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REVIEW

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Comparisons between group- and individual-based interventions to support recovery from stroke and ischaemic heart disease in the community: a scoping review

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ABSTRACT

Purpose: To map and summarise available literature on the effectiveness or other benefits of group- and individual-based interventions provided for adults living with stroke or ischaemic heart disease (IHD) in the community.

Material and Methods: The review was conducted based on JBI methodology and reported using Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews. Articles were retrieved from: Medline, PsychInfo, Embase, Scopus, and CINAHL from 2002–2022. Extracted data from eligible studies included type of health outcomes (e.g., impairments), retention and adherence, social connectedness, and the costs associated with group- and individual-based interventions.

Results: After screening, five articles (representing 4 unique studies) comparing a group- and individual-based intervention were included (total sample size $n=87$). Three types of interventions were assessed: exercise (3/5), communication (1/5), and occupational therapy (1/5). Effectiveness of group- and individual-based interventions at improving health outcomes (i.e. physical ability, communication, motivation, and quality of life) is unclear. Currently there is insufficient evidence to guide clinical practice.

Conclusions: There is limited evidence comparing interventions delivered in a group and individual modality for adults living with stroke or IHD. Adequately powered studies are needed to determine if mode of delivery is equivalent or more cost effective.

> ❯ **IMPLICATIONS FOR REHABILITATION**
> - Rehabilitation interventions can be offered individually or in group settings with clinicians choosing the most appropriate modality.
> - Both group- and individual-based interventions have advantages and disadvantages, with clinical, practical, and economic factors as important considerations when deciding between the two modalities.
> - Based on this scoping review, the authors conclude that there is currently insufficient evidence to guide clinical practice in deciding which mode of delivery (group or individual) is optimal.There is insufficient research evidence to guide clinicians in their choice between offering rehabilitation interventions for stroke or IHD in groups or individually.

Background

Globally, stroke and ischaemic heart disease (IHD) are the two leading causes of adult death and disability [1]. These conditions have similar major modifiable risk factors including hyperlipidaemia and hypertension [2], and can impact on physical and mental well-being that require ongoing medical and allied health management [3]. Both stroke and IHD reduce independence and the quality of life of survivors, and have flow on effects to health and

well-being of family members [4]. To assist with their recovery and reintegration into the community for these chronic conditions, survivors are often referred to community-based services to receive group- or individual- interventions, such as rehabilitation or self-management programs [5].

Individual-based interventions have the advantage of providing the patient with one-to-one attention for their recovery [6]. Group-based interventions have emerged within the health care environment to improve the timeliness and cost-effectiveness of

intervention delivery, by reaching more people at once [7]. In addition, group-based interventions may provide opportunities for therapeutic benefits through peer support, social engagement, and the sharing of strategies [8,9]. However, there are known challenges to providing interventions in a group-based setting. This can include logistical challenges, such as availability of clinicians who have been trained or willing to deliver the intervention in a group-based setting [10]. There are also practical challenges, such as managing a group with different needs, cognitive and behavioural abilities, as well as safety concerns [11,12]. Further challenges for participation by the patients also need to be considered, including social anxiety or fears of participating within a group [10].

There is limited research comparing group- and individual-based interventions within chronic conditions. Previous research that has compared group- and individual-based interventions has produced mixed findings. For example, cognitive behavioural therapy for promoting blood pressure control may be more effective when it is group-based [13], while group- and individual-based education programs appear to be equally effective for controlling blood pressure [14]. Similarly, education-based interventions for management of diabetes may be more effective when group-based [15], or equally effective between group- and individual-based modalities [16]. Little is known about whether an intervention to support recovery after stroke or IHD is more advantageous delivered in a group format or one-to-one with a clinician [17]. Understanding if delivery modality of a community-based intervention for recovery after stroke or IHD can influence study outcomes is essential in taking the field forward. As the evidence within this field is emerging, a scoping review has been conducted to summarise and map the available evidence.

Materials and methods

Aim and study design

The aim was developed using the Population, Intervention, Comparison, Outcome (PICO) framework [18]. For this scoping review we sought to map and summarise the available literature on the effectiveness (health outcomes), retention, costs or other benefits (such as social connectedness) of group-based interventions compared with similar individual-based interventions provided for adults living with stroke or IHD in the community. The methods used for conducting this scoping review were specified in advance in a protocol (osf.io/mzuva) [19], in accordance with JBI (formally known as the Joanna Briggs Institute) methodological guidance for conducting a scoping review [20,21]. The Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) was used to report results [22].

