

A Scoping Review of Psychoeducational Interventions for People After Transient Ischaemic Attack and Minor Stroke

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Background: Psychoeducation can provide information and support to cope with the physical and emotional effects of a health condition. This scoping review aimed to identify the evidence regarding psychoeducational interventions for people after a Transient Ischaemic Attack (TIA) and minor stroke.

Methods: This review was conducted in accordance with the PRISMA Extension for Scoping Reviews. Three electronic databases (MEDLINE, Embase, PsycINFO) were searched for articles on interventions related to psychoeducational support post TIA and minor/mild stroke. Search retrieved 3722 articles. Three reviewers independently screened titles, abstracts, full-texts, and then extracted data for included studies. Study quality was assessed using the JADAD scale. TIDieR checklist was used to describe interventions.

Results: Fifteen RCTs were included. Twelve studies were of high quality (JADAD score ≥ 2), two were low quality. A total of 1500 participants were recruited across the studies. Definition of TIA and minor stroke were unclear, leading to the exclusion of several studies. Various interventions were included, including education/psychoeducation (n=4); exercise and lifestyle advice (n=3); telephone-based education/counselling (n=3); secondary prevention education (n=1); motivational interviewing (n=2); self-management (n=2). Interventions were inconsistently described, with information missing about who delivered it and tailoring.

Conclusions: Definitions of stroke severity are not adequately reported. There are variety of interventions including education about a range of stroke-specific topics. Many interventions are not adequately defined, thus making it difficult to determine if the aim was to provide information or support to promote self-management and wellbeing post TIA/minor stroke. There is a need for a more in-depth systematic review to develop a clear definition of psychoeducation.

Keywords: scoping review, TIA, minor stroke, psychoeducation, complex intervention

1 **1. Introduction**

2 Transient Ischaemic Attacks (TIA) and minor stroke constitute for more than 50% of all stroke
3 cases¹. A TIA (or 'mini-stroke') is the presence of focal neurological dysfunction, caused by a
4 temporary blood clot, which resolves within 24 hours². Minor stroke often refers to a stroke
5 where the symptoms are classed as mild and non-disabling^{3, 4}. It is widely assumed that
6 patients make a full recovery, but there is emerging evidence on the long-term impact of TIA
7 and minor stroke^{5, 6}.

8 Understanding the top research priorities relating to the long-term effects of TIA and minor
9 stroke among relevant stakeholders is key to improving the care and interventions provided⁷.
10 Turner et al., held consensus discussions⁷ and identified eleven research priorities, including
11 what advice, support and information should people receive after their diagnosis.

12 A recent qualitative review of patients' experiences of TIA symptoms, diagnosis, treatment
13 and secondary prevention revealed the potential long-term impact of TIAs on quality of life and
14 psychological wellbeing⁸. This review highlighted the importance of providing information and
15 support after a TIA diagnosis, as a lack of knowledge may lead to greater negative
16 psychological effects and limited engagement with secondary prevention.

17 A systematic review explored evidence regarding secondary prevention lifestyle interventions
18 within 90 days of TIA or 'minor stroke' diagnosis⁹. Four randomised controlled trials (RCTs)
19 were included with various interventions; post-discharge care management; education and
20 exercise; exercise; and instructions on how to be physically active. The review highlighted the
21 limited evidence reporting the effectiveness of these types of interventions, and further RCTs
22 investigating rehabilitation programmes that focus on promoting lifestyles changes are
23 required. Despite some evidence that there is a need for interventions to provide information,
24 to reduce distress and to promote adherence to secondary prevention, it is still unclear what
25 specialist support should be offered following a TIA or minor stroke.

