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Research Article,

The Impact of Nursing Management Programs on the Quality Of Life of Patients with Heart Failure: A Systematic Review

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Abstract:

Background: Non-pharmacological management programs for patients with chronic disease severe Heart Failure (HF) syndrome which programs are managed by nurses with interventions that promote self-care, self-management, self-maintenance, empowerment, behavior modification, have shown encouraging results the reduction of re-admissions, hospitalization days and positive results such as the reduction of hospital costs of the provided health care the costs of the Health Care System.

The purpose of this Systematic Review (SR) is to examine all recent prospective studies that evaluate the impact of Non-Pharmacological Management Programs by Healthcare Professionals - Nurses in the Health Related Quality of Life (HRQofL) of HF Patients.

Material and Method: After searching for published studies in PubMed, Cumulative Index to Nursing and Allied Health Literature (CINAHL) and Cochrane Library a total of 30 studies were found to meet the inclusion criteria in this review of which 6 systematic reviews, 15 randomized controlled trials, 4 randomized pilot studies, 2 experimental studies and 3 prospective studies.

Results: Nursing education and non-pharmacological management programs for patients with HF seem to be successful and effective in improving the self-care and autonomy of patients with HF but no correlation was observed with the improvement of HRQofL.

Conclusions: Further prospective studies are needed to evaluate the results of Non-Pharmacological Nursing Management of patients with HF in relation to follow-up time in the sample homogeneity, intensity and type of program to identify the most effective interventions to improve quality of life.

Keywords: Disease Management Programmes, Heart Failure, Non-Pharmacological Management Programs, Nursing Intervention, Quality of Life.

1.Background:

HF is a syndrome whose incidence will continue to increase as more patients survive heart disease and the population ages with admissions tripling annually in both the United States and in Europe (Washbum and Homberger, 2008, Fang et al., 2008). HF is one of the major public health threats worldwide a threat to Health Systems. Its treatment requires an interdisciplinary approach it is multidimensional and long-term. Patients with HF are often admitted to the hospital for treatment and despite the improvement of their medication and nursing care the prognosis is unfavorable (Albano et al., 2014).

Despite the improvement of the medication of the patients with HF with new innovative drugs combination of drugs to improve the QoL of these patients the reduction of mortality with mechanical support of circulation with pacing-defibrillators for the success of synchronized contraction with increased pulse volume and the possibility of defibrillation in cases of dangerous ventricular arrhythmia re-admissions, re-hospitalizations and long-term hospitalizations of patients with HF are

a reality (Ponikowski et al., 2016, Albert, 2016).

Non-pharmacological management programs for patients with HF with counseling, follow-up, information, information on the way from hospital to home with remote monitoring programs with telephone monitoring and counseling program look promising and add great benefits. in QoL in the improvement of self-care, self-management-self-preservation of the disease in the reinforcement, empowerment and in the smooth transition of the patient with HF from the hospital-clinic to home with always positive outcome of the disease with reduction of re-admissions, re-treatment of patients with HF (Albano et al., 2014, Mingming et al., 2015, Whitaker-Brown et al., 2017, McClintock et al., 2014).

Too many studies have been conducted in order to evaluate the management programs of the HF. The results of these studies led to the development of guidelines for the pharmacological and non-management of HF. Reduction of re-admissions among patients with HF, improvement of QoL and self-care, fewer visits to Emergency Departments (ICUs) have been described by nurses-managed programs (Chaudhry et al., 2007, Conte et al., 2008, Clark et al., 2015).

From the above it is understood that HF as a chronic cardiovascular disease requires the taking of therapeutic measures by the patient himself as well as the implementation of the instructions which have been given by health professionals. Making treatment decisions by the patient himself can significantly affect symptomatology functional capacity morbidity and prognosis. This strategy includes all those actions which aim at maintaining good functional condition clinical stability and early detection of possible deregulation. Adherence to treatment has been shown to reduce morbidity and mortality while improving functional status. The mature, true, close relationship between the HF patient and the therapeutic-interdisciplinary team has been shown to improve compliance with treatment adherence. Counseling nursing interventions to improve compliance-dedication are recommended and individualized by the treatment team with counseling nursing intervention having positive results (NCGC. 2010).

From the review of the literature it is understood that health care providers by organizing structured counseling programs of nursing intervention, education, monitoring, information, training through special form, through electronic material in combination with telephone monitoring, remote monitoring, discharge from the hospital, for the smooth transition of the patient from the hospital to the home with personalized counseling nursing intervention the result is the improvement of the QoL, the improvement of the self-care, the reduction of the re-admissions, re-hospitalizations which can be used to meet other public health needs and the always positive outcome of the disease (Lambrinou et al., 2012, Lambrinou and Kalogirou, 2011, Polykandrioti et al., 2009).

2. Purpose and Objectives:

The purpose of this critical literature review is the analysis of prospective studies which examine the impact of Non-Pharmacological Management Programs by health professionals- nurses in the HRQofL of patients with HF.

Specifically the objectives are:

- The systematic search for the effect of Non-Pharmacological Management Programs by nurses with counseling nursing intervention with training, information, telephone monitoring and their effect on improving self-care, self-management, self-preservation, reduction of readmissions with a final impact on the QofL related to the Health of patients with HF in the PubMed databases, Cumulative Index to Nursing and Allied Health Literature (CINAHL) and Cochrane Library.
- Systematic selection of the studies which resulted from the above search with the PRISMA method (flow chart).
- Thorough review of the selected studies and drawing conclusions which arise from the effect of the Non-Pharmacological Management Programs by nurses in the HRQofL of patients with HF.

