

The effectiveness of the motivational interview in self-care of patients with heart failure: a systematic review

A efetividade da entrevista motivacional no autocuidado de pacientes com insuficiência cardíaca: revisão sistemática

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ABSTRACT

Objective: To determine the effectiveness of the motivational interview intervention in the self-care of patients with heart failure. **METHODS:** This is a systematic review, updated in July 2018, based on the MEDLINE, CINAHL, Cochrane Library, Joanna Briggs Institute Library, PubMed, LILACS and Scopus databases, with the descriptors: heart failure/motivational interviewing/interview motivational, selfcare and patient compliance. **MAIN RESULTS:** We initially identified 25 potential studies for inclusion in this review; however, after eligibility criteria were applied, 14 studies were referred to two reviewers for methodological evaluation; three studies were selected after reaching enough accuracy for inclusion and synthesis. **Conclusion:** It is perceived in the studies, which is the impact of communication in the relation between patient and health professional, which promotes a fundamental link directly related to the success of the treatment. The synthesis of the studies evidenced the effectiveness of the Motivational Interview intervention in the adherence and self-care of patients with heart failure.

Keywords: Heart failure; Motivational Interview; Self-Care and Patient Compliance.

RESUMO

Objetivo: Determinar a efetividade da interven o entrevista motivacional no autocuidado dos pacientes com insufici ncia card aca. **M todo:** Trata-se de uma revis o sistem tica, atualizada em julho de 2018, realizada nas bases MEDLINE, CINAHL, Cochrane Library, Joanna Briggs Institute Library, PubMed, LILACS e Scopus com os descritores: heart failure/insufici ncia card aca, motivational interviewing/entrevista motivacional, self care/autocuidado e patient compliance/coopera o do paciente. **Principais resultados:** Foram identificados, inicialmente, 25 estudos em potencial para inclus o nesta revis o, no entanto, ap s serem aplicados os crit rios de elegibilidade, 14 estudos foram encaminhados a dois revisores para avalia o metodol gica, diante disso, tr s estudos foram selecionados ap s alcanarem rigor suficiente para inclus o e s ntese. **Conclus o:** Percebe-se nos estudos, que   o impacto da comunica o na rela o paciente x profissional de sa de, o que promove um elo fundamental e diretamente relacionado ao sucesso do tratamento. A s ntese dos estudos evidenciou a efetividade da interven o Entrevista Motivacional na ades o e no autocuidado dos pacientes com insufici ncia card aca.

Palavras-chave: Insufici ncia Card aca; Entrevista Motivacional; Autocuidado e Coopera o do Paciente.

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INTRODUCTION

Heart Failure (HF) is a complex clinical syndrome characterized by typical symptoms that may be accompanied by signs resulting from myocardial muscle dysfunction or loss, characterized by left ventricular dilatation or hypertrophy⁽¹⁾. Estimates indicate that 15 million people are afflicted by HF in Europe⁽¹⁻²⁾ and it is expected that in the coming years more people will be affected due to advances in the treatment of acute cardiac events and the high rates of aging of the population⁽³⁾.

Despite important advances in its treatment in recent decades, HF is still associated with hospital readmissions, low quality of life, risk of premature mortality and high hospital costs⁽⁴⁾. Some factors that contribute to these high readmissions due to decompensated HF are related to patients' lack of knowledge about the disease and treatment, inability to recognize signs of worsening, difficulty accessing health services, old age and inadequate social support or social isolation⁽⁵⁾.

In this worrying scenario, the strategies of multidisciplinary follow-up in the management of non-pharmacological treatment of HF patients and the guidelines performed and reinforced at each consultation have brought benefits in the achievement and maintenance of clinical stability and improved self-care and adherence to treatment⁽⁵⁾.

The nurse and the multiprofessional team play an important role in promoting health and in the education of self-care behaviors. By identifying the factors that facilitate these behaviors, they can plan interventions to promote self-care and thus improve the quality of life in these patients⁽⁶⁾.

Understanding patient compliance is a complex process that goes from adherence to and follow-up of prescribed treatment, including the involvement and motivation of patients in defining their care plan, seeking wellness and health, represented by changes in lifestyle which include attendance at consultations and greater control of medications. That is, the improvement of adherence to treatment and self-care is a process that requires, mainly, the behavioral change and motivation of the patient⁽⁷⁾.

The need for behavioral change and motivation of the patients inspired the formulation of a therapeutic intervention called Motivational Interview (MI) whose main objective is to assist the individual in the processes of behavioral changes, stimulating the commitment to make this change through a convincing psychotherapeutic approach it's encouraging⁽⁸⁾.