Eligibility criteria

To be included within this review, articles needed to include 1) adults aged ≥18 years old who have been discharged into the community after stroke or IHD onset; 2) a community-based intervention delivered in a group-based setting, 3) a community-based intervention delivered in a one-to-one setting, that is comparable (i.e. the group- and individual-based interventions do not differ in aspects other than mode of delivery), 4) health outcomes, retention and adherence, social connectedness, and the costs associated with each intervention, 5) published between 2002 and 2022. This date range was set to build upon Barlow et al.'s 2002 formative review of self-management interventions of chronic conditions [5].

Search strategy and screening of articles

To identify potential articles, the following databases were used: Medline, Psychinfo, Embase, Scopus, CINAHL. An overview of the key terms that were used for this scoping review are shown in Table 1. Where possible, search terms were mapped to subject headings (e.g., MeSH terms) in each database. Searches were restricted to articles published in the English language. In addition, reference lists of relevant articles were also manually searched (snowballing). If bibliographic records did not contain enough information to determine eligibility, attempts were made to contact the authors to seek clarification. Searches for potentially eligible manuscripts were also made that were identified through conference abstracts.

Bibliographic records obtained from each database were imported into an online reference manager (Covidence) [23]. Duplicate records were removed. One reviewer (SLH) screened titles, abstracts, and full-text to assess eligibility. A subset of the papers (10%) were assessed on eligibility by a second author (TT). Any disagreements were resolved through discussion between SLH and TT, and if required, further clarification was sought with authors DAC, JC and RS.

Data extraction and synthesis

Data from included articles were systematically extracted using a data extraction template predetermined in the protocol [19]. The data extraction template was developed, piloted and adapted by the review team in Microsoft Excel (2018) [24]. The final extraction template included: intervention type, study design, population, characteristics of the group-based intervention, characteristics of the individual-based intervention, and article findings.

An inductive approach was used to summarise the quantitative and qualitative outcomes extracted from the articles. The data were grouped by modality of intervention (i.e., group-based, individual-based), and type of outcomes that were reported (i.e. health outcomes, retention and adherence, social connectedness, and costs). The efficacy or effectiveness of group-based and

Table 1. Search terms.

Concept 1		Concept 2
"Group-based intervention"	AND	"Stroke'
OR		OR
"Group therapy"		"Transient isch?emic attack"
OR		OR
"Group class"		"isch?emic heart disease"
OR		OR
"Group treatment"		"coronary heart disease"
OR		OR
"Group participation"		"coronary artery disease"
OR		OR
"Group session"		"myocardial isch?emia"
OR		OR
"Class-based"		"myocardial infarct"
OR		OR
"Rehabilitation group"		"acute coronary syndrome"
OR		
"Rehabilitation class"		
OR		
"Self management group"		
OR		
"Self management class"		

individual-based interventions was determined by summarising the outcomes of the between-group or group-by-time interaction effects described within the included articles.

Critical appraisal of the included articles

Critical appraisal assessments are not mandatory for conducting a scoping review [22]. However, due to the breadth of articles included, it was relevant to assess the quality of the evidence we extracted and synthesised. All included articles were critically appraised independently by two authors (SLH, TT) using the critical appraisal tools for randomised-control trials and quasi-experimental studies from JBI [25]. The JBI Critical Appraisal Checklist for randomised-control trials includes 13 questions about the randomisation, blinding, treatment, and analysis of the intervention and control trial groups. The JBI Critical Appraisal checklist for quasi-experimental studies includes 9 questions about the inclusion and description of comparison groups, follow-up process, and analysis performed. Outcomes of the critical appraisal were used to inform the synthesis and interpretation of the results of the articles.