3. Methodology:

In the present study the method of Systematic Bibliography Review was used. There was a systematic review of the Randomized Clinical Trials of the Non-Pharmacological Management Programs by Nurses for patients with HF. The literature related to the purpose of this study was searched in the electronic databases PubMed, Cumulative Index to Nursing and Allied Health Literature (CINAHL) and Cochrane Library (reviews and clinical trials) presented at the site of Randomized Clinical Trials (Randomized Controlled Trials – RCTs) published in English. Also a search of the bibliography was carried out

from the bibliography of other articles and reviews related to the subject under investigation, review articles, meta-analyzes, general articles and epidemiological studies. The study material consists of selected articles published mainly in the last decade. The material was collected after a thorough study and review of the relevant literature.

In the electronic pubmed database bibliographic index words were used for bibliographic search. The terms: Heart Failure, Nurse, Quality of Life, Non-Pharmacological Management Program of Heart Failure, Disease Management Programs were combined., telephone, telephone intervention and telephone follow up. Also the advanced Search option was used and the indexing words were combined with the words AND and OR.

Search data in the Cochrane electronic database is also based on standard terminology using the terms "heart failure", "non-pharmacological nursing", "telephone nursing intervention" and "remote nursing".

4. Data sources and selection of studies:

Chronological criteria for elaboration and publication were used during the collection of the published studies. In particular publications from the last decade have been selected in order to carry out a clear result on the effect and effectiveness of modern non-pharmacological nursing intervention programs, management that reflects the constants of the current decade.

The titles of the studies and the abstracts were carefully revised to exclude any non-relevant studies. The full texts of the rest of the studies were retrieved and read completely and indiscriminately by the author to determine the studies that meet the inclusion criteria. The selected studies were reviewed by three external collaborators-authors who independently examined the studies to confirm the relevance of the selected material. The lists of studies thoroughly examining the topic of interest were reviewed for additional publications, reviews, clarifications and corrections at the time of writing that may have altered the conclusions drawn.

5. Criteria for entry and exclusion of studies:

Abstracts and articles considered eligible for full data extraction are subject to the following criteria of relevance of the research questions:

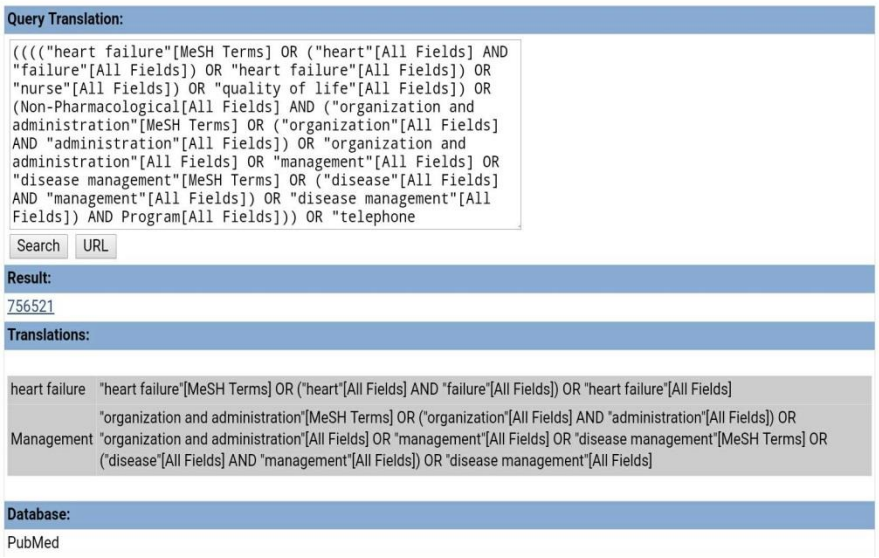
a) The sample in question concerns only human subjects

b) The sample in question suffers from HF

c) The sample in question consists of adults (≥ 18 years of age) regardless of gender

d) The sample has consented to participate in a study on the evaluation of non-pharmacological nursing interventions for the management of HF.

The following image includes the advanced search methodology of the relevant articles from the pubmed database with the change of use of the terms and / or based on the advanced search protocols provided by the specific site.



Query Translation:

((((("heart failure"[MeSH Terms] OR ("heart"[All Fields] AND "failure"[All Fields]) OR "heart failure"[All Fields]) OR "nurse"[All Fields]) OR "quality of life"[All Fields]) OR (Non-Pharmacological[All Fields] AND ("organization and administration"[MeSH Terms] OR ("organization"[All Fields] AND "administration"[All Fields]) OR "organization and administration"[All Fields] OR "management"[All Fields] OR "disease management"[MeSH Terms] OR ("disease"[All Fields] AND "management"[All Fields]) OR "disease management"[All Fields]) AND Program[All Fields])) OR "telephone

Search URL

Result:

