Article Title: Outcomes and Cost of Women-Focused Cardiac Rehabilitation: A Systematic Review and Meta-analysis

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ABSTRACT

Background: The aim of this systematic review was to investigate the effects of women-focused cardiac rehabilitation (CR) on patient outcomes and cost.

Methods: Medline, Pubmed, Embase, PsycINFO, CINAHL, Web of Science, Scopus and Emcare were searched for articles from inception-May 2020. Primary studies of any design were included, with adult females with any cardiac diseases. "Women-focused" CR comprised programs or sessions with >50% females, or 1-1 programming tailored to women's preferences. No studies were excluded based on outcome. Two independent reviewers rated citations for potential inclusion, and 1 extracted data, including quality, which was checked independently. Random-effects meta-analysis was used where there were ≥3 trials with the same outcome; Certainty of evidence for these was determined based on GRADE. For other outcomes, SWiM was applied.

Results: 3498 unique citations were identified, of which 28 (52 papers) studies were included (3,697 participants; 11 trials). No meta-analysis could be performed for outcomes with usual care comparisons. When compared to active comparison, women-focused CR had no meaningful effect on functional capacity. Women-focused CR meaningfully improved physical (mean difference [MD]=6.37, 95% confidence interval [CI]=3.14-9.59; I^2=0%; moderate-quality evidence), and mental (MD=4.66, 95% CI=0.21-9.11; I^2=36%; low-quality evidence) quality of life, as well as 7/8 SF-36 domains. Qualitatively, results showed women-focused CR was associated with lower morbidity, risk factors, and greater psychosocial well-being. No effect was observed for mortality. One study reported favorable economic impact and another reduced sick days.

Conclusions: Women-focused CR is associated with clinical benefit, although there is mixed evidence and more research is needed.

Key words: cardiac rehabilitation; systematic review; mortality; heart disease risk factors; quality of life

Abbreviations: CVDs, Cardiovascular diseases; CR, cardiac rehabilitation; INOCA, ischemia with non-obstructive coronary arteries; UC, usual care; AC, active comparison; QoL, quality of life, MD, mean difference; CI, confidence interval;

HIGHLIGHTS

- Women-focused CR programming comprises women-only sessions and/or tailored content
- This 1st review of outcomes identified 28 studies in 44 centers across >10 countries
- Meta-analyses of trials showed women-focused CR resulted in better QoL than active comparison
- Women-focused CR may also be associated with lower morbidity and some risk factors
- Effects on functional capacity were equivocal, given benefits of all CR models

1. INTRODUCTION

Cardiovascular diseases (CVDs) are among the leading causes of morbidity and mortality in women globally[1]. It has been well-recognized that more attention needs to be paid to women's cardiovascular health due to their poorer outcomes than men, such as more disability, hospitalization and early mortality[2]. This is likely due to the ways CVD risk factors are manifested differently in women (e.g., smoking and oral contraceptives, diabetes more hazardous, low socioeconomic status more preponderant as well as depression[3,4]). Moreover, diagnostic tests are less sensitive in women[5], which is related to the fact that they often have different forms of CVD (e.g., heart failure with preserved ejection fraction, ischemia with non-obstructive coronary arteries [INOCA], coronary artery dissection and vasospasm)[6], and results in women being diagnosed at later stages of disease than men[5]. Finally, women have a greater burden of some comorbidities than men[6].

Cardiac rehabilitation (CR) is a standardized model of secondary preventive care proven to mitigate this burden. It offers the core components of risk factor management, structured exercise, patient education and psychosocial counselling[7], in a clinical setting or home-based setting, offered on average over 4 months[8]. It is established that CR participation results in approximately 20% lower mortality and morbidity[9], and is cost-effective[10]. Unfortunately however, only 15% of participants in CR trials included in the major CR meta-analyses are women[9]. While we unsuccessfully attempted to secure mortality and morbidity data in women from CR trials to establish effects in women[11], observational data suggest women may have even greater mortality reductions with full participation than men[12]. Moreover, many reviews have demonstrated CR participation results in greater

functional capacity and risk factor reduction in women, among other benefits[13], which likely drive reductions in mortality and morbidity. Indeed, CR is recommended for women in clinical practice guidelines[14].

Despite these benefits, CR is under-utilized globally[15], especially in women. To address this, “women-focused” (also termed “gender-tailored” [which we consider to mean that content is adapted to women’s needs and preferences], or “women-only” [meaning the sex composition of CR programming only comprises women] variably in the literature, among other terms) sessions or full programs have been developed, to attempt to address their barriers and meet their unique needs[16].

Extrapolating from the International Council of Cardiovascular Prevention and Rehabilitation’s (ICCPR) global CR audit, it is estimated there are 686 programs in 45 countries globally offering some form of women-focused programming;[17] this is 41% of countries that have any CR. However, there has only been one review in this area, which is published as a conference abstract[18]; we attempted to contact the authors and searched for a full paper to no avail. While this work is an advance, they included only randomized trials which may not represent what is available in the “real-world”. They identified 10 trials; While no meta-analysis was performed, results suggested women-focused CR improves exercise adherence and psychosocial well-being, while non-women-focused and women-focused CR improve physiological outcomes (i.e., functional capacity, risk factors).

This leaves questions regarding the effects of women-focused CR on other clinical outcomes, including mortality, morbidity and cost. Therefore, the objectives of this systematic review -- and meta-analysis where possible -- were to investigate the effects of women-focused CR on patient outcomes, as well as cost. This broad aim enabled a scope of the literature as well.

2. METHODS

The protocol for this systematic review was registered prospectively on PROSPERO (CRD42020189760). Methods were based on the Cochrane Handbook for Systematic Reviews of Interventions[19]. The review was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines[20].

2.1. Inclusion / exclusion criteria

Primary studies of any design, such as randomized trials as well as observational and qualitative studies, were included. In terms of publication type, conference abstracts were included where identified, but the authors were contacted where possible to determine if a full publication was available, and if not, to get further needed details. Theses/dissertations were included. Reviews and editorials were searched to identify primary studies only. Case studies and commentaries were excluded.

The CR program had to offer at least initial assessment, structured exercise (supervised or unsupervised), and at least one other strategy to control risk factors. To be considered "women-focused", CR sessions (e.g., education or exercise components of an overall CR program or peer support) or programs had to include ≥50% females. Individually-delivered programs (e.g., home-based or eCR, which are generally inherently 100%) were included if they were tailored to women's needs or preferences in some way (note this criteria was not specified a priori, but at the time of resolving citation rating discrepancies).

Studies that included female adults (ages 18 years or over) with any cardiac conditions were included. The study could have any outcome, given that it was the first review in this area. Of particular interest were mortality and morbidity, functional capacity,

risk factors, and psychosocial well-being (e.g., quality of life, depressive symptoms, anxiety, stress). We also sought studies on costs, including studies on the costs of programs, costs to the health system or costs to patients. Note findings on the nature of women-focused CR programs, access, utilization, and satisfaction are reported elsewhere[21].

2.2. Search Strategy

Eight electronic databases were searched from their inception to May 2020, namely: APA PsycInfo (Ovid), Medline (Ovid), Pubmed (non-Medline), Embase (Ovid), Web of Science Core Collection, Scopus, CINAHL (Cumulative Index to Nursing & Allied Health Literature) (EbscoHost) and Emcare (Ovid). The search strategies were developed in collaboration with an Information Specialist utilizing the PICO framework, subject headings as appropriate for each database, and free-text terms relevant to the topical concepts. No language limits were applied. A sample search strategy for Medline is shown in online Appendix 1.

2.3. Study Selection

Duplicate citations from the search of the databases were deleted in Mendeley, with the unique citations then imported into Covidence. After training and calibration, two researchers (TM and GMG) independently considered the abstracts of potentially-eligible articles for inclusion. The full-texts of potentially-eligible citations were then considered to ascertain whether they met eligibility criteria. Where unclear, authors were contacted to ascertain whether the CR programs had more than 50% women. For both stages, any disagreements were resolved by the senior researcher. Once the studies were identified, any related protocol manuscripts, theses/dissertations or publications on the baseline cohort for example were secured to inform data extraction and quality assessment.

2.4. Data extraction and management

Information regarding the study design, sample, nature of the CR program, and outcomes reported were extracted from the included studies. In addition, the quality of included studies was assessed using the Mixed-Methods Assessment Tool[22], which is applicable to multiple designs. For each of 5 designs, there are 5 items, which are rated as being present (yes), not present, or indeterminable.

Following training, one author independently extracted data for each included study, and rated their quality. A second author then independently reviewed the extraction and ratings. Any disagreements were resolved by discussion or, where agreement could not be reached, by consultation with the senior author.

2.5. Data synthesis

All study results were synthesized tabularly. In accordance with the Synthesis Without Meta-analysis reporting guideline[23], a formal narrative synthesis was used to analyze outcomes which could not be meta-analyzed due to insufficient trials (i.e., ≥3) with the same outcome and comparison (usual care [UC; i.e., with no CR] or active comparison [AC; e.g., traditional or home-based CR, components of secondary prevention]). Results were grouped by outcome, and then by comparison type, with studies of higher-quality design summarized first (i.e., prioritized randomized trials, followed by controlled studies, and others). Outcome scores at each available assessment point were summarized, as well as tests of effects by group and/or time; Vote counting of significant effects (p-values) by direction was undertaken.

Randomized trials were then selected. The authors created an excel file with all outcomes (including units of measurement / assessment tools) by comparison type (UC or AC), to determine whether there were at least 3 trials with the same type of comparison arms (i.e., UC or AC) for any given outcome measured consistently to perform meta-analysis. Based on that, where possible, random-effects meta-analyses were performed using RevMan version 5.4.1. Mean differences and 95% confidence intervals (CIs) for continuous outcomes between intervention and control/comparison arms were computed. For each meta-analysis, heterogeneity was assessed using χ^2 and I^2 statistics; to compute this, risk of bias information is needed, which was rated for each trial using Cochrane's tool (v1). Given the only other review in this area was published in 2018 and included only 10 trials, we did not expect subgroup analyses could be undertaken, or that we could test for publication bias due to insufficient trials.

Finally, Grading of Recommendations, Assessment, Development, and Evaluation (GRADE) was then used to determine level of evidence for each outcome[24]; this was undertaken by the first author, and checked by another.

3. RESULTS

3.1. Study search and selection

Overall, 3498 unique records were identified from the search. Four reviews were hand-searched[11,25–27]. No title or abstract was identified in a non-English language which would be considered for full-text review. One study undertaken by our group that meets inclusion criteria was recently completed, and was added[28]. Ultimately, 28 studies (52 records) that met the eligibility criteria were included (Figure 1).

3.2. Study characteristics

The first study was published in 2002. Studies were from the following >10 countries: 9 (32.1%) from Canada, 5 (17.9%) from the United States of America, 4 (14.3%) from Iran, 2 (7.1%) from United Kingdom, 2 (7.1%) from Poland, 2 (7.1%) from Sweden, 1 (3.6%) was international[17], and 1 (3.6%) each stemmed from Australia, Taiwan/ China, as well as Saudi Arabia. Six (21.4%) studies were multi-centre; not considering the global audit of women-focused CR[17], ultimately 44 centers were studied (Table 1). Given the estimated availabilty of CR globally summarized in the introduction[17], this likely represents approximately 25% of the countries that offer women-focused programming, and 10% of programs.

Of the included studies, 11 (34.4%) were randomized trials, of which 6 had 2 parallel arms, 4 were 3-armed trials[29–32] and 1 was 4-armed[33] (Table 1). Five (45.4%) had usual care (UC) control arms; Of those 9 with active comparisons (AC), these included: traditional supervised CR, hybrid models (i.e., supervised sessions transitioning to remote), home-based CR, structured exercise only, education only, Tai Chi, relaxation therapy, and cognitive-behavioral psychotherapy. The remaining 17 studies were prospective cohort (n=14, 82.4%; of which n=8 had control groups), mixed-methods (n=2, 11.8%)[34,35] or descriptive (n=1, 5.8%)[17] in design.

Outcomes assessed are outlined below and shown in Table 1. Duration of follow-up ranged from 1 to 60 months (5 years)[36], with a median of 3 months.

Quality of each study is also shown in Table 1 (risk of bias of meta-analyzed trials is shown in the Forest plots – figures 2a, 2b, supplemental figures 2a-b and 3a-h). The median number of yes' (indicating good quality) per study was 4/5.