Results

The initial search retrieved 2583 bibliographic records (Figure 1). Following the removal of duplicates and title/abstract screening, 295 full-text articles were reviewed, five articles met all eligibility criteria and were included [26–30]. A summary of the main characteristics of the included articles is provided in Table 2. The five eligible articles represent four unique studies. All five of these articles were for survivors of stroke (i.e. no articles matched the inclusion criteria for people with IHD). The outcomes of the critical appraisals can be found in Tables 3, 4.
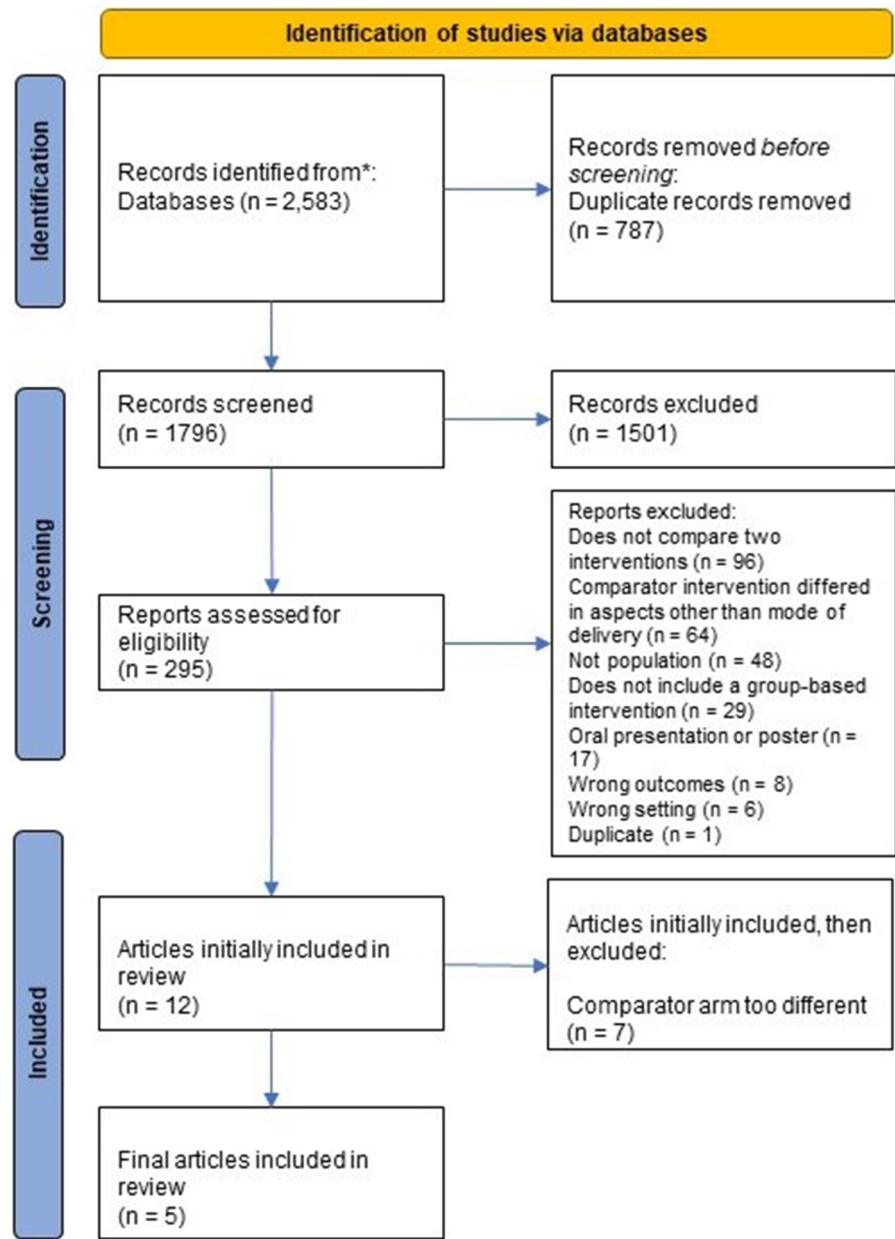

Figure 1. PRISMA diagram.

Table 2. Characteristics of included articles.

