

The effectiveness of group visits for patients with heart failure on knowledge, quality of life, self-care, and readmissions: a systematic review protocol

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Review question/objective

The objective of this review is to identify the effectiveness of group visits for patients with heart failure (HF) on knowledge, quality of life, self-care behaviors, and hospital readmissions.

Research Questions:

1. What is the impact of group visits for patients with HF on knowledge related to HF compared to standard one-on-one medical care?
2. What is the impact of group visits for patients with HF on quality of life compared to standard one-on-one medical care?
3. What is the impact of group visits for patients with HF on self-care behaviors compared to standard one-on-one medical care?
4. What is the impact of group visits for patients with HF on emergency room visits and unplanned hospital readmissions compared to standard one-on-one medical care?

Background

Heart failure (HF) continues to be a major health burden throughout the world. There are currently over 5.7 million Americans,¹ 15 million Europeans,² and 277,800 Australians³ living with HF. These numbers are expected to double by 2040.⁴ Patients and caregivers perform the majority of HF care in the home.⁵

Patients with HF need to learn to be successful in self-managing their condition to lessen the burden of symptoms such as fatigue, dyspnea, and edema.

Patient education is the primary process used to increase knowledge of self-care practices for patients with HF. Patients with HF need to follow a complex medical regimen while adhering to a low sodium diet and prescribed fluid restrictions. In addition patients monitor their physical condition daily for exacerbation of symptoms or signs of fluid overload. Education, behavior modification, and skill development are necessary for a patient with HF to be successful in self-managing their condition.

Most HF education occurs during one-on-one visits between the patient and the health care provider in an examination room during a regular clinic visit. However, there is usually limited time to address all of the needed education topics in an in-depth, meaningful manner with information the patient can take home and utilize in their daily routines.

Group visits provide an alternative venue to provide care for this complex patient population. A group visit is an interactive process between a health care provider and a small group of patients and their caregivers who usually share a common medical concern. The participants of group visits can benefit from the knowledge and experiences of the other participants while providing support and encouragement to each other as they learn to cope with living with a chronic condition.

The process of the group visit was first developed in 1991 by Dr. John C. Scott at the Kaiser Permanente system in Colorado, United States.⁶ Dr. Scott and a nurse held monthly group visits lasting 60 minutes with a group of 15 to 20 patients to manage their complex medical conditions. The group visit model can vary across settings, including from 6-20 patients over a 1-2 hour period with varying times devoted to education and discussion of health concerns. The group visit typically incorporates a one-on-one physical examination with a physician or nurse practitioner in conjunction with a group discussion and medical management. Group visits have shown to be beneficial in improving patient outcomes for conditions such as diabetes, hypertension, and other chronic illness.^{7,8,9,10}

The goal of group visits for patients with HF is to increase patient knowledge and self-care abilities, while improving self-efficacy. Self-care incorporates the decision making process a patient undergoes when deciding on a course of action to maintain stability as a result of a change in symptoms.¹¹ Improved self-care can improve symptoms, which will likely result in an increase in quality of life and a reduction in hospitalizations related to decompensation. Quality of life (QOL) refers to a patient's perception of the impact of a health condition and treatment on the patient's health status¹³ and can be measured with valid and reliable tools such as the Minnesota Living with Heart Failure Questionnaire (MLHFQ)¹⁴ or the Kansas City Cardiomyopathy Questionnaire (KCCQ).¹⁵ Self-care abilities can be measured using an instrument such as the Self-Care Heart Failure Index (SCHFI).¹¹ HF knowledge can be measured using an instrument such as the Atlanta Heart Failure Knowledge Test.¹² Group visits can be used to continue to optimize medication therapy while providing a forum for knowledge acquisition and fostering support.

A search of the Cochrane Library of Systematic Reviews, the Joanna Briggs Library of Systematic Reviews, MEDLINE, and CINAHL did not identify any previously conducted systematic reviews on the effectiveness of group visits on outcomes for patients with heart failure. Therefore, this review seeks to identify studies evaluating the effectiveness of group visits for patients with heart failure on patient knowledge, quality of life, self-care behaviors, and hospital readmissions.

Keywords

Group visits; heart failure; quality of life; readmission; self-care

Inclusion criteria

Types of participants

This review will consider studies that include community living adult patients (18 years and above) of all races and ethnicities with a diagnosis of heart failure.

Types of intervention

This review will consider studies that evaluate the effectiveness of group visits for adult patients with heart failure.

Comparator: standard one-on-one patient-provider visits.

Types of outcomes

This review will consider studies that include the following outcome measures:

- Patient knowledge about HF
- Quality of life
- Self-care behaviors
- Unplanned readmissions for any cause occurring up to one year following a hospitalization for HF
- Emergency room visits for a HF exacerbation

Types of studies

This review will consider both experimental and epidemiological study designs including randomized controlled trials, non-randomized controlled trials and quasi-experimental trials. In the absence of those studies other research designs such as before and after studies, prospective and retrospective cohort studies, case control studies, analytical cross sectional studies, and descriptive studies will be considered for inclusion.