3.3. Participants

Sample sizes across studies ranged from 9–727 participants, with a median of 60 (Table 1). All studies were comprised of only female participants; in two studies, women were compared with matched male participants to investigate any sex differences in the outcomes[28,37] Overall, there were 3,697 women studied.

Mean age was 59.3±7.1 years (standard deviation; Table 1). Ethnocultural background was reported in 7 (25.0%) studies, which mostly comprised white caucasians. Most participants (41.1%) had coronary artery disease, however other diagnosis more common in women were also represented such as: spontaneous coronary artery dissection (SCAD; 2 studies with 79 women)[38,39] INOCA (3 studies with 143 women)[31,40,41] and heart failure only (2 studies with 83 women)[42,43].

3.4. Meta-analyses

Six (54.5%) of 11 trials were included in the meta-analyses[30,31,33,43–45]. Risk of bias across included trials is shown in Supplemental Figure 1. With regard to CR vs. UC, there was no outcome with a sufficient number of trials/arms (i.e., ≥3) to perform meta-analyses.

As shown in Table 2, for comparison to AC, meta-analyses were performed for the following outcomes: functional capacity (i.e., metabolic equivalent of tasks [METs] and oxygen consumption [VO_2peak]), and quality of life (QoL; physical component summary [PCS], mental summary [MCS] scores and 8 domains of SF-36). The effects of women-focused CR in increasing METs were not meaningful (5 trials; participants=339; mean differences [MD]=0.15, 95% confidence interval [CI]=-0.30- 0.59; I^2=40%; moderate-quality evidence; Supplemental Figure 2a). Similarly, the effects of women CR in increasing VO_2peak were not meaningful (3 trials; participants=224; MD=0.22 ml/kg/min, 95% CI=-0.19- 0.63; I^2=82%; low-quality evidence; Supplemental Figure 2b).

Finally, three trials reported on QoL using the SF-36 (for 2, needed data could not be obtained from the authors). For those that reported the 8 domains only, PCS and MCS scores were calculated using available data to optimize the number of trials that could be pooled. Compared with AC (comprised of traditional mixed-sex CR, women-only CR without a psychosocial component, or progressive muscle relaxation), the effects of women-focused CR in increasing PCS (3 trials; participants=341; MD=6.37, 95% CI=3.14-9.59; I^2=0%; moderate-quality evidence; Figure 2a), and MCS (3 trials; participants=341; MD=4.66, 95% CI=0.21-9.11; I^2=36%; low-quality evidence; Figure 2b) scores were found to be meaningful. Regarding specific subdomains of the SF-36, the 2 trials testing the effects of women-focused CR in improving QoL were meaningful for: physical functioning, role physical, bodily pain, vitality, mental health, role emotional, and social functioning (Supplemental Figures 3a-d and 3f-h). There was no meaningful improvement in QoL observed for the general health subdomain only (Supplementary Figure 3e).

3.5. Qualitative Analyses

See the online supplement for these results.

4. DISCUSSION

This is the first-ever[18] full article investigating the effects of women-focused CR on patient outcomes and cost. There is now a small body of evidence: 28 studies, including 11 trials; while study quality is adequate, more outcome data are greatly needed. For the following outcomes tested, women-focused CR was either related to improved outcomes or better outcomes compare to no-CR UC post-program: morbidity, some risk factors (e.g., HDL), and psychosocial outcomes (e.g., depressive symptoms, perceived stress, sexual resumption); for these outcomes, women-focused CR was related to improved outcomes compared to AC: QoL (all domains except general health, based on meta-analyses), and morbidity. The impacts on QoL would be considered clinically-meaningful[46,47]. For the following outcomes, women-focused CR may not be superior to AC or effective in inducing change: functional capacity, strength, as well as some risk factors (e.g., heart-health behaviours, blood pressure, tobacco use, triglycerides, body mass index and blood glucose), and psychosocial outcomes (e.g., fatigue). There was no harm reported, except some symptoms in heart failure patients in one controlled study where symptoms in the control group were not stated[42]. Impact on mortality cannot be determined given insufficient evidence (i.e., 2 studies reporting this, with short length of follow-up). CR has been shown to be cost-effective when compared to UC[10], and an included study suggests may result in fewer sick days than AC[36].

It would not be expected that women-focused CR would be superior to traditional CR for many clinical outcomes (i.e., AC in many studies), given the powerful effect of secondary prevention and medications supported in CR of any model, except where a

significant difference in CR utilization was achieved, and the study had a large sample size and long follow-up. Our associated review shows more research is needed to establish the impact of women-focused CR on utilization[21]. Given the established benefits of CR[9,48] it is not ethical in most instances to test the effect of women-focused CR versus UC, and hence the true effect of women-focused CR likely can never be known.

Clearly, more study is needed to understand which features of women-focused CR are most impactful, and can be cost-efficient (using AC). Trials with larger sample sizes and longer follow-ups are needed, particularly assessing key outcomes of import to payers and patients, such as mortality. With more information, evidence-informed recommendations regarding women-focused CR delivery could be made.

Indeed, it is hoped this review can stimulate evidence-based discussion as a CR community on whether resources should and could be allocated to augment women-focused CR availability, and what such programming should look like. While more research is needed, when considered with corroborative evidence on the effects of women-focused CR on utilization[21], we may conclude such programming can play a role in reducing sex differences related to CR. We make some recommendations on what such services should look like elsewhere[21]. Clearly the lack of availability [17] would need to be addressed if this service is to be equitably available to women with CVD globally. Given CR programs are under-resourced[49], and that only larger, more well-resourced programs appear to be able to offer it[17], when working to standardize and validate women-focused CR, we must recommend feasible, low-cost models.

4.1. Limitations

Caution is necessary when interpreting the results. First, there was no grey literature search, nor any trial registries searched for potential studies to include. Second, data extraction was not done independently by two researchers. Third, there were insufficient trials to assess for the potential of publication bias, but certainly this is a possibility given the small number of identified trials. Moreover, there were insufficient trials to assess for factors that may explain heterogeneity, such as cardiac indication for CR. Finally, generalizability is limited.

5. CONCLUSIONS

Moderate-quality evidence shows for the first time that participation in women-focused CR results in improved QoL, among other benefits including morbidity reduction and cost-efficiency, although any CR has established benefits. More research is needed to understand which features are most impactful, and then implementation of effective, feasible models in CR centres globally should ensue. Clearly, lack of women's referral, and hence awareness of CR is a barrier to uptake, but it is hoped that through leveraging technology, this could be mitigated.

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Authors' contributions: SLG developed and oversaw this review. MP developed and performed all database searches. Studies were screened independently by TM and GLM, with discrepancies resolved by SLG. TM and SLG undertook hand-searching. TM independently extracted data and appraised the quality of included studies, which were checked independently by GLM. TM and SLG drafted the manuscript, and all other authors revised it critically for important intellectual content and accuracy. SLG and TM are responsible for the overall content as guarantors. The corresponding author attests that all listed authors meet authorship criteria, and that no others meeting the criteria have been omitted.

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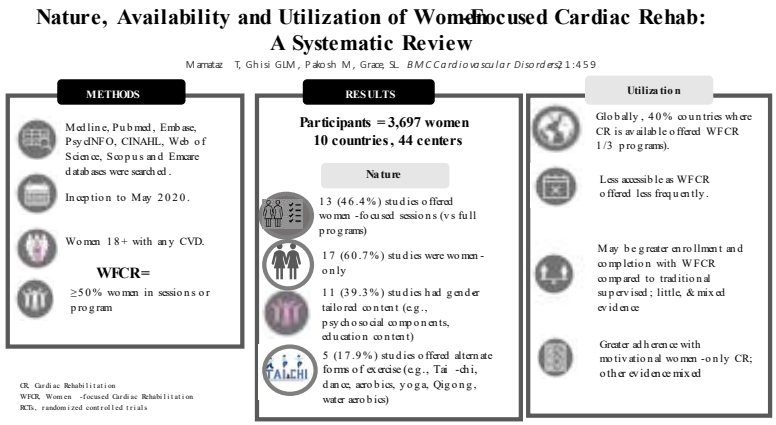

Graphical Abstract

FIGURES

Figure 1: Study Selection Flow Diagram

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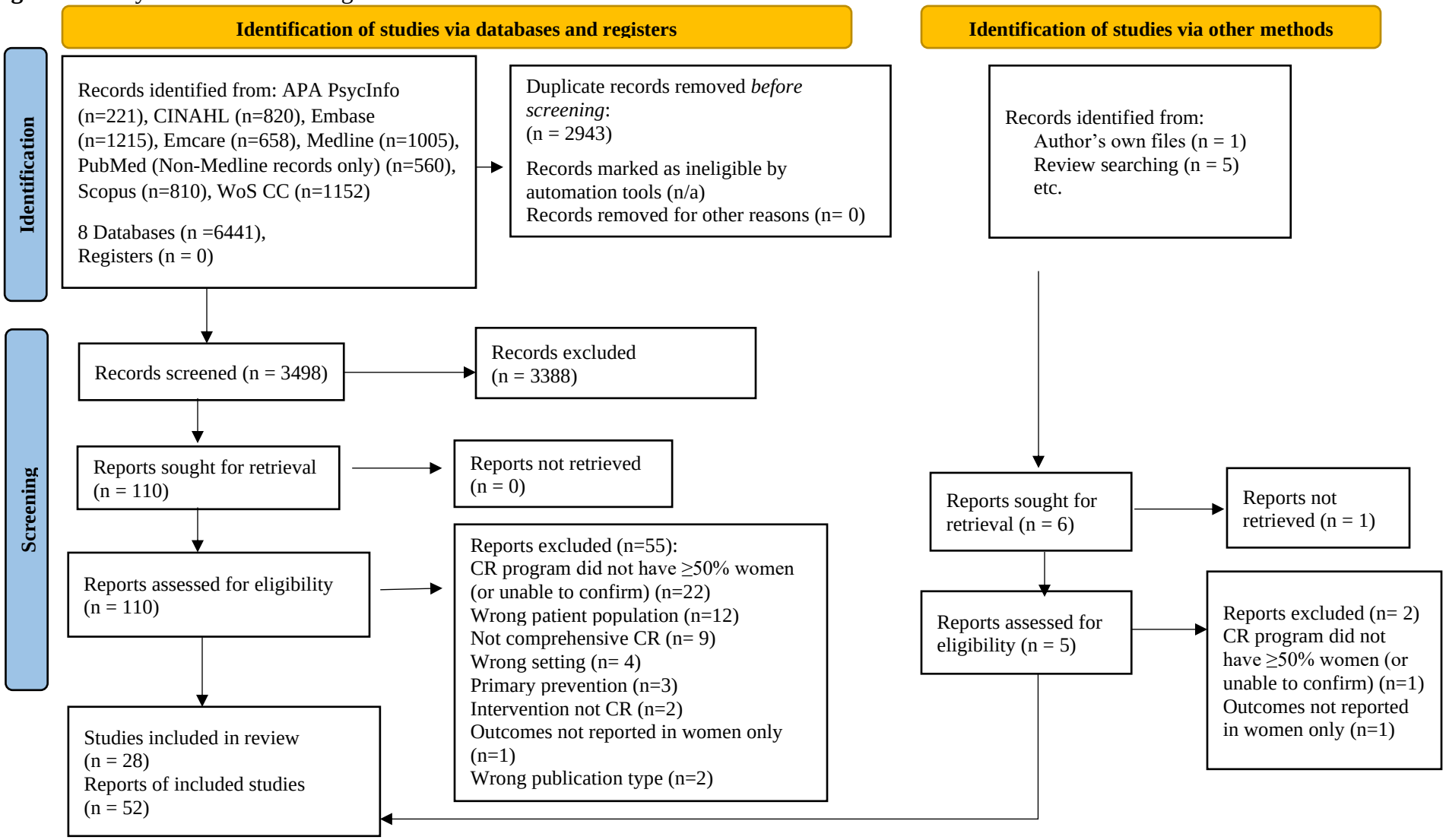
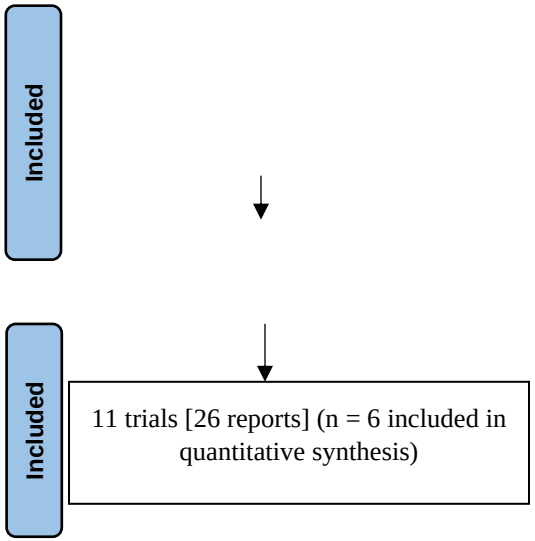
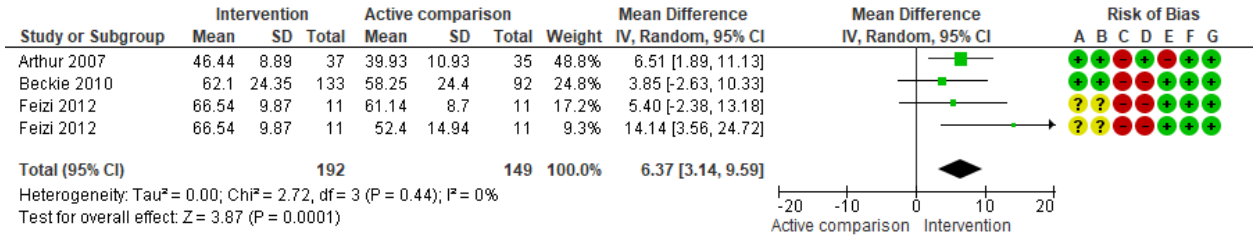




APA, American Psychological Association; CR, cardiac rehabilitation; CINAHL, Cumulative Index to Nursing & Allied Health Literature; CVD, cardiovascular diseases; n/a not applicable; WoS CC, Web of Science Core Collection.