26 Psychoeducation is a broad and multidimensional concept included as a component in many
27 interventions that aim to improve aspects of mood or quality of life. Interventions based on
28 psychoeducation can provide support and information to help people better manage a health
29 condition¹⁰. This could be an effective method of providing support and education after the
30 diagnosis of a TIA or minor stroke, however to our knowledge there has not been a review on
31 the effectiveness of psychoeducational interventions in stroke survivors. Compared to
32 moderate to severe stroke survivors, there is emerging evidence that people diagnosed with
33 a TIA and minor stroke are also at great risk of developing physical and emotional health
34 difficulties^{11,12}. TIA and minor stroke patients are usually managed as outpatients in specialist
35 TIA clinics¹³ that focus on secondary prevention to reduce the risk of future strokes with limited
36 access to post-discharge support services for non-medical interventions.

37 There is a timely need to conduct a scoping review of the literature to identify knowledge gaps
38 and to examine research designs concerning interventions to improve education and
39 psychological well-being for people with TIA and minor stroke. This review aimed to identify
40 the nature and extent of research evidence available to support the use of psychoeducational
41 interventions post-TIA and minor stroke. For the purpose of this review, we define
42 psychoeducational interventions as individual or group programmes providing support,
43 information, education, and management strategies.

44 **2. Methods**

45 This scoping review was conducted in accordance with the PRISMA Extension for Scoping
46 Reviews (see PRISMA-ScR Checklist in Appendix 1)¹⁴.

47 **2.1. Data Sources and Search strategy**

48 Search strategies were developed using indexed terms from controlled vocabularies and free
49 text words relating to TIA, minor stroke and interventions providing education, psychological
50 support, or secondary prevention (example in Appendix 2). The last search was conducted on
51 published literature in the English language until 1st June 2019. The search strategy was

52 adapted for the requirements of each database. We searched the following databases: Ovid
53 MEDLINE(R), Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations, Ovid
54 MEDLINE(R) Daily and Ovid OLDMEDLINE(R) (inception to June 2019); Embase Classic +
55 Embase (OvidSP) (inception to June 2019); PsycINFO (OvidSP) (inception to June 2019). As
56 this was a scoping review, grey literature searches were not conducted, however reference
57 lists were hand-searched. Search results were exported directly to EndNote X9 and duplicates
58 were removed.

59 **2.2. Eligibility criteria**

60 Articles were included if they met the following criteria: 1) focused on interventions related to
61 education, support and management strategies post TIA and minor/mild stroke; 2) were
62 administered in hospital or in community settings; 3) included people with TIA and/or
63 minor/mild stroke; 4) presented relevant information about psychoeducation as a component
64 of the intervention that could be extracted. Studies were excluded if they: 1) did not have a
65 component specifically designed for people with TIA and/or minor/mild stroke; 2) did not have
66 any outcomes related to mood, quality or life or secondary prevention; 3) focused only on the
67 physical impact of TIA and minor/mild stroke; 4) included people with moderate to severe
68 stroke severity (defined by measurement tools or descriptions to define stroke severity); 5)
69 were not a RCT or did not have a control group; 6) were a protocol; 7) focused on other
70 participant groups (for example, carers, family members or healthcare professionals).

71 **2.3. Procedure**

72 Three authors (EK, JK, LC) independently searched through the databases identifying
73 potential articles for inclusion. Following the removal of duplicates, titles and abstracts were
74 reviewed using the eligibility criteria. Once articles for potential inclusion were identified,
75 authors collated results and checked for agreement (EK, JK, LC). Where disagreements
76 arose, the reviewers discussed reasons for inclusion or exclusion, reaching a final decision.

77 **2.4. Quality Appraisal**

78 Three authors (EK, JK, LC) independently assessed the quality of included studies using the
79 JADAD scale¹⁵, which was used for its brevity and ease of use. A fourth author (ST) rated a
80 random sample of five articles to ensure accuracy. Findings were compared and results
81 tabulated.

82 **2.5. Data Extraction**

83 Data were extracted relating to aspects of study design, participant characteristics, details of
84 the intervention, outcome measures (primary and secondary), and conclusions. A bespoke
85 data extraction form was developed and used which was modelled on the TIDieR checklist, to
86 ensure relevant and consistent data was extracted from the included studies^{16, 17}.