756521

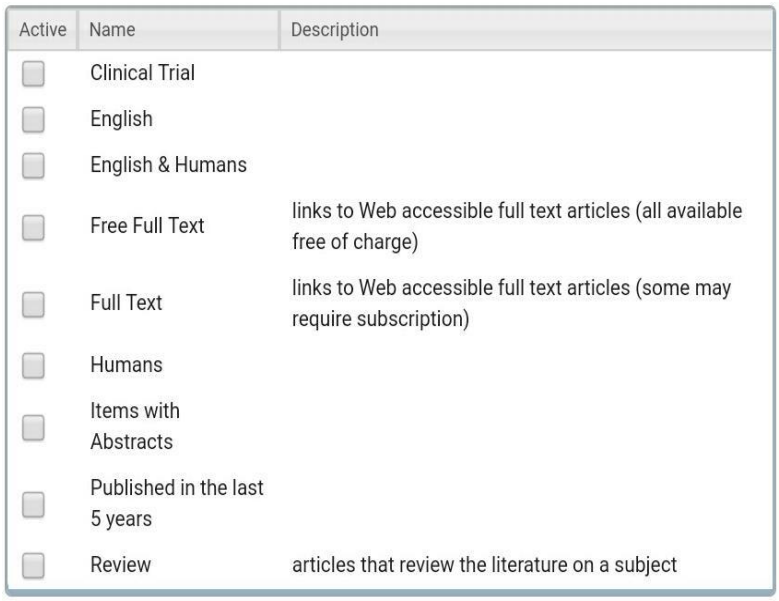
Translations:

heart failure	"heart failure"[MeSH Terms] OR ("heart"[All Fields] AND "failure"[All Fields]) OR "heart failure"[All Fields]
Management	"organization and administration"[MeSH Terms] OR ("organization"[All Fields] AND "administration"[All Fields]) OR "organization and administration"[All Fields] OR "management"[All Fields] OR "disease management"[MeSH Terms] OR ("disease"[All Fields] AND "management"[All Fields]) OR "disease management"[All Fields]

Database:

PubMed

After the specialized search based on terms specific search filters were added that are attached to the image below.



Active	Name	Description
☐	Clinical Trial	
☐	English	
☐	English & Humans	
☐	Free Full Text	links to Web accessible full text articles (all available free of charge)
☐	Full Text	links to Web accessible full text articles (some may require subscription)
☐	Humans	
☐	Items with Abstracts	
☐	Published in the last 5 years	
☐	Review	articles that review the literature on a subject

6. Data extraction:

Using a standard data sheet the following information has been extracted recorded and evaluated from selected studies:

- Authors
- Year of publication
- Study design
- Overall sample size of participants with HF
- Presence of comorbidities
- Age
- Sex
- Confusing factors
- Methods for evaluating the effectiveness of nursing non-pharmacological intervention
- QofL evaluation methods

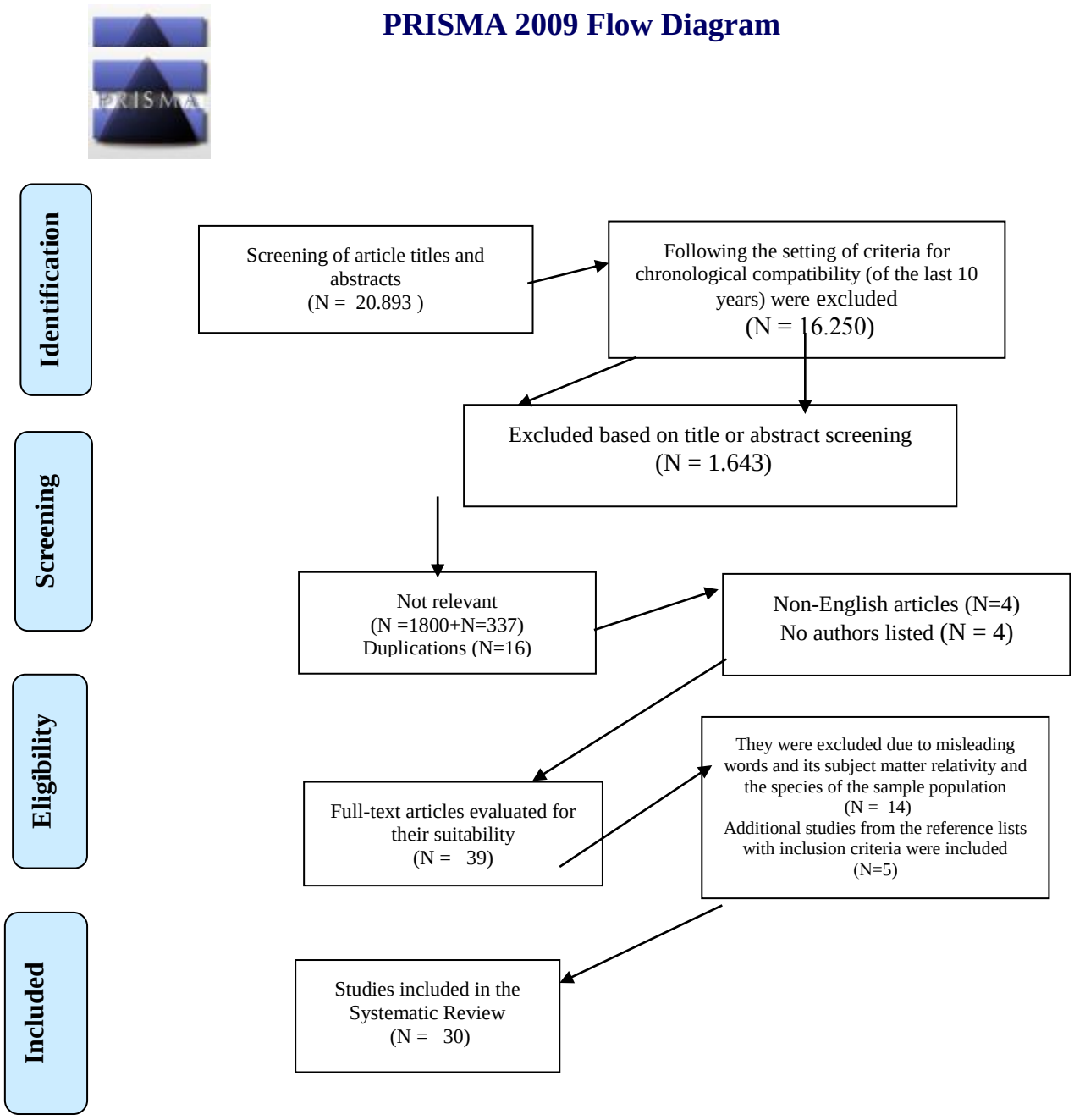
An attempt to retrieve incomplete or confusing data in eligible published studies has been attempted by email to two researchers at least twice. In particular the ambiguities and / or omissions concerned the exact sample number the socio-demographic characteristics of the sample and the assessment tools. It was not possible to communicate with one of the two representatives of the published article a fact that put the specific study out of the eligible material for review. Some documents presented multiple and significant confusing variables such as family history and comorbidities of hyperlipidaemia which were judged not to be within the scope of the HF study. As a result these articles have been delisted. Finally for other publications it was not clear the direct comparison of future estimates making the exported results questionable therefore they were excluded.