From: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ 2021;372:n71. doi: 10.1136/bmj.n71. For more information, visit: http://www.prisma-statement.org/

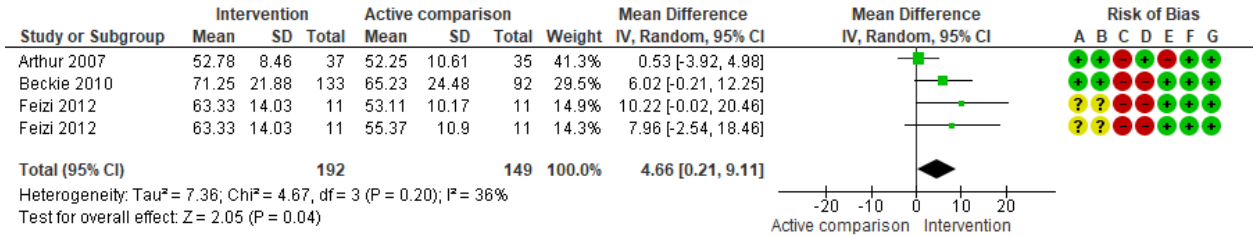
Figure 2a: Forest plot summarizing effect of CR versus AC on QoL Physical Component Summary Scores (SF-36)



Risk of bias legend
(A) Random sequence generation (selection bias)
(B) Allocation concealment (selection bias)
(C) Blinding of participants and personnel (performance bias)
(D) Blinding of outcome assessment (detection bias)
(E) Incomplete outcome data (attrition bias)
(F) Selective reporting (reporting bias)
(G) Other bias

CR, Cardiac rehabilitation; AC, Active comparison, QoL, Quality of life; SF 36, Short form questionnaire 36; PCS, physical component summary.

Figure 2b: Forest plot summarizing effect of CR versus AC on QoL Mental Component Summary Scores (SF-36)



CR, Cardiac rehabilitation; AC, Active comparison, QoL, Quality of life; SF 36, Short form questionnaire 36; MCS, mental component summary.

Table 1: Study Design and Summary of Findings (N=27 studies except Availability study)

Study Author [associated citations], Year, Country	Study design, comparison (y/n, if y nature of); # centres; quality‡	Participants/ Sample: Size (% female), Mean age; ethnocultural background; CHD type [& % HF]; males for comparison (y/n)	Results
Andersson et al.[36] 2010, Sweden	Study design: RCT, comparison: y (AC: physiotherapy [8 sessions= 2x/wk for 4 wks, bicycling or aerobic exercise; information on healthy food and adverse effects of nicotine provided]); 1 centre; quality: 4/5	N=149 (100% female); mean age: 53.4±6.2 years; ethnocultural background: NR; CHD type: AMI (65.2%) (& 0% HF); Males for comparison: no	Mortality (%): 4 participants died during the intervention period. Not specified by group. # of Emergency visits (5 yrs): WFCR yr 1 0.49 (1.12), WFCR yr 5 0.10 (0.35); AC yr 1 0.69 (1.28), AC yr 5 0.52 (1.85); significant difference in women-focused CR 5 years post-intervention ($p<0.01$) and significant difference between groups ($p<0.05$) Scheduled doctor visits (5 yrs): WFCR yr 1 1.17 (1.17), WFCR yr 5 0.48 (0.67); AC yr 1 1.15 (1.30), AC yr 5 0.44 (1.13); significant difference in WFCR ($p=0.04$) and AC ($p<0.01$) following the CR. Number of days, in-patient (5 yrs): WFCR yr 1 2.06 (6.59), WFCR yr 5 0.41 (2.43); AC yr 1 1.34 (2.84), AC yr 5 0.77 (1.86); significant difference in WFCR group ($p<0.01$) following the CR. Proportion employed (5 yrs): WFCR yr 1 70, WFCR yr 5 55; AC yr 1 70, AC yr 5 58; No significant difference within or between groups.

			Proportion on sick leave (5 yrs): WFCR yr 1 47, WFCR yr 5 14; AC yr 1 36, AC yr 5 6; No significant difference within or between groups. Proportion with disability pension (5 yrs): WFCR yr 1 28, WFCR yr 5 72; AC yr 1 24, AC yr 5 60; No significant difference within or between groups.
Arthur et al.[45] 2007, Canada	Study design: RCT, comparison: y (AC: AT [48 sessions= 2x/wk for 24 wks, 40 mins; moderate intensity; using stationary cycles, treadmills, arm ergometers, stair climbers; received other components of comprehensive CR]); 1 centre; quality: 4/5	N=92 (100% female); mean age: NR; ethnocultural background: NR; CHD type: AMI (NR) (& 0% HF). Males for comparison: no	Functional capacity (VO_{2Peak}) (L/min) (18 mo): pre-WFCR 0.98±0.25, post-WFCR 1.12±0.27; pre-AC 0.93±0.22, post-AC 1.19±0.28; No significant difference between and within groups following intervention. Functional capacity (METs) (18 mo): pre-WFCR 3.77±0.85, post-WFCR 4.46±1.44; pre-AC 3.78±0.89, post-AC 4.74±1.20; No significant difference between and within groups following intervention. QoL (SF-36) (18 mo): PCS (scores): pre-WFCR 39.03±8.69, post-WFCR 46.44±8.89; pre-AC 37.00±8.13, post-AC 39.93± 10.93; significant difference in WFCR group (p=0.0002) and between groups (p=0.05) following intervention. MCS (scores): pre-WFCR 51.60±12.07, post-WFCR 52.78±8.46; pre-AC 49.98±10.88, post-AC 52.25±10.61; No significant difference between and within groups following intervention. Arm flexion (Kg) (18 mo): pre-WFCR 8.75±3.20, post-WFCR 12.02±2.96; pre-AC

			7.45±2.81, post-AC 10.50±3.23; Significant difference within groups (p<0.0001) but no significant difference between groups following intervention. Leg flexion (Kg) (18 mo): pre-WFCR 15.57±3.80, post-WFCR 18.82±5.05; pre-AC 15.12±4.32, post-AC 18.45±5.65; Significant difference within groups (p<0.0001) but no significant difference between groups following intervention. Leg press (18 mo): pre-WFCR 76.16±20.99, post-WFCR 109.34±39.58; pre-AC 74.57±20.38, post-AC 101.60±23.93; Significant difference within groups (p<0.0001) but no significant difference between groups following intervention. Bench press (18 mo): pre-WFCR 15.21±6.42, post-WFCR 24.12±6.99; pre-AC 14.11±7.33, post-AC 22.00±7.15; Significant difference within groups (p<0.0001) but no significant difference between groups following intervention. Self-efficacy (18 mo): There were statistically significant improvement in self-efficacy for stair climbing (p = 0.0024), for lifting (p < 0.0001) and for walking (p = 0.0012) within groups following intervention. No significant difference between groups.
Asbury et al.[40] 2008, UK	Study design: RCT with parallel arms, comparison: y (UC control group with symptom monitoring only); 1 centre; quality: 4/5	N=64 (100.0% female); mean age: 57.3±8.6 years; ethnocultural	Functional capacity (ISWD) (meters) (4 mo): pre-WFCR 326.80±111.00, post-WFCR 423.60±133.20, pre-UC NR, post-

		background: NR; CHD type: cardiac syndrome X (100%) (& 0% HF); Males for comparison: no	UC NR; Significant difference within WFCR (p<0.001) following intervention. Diastolic blood pressure (mmHg) (4 mo): pre-WFCR 84.70±9.40, post-WFCR 79.70±7.30, pre-UC NR, post-UC NR; Significant difference within WFCR (p=0.007) following intervention. BMI (Kg/m^2) (4 mo): pre-WFCR 29.10±6.00, post-WFCR 28.40±6.17, pre-UC NR, post-UC NR; Significant difference within WFCR (p=0.003) following intervention. QoL (SF-36) (4 mo) Physical functioning: pre-WFCR 53.10±20.40, post-WFCR 62.10±19.70, pre-UC 57.40±20.30, post-UC 60.30±22.20; Significant difference within WFCR (p<0.001) and no significant difference between groups following intervention. Role physical: pre-WFCR 29.40±37.90, post-WFCR 46.40±41.70; pre-UC 25.80±36.20, post-UC 43.90±38.10; Significant difference within WFCR (p=0.05) and no significant difference between groups following intervention. Emotional role: pre-WFCR 58.30±44.10, post-WFCR 72.60±38.50; pre-UC 72.40±41.80, post-UC 70.10±40.10; Significant difference within WFCR (p=0.05) and no significant difference between groups following intervention. Energy: pre-WFCR 35.50±20.60, post-WFCR 45.70±22.10; pre-UC 43.60±23.40,

			post-UC 44.30±25.50; Significant difference within WFCR ($p<0.001$) and no significant difference between groups following intervention. <u>Well-Being:</u> pre-WFCR 67.40±17.60, post-WFCR 72.10±19.90; pre-UC 74.20±14.70, post-UC 47.40±14.30; No significant difference between and within groups following intervention. <u>Social functioning:</u> pre-WFCR 66.10±23.50, post-WFCR 70.50±26.80; pre-UC 75.00±24.10, post-UC 69.80±23.70; No significant difference between and within groups following intervention. <u>Pain:</u> pre-WFCR 49.90±20.70, post-WFCR 58.70±22.30; pre-UC 54.30±19.90, post-UC 57.40±20.30; Significant difference within WFCR ($p<0.01$) and no significant difference between groups following intervention. <u>General Health:</u> pre-WFCR 49.10±19.30, post-WFCR 58.20±16.40; pre-UC 48.10±22.20, post-UC 54.30±22.90; Significant difference within WFCR ($p=0.01$) and UC ($p=0.02$) and no significant difference between groups following intervention. <u>Anxiety (HADs) (4 mo):</u> pre-WFCR 8.10±3.40, post-WFCR 6.70±3.30; pre-UC 7.00±3.50, post-UC 6.20±3.30; Significant difference within WFCR ($p=0.01$) and no significant difference between groups following intervention.

			Depression (HADs) (4 mo): pre-WFCR 5.50±3.70, post-WFCR 4.80±3.30; pre-UC 4.20±2.70, post-UC 3.80±2.40; No significant difference between and within groups following intervention. HADs Total (4 mo): pre-WFCR 13.50±5.90, post-WFCR 11.50±5.70; pre-UC 11.10±4.90, post-UC 10.10±4.60; Significant difference within WFCR (p=0.04) and no significant difference between groups following intervention. HAQ Health worry (4 mo): pre-WFCR 4.60±3.00, post-WFCR 3.50±2.30; pre-UC 3.90±2.60, post-UC 3.20±2.30; Significant difference within WFCR (p=0.01) and no significant difference between groups following intervention. HAQ Fear of Illness (4 mo): pre-WFCR 3.70±2.30, post-WFCR 3.50±2.20; pre-UC 3.5±2.90, post-UC 3.10±2.40; No significant difference between and within groups following intervention. HAQ Reassurance (4 mo): pre-WFCR 1.20±1.20, post-WFCR 1.10±0.90; pre-UC 1.10±1.00, post-UC 1.00±1.10; No significant difference between and within groups following intervention. HAQ Interference (4 mo): pre-WFCR 2.40±1.80, post-WFCR 1.80±1.60; pre-UC 2.20±2.00, post-UC 1.70±1.90; Significant difference within WFCR (p=0.02) and no significant difference between groups following intervention.