Since HF patients have a low and ineffective compliance to self-care, promoting self-care in this population has become a priority for health professionals, leading to the creation and implementation of the Motivational Interview⁽⁹⁾. It is a relatively simple and low cost approach,

based on cognitive principles such as problem understanding and emotional reactions to them, aiming to establish alternatives for the modification of thought patterns by implementing solutions and proposing appropriate individualized therapeutic interventions at each stage with a view to increasing compliance to treatment⁽⁸⁾.

The aim was to determine the knowledge produced on the effect and effectiveness of the motivational interview on the self-care of patients with heart failure.

METHOD

This is a systematic review based on the recommendations proposed in the Guide Preferred Reporting Items for Systematic Reviews and Meta-Analyses - PRISMA⁽¹⁰⁾. An initial search in PubMed, Cochrane and the Joanna Briggs Institute (JBI) library was conducted to verify the existence of some systematic review on the subject, in order to maintain the originality of the study. It was also evaluated whether specific knowledge gaps reflect topics of interest to the scientific universe and, finally, it was concluded that systematic reviews that encompass the evaluation of the effectiveness of MI in patients with HF have not yet been published. This has clearly demonstrated the need to conduct a systematic review on the subject.

A protocol based on the international requirements on systematic review was published and published in the International Prospective Register of Systematic Reviews (PROSPERO) (<https://www.crd.york.ac.uk/prospero>), whose registration number is CRD42017080903.

The PICO strategy is a recommended model to simplify the construction of the study question and to facilitate the research process. In this model, the question applied to a practical situation should be structured into four elements: Problem or Patient; Intervention; Comparison or Control and Outcomes⁽¹¹⁾. In this study, we considered: P (Heart Failure/*Insuficiência Cardíaca*); I (Motivational Interviewing/*Entrevista Motivacional*); O (Patient Compliance/*Cooperação do Paciente e Self Care/Auto-cuidado*).

It was considered as a question of the study: What is the effect of the motivational interview on self-care of the patient with heart failure in outpatient follow-up?

Inclusion criteria were studies in adults over 18 years of age that address the issue of motivational interview in patients with heart failure; with experimental or near-experimental design, as studies without randomization with single group pre and posttest; time series or control case; indexed in databases published in English, Spanish or Portuguese, without temporal cut, regardless of the professional area of preparation of the study. We excluded studies without determination of clear methodology, theses and dissertations.

The research strategy aims to find published and unpublished studies without a defined time cut. The definition of controlled descriptors was referenced in the terms *Descritores em Ciências da Saúde* (DeCS) and MESH (Medical Subject Headings). The controlled descriptors quoted below were used considering the boolean operators “and” and “or” for search.

Due to the specific characteristics of each database, the search strategies were adapted according to the objectives and inclusion criteria of this study. The search for articles was carried out in July 2018, according to the PICO strategy of Table 1:

The search was performed in the following databases: MEDLINE, CINAHL, Cochrane Library, Joanna Briggs Institute Library, PubMed, LILACS and Scopus.

The review was carried out in three stages. In the first stage the study protocol was elaborated and the search in the databases was carried out. Then, the eligibility criteria were applied in *resumos/ abstracts/resumen*. Subsequently, the data of the articles were entered into the JBI system.

In the second stage, the full texts were evaluated regarding methodological validity, two reviewers registered and trained for the use of the JBI Mastari system. Disagreements among reviewers were resolved through group discussion. We selected the studies that reached a positive evaluation in at least six of ten items of the JBI standardized evaluation instrument, which obtains detailed information about the methodological rigor of the studies.

The studies selected by the reviewers were also classified according to the periodic evaluation proposed by CAPES, which undergoes an updating process. These vehicles are classified in extracts indicative of quality - A1 (the highest); A2; B1; B2; B3; B4; B5; C (zero weight). In addition, the studies were classified according to the level of evidence. Evidence-based practice advocates hierarchically characterized evidence classification systems, depending on the methodological approach adopted, which is based on the study design. Level I would be applied to evidence resulting from a meta-analysis of multiple ran-

domized controlled trials; level 2 for evidence obtained in individual studies with experimental design; level 3 for evidence from quasi-experimental studies; level 4 for evidence from descriptive (non-experimental) studies or qualitative approach; level 5 for evidence from case or experience report, and level 6 for evidence based on expert opinion, according to the Agency for Healthcare Research and Quality categorization (AHRQ) categorization⁽¹²⁾.