7. Flow Chart:

The flowchart below describes the design and prioritization of stages that led to the following systematic review. The bibliographic search in the first phase yielded N = 20.893 studies based on the titles and abstracts. After the placement of the criteria for chronological compatibility (of the last 10 years) N = 16.250 articles were excluded for the methodological requirements mentioned above as well as exclusion based on the title or summary N = 1.643 articles for the type of quality studies they met inclusion criteria but then there was no relevance minus N = 1.800 for fully accessible articles (without any form of payment or subscription) N = 800 were excluded no relevant articles N = 337 and the final exception of duplicates N = 16 in English N = 4 in N = 4 were not in the list of authors of the articles the final confirmation of the relevance through revision of the titles and abstracts yielded N = 39 studies which met the inclusion criteria and were revised for full text. Of these N = 5 studies were excluded from the systematic review as the keywords used were misleading and their research object deviated from the objectives of the present review and no longer met the inclusion criteria. General articles (N = 5) were also excluded as they did not present any research effort but were limited to citations or amendments to guidelines on the management of

patients with HF. Even N = 4 publications were not included in the systematic review as despite their thematic relevance to HF the sample of the population consisted of geriatric patients whose nursing management could not be balanced with that of patients with HF. The search for additional studies among the reference lists of the articles mentioned above included N = 5 more studies with four inclusion criteria. In total N = 30 studies were included in the systematic review and the extracted data are summarized in the following tables. The search based on terms in the research bases did not yield systematic reviews with meta-analysis while in addition to the fact that it yielded general articles quoting guidelines etc. were not considered to have a research offer, therefore they were not included.

Chart1: Flow chart based on the PRISMA method (Moher et al, 2009).



Below (Table 1) lists the types of studies included their number by genre and the authors with the date of publication as an identifier.

Table 1

TYPE OF STUDY	NUMBER	AUTHORS, YEAR
REVIEW	**6**	Chavez et al., 2018 Recio Saucedo et al., 2018 Sedlar et al., 2017 Toles et al., 2016 Stewart et al., 2015 Magid et al., 2017
META-ANALYSIS	**0**	
GENERAL ARTICLES	**0**	
EXPERIMENTAL STUDY	**2**	Lourenço et al., 2015 Johansson et al., 2014
RANDOMIZED PILOT STUDY	**4**	Santos et al., 2018 Smith et al., 2015 Agren et al., 2015 Dunbar et al., 2014
RANDOMIZED CLINICAL TRIALS	**15**	Arruda et al., 2017 Riegel et al., 2017 Vílchez Barboza et al., 2016 Riegel et al., 2016 Masterson Creber et al., 2015 Drevenhorn et al., 2015 Haas et al., 2014 Mase et al., 2015 Agren et al., 2013 Allen et al., 2014 Mussi et al., 2013 Lennie et al., 2013 Rodríguez - Gázquez et al., 2012 Welsh et al., 2013 Han et al., 2010
PERSPECTIVE STUDY	**3**	Norman et al., 2018 Clark et al., 2015 Evangelista et al., 2015

The following table (Table 2) describes the selected studies and their basic elements are presented.

Table 2: **DESCRIPTION OF STUDIES**

AUTHORS, YEAR	SAMPLE	INTERVENTION	EVALUATION TOOL	RESULT
Santos et al., 2018	**32** patients with HF divided into 4 intervention groups	Phototherapy, sleep hygiene measures and their combination	Sleep Quality: Pittsburgh Sleep Quality Inventory QofL Related to Health: Minnesota Living with Heart Failure Questionnaire	Great utility of non-pharmacological treatments in improving the quality of sleep and health-related QofL.
Arruda et al., 2017	**27** patients with chronic HF.	Delivery of teaching material in a pleasant and creative form (videos, board games, tic-tac-toe, memory games and	Improvised questionnaires and scales of self-preservation, self-management and self-confidence.	Compliance and self-care did not differ from that of patients in any specialized clinic. In fact, patients' confidence in self-care has declined.