			HAQ Total (4 mo): pre-WFCR 12.00±5.70, post-WFCR 9.90±5.20; pre-UC 10.70±6.20, post-UC 9.10±1.10; Significant difference within WFCR (p=0.02) and no significant difference between groups following intervention. CAQ Fear (Cardiac anxiety questionnaire) (4 mo): pre-WFCR 1.30±0.50, post-WFCR 1.20±0.50; pre-UC 1.50±0.70, post-UC 1.20±0.50; No significant difference between and within groups following intervention. CAQ Avoidance (Cardiac anxiety questionnaire) (4 mo): pre-WFCR 1.50±0.60, post-WFCR 1.30±0.60; pre-UC 1.60±0.80, post-UC 1.50±0.80; Significant difference within WFCR (p=0.02) and no significant difference between groups following intervention. CAQ Attention (Cardiac anxiety questionnaire) (4 mo): pre-WFCR 1.40±0.70, post-WFCR 1.40±0.60; pre-UC 1.30±0.80, post-UC 1.20±0.70; No significant difference between and within groups following intervention. CAQ Total (Cardiac anxiety questionnaire) (4 mo): pre-WFCR 1.40±0.50; post-WFCR 1.30±0.40; pre-UC 1.50±0.60, post-UC 1.30±0.50; Significant difference within WFCR (p=0.03) and UC (p=0.03) and no significant difference between groups following intervention.

Azad et al.[42] 2012, Canada	Study design: Pretest, posttest single group (part of a larger RCT), comparison: not available; 1 centre; quality: 3/5	N=51 (100% female); mean age: 74.4±6.9 yrs; ethnocultural background: NR; CHD type: 100% HF; Males for comparison: no	Average CR session attendance rate: 87% QoL (MLWHFQ) (1.5 mo): Low attendees (attended <90% of scheduled sessions) 26.30±17.98, High attendees (attended >90% of scheduled sessions) 28.35±17.18. No significant difference between the two groups. NYHA class frequency: Class I: low attendees (<90%) 6, High (>90%) 6; Class II: low attendees (<90%) 9, High (>90%) 9; Class III: low attendees(<90%) 5, High (>90%) 8; No significant difference between the two groups. Age (yrs): Low attendees (<90%) 74.10±6.62, High attendees (>90%) 74.65±7.16. No significant difference between the two groups.
Beckie et al. [50],[44],[51],[52],[53],[54],[55],[56] 2010, USA	Study design: RCT, comparison: y (AC: Traditional CR [36 sessions= 3x/wk for 12 wks; aerobic training by treadmill walking, cycling or rowing; eight education classes of 1 hour duration on CHD risk factor modification before each exercise session]); 1 centre; quality: 5/5	N=252 ([WFCR=111, AC=141] (100% female); mean age: 61.6±10.0 years; ethnocultural background: Caucasian 82.0%; CHD type: AMI (4.4%), chronic SA (12%), (& 0% HF); Males for comparison: no	Functional Capacity (METs) (9 mo): pre-WFCR 6±2.50; post-WFCR 7.4±2.00; pre-AC 6.00±2.00; post-AC 8.10±3.00. Significant difference within WFCR and AC group ($p<0.05$) following the intervention. Systolic blood pressure (mm Hg) (9 mo): pre-WFCR 121.00±12.00, post-WFCR 115.00±12.00, pre-AC 115.00±11.00, post-AC 115.00±11.00; Significant difference within WFCR ($p<0.05$) following intervention. Diastolic blood pressure (mm Hg) (9 mo): pre-WFCR 75.00±9.00, post-WFCR 71.50±8.00, pre-AC 73.00±9.00, post-AC

			73.00±7.00; Significant difference within WFCR ($p<0.05$) following intervention. Total cholesterol (mg /dL) (9 mo): pre-WFCR 158.00±37.00; post-WFCR 148.00±29.00; pre-AC 167.00±39.00; post-AC 157.00±41.00; Significant difference within WFCR ($p<0.05$) group and no difference between groups following intervention. LDL-C (mg/dL) (9 mo): pre-WFCR 89.00±34.00; post-WFCR 79.50±24.00; pre-AC 95.20±33.00; post-AC 89.00±34.00; Significant difference within WFCR ($p<0.05$) group and no difference between groups following intervention. HDL-C (mg/dL) (9 mo): pre-WFCR 45.00±13.00; post-WFCR 48.00±14.00; pre-AC 41.00±12.00; post-AC 42.00±11.00. No significant difference within and between groups following the intervention. Total/HDL-C ratio (9 mo): pre-WFCR 3.70±1.50; post-WFCR 3.30±1.00; pre-AC 4.40±2.00; post-AC 4.00±2.00; Significant difference within WFCR group ($p<0.05$) and no significant difference between groups following intervention. Triglycerides (mg /dL) (9 mo): pre-WFCR 113.00±47.00; post-WFCR 101.00±39.00; pre-AC 154.00±76.00; post-AC 133.00±66.00; Significant difference within AC ($p<0.05$) group and no difference between groups following intervention.

			BMI (Kg/m^2) (9 mo): pre-WFCR 32.00±7.00; post-WFCR 31.00±7.00; pre-AC 32.00±7.00; post-AC 31.00±7.00; Significant difference within WFCR ($p<0.05$) and AC groups ($p<0.05$) and no significant differences between groups following intervention. Waist circumference (cm) (9 mo): pre-WFCR 100.00±15.00; post-WFCR 97.00±14.00; pre-AC 100.00±15.00; post-AC 97.00±15.00; Significant difference within WFCR ($p<0.05$) and AC ($p<0.05$) groups and no difference between groups following intervention. Percent body fat (9 mo): pre-WFCR 38.98±3.00; post-WFCR 38.16±4.00; pre-AC 38.75±3.00; post-AC 38.41±4.00; Significant difference within WFCR group ($p<0.05$) only and no significant difference between groups following intervention. QoL (SF-36) (9 mo) Physical functioning: pre-WFCR 48.60±24.10; post-WFCR 63.70±25.50; pre-AC 49.50±24.80; post-AC 59.70±26.20; Significant difference within WFCR ($p<0.05$) and AC ($p<0.05$) and no significant difference between groups following intervention. Role physical: pre-WFCR 42.80±23.60; post-WFCR 63.80±26.80; pre-AC 45.10±25.00; post-AC 61.00±26.20; Significant difference within WFCR ($p<0.05$) and AC ($p<0.05$) and no significant

			difference between groups following intervention. Bodily pain: pre-WFCR 52.60±23.40; post-WFCR 56.90±25.60; pre-AC 54.30±22.60; post-AC 51.70±24.40; Significant difference within WFCR group ($p<0.05$) only and no significant difference between groups following intervention. General Health: WFCR 58.50±18.90; WFCR 64.00±19.50; AC 58.70±20.80; AC 60.60±20.80; Significant difference within WFCR group ($p<0.05$) only and no significant difference between groups following intervention. Role emotional: WFCR 63.80±29.10; WFCR 77.40±24.30; AC 65.00±27.60; AC 70.40±25.90; Significant difference within WFCR group ($p<0.05$) only and no significant difference between groups following intervention. Social functioning: WFCR 64.60±26.20; WFCR 76.60±25.60; AC 68.50±25.90; AC 69.40±27.90; Significant difference within WFCR group ($p<0.05$) only and no significant difference between groups following intervention. Vitality: WFCR 46.30±19.20; WFCR 56.60±19.70; AC 47.20±21.80; AC 50.30±23.40; Significant difference within WFCR group ($p<0.05$) only and no significant difference between groups following intervention.

			Mental Health: WFCR 66.40±20.90; WFCR 74.40±17.90; AC 68.40±21.20; AC 70.80±20.70; Significant difference within WFCR group ($p<0.05$) only and no significant difference between groups following intervention. QoL (MDT scores) (9 mo): WFCR 34.80±7.50; WFCR 37.80±7.90; AC 35.40±6.60; AC 35.90±7.40; Significant difference within WFCR ($p<0.05$) and AC ($p<0.05$) and between groups ($p=0.003$) following intervention. Depression (CES-D) (9 mo): pre-WFCR 17.80±12.00, post-WFCR 11.80±10.50; pre-AC 16.70±10.60, post-AC 14.40±10.00; Significant difference within WFCR ($p=0.02$) and between groups ($p=0.01$) following intervention. Anxiety (State anxiety inventory scale scores) (9 mo): pre-WFCR 34.90±11.60; post-WFCR 32.00±10.80; pre-AC 34.40±12.00; post-AC 32.90±10.70; Significant difference within WFCR ($p<0.05$) and AC ($p<0.05$) and no significant difference between groups following intervention. SASS (scores) (9 mo): pre-WFCR 7.00±2.10; post-WFCR 7.90±1.50; pre-AC 7.10±1.90; post-AC 7.20±1.90; Significant difference within WFCR ($p<0.05$) and AC ($p<0.05$) and between groups ($p=0.01$) following intervention.

			Fasting blood glucose (mg /dL) (9 mo): pre-WFCR 100.00±20.00; post-WFCR 99.00±17.00; pre-AC 103.00±30.00; post-AC 108.00±26.00; No significant difference within and between groups following intervention. HRR1 (bpm) (3 mo): pre-WFCR 17.50±11.00; post-WFCR 19.10±12.00; pre-AC 15.70±9.00; post-AC 16.90±9.50; Significant difference within WFCR ($p<0.05$) group following intervention. HRR2 (bpm) (3 mo): pre-WFCR 31.30±13.00; post-WFCR 33.00±14.60; pre-AC 28.20±13.00; post-AC 31.20±13.70; Significant difference within WFCR ($p<0.05$) group following intervention. Resting HR (bpm) (9 mo): pre-WFCR 73.00±10.00; post-WFCR 69.00±8.00; pre-AC 72.00±8.00; post-AC 71.00±10.00; Significant difference within WFCR ($p<0.05$) group following intervention. Peak treadmill time (min) (9 mo): pre-WFCR 8.50±3.00; post-WFCR 11.00±3.00; pre-AC 9.00±3.00; post-AC 11.00±3.50; Significant difference within WFCR ($p<0.05$) and AC ($p<0.05$) groups and no significant difference between groups following intervention. Cardiovascular biomarkers: HsCRP (mg /dL) (9 mo): pre-WFCR 6.00±8.00; post-WFCR 4.00±5.50; pre-AC 6.00±9.00; post-AC 3.50±4.00; Significant difference within WFCR ($p<0.05$) and AC

			(p<0.05) group and no difference between groups following intervention. Interleukin-6 (pg /mL) (9 mo): pre-WFCR 18.00±48.00; post-WFCR 8.00±19.00; pre-AC 17.00±45.00; post-AC 7.00±7.00; Significant difference within WFCR (p<0.05) and AC (p<0.05) group and no difference between groups following intervention. TNF-α (pg /mL) (9 mo): pre-WFCR 8.50±9.00; post-WFCR 5.00±4.00; pre-AC 12.00±31.00; post-AC 6.00±6.00; Significant difference within WFCR (p<0.05) group and no difference between groups following intervention. ICAM-1 (pg /mL) (9 mo): pre-WFCR 228.50±134.00; post-WFCR 173.00±83.00; pre-AC 179.00±81.00; post-AC 181.00±78.00; Significant difference within WFCR (p<0.05) group and no difference between groups following intervention.
Chou et al.[38] 2016, Canada	Cohort with pretest, posttest design; comparison: y (UC that is, Non-SCAD-CR cohort) ; 1 centre; quality:4/5	N=70 (100.0% female); mean age: 52.3±8.4 yrs; ethnocultural background: Caucasian 82.9%; CHD type: SCAD 100%, (& 0% HF); Males for comparison: no	Mortality (%): WFCR 0 (0.0%), UC 2 (2.8%); No significant difference between groups following intervention. MACE (%): WFCR 3 (4.3%), UC 38 (26.2%); Significant difference between groups following intervention (p<0.001). Recurrent MI (%): WFCR 0 (0.0%), UC 32 (22.1%); Significant difference between groups following intervention (p<0.001). Stroke (%): WFCR 0 (0.0%), UC 3 (2.1%); No significant difference between groups following intervention.

