use language in a social context and enhance communication confidence. We also suggest that the therapy timing and format should follow other recommendations in this clinical guideline, aiming to enhance language recovery, communication, participation, and quality of life.	12/12 (100%) writing group members agree.
PICO 6 (a) – (f) Expert Consensus Statement 1. In people with aphasia following stroke, we suggest that in the clinical context, SLT should be delivered alone rather than SLT alongside tDCS. 2. Individualised tDCS approaches for post-stroke aphasia may be beneficial, but further evidence is required.	10/12 (83.3%) writing group members agree with first statement. 12/12 (100%) writing group members agree with remaining statement.