87 **3. Results**

88 **3.1. Study design and participant characteristics**

89 The initial search identified 3722 articles. Fifteen studies were included in the review. Figure
90 1 presents a PRISMA flow diagram. All reviewers were in agreement about which studies met
91 the inclusion criteria. Most studies (80%) were of high quality (n=12, JADAD score 3-5), with
92 only three studies having low quality designs and reporting (JADAD score 0-2). All studies
93 reported drop-out rates, with most studies scoring low on blinding of participants and
94 assessors. Some methods of randomisation were also inappropriate, such as allocation based
95 on participant characteristics. A summary of scores is shown in Table 1.

96 A total of 1500 participants with TIA (n=104) or minor stroke (n=1133) were recruited and
97 randomised across the 15 studies. Studies were conducted in the USA, Netherlands, New
98 Zealand, UK, Canada, Ireland and Taiwan. Three studies recruited people from TIA/minor
99 stroke or stroke prevention clinics¹⁸⁻²⁰, one recruited patients via a specialised stroke unit²¹,
100 two via outpatient clinics^{22, 23} and the remainder via rehabilitation, acute or veteran hospitals.
101 Information about participant numbers and demographics was generally well reported and
102 consistent for all studies, presenting age, gender, sample size, and type of stroke. Dropout

103 rates (range 0-20%) were recorded for all studies, some more detailed than others. Only one
104 study had 100% adherence¹⁸, and another study recorded only one participant leaving the
105 study early due to work commitments¹⁹. One study had a large number of dropouts (n=36),
106 however as there was a large sample size this only equated to 18% drop rate²⁰. The
107 intervention period varied for the studies, with the majority lasting 3 or 6 months. A summary
108 of study characteristics is shown in Table 2.

109 Although all studies state that they included TIA and/or minor stroke participants, the definition
110 of diagnoses was variable and, in some cases unclear. The diagnosis of minor/mild stroke
111 across the studies was: i) National Institutes of Health Stroke Scale (NIHSS) score of ≥ 1 , 0 to
112 5, ≤ 3 or ≤ 15 ; ii) score $>8.5/11.5$ on the Canadian Neurological Scale; iii) a modified Rankin
113 Score between 0 and 2; iv) Barthel Index score of >60 or ≥ 65 ; v) minor stroke confirmed by
114 positive findings on CT or MRI of the head. There was no common definition of minor stroke,
115 and no explicit definition of TIA. The number of participants with a TIA versus minor stroke
116 diagnosis was not clearly reported in one study²⁴ and three studies included both diagnoses
117 but did not report the numbers²⁵⁻²⁷.

118 **3.2. Intervention details**

119 All studies detailed their interventions relatively well, in accordance with the TIDieR checklist¹⁶.
120 However, there was limited information about who delivered the intervention, training provided
121 to those delivering the intervention and tailoring of the intervention to individual participants.
122 There was also limited reporting of fidelity assessments, meaning few studies provided any
123 information about whether the intervention was delivered as intended.

124 The components of the interventions were well described across the studies. Varying
125 interventions were used by all studies, apart from two studies that used the same manual-
126 based intervention^{18, 19}. Interventions included education, psychoeducation, exercise and
127 lifestyle advice, telephone-based education/counselling, enhancing secondary prevention,

128 motivational interviewing and improving self-management. A summary of intervention details
129 is shown in Table 3.

130 Four studies focused on education or psychoeducation. One²⁸ was delivered at home by an
131 advanced practice nurse care manager who provided education about lifestyle change and
132 stroke warning signs. Two studies^{18, 19} used the '*Healthy Brain Rehabilitation Manual*²⁹, which
133 contained information about TIA/minor stroke, how to set goals, action plans for changing
134 lifestyle, secondary prevention and mental health. Participants received a pedometer
135 alongside the manual to encourage exercise. Another study²² delivered an eight week
136 community-based stroke education programme, delivered as lectures, demonstrations, or
137 discussions. It provided education on warning signs, risks, diet, social activities, rehabilitation,
138 and support. One study²³ specifically delivered enhanced secondary prevention support and
139 discussed behaviour change intentions, which could be considered psychoeducation.