Study ID	Author (year), country intervention delivered	Intervention	Type of study design	Population	Sample size	Type of intervention used for group-based modality	Number of sessions for the group-based modality	Type of intervention used for individual-based modality	Number of sessions for the individual-based modality
1	Efstratiadou et al. (2019), Greece [26]	Communication therapy	Quasi experimental	Aphasia post-stroke	36	Face-to-face therapist delivered aphasia therapy	One 90-minute session per week, for 12 weeks	Face-to-face therapist delivered aphasia therapy	Three 60-minute sessions per week, for 12 weeks
2	Mehdizadeh et al. (2017), Iran [27]	Occupational therapy	Non-randomised control trial	Stroke	14	Face-to-face therapist delivered occupational therapy	Six sessions of 120 min	Face-to-face therapist delivered occupational therapy	Not specified
3	Serrada et al. (2022), Australia [28]	Exercise therapy	Randomised control trial	Stroke	16	Face-to-face therapist delivered body awareness therapy	Two sessions of 45 min per week, for 10 weeks	Audio delivered body awareness therapy	Two sessions of 45 min per week, for 10 weeks
4	Song et al. (2015), Korea [29]	Exercise therapy	Randomised control trial	Stroke	21	Face-to-face therapist delivered physical therapy	Three sessions of 30 min per week, for 4 weeks	Face-to-face therapist delivered physical therapy	Three sessions of 30 min per week, for 4 weeks
4	Song et al. (2015), Korea[30]	Exercise therapy	Randomised control trial	Stroke	21	Face-to-face therapist delivered physical therapy	Three sessions of 30 min per week, for 4 weeks	Face-to-face therapist delivered physical therapy	Three sessions of 30 min per week, for 4 weeks

There were seven additional articles [31–37] that were initially considered eligible, but after consensus among authors, were excluded as the group- and individual-based interventions were deemed non-comparable with each other (i.e. components of each intervention were different, beyond group- and individual-based delivery). A summary of the main characteristics of these excluded articles is provided in Supplementary Table I.

Exercise-based therapy was the most common type of intervention delivered that provided a comparison between group and individual delivery modality, with three articles covering this topic [28–30]. There was one article covering communication/aphasia therapy [26], and one article on occupational therapy [27]. While the date range for the scoping review was set between 2002 and 2022, all of the included articles were published in 2015 or later.

Efficacy and effectiveness of group- versus individual-based interventions

All five of the included articles compared the effectiveness of the group- and individual-based mode of delivery in the intervention by conducting a between-group analysis or a group-by-time interaction effects analysis [26–30]. The results of these interaction analyses have been provided according to the types of outcome measures reported in each article (Tables 5 and 6).

Mobility and physical ability

There were four articles that examined differences between interventions delivered in a group- or individual-based modality for measures of mobility or physical ability. Mehdizadeh et al. (2017) [27] compared a face-to-face group-based occupational therapy, including movement exercises, craft activities, and daily living activities with face-to-face traditional occupational therapy delivered individually over six weeks. The authors conducted a group-by-time analysis and demonstrated no difference between the group- and individual-based trial groups on the Barthel Index or the Modified Rankin Scale, used to evaluate the level of performance of activities or global disability, respectively. The authors did demonstrate a significant difference between the group- and individual-based interventions on the Canadian Occupational Performance Measure (COPM), which was a separate measure of performance of activities. However, the sample size used within this article was small ($n = 14$). Further, it was not indicated which of the two modalities demonstrated the greater change over time. No reply from the authors has been received to clarify these findings, despite multiple efforts to contact them.

Serrada et al. (2022) [28] compared a face-to-face group-based body awareness intervention and an audio-based individual body awareness intervention. This was a pilot study conducted over 10 weeks. The authors used a between-group analysis to compare sensation in upper of lower limbs using four separate measures and found no significant difference between the two interventions. The authors found a significant interaction for one measure of body awareness (the Multidimensional Assessment of Interoceptive Awareness) with the group-based intervention demonstrating greater improvements. No difference was observed between the interventions on two other measures of body awareness (Body Perception Disturbance upper limb, Body Perception Disturbance lower limb scale). The authors found a significant between-group interaction using two measures of motor impairment (Fugl-Meyer Upper Extremity, Fugl-Meyer Lower Extremity), with the group-based intervention demonstrating greater improvements. No difference were found using four other measures of motor impairment (Motor Activity Log- Quality of Movement, Motor Activity Log Amount of Use, 10-metre walk test, Patient Specific Functional Scale). Of the statistically significant differences between interventions that were found, minimally clinically important differences were exceeded. However, the article was not sufficiently powered to detect differences in these outcomes.

Table 3. Results from applying the JBI critical appraisal checklist for included randomised control trials.