		drawings and paintings)		
Norman et al., 2017	**40** stable but symptomatic patients with chronic HF.	Intelligence-based education and training program	Self-reported fatigue, sleep quality, instability / dizziness, NYHA functional classification, 6 min walk test and cardiorespiratory rates, Mann-Whitney U test were used to analyze mean changes from onset to follow-up (week 10 ± 1).	Significant reduction in self-reported fatigue, instability / dizziness and shortness of breath associated with physical function (NYHA class). No side effects were observed.
Riegel et al., 2016	**8** patients with HF.	Motivational interview Custom interventions for heart HF (MITI-HF) every home visit and 3-4 follow-up phone calls after 90 days.	Quantitative evaluation of self-care, self-maintenance Self-Care of HF Index (SCHFI) Quality: self-recorded interventions	Improved self-care: 1) reflection and reformation, 2) genuine empathy, affirmation and humor and 3) personalized problem solving, positive attitude setting, positive self-attitude.
Vílchez-Barboza et al., 2016	**120** registered in the municipal family health centers with hypertension	Traditional counseling and personal and telephone nursing counseling for 7 months	Generic Health-Related Quality of Life Questionnaire SF-36	Increased physical and mental health, weight loss, abdominal circumference, total cholesterol, cholesterol, low-density lipoprotein, atherosclerotic index, cardiovascular risk and 10-year CDrisk
Riegel et al., 2016	**70** patients with HF.	Motivational Interviewing adapted for self-service during a home visit and 3-4 subsequent phone calls.	The duration of hospitalization (Length Of Stay) was calculated with dates of entry and exit.	Patients who were re-admitted after 3 months had a condition not related to HF and re-admission was lower in intervention (7.1%) compared to the control group (30%) depending on age-related comorbidities, diabetes and hemoglobin.
Masterson Creber et al., 2015	**67** patients with HF.	Immediately after leaving the discharge, a home visit was made and 3-4 subsequent phone calls from a nurse after 90 days.	Self-care of heart failure index, (SCHFI), heart failure somatic perception scale (HFSPS), Kansas City Cardiomyopathy Questionnaire (KCCQ)	No differences were observed between the groups in terms of self-care, self-confidence, HF symptoms or QofL in 90 days
Lourenço	**59** patients	Telephone aid	Morisky Self-Reported	The combination of

et al., 2015	with CD and HF.	between baseline and 2-month monitoring – follow up.	Measure of Medication Adherence Scale, Proportion of medication adherence, Mac New Heart Disease Health-related Quality of Life Questionnaire, 36-item Short Form Health Survey - SF-36	intervention strategies - Action Planning and Treatment Planning for the maintenance of medication did not affect the QofL of patients with HF and coronary heart disease in external monitoring.
Smith et al., 2015	**198** patients with HF (randomized to clinical sessions or group care program)	Self-help instructions on DVD and support group facility to engage in patient-centered discussions about the day-to-day management of HF.	Kansas City Cardiomyopathy Questionnaire (KCCQ) The European Heart Failure Self Care Behavior Scale HF Knowledge Questionnaire. Patients' HF rehospitalisation's Group Appointment Helpfulness Evaluation Scale	"Helpfulness" in the management of HF with a 33% reduction in the re-admission rate associated with the intervention during the 12-month follow-up period. The total cost of scheduling five appointments was $ 243.58 per patient. Improvements in self-monitoring and home care and reductions in hospitalizations.
Drevenhorn et al., 2015	**137** patients with hypertension and HF.	Multi-factor training for 3 days, the Stages Of Change model and application of guidelines for cardiovascular prevention. Videotaped consulting with simulated.	Exercise of Self-Care Agency (ESCA) instrument	Counseling training resulted in more effective patient self-care, which was significantly associated with increased physical activity.
Haas et al., 2014	**65** patients with HF	Only Exercise (Control) Intervention, Exercise + Nutrition Quality + Weight Maintenance Intervention, or Exercise + Nutrition Quality + Cessation of Intervention Loss. CROSSROADS used a lifestyle intervention approach	Treatment Fidelity Workgroup of the NIH Behavior Change Consortium	The CROSSROAD trial is the first evidence-based randomized controlled trial in the field of lifestyle intervention education for elderly patients at risk for cardiovascular disease.

		consisting of exercise, diet and behavioral elements		
Mase et al. 2015	**135** patients recently hospitalized due to HF.	Remote counseling (weekly phone calls) and 4 group classes.	Minnesota Living with Heart Failure scale) Euroqol EQ 5D Treatment Self-Regulation Questionnaire-TSRQ Health literacy scale PHQ-9	Participants were more likely to have higher baseline health, functional capacity, and Social Suport
Clark et al., 2015	**50** patients with HF class I-III	3-month training, 3-month guidance by telephone / e-mail with integrated memory enhancement programs by specially trained nurses (APRN)	Kansas City Cardiomyopathy Questionnaire-KCCQ Metamemory in Adulthood Questionnaire-MIA HF Knowledge Test-HFKT Self-Care in Heart Failure Index—SCHFI Geriatric Depression Scale-GDS	9 months after a period of 3 months without contact with the nurses proved successful results in the state of health and self-preservation (self-efficacy, QofL, memory, self-confidence, reduction of depression and enhancement of knowledge about HF.
Agren et al., 2015	**42** patients with postoperativ e HF.	3 sessions of 30-60 minutes of psycho-training (suggested solutions for stressful situations) along with conventional support from a physiatrist, nurse and physiotherapist 4-6 and 10-12 weeks after discharge and telephone counseling 22-24 weeks after discharge.	SF-36, Beck Depression Inventory, self-reported control and autonomy in 3 and 12 months after the intervention	Psychoeducational support improved the mental and physical health of patients, as well as their relatives who participated in the pair study, both short-term and long-term (at 3 and 12 months). No significant differences were observed in QofL, due to health after 3 and 12 months. However, significant improvements (SF-36) were found over time during the intervention.
Johansson et al.,2014	**47** patients who underwent coronary and / or pharmacolo gical treatment 3-7 weeks ago in a general hospital	Keeping a special diary of sleep recording for 10 consecutive periods of 24 hours, with follow-up after 3-4 months. Personalized training	Uppsala Sleep Inventory Epworth Sleepiness Scale (ESS) (SF-36) (health-related quality of life-HRQoL) And a special study diary for sleep	Over a 3-4 month follow-up period, major improvements were observed in sleep quality, duration, and efficiency. Also, statistically significant improvements in health-related QofL were revealed.