Search strategy

The search strategy aims to find both published and unpublished studies. A three-step search strategy will be utilized in this review. An initial limited search of MEDLINE and CINAHL will be undertaken followed by analysis of the text words contained in the title and abstract, and of the index terms used to describe an article. A second search using all identified keywords and index terms will then be undertaken across all included databases. Thirdly, the reference list of all identified reports and articles will be searched for additional studies. Studies published in the English language will only be considered for inclusion in this review. Studies published from the onset of the database to the current date of the review will be considered for inclusion in this review.

The databases to be searched include:

PubMed, Cumulative Index to Nursing and Allied Health Literature (CINAHL), Excerpta Medica Database (EMBASE), Health Source: Nursing/Academic edition

The search for unpublished studies will include:

ProQuest Dissertation & Theses, MedNar, Virginia Henderson International Nursing Library, New York Academy of Medicine

Initial keywords to be used will be:

group visit, shared medical appointment, heart failure

Assessment of methodological quality

Papers selected for retrieval will be assessed by two independent reviewers for methodological validity prior to inclusion in the review using standardized critical appraisal instruments from the Joanna Briggs Institute Meta Analysis of Statistics Assessment and Review Instrument (JBI-MAStARI) (Appendix I). Any disagreements that arise between the reviewers will be resolved through discussion, or with a third reviewer.

Data collection

Data will be extracted from papers included in the review using the standardized data extraction tool from JBI-MAStARI (Appendix II). The data extracted will include specific details about the interventions, populations, study methods and outcomes of significance to the review question and specific objectives.

Data synthesis

Quantitative data will, where possible be pooled in statistical meta-analysis using JBI-MAStARI. All results will be subject to double data entry. Effect sizes expressed as relative risk (for categorical data) and weighted mean differences (for continuous data) and the 95% confidence intervals will be

calculated for analysis. Heterogeneity will be assessed statistically using the standard Chi-square and also explored using subgroup analyses based on the different study designs included in this review. Where statistical pooling is not possible the findings will be presented in narrative form including tables and figures to aid in data presentation where appropriate.

Conflicts of interest

None to disclose.

Acknowledgements

None

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Appendix I: Joanna Briggs Institute Critical Appraisal Instruments

JBI Critical Appraisal Checklist for Randomised Control / Pseudo-randomised Trial

Reviewer Date

Author Year Record Number

	Yes	No	Unclear	Not Applicable
1. Was the assignment to treatment groups truly random?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Were participants blinded to treatment allocation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Was allocation to treatment groups concealed from the allocator?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Were the outcomes of people who withdrew described and included in the analysis?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Were those assessing outcomes blind to the treatment allocation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Were the control and treatment groups comparable at entry?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Were groups treated identically other than for the named interventions?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Were outcomes measured in the same way for all groups?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Were outcomes measured in a reliable way?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Was appropriate statistical analysis used?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Overall appraisal: Include Exclude Seek further info.

Comments (Including reason for exclusion)

JBI Critical Appraisal Checklist for Descriptive / Case Series

Reviewer Date

Author Year Record Number

	Yes	No	Unclear	Not Applicable
1. Was study based on a random or pseudo-random sample?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Were the criteria for inclusion in the sample clearly defined?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Were confounding factors identified and strategies to deal with them stated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Were outcomes assessed using objective criteria?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. If comparisons are being made, was there sufficient descriptions of the groups?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Was follow up carried out over a sufficient time period?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Were the outcomes of people who withdrew described and included in the analysis?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Were outcomes measured in a reliable way?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Was appropriate statistical analysis used?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Overall appraisal: Include Exclude Seek further info

Comments (Including reason for exclusion)

JBI Critical Appraisal Checklist for Comparable Cohort/ Case Control

Reviewer Date

Author Year Record Number

	Yes	No	Unclear	Not Applicable
1. Is sample representative of patients in the population as a whole?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Are the patients at a similar point in the course of their condition/illness?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Has bias been minimised in relation to selection of cases and of controls?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Are confounding factors identified and strategies to deal with them stated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Are outcomes assessed using objective criteria?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Was follow up carried out over a sufficient time period?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Were the outcomes of people who withdrew described and included in the analysis?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Were outcomes measured in a reliable way?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Was appropriate statistical analysis used?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Overall appraisal: Include Exclude Seek further info.

Comments (Including reason for exclusion)

Appendix II: Joanna Briggs Institute Data Extraction Instrument

JBI Data Extraction Form for Experimental / Observational Studies

Reviewer Date

Author Year

Journal Record Number

Study Method

RCT Quasi-RCT Longitudinal
Retrospective Observational Other

Participants

Setting _____
Population _____

Sample size

Group A _____ Group B _____

Interventions

Intervention A _____
Intervention B _____

Authors Conclusions:

Reviewers Conclusions:

Study results

Dichotomous data

Outcome	Intervention () number / total number	Intervention () number / total number

Continuous data

Outcome	Intervention () number / total number	Intervention () number / total number