In this study, we also identified the impact factor that is the main metric used to evaluate scientific journals worldwide when accounting for citations received; the higher the impact factor, the better it is considered the journal and, consecutively, the quality standard of the published articles.

In the third stage, the reading and interpretation of the selected texts was performed by filling out an instrument previously prepared by the authors to obtain the necessary information to analyze the effectiveness of the motivational interview used in the studies, such as objectives, type of study, number of patients, outcome and results found.

In order to reduce the errors of interpretation of the results and the design of the analyzed studies (bias), the search was performed by three evaluators, independently, in the same bases and with the same descriptors, presenting at last a 100% concordance in the findings. In addition, two reviewers verified the validation of methodological quality independently. There was no disagreement between them.

RESULTS

Selection of studies

The study identified 25 potentially relevant studies and, after applying the exclusion criteria and elimination of the duplicate studies, 14 studies were selected and sent to the evaluators. After this evaluation, 11 studies were excluded by the evaluators because they did not reach methodological validation (6/10), with three articles included in this systematic review, as shown in Figure 1. Of these three studies, one was a quanti-quali study with level of evidence

CHART 1 – PICO Strategy. Niterói, RJ, 2018.

	MESH	DECS
P (and)	Heart Failure	<i>Insuficiência Cardíaca</i>
I (and)	Motivational Interviewing	<i>Entrevista Motivacional</i>
C	-----	-----
O	Patient Compliance OR Self Care	<i>Adesão ao tratamento</i> OR <i>Autocuidado</i>

4, a randomized clinical trial with level of evidence 2 and an intervention study with level of evidence 3.

Characteristics of the studies

The characteristics of the studies are reported in Table 2.

Among the studies identified, a randomized clinical trial⁽¹⁴⁾ conducted at a single center in 2016 in the USA, aimed to test the effectiveness of a motivational interview intervention compared to usual care to improve self-care, physical symptoms, and quality of life of HF patients. Patients were recruited immediately after discharge, and the intervention group received a home visit and 3 to 4 follow-up phone calls by a nurse for 90 days, all based on the motivational interview. Of the 67 participants who completed the study, there were no differences between groups in maintenance and confidence in self-care, physical symptoms of HF, or quality of life at 90 days. Regarding self-care, the difference of averages in the intervention and control groups were 19.7 ± 16.0 and 12.1 ± 18.3 ($p = 0.08$), respectively in Maintenance of self-care and 26.6 ± 20.8 and 21.6 ± 16.8 ($p = 0.31$), respectively for Self-care Confidence. When the effect size is calculated, *d* Cohen indicates an intervention with moderate effect (d cohen = 0.44).

In order to determine the effect of education based on motivational interviews in the self-care of patients with heart failure with depression, a quasi-experimental study⁽¹⁵⁾ conducted in 2017 in Iran, included 82 patients with heart failure with confirmed depression. These patients were divided into two groups, in which the intervention group received four sessions of behavioral self-care education based on the principles of motivational interview and the control group received four sessions of conventional education on self-care behavior and, after 8 weeks, the patients from both groups were reevaluated for the same outcome. The study identified that total scores and self-care maintenance, management, and confidence scores in patients with heart failure with depression were significantly higher after education based on motivational interviewing than after conventional self-assessment care education ($p < 0.05$).

As the development of studies that used the motivational interview presented positive results, the question was started regarding the mechanisms of MI that provide its effectiveness. A study⁽¹³⁾ American study conducted in 2017 aimed to identify the mechanisms that promote the effectiveness of MI in the face of changes in self-care through a mixed method. The MI intervention was applied in 41 participants, starting with a home visit and continued with 3 to