140 Three studies^{21, 24, 30} delivered exercise and education programmes that lasted eight weeks
141 focusing on stroke prevention and healthy behaviour change. One study²¹ delivered lifestyle
142 education every three months.

143 Three studies provided telephone-based interventions, either providing education,
144 counselling, or advice. One study³¹ provided a stroke self-management programme via
145 telephone, covering stroke warning signs, self-management topics and helping patients
146 understand their diagnosis. Another³² provided telephone support for six months, providing
147 information on stroke/lifestyle management. The third study³³ delivered lifestyle and
148 behavioural management via telephone, involving a nurse educator and peer dyads (i.e.
149 individuals who had stroke/TIA and their carers).

150 Two studies used motivational interviewing to deliver education and encourage lifestyle
151 change. One²⁵ provided enhanced stroke education provided by a discharge educator and the
152 other study²⁰ delivered education counselling with the use of motivational interviews provided
153 by a nurse.

154 Two additional studies implemented different self-management programmes. One³⁴ focused
155 on medical, emotional and participation management, encouraging problem-solving and
156 another³⁵ focused on three goals: medical, role and emotional management.

157 **3.3. Outcomes**

158 A range of outcomes were used across the studies. A summary is shown in Table 4. Four
159 measured quality of life as a primary outcome, three of which used the EuroQol EQ-5D and
160 one used stroke specific measure³¹. Three studies measured quality of life as a secondary
161 outcome. Some studies included measures of physical activity (e.g. the International Physical
162 Activity Questionnaire; IPAQ), neuromotor function or exercise capacity. Seven studies
163 included measures of mood or psychosocial function, such as the Hospital Anxiety and
164 Depression Scale (HADS), Patient Health Questionnaire–9 (PHQ-9) and Beck Depression
165 Inventory II (BDI-II), although not all were primary outcomes. Other included measures were
166 related to stroke knowledge and awareness, self-efficacy, and outcomes relevant to
167 secondary prevention (e.g. diet, BMI, weight, alcohol consumption).

168 Several significant changes in outcomes were presented across the included studies. Three
169 studies^{20, 28, 34} reported a significant increase in stroke knowledge or self-efficacy/management
170 in the intervention group compared to controls. Other studies reported improvement in
171 secondary prevention measures, such as reduced cholesterol²¹, improved self-reported
172 exercise²³ and an improved global health score³⁰ in the intervention groups compared to
173 controls. There was a significant reduction in recurrent strokes or TIAs in one study²⁴ after an
174 eight-week exercise and education programme compared to controls.

175 **4. Discussion**

176 This scoping review was conducted instead of a systematic review, with the aim to determine
177 the body of literature on the topic of psychoeducational interventions for individuals following
178 TIA and minor stroke. Our review identified a total of fifteen RCTs that had a focus on
179 educating individuals following minor stroke or TIA, encouraging them to change their lifestyle,

180 increasing exercise levels, setting health related goals, and improving understanding of their
181 diagnosis. All studies had a supportive, educational, or psychological component.

182 Although a number of high-quality studies were identified, challenges arose when deciding
183 which articles to include. One issue was the inconsistent definition of TIA and minor stroke
184 across the literature, which made it difficult to determine whether participants were diagnosed
185 with the relevant condition. There was considerable variability in the way studies reported the
186 inclusion or diagnosis of participants with minor/mild stroke and no common definition of stroke
187 severity was found across the relevant literature. The diagnosis of TIA is known to be variable,
188 often relying on accurate history taking and clinical expertise. Experts frequently disagree on
189 TIA diagnoses, which poses a challenge for research and long-term care of patients³⁶⁻³⁹.