			Revascularization (%): WFCR 3 (4.3%), UC 12 (8.3%); No significant difference between groups following intervention. CV hospitalization (%): WFCR 2 (2.9%), UC 8 (5.5%); No significant difference between groups following intervention. Functional capacity (METs) (6 mo): pre-WFCR 10.10±3.30; post-WFCR 11.50±3.50; Significant difference within WFCR following intervention (p<0.001). Chest pain (%) (6 mo): pre-WFCR 44 (62.90%); post-WFCR 26 (37.10%); Significant difference within CR following intervention (p<0.001). Exercise duration (sec) (6 mo): pre-WFCR 522.00±179.50; post-WFCR 595.90±176.30; Significant difference within CR following intervention (p<0.001). Depressive symptoms (STOP-D) (6 mo): pre-WFCR 13.00±1.40; post-WFCR 8.00±1.70; Significant difference within CR following intervention (p=0.04).
Clark et al. (Women Take Pride trial) [29],[57],[58],[59] 2003, USA	RCT, comparisons: y (AC[women tailored program group format{7 sessions=1x/wk for 6 wks group sessions, then at 6 month another reunion, all f2f, 6-8 women/group] and UC[routine care with physician]; multi-centre (12); quality: 5/5	N=575 (100.0% female); mean age:72.8 years; ethnocultural background: caucasian 82.8%; CHD type: AMI (41.7%), SA (37.6%), (& 23% HF); Males for comparison: no	Mortality (%): CR 8 (3.10%); UC 8 (3.06%) In-Patient days: Significant difference between CR vs UC following intervention. Functional capacity (6MWD, feet) (12mo)¶: pre-WFCR 1052.00±302.30; post-WFCR 1125.50±345.90; Significant difference following intervention (p<0.001). QoL (SF-36) (12 mo)¶: General Health: pre-WFCR 64.00±72.20; post-WFCR 64.70±18.80; No significant difference following intervention.

			Emotional well-being: pre-WFCR 75.90±16.00; post-WFCR 78.80±15.00; Significant difference following intervention (p=0.009). Energy: pre-WFCR 54.90±19.00; post-WFCR 59.00±18.50; No significant difference following intervention. Bodily pain: pre-WFCR 63.00±23.70; post-WFCR 67.10±23.70; No significant difference following intervention. Role physical: pre-WFCR 52.00±41.80; post-WFCR 57.30±42.30; No significant difference following intervention. Social functioning: pre-WFCR 77.70±22.20; post-WFCR 84.10±19.40; Significant difference following intervention (p=0.004). Physical functioning: pre-WFCR 61.80±24.50; post-WFCR 62.50±25.10; No significant difference following intervention. General health status (one-item self-rated physical health measure) (scores) (12mo)¶: pre-WFCR 2.80±0.80; post-WFCR 2.60±0.80; No significant difference following intervention. Cardiac symptoms¶: (i)Number: WFCR 5.80±3.10; WFCR 5.20±3.10; Significant difference following intervention (p=0.03). (ii)Frequency: WFCR 18.40±11.10; WFCR 16.00±10.70; Significant difference following intervention (p=0.01).

			(iii)Level of bother: WFCR 17.90±11.60; WFCR 16.10±12.20; No significant difference following intervention. Weight (lbs)¶: WFCR 171.40±38.60; WFCR 171.20±41.00; No significant difference following intervention. Knowledge (Community resources)¶: WFCR 1.75±0.38; WFCR 1.98±0.42; Significant difference following intervention ($p<0.001$). Stress, Personality (Rosenberg self-esteem) (4 mo)¶: pre-WFCR 4.80±2.70; Pre-UC 4.60±2.80; Significant difference following intervention ($p<0.001$; only baseline data available). SIP- Emotional category (score) (4 mo)¶: pre-WFCR 8.20±12.80; pre-UC 7.80±11.00; Significant difference following intervention ($p<0.001$; only baseline data available). SIP- Physical dimension (score) (4 mo)¶: pre-WFCR 8.40±9.60; pre-UC 10.80±11.10; Significant difference following intervention ($p=0.02$; only baseline data available). Depressive symptoms (score) (4 mo)¶: pre-WFCR 3.50±4.30; pre-UC 3.60±4.40; Significant difference following intervention ($p<0.001$; only baseline data available). Cost¶: Direct program cost per participant (8 participants per session): $130.50 Training cost per participant (32 participants per year): $56.00

			Direct total costs per participant per 4 wk tailored CR program: $186.50
Davidson et al.[34] 2008, Australia	Mixed method study, both quantitative and qualitative approaches were used; In the 2nd half of phase I of HAFW program development pilot trial with 6 women with qualitative method was utilized then descriptive pre-post data were collected during phase II of program development. no comparison; 2 centres; quality:5/5	N=48 (100% female); mean age: 60.85±9.1 yrs; ethnocultural background: NR; CHD type: ACS (% NR) (& 0% HF); Males for comparison: no	Qualitative result: Themes: (1) lack of understanding/awareness of symptoms, (2) perception of isolation, (3) not prioritizing one's own health, and (4) benefits of support and supportive education/awareness. Quantitative results: DASS/ Depression (1.5 mo): pre-WFCR 9.35±11.24; post-WFCR 7.62±6.91; Significant difference following intervention (p NR). DASS/ Anxiety (1.5 mo): pre-WFCR 8.32±9.54; post-WFCR 6.81±7.93; Significant difference following intervention (p NR). DASS/ Stress (1.5 mo): pre-WFCR 10.86±9.82; post-WFCR 11.23±6.81; Significant difference following intervention (p NR). WRIP/ Stress (1.5 mo): pre-WFCR 4.35±2.89; post-WFCR 3.33±2.27; No significant difference following intervention. WRIP/ Satisfaction (1.5 mo): pre-WFCR 7.07±2.04; post-WFCR 7.76±2.23; No significant difference following intervention. CCI (1.5 mo): pre-WFCR 3.58±0.53; post-WFCR 3.83±0.46; No significant difference following intervention. MSPSS (1.5 mo): pre-WFCR 5.60±0.89; post-WFCR 5.69±0.85; No significant difference following intervention.

			MSPSS/Significant other (1.5 mo): pre-WFCR 5.87±1.16; post-WFCR 5.95±1.40; No significant difference following intervention. MSPSS/ Family (1.5 mo): pre-WFCR 5.52±1.17; post-WFCR 5.61±0.82; No significant difference following intervention. MSPSS/Friend (1.5 mo): pre-WFCR 5.40±0.95; post-WFCR 5.53±0.87; No significant difference following intervention.
Eyada et al.[60] 2007, Saudi Arabia	Pre-post test design; no comparison; 1 centre; quality: 3/5	N=35 (100.0% female); mean age: 50.03±9.2 yrs; ethnocultural background: NR; CHD type: UA (45.7%), NSTEMI (54.2%) (& 0% HF); Males for comparison: no	Resumption of sexual activity (3 mo post-discharge): group I (those resumed their sexual relations) 17 (48.57%) vs group II (those who had not resumed their sexual relations) 18 (51.43%). Patients attended CR were 3.77 times more likely to resume sexual activity than those who did not receive CR (OR = 3.77, CI = 0.74–20.39). CR completion: Group I 12 (70.59%); Group II 7 (38.89%); Significant difference between groups ($p<0.05$) ASEX score: Assessed only in group I. Group I 24.11±3.42; Those who did not complete their CR 25.00±3.39; Those who completed their CR 23.75±3.52; No significant difference between groups.
Feizi et al.[33] 2012, Iran	RCT (4 arms); comparisons: 2 AC controls (AC1: PMR [2 f2f sessions lesson on Jacobson's PMR method for 16-muscle groups, then practice PMR 15 min daily at home] and AC2: CR [phase III CR with aerobic exercise including walking,	N=40 (100.0% female); mean age: 50.9±6.9 yrs; ethnocultural background: NR; CHD type: cardiac syndrome X	QoL (SF-36) (2 mo) Physical functioning: pre-WFCR 38.63±12.86; post-WFCR 66.36±7.44; pre-AC1 38.18±12.30; post-AC1 46.36±11.42; pre-AC2 35.63±12.90; post-AC2 59.54±8.20; pre-UC 30.71±20.70; post-UC 31.42±14.35; Significant difference between

	stretching with gradually increasing intensity and duration of maximum 40 min; educational pamphlet and Cds also provided to practice]) and vs UC control [no CR or PMR]); 1 centre; quality: 3/5	(100%) (& 0% HF); Males for comparison: no	WFCR vs PMR ($p<0.05$), WFCR vs UC ($p<0.05$), AC1 vs AC2 ($p<0.05$), AC2 vs UC ($p<0.05$) groups following intervention. Role Physical: pre-WFCR 30.81±14.90; post-WFCR 71.02±8.03; pre-AC1 32.39±9.19; post-AC1 51.13±12.75; pre-AC2 Baseline 39.20±9.71; post-AC2 61.93±7.10; pre-UC 34.82±13.14; post-UC 30.35±9.14; Significant difference between WFCR vs AC1 ($p<0.05$), WFCR vs AC2 (P,0.05), WFCR vs UC ($p<0.05$), AC1 vs UC ($p<0.05$), AC2 vs UC ($p<0.05$) groups following intervention. Bodily Pain: pre-WFCR 37.50±15.81; post-WFCR 73.86±14.20; pre-AC1 38.63±10.29; post-AC1 59.09±16.85; pre-AC2 42.04±17.91; post-AC2 67.04±10.11; pre-UC 33.92±11.88; post-UC 26.78±8.62; Significant difference between WFCR vs UC ($p<0.05$), AC1 vs UC ($p<0.05$), AC2 vs UC ($p<0.05$) groups following intervention. General Health: pre-WFCR 33.71±10.93; post-WFCR 54.92±9.82; pre-AC1 33.33±10.86; post-AC1 53.03±18.73; pre-AC2 Baseline 36.74±11.30; post-AC2 56.06±9.38; pre-UC 44.64±24.49; post-UC 32.73±14.31; Significant difference between WFCR vs UC ($p<0.05$), AC1 vs UC ($p<0.05$), AC2 vs UC ($p<0.05$) groups following intervention. Role emotional: pre-WFCR 31.81±15.73; post-WFCR 62.87±13.10; pre-AC1 31.81±14.34; post-AC1 62.87±12.56; pre-

			AC2 34.09±16.00; post-AC2 50.75±10.17; pre-UC 32.14±16.26; post-UC 29.76±15.10; Significant difference between WFCR vs UC ($p<0.05$), AC1 vs UC ($p<0.05$), AC2 vs UC ($p<0.05$) groups following intervention. <u>Social functioning:</u> pre-WFCR 48.86±16.25; post-WFCR 72.72±19.21; pre-AC1 44.31±8.59; post-AC1 62.04±8.42; pre-AC2 52.27±10.92; post-AC2 62.50±12.50; pre-UC Baseline 48.21±15.18; post-UC 39.28±11.24; Significant difference between WFCR vs UC ($p<0.05$), AC1 vs UC ($p<0.05$), AC2 vs UC ($p<0.05$) groups following intervention. <u>Vitality:</u> pre-WFCR 32.95±9.71; post-WFCR 61.36±10.75; pre-AC1 25.56±13.24; post-AC1 53.40±10.95; pre-AC2 27.84±11.64; post-AC2 50.56±9.03; pre-UC 25.89±12.72; post-UC 26.78±11.24; Significant difference between WFCR vs UC ($p<0.05$), AC1 vs UC ($p<0.05$), AC2 vs UC ($p<0.05$) groups following intervention. <u>Mental Health:</u> pre-WFCR 27.72±12.52; post-WFCR 56.36±13.05; pre-AC1 25.45±18.76; post-AC1 43.18±11.67; pre-AC2 49.50±24.80; post-AC2 48.63±8.96; pre-UC 27.14±12.53; post-UC 27.14±13.18; Significant difference between WFCR vs UC ($p<0.05$), AC1 vs UC ($p<0.05$), AC2 vs UC ($p<0.05$) groups following intervention. <u>Total:</u> pre-WFCR 34.84±9.04; post-WFCR 63.51±7.71; pre-AC1 33.39±7.33; post-AC1 51.57±7.65; pre-AC2 34.83±9.64; post-AC2

			56.56±6.90; pre-UC 33.73±10.41; post-UC 30.45±6.94; Significant difference between WFCR and AC1 ($p<0.05$), WFCR vs UC ($p<0.05$), AC1 vs UC ($p<0.05$), AC2 vs UC ($p<0.05$) groups following intervention.
Gary et al. [43],[61],[62] 2003, USA	RCT, comparisons: y (AC: education only control received wkly home visits for 12 wks); 1 centre; quality: 4/5	N=32 (100.0% female); mean age: 68.0±11.0 yrs; ethnocultural background: caucasian 59.3%; CHD type: 100% HF; Males for comparison: no	Functional capacity (6MWD) (m) (3 mo): pre-WFCR 840.00±366.00; post-WFCR 1043.00±317.00; pre-AC 824.00±367.00; post-AC 732.00±408.00; Significant difference within WFCR ($p<0.05$) and between groups ($p=0.002$) following intervention. QoL (scores) (MLHFQ) (3 mo): pre-WFCR 41.90±24.10; post-WFCR 24.10±18.00; pre-AC 24.20±18.20; post-AC 27.85±21.90; Significant difference within WFCR ($p<0.01$) and between groups ($p=0.002$) following intervention. Depressive symptoms (GDS) (3 mo): pre-WFCR 6.20±4.40; post-WFCR 4.00±4.00; pre-AC 5.00±2.70; post-AC 7.00±5.00; Significant difference within WFCR group ($p=0.01$) only and between groups ($p<0.05$) following intervention. Exercise self-efficacy (scale modified for women with HF from McAuley and Jacobson) (scores) (3 mo): Self-efficacy adherence: pre-WFCR 76.20±37.10; post-WFCR 83.43±31.60; pre-AC 80.60±33.90; post-AC 64.70±43.90; Significant difference within WFCR group ($p=0.04$) only, and between groups ($p<0.05$) following intervention.