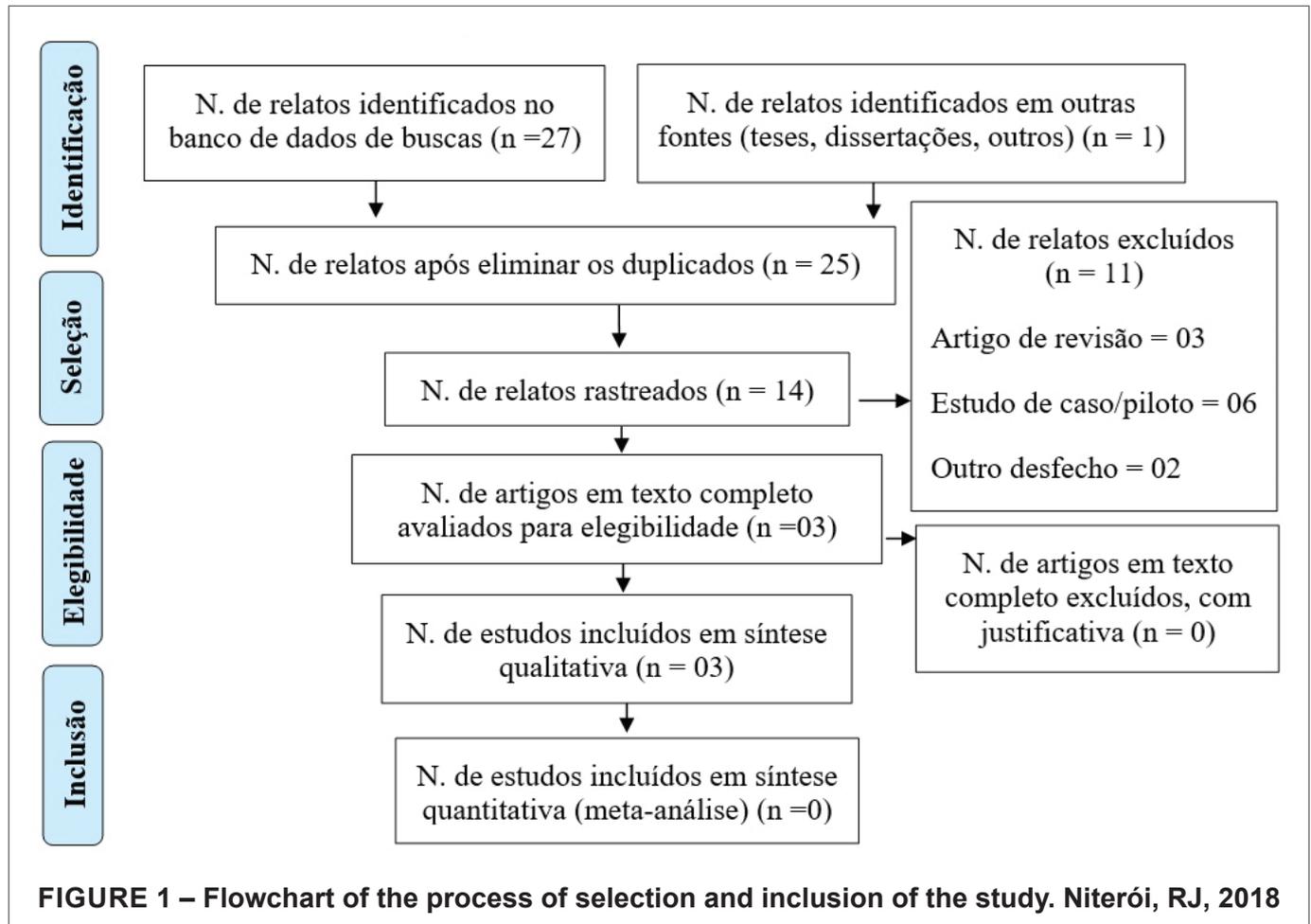


CHART 2 – Characteristics of the studies. Niterói, RJ, Brazil, 2018.

Author / Country / Impact Factor (IF) / Qualis Capes	Outcomes / Type of study (TS) / Level of Evidence (LE)	Main characteristics of the study / Sample (N) / Follow-up time (T)	Results
Riegel et al. ⁽¹³⁾ /EUA IF: 2,429 Qualis Enf: A2 Med I: B1	Mechanisms of efficacy of MI for self-care TS: Quanti-qualitative. LE: 4	Identify mechanisms of effectiveness of MI and its relation to selfcare; N=41; T=90 days	MI techniques evidenced: reflection and reformulation; genuine empathy, affirmation and humor; solving individual problems. These techniques stimulated: goal setting, positive speech, perceived ability to overcome barriers, and conversation about change.
Masterson et al. ⁽¹⁴⁾ /EUA IF: 2,785 Qualis: Enf: A2; Med I: B1	Improving self-care TS: Randomized controlled trial LE: 2	To test the efficacy of MI in self-care of patients with HF. N=67, T= 90 days	The intervention was based on the resolution of resistance or ambivalence to change aspects of selfcare through conversations about the planning of actions. There were no differences between groups in maintaining self-care, confidence in self-care, physical symptoms of HF or quality of life at 90 days.
Navidian et al. ⁽¹⁵⁾ /Irã IF: 2,785 Qualis: Enf: A2; Med 1: B1	Selfcare and Depression TS: Almost experimental LE: 3	Effect of MI on self-care in patients with depressive HF. N= 82 days	MI was based on the practical importance of decision-making balance, intrinsic motivation and support for self-efficacy. The mean increase in overall scores and scores on the three self-care (maintenance, management and confidence) subscales of patients with HF and depression were higher after the intervention by MI (p <0,05).