JBI Critical appraisal question	Serrada et al. (2022) [28]	Song et al. (2015) [29]	Song et al. (2015) [30]
Was true randomization used for assignment of participants to treatment groups?	Yes	Unclear	Unclear
Was allocation to treatment groups concealed?	Yes	Unclear	Unclear
Were treatment groups similar at the baseline?	Yes	Unclear	Unclear
Were participants blind to treatment assignment?	Yes	Unclear	Unclear
Were those delivering treatment blind to treatment assignment?	No	Unclear	Unclear
Were outcomes assessors blind to treatment assignment?	Yes	Unclear	Unclear
Were treatment groups treated identically other than the intervention of interest?	Yes	Yes	Yes
Was follow up complete and if not, were differences between groups in terms of their follow up adequately described and analysed?	Yes	Unclear	Unclear
Were participants analysed in the groups to which they were randomized?	No	Unclear	Unclear
Were outcomes measured in the same way for treatment groups?	Yes	Yes	Yes
Were outcomes measured in a reliable way?	Yes	Yes	Yes
Was appropriate statistical analysis used?	Yes	Yes	Yes
Was the trial design appropriate, and any deviations from the standard RCT design (individual randomization, parallel groups) accounted for in the conduct and analysis of the trial?	Yes	Yes	Yes

Table 4. Results from applying the JBI critical appraisal checklist for included quasi-randomised control trials.

JBI Critical appraisal question	Efstratiadou et al. (2019) [26]	Mehdizadeh et al. (2017) [27]
Is it clear in the study what is the 'cause' and what is the 'effect' (i.e. there is no confusion about which variable comes first)?	Yes	Yes
Were the participants included in any comparisons similar?	Yes	Yes
Were the participants included in any comparisons receiving similar treatment/care, other than the exposure or intervention of interest?	No	No
Was there a control group?	Yes	Yes
Were there multiple measurements of the outcome both pre and post the intervention/exposure?	Yes	No
Was follow up complete and if not, were differences between groups in terms of their follow up adequately described and analyzed?	Yes	Unclear
Were the outcomes of participants included in any comparisons measured in the same way?	Yes	Yes
Were outcomes measured in a reliable way?	Yes	Yes
Was appropriate statistical analysis used?	Yes	Yes

Song et al. (2015) [30] compared a face-to-face group-based circuit training with face-to-face individual-based circuit training, over four weeks. The authors used a between-group analysis and found no difference across their measures of mobility between the two interventions. The sample size used within this article was small ($n = 21$)

Communication

One article by Efstratiadou et al. (2019) [26] examined the group-by-time interaction for measures of communication. The authors compared a face-to-face group and individual-based aphasia therapy over 12 weeks for measures of communication, including a naming task and functional communication. No differences were observed. The sample size reported for this study was small ($n = 36$).

Motivation, self-efficacy, and satisfaction

Authors of three articles examined the differences between interventions delivered in a group- or individual-based modality on measures of motivation, self-efficacy, and satisfaction. Mehdizadeh et al. (2017) [27] compared the satisfaction of the participants with the group- and individual based activities using the COPM. The authors found a significant difference between the two interventions. However, the authors did not indicate which of the two interventions demonstrated the greater change over time. Again it was noted that the sample size reported within this article was small ($n = 14$). Serrada et al. (2022) [28] compared the self-efficacy of the group- and individual-based interventions using the Stroke Self- Efficacy Questionnaire, the authors found no significant differences between the modalities. Song et al. (2015) [29] compared the self-esteem (using the Self-Esteem Scale), relationship change (using the Relationship Scale) and motivation (using the motivation of Rehabilitation Scale) between the group- and individual-based interventions. The authors found a significant difference between the group- and individual based interventions for motivation only, with the group-based modality demonstrating greater improvement over time.

Quality of life

Authors from two articles examined the differences between interventions delivered in a group- and individual-based modality for measures of quality of life. Efstratiadou et al. (2019) [26], and Serrada et al. (2022) [28] found that both the group- and

Table 5. Outcome measures of studies performing a between-group analysis.