190 Another issue was our own general definition of psychoeducation and the inconsistency
191 across studies included in describing interventions. This review conceptualised
192 psychoeducation as any intervention that included a component of education, support and
193 management strategies. Several studies delivered an element of education or
194 psychoeducation, but failed to explicitly state when psychological components were delivered.
195 This made it difficult to determine the number of studies providing 'pure' psychoeducational
196 interventions, leading to the exclusion of some articles^{40, 41}. Although there are long-standing
197 and frequently cited definitions of psychoeducation within the literature^{42, 43} it appears that
198 researchers are not consistent in their description of such interventions, how these are
199 implemented, or their individual components. There is a need for more well-designed trials or
200 studies to better understand the components of psychoeducation and its potential impact on
201 outcomes. Further research will facilitate the development of a clear definition of
202 psychoeducation as a standalone intervention or as an individual component included as part
203 of a multi-faceted complex intervention. The benefits of psychoeducation are evidence-based,
204 and known to improve outcomes, however it is still unclear whether these interventions are
205 being implemented with people after a TIA and minor stroke.

206 Interventions were delivered by a variety of people, including stroke nurses, trained healthcare
207 professionals, GPs, nurse educators and discharge educators. None of the studies stated that
208 psychologists delivered the intervention. There was no commonality among the individuals
209 responsible for delivering the interventions, and limited information about how these
210 individuals were trained to provide psychological support, motivational interviewing, or
211 psychoeducation. This may be an issue in terms of appropriate and correct delivery of
212 interventions with psychological components. Also, few studies reported fidelity assessment,
213 which would provide useful information about whether the intervention was delivered as
214 intended. Reporting of this is important in terms of understanding how the intervention could
215 be improved and determine whether those delivering it require specific training.

216 Poor reporting of training and fidelity means that replication of such interventions in practice
217 is inevitably difficult. Potential barriers to the success of psychoeducational programmes in
218 the TIA/minor stroke population are largely unknown. Inconsistent reporting of
219 psychoeducation interventions makes it challenging for researchers to consider potential
220 implementation barriers to effective delivery, thus preventing the field from moving forward.

221 Improvements in knowledge, self-efficacy, and a reduction in recurrent strokes/TIAs were
222 reported across the literature. This is a key finding as TIA and minor stroke are medical
223 emergencies that require individuals to seek help and adapt their lifestyles. These are positive
224 findings suggesting that a psychoeducational support component in interventions for this
225 population could support secondary prevention. Previous literature suggests that
226 psychoeducation interventions improve self-reported health, coping skills⁴⁴ and family
227 functioning⁴⁵ for stroke caregivers, along with improved coping/quality of life and decreased
228 depressive symptoms in stroke survivors⁴⁶. There is a wealth of research highlighting the
229 benefits of psychoeducational interventions in other populations, such as those with cancer⁴⁷
230 and cardiac disease⁴⁸, however, there still remains an inconsistency in the reporting and
231 definition of these interventions.

232 A strength of our review was the use of the TIDieR checklist to aid data extraction, which has
233 been used and recommended by other reviewers^{17, 49, 50}. This facilitated consistent reporting
234 of intervention details and highlighted areas of poor reporting. Although this review used a
235 systematic search strategy to identify all relevant articles, it does have some limitations. We
236 limited our search to English language only, which may have excluded some relevant studies.
237 Overall, this review included a number of studies implementing heterogeneous interventions
238 that included components of psychoeducation, however it also highlighted the evidence gaps
239 in the literature regarding the use of psychoeducation and inconsistencies in intervention
240 descriptions. It identified two key aspects that require further clarification: i) the definition of
241 different types of stroke and severity of the diagnosis, and ii) what are the key characteristics
242 of a psychoeducational intervention. The findings from this review clearly indicate the need for
243 more high quality clinical trials in this area to determine the effectiveness of psychoeducational
244 interventions in TIA or minor stroke, and to generate a clear and consistent definition of
245 psychoeducation. This could inform the development of future interventions with components
246 of psychoeducational support after TIA and minor stroke.