			Self-efficacy Barrier: pre-WFCR 66.20±26.90; post-WFCR 75.50±21.40; pre-AC 64.50±23.20; post-AC 50.54±37.50; No significant difference between and within groups following intervention. Self-efficacy workload: pre-WFCR 56.70±25.90; post-WFCR 71.93±28.00; pre-AC 59.30±28.20; post-AC 56.31±37.00; Significant difference within WFCR group ($p=0.03$) only and between groups ($p<0.05$) following intervention. Self-efficacy outcome: pre-WFCR 13.57±1.90; post-WFCR 14.36±2.60; pre-AC 13.80±2.00; post-AC 13.23±2.08; No significant difference within and between groups following intervention.
Grace et al. (CR4HER trial)[30],[63],[64],[65],[66] 2014, Canada	Single-blind, 3 parallel arm, pragmatic RCT; comparison: y (AC1: supervised mixed-sex [48 sessions=2x/wk for 24 wks, 60 min; aerobic exercise via stationary bicycle/treadmill/walking and education classes] and AC2 home-based [27 sessions=3 supervised and 1x/wk for 24 wks phone calls along with education materials] CR); 3 centres; quality: 4/5	N=169 (100% female); mean age: 63.64±10.42 yrs; ethnocultural background: Caucasian 62.50%; CHD type: AMI (35.5%), (& 0% HF); Males for comparison: no	Functional capacity (VO_{2Peak}) (6 mo): pre-WFCR 18.01±5.94; post-WFCR 20.07±5.53; pre-AC1 15.76±4.04; post-AC1 19.11±5.18. pre-AC2 14.92±3.01; post-AC2 17.32±3.67. Significant difference within AC1 ($p<0.001$) and WFCR group ($p<0.05$) following the intervention. CR program adherence: WFCR 6 mo 54.40± 27.83; AC1 6 mo 51.33±27.09. AC2 6 mo 58.12±29.60. Significant difference between WFCR and AC2 group ($p<0.05$). Systolic blood pressure (mmHg) (6 mo): pre-WFCR 130.38±17.43; post-WFCR 124.86±17.45; pre-AC1 128.81±20.02; post-AC1 125.65±17.69. pre-AC2 125.75±19.59; post-AC2 118.25±14.46. Significant difference between pre and post program for

			all models ($p<0.05$) following the intervention. Diastolic blood pressure (mmHg) (6 mo): pre-WFCR 73.57±8.26; post-WFCR 75.38±8.48; pre-AC1 74.60±10.00; post-AC1 72.98±10.18. pre-AC2 71.58±10.33; post-AC2 72.42±9.00. No significant difference within and between groups following the intervention. Total Cholesterol (mmole/L) (6 mo): pre-WFCR 4.81±0.71; post-WFCR 4.25±1.03; pre-AC1 4.84±1.54; post-AC1 4.14±1.38. pre-AC2 4.74±1.40; post-AC2 4.05±0.75. Significant difference between WFCR and AC1 ($p<0.05$) following the intervention. LDL-C (mmole/L) (6 mo): pre-WFCR 2.66±0.54; post-WFCR 2.16±0.85; pre-AC1 2.79±1.33; post-AC1 2.25±1.11. pre-AC2 2.89±1.27; post-AC2 2.16±0.68. Significant difference between WFCR and AC1 ($p<0.05$) following the intervention. HDL-C (mmole/L) (6 mo): pre-WFCR 1.61±0.34; post-WFCR 1.74±0.36; pre-AC1 1.46±0.52; post-AC1 1.77±0.90. pre-AC2 1.33±0.45; post-AC2 1.40±0.49. Significant difference between pre and post program for all models ($p<0.05$). Triglycerides (mmole/L) (6 mo): pre-WFCR 1.03±0.55; post-WFCR 0.79±0.34; pre-AC1 1.45±0.64; post-AC1 1.43±0.72. pre-AC2 1.13±0.64; post-AC2 1.06±0.53. No significant difference within and between groups following the intervention.

			BMI (Kg/m2) (6 mo): pre-WFCR 27.58±5.21; post-WFCR 26.45±5.50; pre-AC1 29.40±5.91; post-AC1 29.09±5.73. pre-AC2 27.13±6.89; post-AC2 27.74±7.07. No significant difference within and between groups following the intervention. Waist circumference (cm) (6 mo): pre-WFCR 88.78±13.73; post-WFCR 88.69±14.40; pre-AC1 91.72±11.54; post-AC1 90.55±10.96. pre-AC2 101.00±8.89; post-AC2 103.33±2.52. No significant difference within and between groups following the intervention. Tobacco use (%) (6 mo): pre-WFCR 1 (3.6%); post-WFCR 1 (3.6%); pre-AC1 3 (6.80%); post-AC1 2 (4.50%). pre- AC2 1(11.10%); post-AC2 2 (11.10%); No significant difference within and between groups following the intervention. QoL (Euro-QoL-5D) (6 mo): pre-WFCR 0.78±0.16; post-WFCR 0.88±0.14; pre-AC1 0.74±0.21; post-AC1 0.81±0.21. pre-AC2 0.84±0.096; post-AC2 0.87±0.15. Significant difference within WFCR ($p<0.01$) and AC1 ($p<0.05$) following CR and no difference between groups. Total CRBS score (6 mo): post-WFCR 1.73±0.70; post-AC1 1.92±0.68. post-AC2 2.01±0.98. No significant difference within and between groups following the intervention. Exercise behavior (Pedometer step count) (6 mo): pre-WFCR 5390.76±2675.18; post-

			WFCR 6290.44±3055.43; pre-AC1 5771.71±2799.30; post-AC1 5872.72±2797.40. pre-AC2 6074.48±3480.38; post-AC2 7802.61±5792.55; No significant difference within and between groups following the intervention. <u>Self-reported physical activity score (by using Godin Leisure-Time Exercise Questionnaire) (6 mo):</u> pre-WFCR 22.38±17.56; post-WFCR 33.58±19.26; pre-AC1 20.12±16.84; post-AC1 30.16±20.86. pre-AC2 30.38±21.22; post-AC2 28.53±15.33. Significant difference within WFCR ($p<0.01$) and AC1 ($p<0.05$) and no significant difference between groups following CR. <u>Diet (Diet Habit Survey total score) (6 mo):</u> pre-WFCR 198.31±24.72; post-WFCR 205.66±27.50; pre-AC1 202.78±38.35; post-AC1 206.00±30.32. pre-AC2 203.98±22.00; post-AC2 203.33±30.00. Significant difference within WFCR group post-program ($p<0.05$) and no significant difference between groups. <u>Anxiety (HADs) (6 mo):</u> post-WFCR 4.78±3.77; post-AC1 7.07±4.36. post-AC2 5.44±4.29. Significant difference in WFCR vs AC1 following CR. No significant difference within groups following the intervention. <u>Depressive symptoms (PHQ-2) (6 mo):</u> post-WFCR 0.43±0.96; post-AC1 1.41±1.77;

			post-AC2 0.49±0.82. Significant difference between groups (p<0.001) following the intervention. Social support (TIES) (6 mo): pre-WFCR 18.96±8.47; post-WFCR 19.71±8.10; pre-AC1 17.23±7.52; post-AC1 17.05±7.94. pre-AC2 20.76±6.13; post-AC2 20.82±6.99. No significant difference within and between groups following the intervention. CR satisfaction (‘Please indicate your degree of satisfaction with the CR program to which you were referred’): 4.23±1.16/5. There was no significant difference in patient satisfaction by program model. Gender-tailored satisfaction items (7-item questionnaire generated by investigators) (6 mo): i) Felt comfortable with my work-out clothes: post-WFCR 4.77±0.43; post-AC1 4.27±0.72. post-AC2 4.56±0.51. Significant difference between WFCR and AC1 group (p=0.001). ii) Satisfied with education in the program: post-WFCR 3.86±1.04; post-AC1 3.86±1.03. post-AC2 4.19±0.83. No significant difference between models. iii) Satisfied with life role direction given: post-WFCR 3.86±1.11; post-AC13.84±1.07. post-AC2 3.67±1.05. No significant difference between groups. iv) Satisfied with psychosocial issues discussion: post-WFCR 3.54±1.17; post-

			AC1 3.59±1.06; post-AC2 3.27±1.10. No significant difference between groups. v) Behavior change counseling suited me: post-WFCR 3.56±1.16; post-AC1 3.27±1.05. post-AC2 3.36±1.01. No significant difference between groups. vi) Satisfied with women's health issues discussion: post-WFCR 3.30±1.14; post-AC1 3.02±1.14. post-AC2 2.80±1.32. No significant difference between groups. vii) Competitive environment: post-WFCR 1.43±0.68; post-AC1 1.77±1.17. post-AC2 2.31±0.95. Significant difference between WFCR and mixed-sex CR group ($p<0.01$). CR preferences total score (CRPF-R) (6 mo): post-WFCR 2.33±0.34; post-AC1 2.38±0.30. post-AC2 2.11±0.31. Significant difference between groups ($p<0.01$).
Gunn et al.[67] 2007, Canada	Study design: single group pre-post design, comparison: y (AC: matched control cohort who attended outpatient CR [on utilization of ancillary CR services including supervised hospital-based exercise, home-based exercise, nursing and nutrition services] no other information provided); 1 centre; quality: 3/5	N=45 (100% female); mean age: NR; ethnocultural background: NR; CHD type: NR; Males for comparison: no	Compared to baseline scores, women who completed the women's only exercise and education program reported significant increases in self-efficacy for stair climbing ($p<0.01$), lifting ($p<0$ .01), and walking ($p<0$ .001). There were also significant positive changes in anxiety ($p<0$ .01), depression ($p<0.01$), satisfaction with physical function ($p<0$ .01), and satisfaction with body appearance ($p<0.001$). There were no changes in physical or mental HRQL ($P>0.05$). Mean adherence to the women-only program was 75.71%. Compared to matched controls, participants in women-

			only program utilized a significantly greater amount of CR services.
Heald et al.[28] 2021, Canada	Retrospective study, pretest, posttest design; comparison: y (3 groups-supervised mixed-sex[25 sessions=1 initial assessment plus 1x/wk supervised session for 24 wks] , home-based[20 sessions=2 initial and exit assessment, wkly phone calls for 12 wk then biwkly phone calls for 12 wks] and Men comparison; 3 centres; quality: 4/5	N=727 (100% female); mean age: 66.9±12.3 years; ethnocultural background: NR; CHD type: AMI (55.0%), SA (3.5%) (& 3.6% HF); Males for comparison: y	Functional capacity (VO_{2Peak}) (ml/Kg/min) (6 mo): pre-WFCR 16.00±4.50; post-WFCR 19.80±4.50; pre-AC1 17.70±5.30; post-AC1 20.80±6.00. pre-AC2 18.30±6.40; post-AC2 18.60±6.20. Significant difference between AC1 and AC2 group ($p<0.05$) following the intervention. Functional capacity (METs) (6 mo): pre-WFCR 4.60±1.30; post-WFCR 5.60±1.30; pre-AC1 5.10±1.50; post-AC1 5.90±1.70. pre-AC2 5.20±1.80; post-AC2 5.20±1.80. Significant difference between AC1 and AC2 group ($p<0.05$) following the intervention. Systolic blood pressure (mmHg) (6 mo): pre-WFCR 124.00±17.00; post-WFCR 123.90±15.10; pre-AC1 121.60±17.60; post-AC1 120.30±15.60. pre-AC2 123.90±20.30; post-AC2 116.60±17.50. Significant difference between AC1 and AC2 group ($p<0.05$) following the intervention. Diastolic blood pressure (mmHg) (6 mo): pre-WFCR 72.20±8.00; post-WFCR 74.20±8.00; pre-AC1 72.90±9.80; post-AC1 73.10±8.10. pre-AC2 67.70±8.80; post-AC2 66.80±6.60. Significant difference between AC1 and AC2 group ($p<0.05$) following the intervention. Total cholesterol (mmol/L) (6 mo): pre-WFCR 4.00±1.20; post-WFCR 4.00±1.10; pre-AC1 4.10±1.10; post-AC1 4.10±1.20.