Author (year), country intervention delivered	Outcome measure	Outcome tool	Pre (T1) Group-based Mean (SD) Individual-based Mean (SD)	Post (post therapy) Group-based Mean (SD) Individual-based Mean (SD)	Summary of analysis
Mobility and physical ability					
Mehdizadeh et al. (2017), Iran [27]	Performance	Barthel Index	Not available	Not available	No interaction
		Canadian Occupational Performance Measure	Not available	Not available	Unclear interaction
	Global disability	modified Rankin Scale	Not available	Not available	No interaction
Serrada et al. (2022), Australia [28]	Sensation	Erasmus Nottingham Sensory Assessment Upper Limb tactile	18 (13.4) 23.5 (10.9)	24.5 (11.2) 24.8 (10.9)	No difference
		Erasmus Nottingham Sensory Assessment Upper Limb proprioception	7 (2.83) 7.5 (0.93)	7.13 (2.47) 7.63 (1.06)	No difference
		Erasmus Nottingham Sensory Assessment Lower Limb tactile	20.0 (14.2) 24.4 (7.58)	26.8 (11.0) 23.8 (9.24)	No difference
		Erasmus Nottingham Sensory Assessment Lower Limb proprioception	7.00 (2.83) 7.75 (0.71)	7.75 (0.71) 7.75 (0.71)	No difference
	Body awareness	Body Perception Disturbance upper limb	15.3 (11.2) 19.8 (11.5)	17.8 (10.7) 19.6 (11.8)	No difference
		Body Perception Disturbance lower limb scale	10.3 (9.62) 19.5 (11.6)	17.3 (10.7) 19.4 (11.9)	No difference
		Multidimensional Assessment of Interoceptive Awareness	18.4 (7.44) 24.4 (6.87)	31.0 (2.72) 24.7 (5.43)	Group-based trial group showing greater improvement
	Motor impairment	Fugl-Meyer Upper Extremity	35.0 (23.9) 42.4 (20.4)	40.5 (20.5) 43.4 (19.7)	Group-based trial group showing greater improvement
		Fugl-Meyer Lower Extremity	20.9 (9.46) 23.9 (5.89)	26.9 (6.40) 25.0 (7.17)	Group-based trial group showing greater improvement
		Motor Activity Log - Quality of Movement	1.61 (1.91) 1.26 (1.31)	1.51 (1.71) 1.12 (1.09)	No difference
		Motor Activity Log - Amount of Use	1.57 (1.92) 1.41 (1.38)	1.64 (1.81) 1.33 (1.12)	No difference
Mobility and physical ability					
Serrada et al. (2022), Australia [28]	Motor impairment	Ten metre walk test	55.7 (53.7) 43.2 (48.0)	54.2 (54.7) 37.3 (38.7)	No difference
		Patient Specific Functional Scale	1.95 (2.00) 2.77 (1.38)	3.54 (2.17) 3.64 (1.74)	No difference
Serrada et al. (2022), Australia [28]	Global disability	Stroke Impact Scale	188.1 (38.2) 203.6 (29.5)	207.6 (39.4) 202.8 (25.6)	Group-based trial group showing greater improvement
Song et al. (2015), Korea [30]	Mobility	GAITRite	53.8 (20.4) 42.6 (21.8)	69.2 (29.5) 57.5 (28.7)	No difference
		two-minute walking test	57.6 (20.5) 51.0 (24.1)	73.9 (27.2) 64.0 (26.0)	No difference
Motivation, self-efficacy, and satisfaction					
Mehdizadeh et al. (2017), Iran [27]	Satisfaction	Canadian Occupational Performance Measure	Not available	Not available	Unclear interaction
Serrada et al. (2022), Australia [28]	Self-efficacy	Stroke Self-Efficacy Questionnaire	89.0 (39.8) 90.5 (27.3)	91.9 (28.1) 87.4 (31.1)	No difference
Song et al. (2015), Korea [29]	Satisfaction	Self-esteem scale	29.6 (5.7) 27.2 (3.8)	32.8 (4.8) 30.3 (4.1)	No difference
	Motivation	Motivation of rehabilitation scale	82.3 (3.8) 83.8 (9.4)	95.8 (6.4) 86.7 (10.0)	Group-based trial group showing greater improvement
		Relationship change scale	92.8 (12.3) 83.8 (10.7)	100.3 (11.6) 90.2 (0.1)	No difference
Quality of life					
Serrada et al. (2022), Australia [28]	Quality of life	Stroke Specific Quality of Life Scale	161.1 (41.6) 159.6 (30.0)	166.1 (37.9) 171.8 (27.3)	No difference

Table 6. Outcome measures of studies performing a group-by-time interaction effect analysis.