247 We hope this review will help to establish the a priori characteristics of a systematic review in
248 this topic area. Furthermore, this review highlights that future studies concerning interventions
249 for TIA and minor stroke need to consider a definition of these diagnoses as well as the
250 reporting of stroke type and severity. We recommend that a future systematic review is
251 conducted using appropriate methodology and focuses on specific questions to address
252 knowledge gaps. Findings will guide research on interventions for the provision of
253 psychoeducational support after TIA and minor stroke with the aim to improve psychosocial
254 outcomes or preventing future strokes.

255

256 **Disclosure of Interest**

257 The authors report no conflict of interest.

258

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262 <https://www.stroke.org.uk/research/psychological-educational-and-social-support-people->

263 [after-tia-and-minor-stroke](https://www.stroke.org.uk/research/psychological-educational-and-social-support-people-after-tia-and-minor-stroke)

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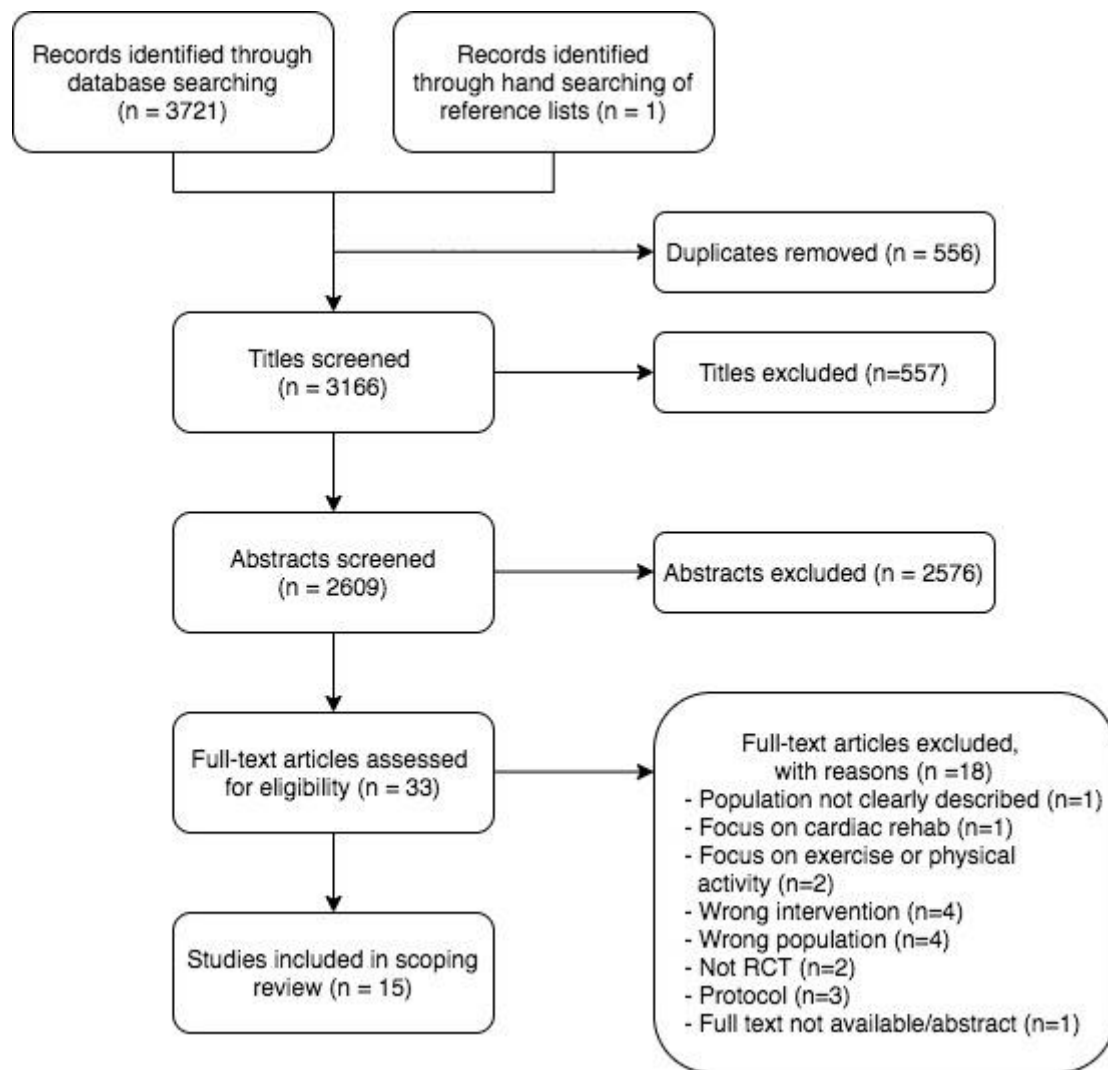