			pre-AC2 4.00±1.30; post-AC2 5.00±1.20. Significant difference between AC1 and AC2 group ($p<0.05$) following the intervention. LDL-C (mmol/L) (6 mo): pre-WFCR 2.00±1.00; post-WFCR 1.90±0.90; pre-AC1 2.00±1.00; post-AC1 2.00±1.00. pre-AC2 2.10±1.00; post-AC2 3.20±0.70. Significant difference between AC1 and AC2 group ($p<0.05$) following the intervention. HDL-C (mmol/L) (6 mo): pre-WFCR 1.60±0.50; post-WFCR 1.50±0.40; pre-AC1 1.50±0.40; post-AC1 1.50±0.40. pre-AC2 1.50±0.50; post-AC2 1.20±0.10. Significant difference between AC1 and AC2 group ($p<0.05$) following the intervention. Triglycerides (mmol/L) (6 mo): pre-WFCR 1.30±0.80; post-WFCR 1.30±0.70; pre-AC1 1.30±0.70; post-AC1 1.30±0.70. pre-AC2 1.00±0.30; post-AC2 1.50±0.80. Significant difference between AC1 and AC2 group ($p<0.05$) following the intervention. Tobacco use (%) (6 mo): pre-WFCR 0 (0.0%); post-WFCR 0 (0.0%); pre-AC1 3 (5.9%); post-AC1 2 (5.1%). pre- AC2 0 (0.0%); post-AC2 0 (0.0%); Significant difference between AC1 and AC2 ($p<0.05$) following the intervention. BMI (Kg/m^2) (6 mo): pre-WFCR 27.80±5.20; post-WFCR 27.80±5.90; pre-AC1 27.50±5.70; post-AC1 27.30±5.60. pre-AC2 31.90±11.00; post-AC2 30.30±11.90. Significant difference between AC1 and

			AC2 group ($p<0.05$) following the intervention. Waist circumference (cm) (6 mo): pre-WFCR 90.30±13.50; post-WFCR 89.20±14.50; pre-AC1 89.20±13.90; post-AC1 87.90±13.90. pre-AC2 95.90±17.60; post-AC2 92.60±23.20. Significant difference between AC1 and AC2 group ($p<0.05$) following the intervention. Depressive symptoms (CES-D) (scores) (6 mo): pre-WFCR 13.80±8.50; post-WFCR 11.20±10.70; pre-AC1 12.60±9.90; post-AC1 10.40±8.70. pre-AC2 11.00±6.80; post-AC2 13.00±4.40. Significant difference between AC1 and AC2 group ($p<0.05$) following the intervention. QoL (Cantril's Ladder of life questionnaire)(scores) (6 mo): pre-WFCR 7.20±1.60; post-WFCR 7.70±1.60; pre-AC1 6.80±1.90; post-AC1 7.50±1.50. pre-AC2 7.00§; post-AC2 7.00§. Significant difference between AC1 and AC2 group ($p<0.05$) following the intervention. Program utilization: Number of sessions attended (6 mo): WFCR 13.60±6.60; AC1 14.70±7.20; AC2 9.90±5.60 of 15; mixed-sex CR men attended 14.30±7.40 sessions. No significant difference in attendance by model. Program completion: (6 mo): WFCR 96 (60.0%) AC1 324 (62.3%). AC2 8 (33.3%). Significant difference between model among women participants($p<0.05$).

Kennedy et al.[68] 2003, Canada	Study design: retrospective cohort, comparison: no; 1 centre; quality: 4/5	N=126 (100% female); mean age: 61.0±12.0 yrs; ethnocultural background: NR; CHD type: AMI (45.2%) (& 0% HF); Males for comparison: no	Total cholesterol (mmol /L) (3.5 mo): pre-WFCR 5.38±1.08; post-WFCR 5.40±1.02; no significant difference within group. HDL-C (mmol /L) (3.5 mo): pre-WFCR 1.20±0.31; post-WFCR 1.26±0.32; Significant difference observed following intervention ($p<0.05$). LDL-C (mmol /L) (3.5 mo): pre-WFCR 3.23±0.90; post-WFCR 3.25±0.94; no significant difference within group. Triglyceride (mmol /L) (3.5 mo): pre-WFCR 2.03±0.93; post-WFCR 1.95±0.77; no significant difference within group. QoL (Visual analogue scale) (3.5 mo) (score difference between pre-post data are given) Physical ($p<0.01$), psychosocial ($p<0.05$), worry ($p<0.01$) and nutrition ($p<0.05$) and reduction in symptoms ($p<0.05$) domains of QoL are significantly improved following intervention. Exercise tolerance time (3.5 mo) pre-WFCR 6.6±2.4; post-WFCR 8.0±2.4; Significant difference observed following intervention ($p<0.05$).
Mahmoodian et al.[69] 2012, Iran	Descriptive single group pretest, post-test design; comparison: no; 1 centre; quality: 1/5	N=88 (100% female); mean age: NR; ethnocultural background: NR; CHD type: ACS and HF (proportions NR). Males for comparison: no	*data subdivided by Costello-Comrey Depression and Anxiety Scale (CCDAS) </>60 in the result. Those with CCDAS score>60 is considered as having high anxiety and depressive symptoms. Functional capacity (METs) (2 mo): Significant improvement observed following intervention in both sub-groups (p NR).

			Functional capacity (VO_{2Peak}) (2 mo): Significant difference observed following intervention in both sub-groups (p NR).. QoL (SF-36) (2 mo): All domains: Significantly improved only with the group that had CCDAS >60 following intervention (p NR). Total score, PCS and MCS: increased significantly in both sub-groups following intervention (p NR).
Price et al 2005[16], Rolfe 2010[70], Sutton 2012[71], Landry 2015[72], Canada	Case study of a CR program at Tertiary Hospital (Price); Qualitative study with conceptual themes developed (Rolfe &Sutton); Retrospective single centre cohort study with pre- and posttest data (Landry); comparison: no; 1 centre; quality: 5/5	N=598 (100% female); mean age: 62.5±11.6 yrs; ethnocultural background: NR; CHD type: AMI (25.0%) (& 8.0% HF); Males for comparison: no	Qualitative result: Conceptual themes for provision of care based on Principles of women health (Price 2005)[16]: 1. Empowerment of women 2. Accessible programs 3. Broad definition of health care 4. High quality of care 5. Collaborative planning 6. Innovative and creative approaches Conceptual themes that emerged through in-depth interview of 14 participants are (Sutton 2012): 1. Safety- Physical, social, symbolic 2. Searching for a sense of place: the importance of the therapeutic landscape- continuity of care, sense of belonging, solidarity 3. Confidence and empowerment Key themes that emerged through in-depth interview of 14 participants regarding participants' experiences about participation to WCHI program are (Rolfe 2010):

			1. Acquiring physician referral 2. negotiating transportation issues, and 3. navigating program schedules 4. Peer and professional support Quantitative result: Functional capacity (METs) (12 mo): pre-WFCR 6.40±2.50; post-WFCR 8.70±2.60; Significant difference observed following intervention at discharge, 6 and 12 months ($p<0.001$). Functional capacity (DASI) (12 mo): pre-WFCR 25.30±13.40; post-WFCR 28.60±16.20; Significant difference observed following intervention ($p<0.005$) at discharge and 6 month. Systolic blood pressure (mmHg) (12 mo): pre-WFCR 113.00±4.20; post-WFCR 113.00±9.90; No significant difference observed following intervention at discharge, 6 and 12 months. Total cholesterol (mmol/L) (12 mo): pre-WFCR 4.50±1.10; post-WFCR 4.30±1.00; No significant difference observed following intervention at discharge, 6 and 12 months. LDL-C (mmol/L) (12 mo): pre-WFCR 2.50±0.90; post-WFCR 2.30±0.90; Significant difference observed following intervention at 6 and 12 months. ($p<0.005$). HDL-C(mmol/L) (12 mo): pre-WFCR 1.43±0.40; post-WFCR 1.50±0.50; No significant difference observed following intervention at discharge, 6 and 12 months.

			Triglycerides(mmol/L) (12 mo): pre-WFCR 1.60±0.80; post-WFCR 1.50±0.70; No significant difference observed following intervention at discharge, 6 and 12 months. BMI (Kg/m2) (12 mo): pre-WFCR 31.10±7.50; post-WFCR 30.90±7.50; No significant difference observed following intervention at discharge, 6 and 12 months. Waist circumference (cm) (12 mo): pre-WFCR 97.60±16.10; post-WFCR 97.00±16.20; No significant difference observed following intervention at discharge, 6 and 12 months. FBS (mmol/L) (12 mo): pre-WFCR 6.30±1.90; post-WFCR 6.20±2.00; No significant difference observed following intervention at discharge, 6 and 12 months. HbA1c (12 mo): pre-WFCR 0.073±0.01; post-WFCR 0.065±0.01; No significant difference observed following intervention at discharge, 6 and 12 months. QoL (SF-36) (12 mo) PCS: pre-WFCR 39.90±9.60; post-WFCR 43.60±9.90; Significant difference observed following intervention at discharge and 6 months follow up ($p<0.005$) but not significant at 12 month follow-up. MCS: pre-WFCR 45.40±11.30; post-WFCR 48.70±8.20; No significant difference observed following intervention at discharge, 6 and 12 months. Depressive symptoms (BDI) (12 mo): pre-WFCR 13.40±9.40; post-WFCR 7.20±7.50;

			Significant difference observed following intervention at discharge, 6 and 12 months ($p<0.005$).
Reed et al.[73],[74] 2019, Canada	Matched case-control study, pretest, posttest design; comparison: y (MICE AC control [16 sessions= 2x/wkly for 8 wks, 60 min moderate to vigorous exercise); 1 centre; quality: 3/5	N=60 (100% female); mean age: 58.6±9.0 yrs; ethnocultural background: caucasian 88%; CHD type: AMI (60%), (& 2% HF); Males for comparison: no	Functional capacity (VO_{2Peak}) (mL/Kg/min) (2.5 mo)^: WFCR +2.10±2.60; AC NR; Significant difference within CR group following intervention ($p<0.05$). Anxiety (HADs) (scores) (2.5 mo)^: WFCR -1.80±3.50; AC -1.50±3.00; Significant difference within group following intervention ($p<0.001$). Depressive symptoms (HADs) (scores) (2.5 mo)^: WFCR -0.70±3.00; AC -1.10±2.30; Significant difference within group following intervention ($p=0.003$). BMI (Kg/m2) (2.5 mo)^: WFCR -0.40±1.20; AC -0.20±0.70; Significant difference within group following intervention ($p=0.02$). Waist circumference (cm) (2.5 mo)^: WFCR -4.40±7.40; AC -2.30±4.7; Significant difference within group following intervention ($p<0.001$). Resting diastolic blood pressure (mmHg) (2.5 mo)^: WFCR -1.00±7.90; AC -4.70±9.00; Significant difference within group following intervention ($p=0.03$).
Sadeghi et al. [75],[76],[37],[77] 2012, Iran	Study design: Observational study, pretest, posttest design; comparison: y (female non-obese CR and male CR participants); 1 centre; quality: 5/5	N=205 (100% female); mean age: 57.84±8.44 yrs; ethnocultural background: NR; CHD type: AMI (8.8%) and chronic	Functional capacity (METs) (2 mo): pre-WFCR 5.94±1.68, post-WFCR 7.87±2.0, pre-AC 6.96±2.44, post-AC 8.70±2.53; Significant difference within WFCR and AC groups following CR ($p<0.05$) and no significant difference between groups.