Author (year), country intervention delivered	Outcome measure	Outcome tool	Type of analysis used	Pre (T1) Group-based Mean (SD) Individual-based Mean (SD)	Pre (T2) Group-based Mean (SD) Individual-based Mean (SD)	Post (post therapy) Group-based Mean (SD) Individual-based Mean (SD)	Post (follow-up) Group-based Mean (SD) Individual-based Mean (SD)	Summary of analysis
Communication								
Efstratiadou et al. (2019), Greece [26]	Communication skills	Oral confrontation-naming task of the 260 Snodgrass and Vanderwart pictures – colour version	Group-by-time analysis	62.14 (49.67) 58.91 (50.14)	75.29 (62.64) 66.23 (53.95)	116.79 (79.45) 103.64 (77.01)	111.64 (76.90) 96.32 (68.49)	No interaction
		Boston Naming Test	Group-by-time analysis	7.50 (6.98) 6.95 (6.74)	8.00 (6.21) 7.41 (7.22)	13.14 (10.28) 10.77 (10.80)	11.21 (10.14) 10.32 (10.27)	No interaction
		American Speech and Hearing Association Functional Assessment of Communication Skills for Adults	Group-by-time analysis	5.11 (1.13) 5.21 (1.12)	5.15 (1.20) 5.30 (1.08)	5.44 (.97) 5.55 (.94)	5.47 (1.18) 6.02 (0.73)	No interaction
		Cookie Theft Picture Description of the BDAE	Group-by-time analysis	17.45 (21.87) 16.18 (25.03)	16.63 (18.15) 14.74 (24.73)	18.23 (21.48) 17.43 (31.03)	17.13 (21.71) 17.93 (27.80)	No interaction
Quality of life								
Efstratiadou et al. (2019), Greece [26]	Quality of life	Stoke and Aphasia Quality of Life Scale	Group-by-time analysis	3.43 (0.60) 3.13 (0.75)	3.28 (0.61) 3.15 (0.79)	3.62 (0.57) 3.31 (0.78)	3.49 (0.73) 3.35 (0.78)	No interaction

individual-based interventions improved in measures of quality of life over time, and that there was no group-by-time interaction between the between the two modalities.

Retention, adherence, and satisfaction with the group- versus individual-based intervention

Only one of the included articles (17%) discussed retention, adherence, or satisfaction with one or both group- and individual-based interventions. Serrada et al. (2022) [28] found that dropout rates were the same for both the modalities. However, they demonstrated that adherence to the group-based intervention was high (87.5% of participants completing 100% of classes). In this article, participant in the individual-based intervention had much lower adherence (50% of participants attending at least 75% of classes). Reasons for lack of adherence in the individual-based intervention included participants being too busy to attend, lack of motivation, and not being convinced of the value of the intervention.

Reported impact of social connectedness

One of the five included articles discussed the impact of social connectedness. Serrada et al. (2022) [28] interviewed participants after the interventions had finished. The authors describe a clear interest and like for the intervention among those in the group-based modality. Further, comments for the participants within the group-based intervention included finding a connection with others, and enjoying the company, socialisation, and motivation effects from participating as a group. Comments from those in the individual-based modality suggested that participating in a group is preferred, to improve social connections and motivation.

Cost evaluation

The costs associated with delivering community-based intervention in a group or individual modality were not reported in any of the included articles.

Discussion

In this scoping review, we provide a summary of the current available evidence on the effectiveness, retention, costs, or other benefits of group-based interventions compared with similar individual-based interventions provided for adults living with stroke or IHD in the community. Each of the included articles used a randomised-control or quasi experimental study design to determine differences in outcome measures between the group- and individual-based interventions.

Overall, based on the articles included in the current review, we cannot determine the effectiveness of interventions delivered in a group- or individual modality for stroke or IHD. The authors of two articles comparing the effectiveness of group- and individual-based interventions in stroke found that the group-based intervention outperformed the individual-based intervention on some measures of mobility and self-esteem [28,29]. However, both of these studies had small sample sizes, which means that results should be interpreted with caution [38]. Further, both of these articles, as well as the following two additional articles [26,30] found no difference between the group- and individual-based interventions on all other measures. Finding no differences between the health outcomes measured within these articles may provide evidence that either mode of delivery can achieve similar health outcomes. However, none of the articles included within the current review was sufficiently powered to detect differences in outcome measures.

Similarly, in previous research, comparisons between group- and individual-based interventions made within the acute or subacute phase of poststroke and post-IHD found no differences between the modalities in measures of mobility [39–42].

Retention and adherence to the interventions was not discussed in most of the articles (4/5). Assessing factors such as participation retention, adherence and compliance can assist in the interpretation of the impact of the intervention [43] as well as its potential for widespread adoption [44]. The authors of one article within the current review that did compare adherence between the group- and individual-based interventions found that adherence was greatest among those participating in the group-based modality [28]. These results are supported by the higher levels of motivation that were found within the article by Song et al. (2015) [29]. Authors of a systematic review into the views and adherence of older adults participating in community-based exercise interventions found that one of the key reasons for participant adherence to an intervention was socialising and social connectedness [45]. Additional reasons identified included participant perceived benefits, program design, empowering effects, characteristics of the instructors, and individual behaviour [45].