4 telephone calls in the next 90 days. At the home visit, MI was used to help participants identify at least two goals that would improve self-care in HF. The intervention was adapted to these objectives and specific baseline issues of self-care in HF, identified through the self-care index in HF. The study was carried out through a mixed method, in which the quantitative and qualitative data were triangulated to evaluate the congruence of the results in selfcare, pre and post intervention. Part of the consultations were recorded, and the patients' speeches were used in the data analysis. All patients presented improvement in self-care indexes (Maintenance: $59.9 \pm 16.4 - 79.6 \pm 11.4$ ($p < 0.00001$); Management: $50.9 \pm 28.1 - 68.4 \pm 23.3$ ($p = 0.002$) Reliability: $54.65 \pm 22.2 - 81.23 \pm 17.9$ ($p < 0.0001$)⁽¹³⁾.

DISCUSSION

This study identified three articles for research in which it was possible to perceive congruence in aspects related to the need to obtain new information about MI. All the articles stand out for the search of a proof about the effectiveness of MI associated with other factors.

The studies evaluated show strong evidence of the effect of MI on the self-care of patients with HF, showing significant improvements in self-care scores before and after the interventions. However, it is perceived in the studies something valuable, that is the impact of the communication in the patient x professional relationship and health⁽¹³⁻¹⁵⁾, which promotes a fundamental link directly related to the success of the treatment⁽¹⁶⁾.

The studies emphasize the importance of reflection, positive conversation about change, communication embracing genuine empathy, affirmation and humor promoting capacity to overcome barriers, personalized problem solving, stimulating an open dialogue for goal setting. These techniques stimulated openness toward goal setting, positive self-talk, perceived ability to overcome barriers and change conversation. The mechanisms by which the techniques achieved the desired results were the development of discrepancy and self-efficacy, which are consistent with the principles of MI. The authors concluded that the present study contributed to clarify the mechanism by which MI facilitates behavioral changes, as well as emphasize that the use of MI to discuss self-care can help overcome barriers and involve patients with HF in setting goals for changes of behavior⁽¹³⁾.

In the process of implementing selfcare, the final decision to incorporate or not new habits of life is entirely the patient's⁽¹⁷⁾. When we are faced with ambivalent patients, MI provides subsidies that guide the professional to help the patient in decision making, evoking the client in a balanced way the pros and cons, the advantages and disadvantages of the context⁽¹⁸⁻¹⁹⁾. Ambivalence is considered not only as the reluctance to do something, but the experience of a psychological conflict to decide between two different paths⁽¹⁸⁻²⁰⁾.

In this area, all professionals should be aware of their way of conducting consultations. Regardless of the use of MI positive dialogue, genuine empathy and a little good humor

can make the environment more pleasant and susceptible to a conversation about change. Impositions or task lists advocated by traditional models may even work, however, we need to be aware of work techniques that point to long-lasting results and support real and effective change.

Reflection is the key strategy of MI⁽¹⁸⁾, and for this reason the technique is used by asking open-ended questions in the proportion of 3: 1, in relation to the closed questions. Open-ended questions are those that put the patient in a position to express themselves and not be held hostage by the usual “yes and no” in traditional consultations⁽²⁰⁾. When a patient is asked to reflect on their health behaviors, they may hear themselves talking and with the support of the interviewer, recognize where they can reshape their selfcare strategies.

Health professionals need to know their performance occurs during the consultation and when the patient goes home, will perform the care in the way he decides to perform, so a consultation in which interviewee and interviewer dialog and build together, is likely to become more effective in self-care. Promoting strategies that favor the implementation of self-care have an impact on other outcomes, such as quality of life⁽²¹⁾.

Personalized problem solving is the most appropriate way to set goals and adjustments for each patient’s self-care. Generalized standards settings for the chronically ill make adherence to self-care measures even harder to achieve. Patients with HF need to incorporate different habits of life, which together, often become difficult and tiring, however, extremely necessary. In this context, knowing the individuality of each one can provide the recognition of adjustments or adjustments of routines that favor, thus, the adhesion to self-care.

CONCLUSION

This study evaluated the effectiveness of the Motivational Interview intervention in the adherence and self-care of patients with heart failure through a systematic review of the literature. It was not possible to conduct a meta-analysis due to the diversity of methods and outcomes, however, this study was able to demonstrate the way in which the Motivational Interview can positively reach the patients with HF, giving healthcare professionals an easy understanding of new strategies that can be incorporated into the care of patients with HF.

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