Figure 1. PRISMA diagram

Table 1. JADAD Scale Scores

Study ID (First Author, Year)	Randomisation (max = 2)	Blinding (max = 2)	Account of Patients (max = 1)	Total Score (max = 5)	Quality
Allen, 2009	2	2	1	5	High
Boss, 2014	1	0	1	2	Low
Byers, 2010	1	0	1	2	Low
Damush, 2011	2	1	1	4	High
Faulkner, 2015	2	1	1	4	High
Faulkner, 2017	1	2	1	4	High
Gillham, 2010	2	1	1	4	High
Green, 2007	2	0	1	3	High
Heron, 2017	2	1	1	4	High
Heron, 2019	2	1	1	4	High
Rochette, 2013	2	2	1	5	High
Sajatovic, 2018	2	0	1	3	High
Wang, 2013	1	0	1	2	Low
Wolf, 2016	2	2	1	5	High
Wolf, 2017	2	2	1	5	High

Tables 2. Study methods and participant characteristics of included studies.

See Supplementary Material File; 2-4.

Table 3. Intervention details of included studies.

See Supplementary Material File; Tables 2-4.

Table 4. Outcomes reported by included studies.

See Supplementary File; Tables 2-4.

Appendix 1: Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
TITLE			
Title	1	Identify the report as a scoping review.	1
ABSTRACT			
Structured summary	2	Provide a structured summary that includes (as applicable): background, objectives, eligibility criteria, sources of evidence, charting methods, results, and conclusions that relate to the review questions and objectives.	2
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known. Explain why the review questions/objectives lend themselves to a scoping review approach.	3-4
Objectives	4	Provide an explicit statement of the questions and objectives being addressed with reference to their key elements (e.g., population or participants, concepts, and context) or other relevant key elements used to conceptualize the review questions and/or objectives.	4
METHODS			
Protocol and registration	5	Indicate whether a review protocol exists; state if and where it can be accessed (e.g., a Web address); and if available, provide registration information, including the registration number.	N/A
Eligibility criteria	6	Specify characteristics of the sources of evidence used as eligibility criteria (e.g., years considered, language, and publication status), and provide a rationale.	5
Information sources*	7	Describe all information sources in the search (e.g., databases with dates of coverage and contact with authors to identify additional sources), as well as the date the most recent search was executed.	4-5
Search	8	Present the full electronic search strategy for at least 1 database, including any limits used, such that it could be repeated.	22
Selection of sources of evidence†	9	State the process for selecting sources of evidence (i.e., screening and eligibility) included in the scoping review.	5
Data charting process‡	10	Describe the methods of charting data from the included sources of evidence (e.g., calibrated forms or forms that have been tested by the team before their use, and whether data charting was done independently or in duplicate) and any processes for obtaining and confirming data from investigators.	5-6
Data items	11	List and define all variables for which data were sought and any assumptions and simplifications made.	6-7
Critical appraisal of individual sources of evidence§	12	If done, provide a rationale for conducting a critical appraisal of included sources of evidence; describe the methods used and how this information was used in any data synthesis (if appropriate).	6