In one of the articles [28] included in the current review, the authors discussed the influence of socialisation. In this article, the social elements of group-based interventions were welcomed by participants [28]. Experiences such as being able to connect with peers and share experiences have also been demonstrated in previous articles. Withiel et al. (2020) [46] explored the experiences of stroke participants in a face-to-face group-based memory intervention with a different online individual-based program. The authors found that most participants in the group-based intervention discussed how the group format allowed them to talk with others, share experiences, and take advice from each other. Clarke et al. (2020) [47] performed a systematic review of the key features of group-based self-management interventions for stroke. The authors found that the sharing of experiences, social comparison, vicarious learning, and mutual gain were common characteristics of group-based therapy. These findings are further supported by a cross-sectional study assessing survivors' preferences for participating in research [48]. The authors found that most survivors of stroke showed a high level of interest for participating in group-based interventions. They also found that meeting other people in the same situation was one of the most common reasons for showing interest in research. However, it must be noted that not all people enjoy group-based sessions [28]. Disliking group-based sessions has been reported by a minority of people in other group-based interventions [49,50]. Reasons for disliking group-based sessions included feeling embarrassed and uncomfortable performing tasks around others or feeling that the intervention was not tailored to their needs [28,49,50].

No article in the current review was based on an IHD population or compared the costs of delivering the group- or individual-based interventions. Self-management and rehabilitation interventions in IHD are often provided in a group-based setting, and compared with other group-based interventions [51]. Given the high costs of delivering community-based interventions for survivors of stroke and IHD, the cost-effectiveness of intervention provision is essential to consider. Future studies comparing effectiveness of individual and group-based interventions should address these issues [52].

Methodological limitations of the included articles need to be addressed. All included articles have very small sample sizes (36 total participants or less). As such, the results of these underpowered studies may be spurious and must be interpreted with caution [38]. Additionally, all included articles represented rehabilitation interventions with a specific focus, e.g., exercise, communication, and none were broader self-management interventions. Future study designs with a larger sample size using comparable interventions are required to determine which modality is best suited for interventions to support recovery in people with stroke or IHD living in the community.

Limitations

Limitations of the current review need to be acknowledged. Although this scoping review used a systematic method to search, collate, and evaluated the literature, interpretation of results was limited by differences in the interventions assessed. For example, the five articles used within the current review, representing four unique studies, covered three broad types of interventions (exercise-based therapy, communication therapy, occupational therapy) and no two interventions were the same. Further, four broad types of health outcomes data were collected: mobility and physical ability, communication, motivation and self-efficacy, and quality of life. Additionally, different measurement tools were used in each of the included articles. Therefore, it was not possible to report on any definitive differential effect between group- and individual based interventions. A meta-analytic approach may not be possible until more research is conducted with better methodological consistencies, such as using consensus developed core outcome measures for stroke and IHD [53,54].

Conclusions

This was a comprehensive scoping review to help summarise and map the available evidence on the effectiveness, retention, costs, and other potential benefits of group or individual-based interventions for people living with stroke or IHD. We identified that group- and individual-based intervention have been compared using a variety of community-based rehabilitation interventions within the field of stroke. More research will be required within the field of IHD. The small sample size in many of these articles warrant caution when interpreting the results. Effectiveness of group- and individual-based interventions at improving health outcomes (i.e. physical ability, communication, motivation, and quality of life) is unclear. Therefore, there is currently insufficient evidence to guide clinical practice. Advantages for group-based interventions include social connectedness and higher levels of retention. However, some people dislike participating in group-based interventions, and would prefer an individualised program. Future articles, using robust study designs and appropriately powered sample sizes are required to determine which modality of intervention (i.e. group- or individual-based) is best suited to guide clinical practice targeting recovery from stroke and IHD. Additional studies that investigate patient and clinician experiences could provide insight into the value of delivering community-based interventions in these different modalities.

Ethics approval and consent to participate

This scoping review of the literature did not involve human or animal research and did not require ethical approval. This scoping review was conducted as part of first author's PhD program.

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Data availability statement

Data are presented in the main paper and additional supporting file.

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