		program to promote self-care sleep activity. Individual exercises for physical activity, relaxation exercises (CD provided by a physiotherapist and a booklet on sleep and stress management.		
Evangelista et al., 2015	**21** patients with chronic HF	Educate patients to measure their weight, blood pressure and heart rate at home with an RMS device that retransmits this information daily for 3 months to a centralized computer information system.	Patient Activation Measure HF self-care Index Minnesota Living With Heart Failure Questionnaire (MLHFQ)	Major improvements in the mobilization of patients with HF, self-care and QofL. Moderately strong correlations between increased activation-mobilization, self-care and QofL with the RMS method.
Dunbar et al., 2014	**71** patients with HF and DM	Two individual training / counseling sessions 30-45 minutes before leaving the hospital, integrated training intervention HF - DM (diet, medication, monitoring of symptoms, physical activity) and management of comorbidities.	Atlanta HF Knowledge Test (AHFKT) Self-Care in Heart Failure Index Version 6.2 (SCHFI) Minnesota Living with Heart Failure Questionnaire (MLHFQ)	Improved knowledge of HF (30 days), self-maintenance (30 and 90 days), self-care (90 days), general diet (30 days), improvement of QofL and emotions. The higher percentages of the participants in the intervention group improved the intention to exercise between 0-30 days and reported a moderate result.
Agren et al., 2013	**155** pairs of patients with HF and their caregivers	3 sessions of nursing counseling training based on computer system and written material with the aim of	Self-completing questionnaire to collect data on age, gender, education, smoking, physical activity and relationships SF-6D (short version of SF-36 for patient QALY	With an intervention cost of € 223 per patient, the intervention did not prove cost effective, both for the patients and their caregivers. The intervention, however, had effects (not

		developing problem-solving skills in 2, 6 and 12 weeks after hospitalization due to deregulation	parameterization	significant) on the patient-caregiver pairs and after the QALY analysis, it proved to be a reasonable cost-effectiveness ratio.
Allen et al., 2014	**525** patients with confirmed cardiovascular disease, DMtII, hypercholesterolemia, hypertension, HF.	One-year intervention of community nursing with the aim of changing the lifestyle and avoiding drug addiction and prescribing.	Basic one-year evaluation on lipid, blood pressure and HbA1c monitoring.	At an average cost of $ 627 per patient, the cost-effectiveness of the 1-year intervention is a cost-effective approach for community health centers to consider improving care for patients with existing cardiovascular disease or at high risk of developing cardiovascular disease.
Mussi et al., 2013	**101** patients with HF.	6-month systematic nursing follow-up on the 10th, 30th, 60th and 120th day after discharge, with 4 telephone sessions to support the goals (about the disease, regular use of drugs and its effects, non-pharmacological care, weight control and cases of shortness of breath , physical exercise and annual vaccination)	Clinical Congestion Score European Heart Failure Self Care Behaviour Scale (EHFScBS)	There has been a significant improvement in self-care and knowledge of the disease. Respectively, adherence to treatment, measurement and comparison between groups was significantly higher. The strategy of resident visits to patients who have recently been treated for HF was effective.
Lennie et al., 2013	**75** patients with chronic HF.	6-month dietary intervention to reduce symptoms (swelling, shortness of breath and fatigue) and improve Health-Related QofL in 3 and 6 months.	Memorial Symptom Assessment Scale—Heart Failure (MSAS-HF) Minnesota Living with Heart Failure Questionnaire	Diet has been found to be an important aspect of the treatment of HF. The well-defined behavioral and organizational approach by an experienced and consistent team of researchers is simple and the benefits of goal setting, empowerment, self-care and improving overall well-being are great. The symptoms and

				QofL of patients with HF improved through a low-cost, easy therapeutic intervention
Rodríguez-Gázquez et al., 2012	**33** patients with chronic HF.	Educational nursing program (educational meetings - home visits, training courses and printed material) to improve self-care.	Nancy Artinian's Heart Failure Self-care Behaviours Scale	66% of patients improved their self-preservation score by at least 20%. Educational intervention has beneficial effects on the self-management behaviors of people with HF.
Welsh et al., 2013	**27** patients with HF.	6-week nursing training on adopting a low-sodium diet with home visits and phone calls over three data collection periods.	Dietary Sodium Restriction Questionnaire (DSRQ).	The educational intervention to reduce sodium intake was effective during the final 6 months of the study. Attitude towards a low sodium diet also improved in 6 weeks for the intervention group. Personalized home teaching with well-organized and specific teaching strategies can lead to dietary changes, such as maintaining a low-sodium diet in newly diagnosed or chronic HF patients.
Han et al., 2010	Telephone counseling to enhance knowledge about the disease and parallel Social Suport and opportunities to discuss the participant's progress in controlling the disease (taking medication, low-salt diet, exercise, smoking cessation, monitoring AP at home	12 months of telephone counseling on hypertension weekly or monthly.	Self-completing questionnaire	The overall success rate for the intervention was 80.3% which was significantly affected by the frequency of counseling, employment status and years of stay of patients in the country of intervention (USA). There has been improvement in reducing medication and alcohol consumption but not smoking and intensifying exercise.

	or management anxiety)			

The systematic reviews of the last decade on the consulting management, intervention and Non-Pharmacological treatment of patients with HF due to different parameters of the population samples and the evaluation tools will be presented separately in the table below.