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
Synthesis of results	13	Describe the methods of handling and summarizing the data that were charted.	5-6
RESULTS			
Selection of sources of evidence	14	Give numbers of sources of evidence screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally using a flow diagram.	17
Characteristics of sources of evidence	15	For each source of evidence, present characteristics for which data were charted and provide the citations.	6-7 and Table 2
Critical appraisal within sources of evidence	16	If done, present data on critical appraisal of included sources of evidence (see item 12).	18
Results of individual sources of evidence	17	For each included source of evidence, present the relevant data that were charted that relate to the review questions and objectives.	6-9
Synthesis of results	18	Summarize and/or present the charting results as they relate to the review questions and objectives.	6-9 and Tables 2-4
DISCUSSION			
Summary of evidence	19	Summarize the main results (including an overview of concepts, themes, and types of evidence available), link to the review questions and objectives, and consider the relevance to key groups.	9-10
Limitations	20	Discuss the limitations of the scoping review process.	10-11
Conclusions	21	Provide a general interpretation of the results with respect to the review questions and objectives, as well as potential implications and/or next steps.	12
FUNDING			
Funding	22	Describe sources of funding for the included sources of evidence, as well as sources of funding for the scoping review. Describe the role of the funders of the scoping review.	13

JB1 = Joanna Briggs Institute; PRISMA-ScR = Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews.

* Where *sources of evidence* (see second footnote) are compiled from, such as bibliographic databases, social media platforms, and Web sites.

† A more inclusive/heterogeneous term used to account for the different types of evidence or data sources (e.g., quantitative and/or qualitative research, expert opinion, and policy documents) that may be eligible in a scoping review as opposed to only studies. This is not to be confused with *information sources* (see first footnote).

‡ The frameworks by Arksey and O'Malley (6) and Levac and colleagues (7) and the JB1 guidance (4, 5) refer to the process of data extraction in a scoping review as data charting.

§ The process of systematically examining research evidence to assess its validity, results, and relevance before using it to inform a decision. This term is used for items 12 and 19 instead of "risk of bias" (which is more applicable to systematic reviews of interventions) to include and acknowledge the various sources of evidence that may be used in a scoping review (e.g., quantitative and/or qualitative research, expert opinion, and policy document).

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMAScR): Checklist and Explanation. *Ann Intern Med.* 2018;169:467–473. doi: [10.7326/M18-0850](https://doi.org/10.7326/M18-0850).

Appendix 2: Example Search Strategy

MEDLINE

1. Stroke/ OR Ischemic Attack, Transient/ OR Stroke Rehabilitation/ OR (Non-Disabling Stroke* OR Minor Stroke* OR Mini-Stroke* OR Stroke Survivor* OR Transient Brainstem Ischaemia* OR Transient Brainstem Ischemia* OR Transient Cerebral Ischaemia* OR Transient Cerebral Ischemia* OR Transient Ischaemic Attack* OR Transient Ischemic Attack*).ti,ab.
2. Computer-Assisted Instruction/ OR Counseling/ OR Life Style/ OR "Patient Education as Topic"/ OR Risk Reduction Behavior/ OR Secondary Prevention/ OR Self Care/ OR Self-Help Groups/ OR Self-Management/ OR Rehab*.ti. OR (Psychoeducation OR "Psycho-Education").ti,ab.
3. Randomized controlled trial.pt. or controlled clinical trial.pt. or randomized.ab. or placebo.ab. or clinical trials as topic.sh. or randomly.ab. or trial.ti.
4. 1 and 2 and 3
5. exp animals/ not humans.sh.
6. 4 not 5