Table 3

AUTHORS, YEAR	CULTURE OF STUDIES	RESEARCH QUESTION	RESULTS	CONCLUSIONS
Chavez et al., 2018	**56** primary studies and **26** systematic reviews	Identification and summary of joint nursing interventions and outcomes of nursing care specifically for the elderly with various comorbidities including HF.	Overall, the nursing results were positive in 83/144 (58%) of the results compared to simple medical care or conventional care. The most frequently reported quantitative parameter was the cost of remote intervention (n = 41) and the most frequently reported benefits that emerged were residential interventions (8/9, 89%) and long-term care (7/10, 70%).	Transitional nursing provided improved results in all measures except cost and accessibility of services
Recio Saucedo et al., 2018	**14**	Determining the impact of neglected nursing care, due to lack of specialized nurses in adults (increased morbidity, reintroduction, mortality)	Correlations were reported between inadequate care and patient outcomes (n = 14) with one or more patient outcomes, including medication errors, infections, critical events, quality of care, and patient re-admission (n = 7). Regarding the correlation between lack of remote care and mortality, no clear correlations emerged (n = 3).	Few evidence investigating inadequate care and patient outcomes produced mainly from data reported by the nurse and patient. Further research is needed.
Sedlar et al., 2017	**30**	Evaluation of the importance of factors related to self-maintenance behaviors of patients with HF, as measured by the European Heart	A wide variety of personal and environmental factors are associated with self-care, self-management behaviors in patients with HF.	Age, Health, Gender, Education, Depression Symptoms, and Left ventricular EF were most frequently associated with the EHFScBS score.

		Failure Self-Care Behavior Scale (EHFScBS).		
Toles et al.,2016	**6**	Recognition of the effect of nursing interventions in transitional care, in comparison with the usual care in clinical outcomes (mortality, readmission, functional status and description of the characteristics of the intervention, the required resources and the methodological challenges for their implementation.	There is promising but limited evidence that transitional care improves clinical outcomes for patients with HF.	There is a need for more randomized transitional care studies free of methodological challenges for the study of transitional patient care.
Stewart et al., 2015	**4**	Evaluation of the relationship between diet and cognitive skills in older adults with HF.	Irrational eating habits have been associated with worse attention, executive function and memory in older adults with HF Anemia, hyponatraemia, hypokalaemia, hyperglycaemia and hypalbuminemia have also been associated with cognitive impairment.	More descriptive studies are required with the aim of complete and rational planning of dietary interventions in order to maintain and optimize cognitive function in older adults with HF.
Magid et al., 2017	**8**	The use of an LV assist device (LVAD) in patients with end stage HF. requires substantial guidance and remote nursing management.	The use of an LV assist device (LVAD) in patients with end stage HF. requires substantial guidance and remote nursing management.	The patient experience with the LVAD device is intense and aggravating and implies the need to adapt to a new life. Therefore, future research should focus on strategies to support these individuals.

8. Discussion:

From the above systematic review of the most modern studies, at a first glance, they seem clear in terms of extracting positive results, for the effectiveness of remote management and the Non-Pharmacological approach of patients with HF.

Most studies have well-established remote approach practices that do not differ much from each other. In particular, after the patient leaves the hospital, his complete history is enriched with his updated contact details, the available means of communication, to which he has full and daily or weekly access and receives the necessary printed or electronic material, with which he will to start his outpatient education and consequently his outpatient nursing, counseling intervention. Only through the study of Masterson Creber et al., (2015) the results of the intervention were not found to be any different from the control group, however the specific intervention was of limited duration (3 months) and concerned only one home visit and one telephone counseling.

Despite their relative methodological homogeneity and the use of remarkable and weighted assessment tools for measuring Health-Related QofL, knowledge of the background of HF as a chronic disease, self-management, self-preservation, self-care of patients with HF, it is worth mentioning that through the studies, which were reviewed did not present homogeneous socio-demographic data (gender, age, employment) therefore, even when they were listed they were not recorded in order to ensure the homogeneity, usability and comparability of the presented qualitative characteristics of the studies.

As most researchers point out, in order to successfully complete the intervention, whether through home visits or telephone sessions, it is very important to mobilize the patient in advance and inform him about the parameters of the disease he is facing. The relevant education must take place in the presence of his family and it is equally legitimate for them to be informed with absolute clarity about their special role in educating, empowering, strengthening and mobilizing the patient.

None of the studies reviewed evaluating the efficacy of outpatient and non-pharmacological management of the patient with HF reported moderate or adverse outcomes. On the contrary, all studies emphasize the absolute importance of these interventions in the mobilization, functionality, autonomy, self-preservation and spiritual euphoria of the patient.

The extracted results of the studies differ in the size of the patient's functionality or autonomy during or at the formal end of the outpatient management program. In addition, few of the studies reviewed are able to provide long-term results as most of the time the follow-up of patients (follow up) is not prospective, on the contrary, data are provided that relate exclusively to the end of the recording that marks the end of the study.

Of the studies reviewed, only the publication of Clark et al., (2015) showed positive results (state of health and self-preservation, self-management (self-efficacy, QofL, memory, self-confidence, reduction of depression and enhanced knowledge about HF) 9 months after The above study presented the most promising patient outcome found in all of the recent literature available.

The study of systematic reviews, even if it did not concern exclusively patients with HF, gave very important results regarding the necessity of patients who are at an advanced age or have a chronic disease with or without specific comorbidities for outpatient management. In particular, the study by Chavez et al., (2018) emphasizes the positive response of patients to such interventions, while limitations due to prohibitive costs, limited human resources and limited access of patients to telephone conversations or e-mail, in order to the overall project to be crowned with complete success. Respectively, Toles et al., (2016) in their systematic review recognize the variety and effectiveness of the above interventions, however they express specific concerns about the different methodological approaches of each researcher that can lead to confusing factors of unbalanced results.

It is worth noting that this review is one of the few that sought and presented the scanty published results that refer to quantitative data on relapse, re-admission, re-hospitalization or mortality of patients with HF with or despite outpatient non-pharmacological counseling programs. A very interesting correlation comes from the systematic review of Stewart et al., (2015) and concerns the context of dietary interventions that should be designed for patients with HF. This study was judged to be methodologically consistent, while it is worth mentioning that it complements and creates correct correlations with the corresponding studies of Welsh et al., (2013) which provided positive results for patients with HF who underwent outpatient in a special diet and

presented positive results. only during the last six months of the intervention, but also by Lennie et al., (2013) who unilaterally correlated the effect of the proposed diet of patients with HF with symptoms such as shortness of breath, fatigue, etc.

In addition, a serious issue that arises in addition to the effectiveness of these interventions is the cost-effectiveness ratio that emerged and targeted through 2 of the studies reviewed. These studies have presented conflicting results as to whether the effort of remote nursing counseling for a patient with HF can be integrated within a framework of strict financial budgets and limited funding at the primary care level, but also at Community level. Agren et al., (2013) presenting a moderate financial budget for each patient, emphasize that this is an effective practice that in any case eliminates the financial cost per capita. On the contrary, Allen et al., (2014), exporting a huge financial cost per patient, emphasize that outpatient nursing intervention may not be characterized by a cost-effectiveness ratio and encourage further research on increasing efficiency or reducing it, respectively. This issue, on which the data so far are scarce and contradictory, is proposed to be reconsidered and given due consideration. Another issue that is highlighted by many studies that fall under the present review is the necessary training and specialization that nurses must have, as health professionals, who undertake under medical guidance to implement a management program, counseling patients with HF. In particular, as pointed out by many studies, the know-how and academic background of nurses must be equal to the increased demands of an advanced program of remote counseling, mentoring support. Thus, the targeted and specialized basic, but also continuing education and training of nurses in the direction of this goal is set as a necessary condition. Non-pharmacological management programs with counseling nursing intervention for patients with HF, focus on encouraging the adoption of self-care behaviors by the patient. As the systematic review has shown, they are usually educational in nature and are intended to help the patient understand the importance of adherence to medication, diet and other restrictions, to enhance risk modification and lifestyle changes, and to integrate exercise into their daily life and in addition to their ability to recognize symptoms of worsening of the disease and to seek timely health care.

The interventions are made as shown by the literature coordinated and individualized by an interdisciplinary team of experts. Particular emphasis is given to the majority of HF management programs by a medical and nursing team. In many chronic HF disease management programs, the health care professional acts as a link between the HF patient and an interdisciplinary team or coordinates the team.

9. Conclusion:

This systematic review gives a part, a part of the evaluation of the main issue, object of management, coordination, intervention of non-pharmacological counseling by nurses of HF syndrome, in order to improve the Health Related QofL to the patients with HF. However, the essential characteristics of the success of the HF non-pharmacological management programs remain undefined and more studies and meta-analyzes are needed for this purpose.

The findings of this Systematic Review emphasize the need to develop a HF management program at the exit of the patient with HF, in the phase of discharge for his smooth transition to the community with developed Social Support and then with the continuous nursing intervention with a developed Non-Pharmacological program. Management of this chronic disease. Social Support both for the patient with HF, as well as for his family, but also for his caregivers. This seems to give new indications of the importance of continuous contact, support and follow-up in the Health-Related QofL in designing effective management programs. The nursing role with the necessary nursing interventions, as shown by the results of the current systematic review, the nurse, as a mentor with counseling interventions in the discharge, as well as through telephone counseling and communication, can achieve an improvement in reintroduction, improvement in self-care, self-management of the disease. Today, a large number of studies, as seen from the present review, evaluate the positive results of educational therapeutic management programs of HF. In addition, other studies focusing on the evaluation of efficiency also show a drastic, active revolution in the field of researchers. The studies should be very accurate, specific not only in describing the characteristics of patients with HF, which from now on should include cognitive, cultural information, as well as information about the social and psychological level of the patient with HF. It is also necessary to evaluate the outcomes, taking into account the psychosocial issues. The study on

how the non-pharmacological management programs of HF, the educational treatment programs will be able to help the patients with HF, is necessary the contribution of the researchers in the more accurate description of the patients, of the educational methodology, of the evaluation of the protocols, in general the provision of a certified program. According to the data of the literature, a special individual-patient-centered approach, HF management programs, guided and followed in the particular beliefs of managing the illness of each HF patient individually and depending on his emotional level, his emotional state, supporting him by reading its obstacles and proposing individual solutions, so that it can help increase the maintenance of its self-care, confidence in the improvement of its self-care and in the management of its self-care, thus leading to the improvement of its QofL.

Further studies are needed to confirm the above observations, statement, this conclusion of this Systematic Review.

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