		SA (21.1%) (& 0% HF); Males for comparison: y	Total cholesterol (mg/dL) (2 mo): pre-WFCR 229.56±57.49, post-WFCR 218.01±51.63, pre-AC 218.62±55.42, post-AC 204.70±50.40; Significant difference within WFCR and AC groups following CR ($p<0.05$) and no significant difference between groups. LDL-C (mg/dL) (2 mo): pre-WFCR 139.58±51.80, post-WFCR 127.11±45.83, pre-AC Baseline 134.27±47.15, post-AC 123.00±40.01; Significant difference within WFCR and AC groups following CR ($p<0.05$) and no significant difference between groups. HDL-C (mg/dL) (2 mo): pre-WFCR 41.59±8.60, post-WFCR 44.40±8.57, pre-AC 42.79±9.74, post-AC 43.90±9.70; Significant difference within WFCR and AC following CR ($p<0.05$) and no significant difference between groups. Triglycerides (mg/dL) (2 mo): pre-WFCR 234.42±106.48, post-WFCR 210.69±100.17, pre-AC 205.60±112.34, post-AC 185.83±88.43; Significant difference within WFCR and AC following CR ($p<0.05$) and no significant difference between groups. LDL/HDL ratio (2 mo): pre-WFCR 3.55±1.72, post-WFCR 2.91±1.13, pre-AC 3.25±1.45, post-AC 2.86±1.04; Significant difference within WFCR and AC following CR ($p<0.05$) and no significant difference between groups.

			BMI (Kg/m^2) (2 mo): pre-WFCR 33.50±2.75, post-WFCR 32.69±3.00, pre-AC 26.28±2.66, post-AC 25.76±2.58; Significant difference within and between groups following CR ($p<0.05$). FBS (mg/dL) (2 mo): pre-WFCR 115.60±40.90, post-WFCR 110.48±37.66, pre-AC 123.54±57.63, post-AC 116.80±40.56; Significant difference within groups ($p<0.05$) following intervention but no significant difference between groups.
Sengupta et al.[78] 2020, USA	Single group, pretest-posttest design; comparisons: no; 1 centre; quality: 4/5	N=10 (100% female); age: 64.40±6.30 yrs; ethnocultural background: white caucasian 80%; CHD type: AMI (20%) and HF (10%); Males for comparison: no	Systolic blood pressure (mmHg) (3 mo): pre-WFCR 129.20±12.30, post-WFCR 141.50±18.90; No significant difference following intervention. Diastolic blood pressure (mmHg) (3 mo): pre-WFCR 76.70±8.70, post-WFCR 73.60±9.20; No significant difference following intervention. BMI (Kg/m^2) (3 mo): pre-WFCR 29.20±6.00, post-WFCR 28.70±5.80; Significant difference following intervention ($p=0.01$). Self-efficacy (for Managing Chronic disease) (3 mo): pre-WFCR 45.40±12.50, post-WFCR 48.20±7.60; No significant difference following intervention. Self-efficacy (exercise behavior) (3 mo): pre-WFCR 52.50±7.60, post-WFCR 54.40±6.20; No significant difference following intervention.

			Self-efficacy (diet) (3 mo): pre-WFCR 88.80±6.00, post-WFCR 89.60±6.80; No significant difference following intervention. Stress (Perceived stress scale) (3 mo): pre-WFCR 13.30±6.70, post-WFCR 9.90±6.90; No significant difference following intervention. Depressive symptoms (PHQ-9) (3 mo): pre-WFCR 5.50±5.40, post-WFCR 2.90±3.80; Significant difference within CR (p=0.04) following intervention. Diet (Rapid eating assessment for participants-Short form) (3 mo): pre-WFCR 32.70±3.50, post-WFCR 33.70±2.70; No significant difference following intervention. Physical Activity (IPAQ) (last 7 days) (3 mo): i)Days of moderate-intensity physical activity (per wk): pre-WFCR 3.00±2.40, post-WFCR 3.40±2.30; No significant difference following intervention. ii)Minutes per day of moderate-intensity physical activity (3 mo): pre-WFCR 35.70±35.30, post-WFCR 63.10±52.80; No significant difference following intervention.
Shabani et al.[79] 2010, Iran	Quasi-experimental and perspective design study with non-randomized pre-posttest control group; comparisons: y (UC control); 1 centre; quality: 4/5	N=60 (100.0% female); mean age: 58.9± 9.7 yrs; ethnocultural background: NR; CHD type: CABG (100.0%), (& 0%	Functional capacity (METs) (3 mo): pre-WFCR 7.72±1.60, post-WFCR 10.72±1.30; pre-UC 7.27±1.95, post-UC 7.50±2.02; Significant difference within CR following intervention (p<0.001). Functional capacity (6MWD) (m) (3 mo): pre-WFCR 375.20±28.10, post-WFCR 556.00±66.10; pre-UC 383.00±32.00, post-

		HF); Males for comparison: no	UC 390.00±39.00; Significant difference within CR following intervention (p<0.001). Systolic blood pressure (max mmHg) (3 mo): pre-WFCR 151.50±18.70, post-WFCR 155.00±16.80; pre-UC 148.00±14.20, post-UC 150.00±12.90; Significant difference within CR following intervention (p<0.008). Exercise Time (sec) (Bruce protocol) (3 mo): pre-WFCR 311.20±101.70, post-WFCR 464.60±107.30; pre-UC 317.00±98.00, post-UC 329.00±105.00; Significant difference within CR following intervention (p<0.001). RPP (3 mo): pre-WFCR 20270.00±2704.10, post-WFCR 22361.00±3206.00; pre-UC 19240.00±2580.00, post-UC 19908.00±2750.00; Significant difference within CR following intervention (p<0.001). Maximal HR (bpm) (3 mon): pre-WFCR 135.60±23.50, post-WFCR 144.20±20.80; pre-UC 130.10±15.80, post-UC 132.00±17.20; Significant difference within CR following intervention (p<0.004).
Silber et al.[39] 2015, USA	Single group, pretest, posttest design; comparisons: no; 1 centre; quality: 3/5	N=9 (100.0% female); mean age: 47.6±9.9 yrs; ethnocultural background: NR; CHD type: SCAD (100%), (& 0% HF); Males for comparison: no	Functional capacity ($VO_{2\ Peak}$) (mL/Kg/min) (3 mo): pre-WFCR 25.40±4.10, post-WFCR 28.20±3.00; Significant difference following CR (p NR). $VO_{2\ Peak}$ (% predicted) (3 mo): pre-WFCR 87.80±18.40, post-WFCR 97.30±10.10; Significant difference following CR (p NR). Functional capacity (6MWD) (m) (3 mo): pre-WFCR 553.60±161.50, post-WFCR

			625.80±121.40; Significant difference following CR (p NR). 6MWD (% predicted) (3 mo): pre-WFCR 98.40±25.70, post-WFCR 114.00±20.90; Significant difference following CR (p NR). Body mass (kg) (3 mo): pre-WFCR 73.90±13.00, post-WFCR 70.40±11.00; Significant difference following CR (p NR). Fat mass (Kg) (3 mo): pre-WFCR 29.00±9.90, post-WFCR 27.30±9.70; Significant difference following CR (p NR). Body Fat (%) (3 mo): pre-WFCR 38.30±7.00, post-WFCR 37.30±7.70; Significant difference following CR (p NR). Lean mass (Kg) (3 mo): pre-WFCR 44.60±4.10, post-WFCR 43.80±2.30; Significant difference following CR (p NR). Emotional stress rating (scores) (3 mo): pre-WFCR 6.10±2.60, post-WFCR 4.30±2.00; Significant difference following CR (p NR). Depression (PHQ-9) (3 mo): pre-WFCR 4.30±3.80, post-WFCR 3.30±1.80; Significant difference following CR (p NR).
Szot et al.[41] 2016, Poland	Single group, pretest, posttest design; comparisons: no; 1 centre; quality: 4/5	N=55 (100% female); mean age: 57.25±5.43 yrs; ethnocultural background: NR; CHD type: cardiac syndrome X (100%) (& 0% HF); Males for comparison: no	Functional capacity (maximum amount of METs during exercise) (3 mo): pre-WFCR 6.52±2.09, post-WFCR 8.13±2.06; Significant difference following intervention ($p<0.001$). Systolic blood pressure value at baseline (mmHg) (3 mo): pre-WFCR 134.91±11.03, post-WFCR 128.55±8.64; Significant difference following intervention ($p<0.001$).

			Diastolic blood pressure value at baseline (mmHg) (3 mo): pre-WFCR 81.55±8.38, post-WFCR 77.82±7.86; Significant difference following intervention ($p<0.001$). Systolic blood pressure value at peak exercise (mmHg) (3 mo): pre-WFCR 160.00±16.64, post-WFCR 158.45±11.50; No significant difference following intervention. Diastolic blood pressure value at peak exercise (mmHg) (3 mo): pre-WFCR 81.60±14.62, post-WFCR 81.36±10.82; No significant difference following intervention. BMI (Kg/m^2) (3 mo): pre-WFCR 27.53±2.87, post-WFCR 27.00±2.52; Significant difference following intervention ($p<0.001$). HR value at baseline (bpm) (3 mo): pre-WFCR 83.15±10.81, post-WFCR 78.07±7.39; Significant difference following intervention ($p<0.001$). Maximal HR value at peak exercise (bpm) (3 mo): pre-WFCR 134.00±13.86, post-WFCR 136.13±11.16; No significant difference following intervention. Percentage of maximal predicted HR for given age (bpm) (3 mo): pre-WFCR 82.40±8.74, post-WFCR 83.73±7.32; No significant difference following intervention. Length of exercise test (sec) (3 mo): pre-WFCR 635.87±157.07, post-WFCR 760.02±142.49; Significant difference following intervention ($p<0.001$).

			Scintiagraphic assessment of Left ventricular perfusion (3 mo): Summed stress score in LAD artery region: pre-WFCR 2.82±2.97, post-WFCR 1.67±2.19; Significant difference following intervention ($p<0.01$). Summed stress score in CCA artery region: pre-WFCR 0.54±1.02, post-WFCR 0.47±0.92; No significant difference following intervention. Summed stress score in RCA artery region: pre-WFCR 3.49±2.96, post-WFCR 2.27±2.17; Significant difference following intervention ($p<0.01$). Total summed stress score for LV perfusion: pre-WFCR 6.95±3.16, post-WFCR 4.51±2.58; Significant difference following intervention ($p<0.01$). Summed rest score in LAD artery region: pre-WFCR 1.53±2.00, post-WFCR 1.67±2.19; No significant difference following intervention. Summed rest score in CCA artery region: pre-WFCR Baseline 0.20±0.52, post-WFCR 0.31±0.60; No significant difference following intervention. Summed rest score in RCA artery region: pre-WFCR 2.20±2.15, post-WFCR 2.36±2.40; No significant difference following intervention. Total summed rest score for LV perfusion: pre-WFCR 3.93±2.71, post-WFCR

			4.35±3.13; No significant difference following intervention. Summed difference score between stress and rest value in LAD artery region: pre-WFCR 1.40±1.49, post-WFCR 0.47±1.05; Significant difference following intervention ($p<0.01$). Summed difference score between stress and rest value in CCA region: pre-WFCR 0.36±0.75, post-WFCR 0.16±0.50; Significant difference following intervention ($p<0.01$). Summed difference score between stress and rest value in RCA region: pre-WFCR 1.33±1.36, post-WFCR 0.25±0.58; Significant difference following intervention ($p<0.01$). Summed difference score between stress and rest value for LV perfusion: pre-WFCR 3.09±1.58, post-WFCR 0.89±1.26; Significant difference following intervention ($p<0.01$).
Tsai et al.[80] 2019, Taiwan, China	Study design: RCT with parallel arm, comparison: y (UC: received regular health education and completed 12 wk telephone follow up survey with each call lasting 10 min); 2 centres; quality: 5/5	N=35 (100% female); mean age: 56.1± 5.6 yrs; ethnocultural background: NR; CHD type: AMI 45.8%), (& 0% HF); Males for comparison: no	Systolic blood pressure (mmHg) (3 mo): pre-WFCR 128.20±18.00, post-WFCR 123.00±6.60, pre-UC 134.30±26.10, post-UC 128.10±13.80; No significant difference between and within groups following intervention. Diastolic blood pressure (mmHg) (3 mo): pre-WFCR 74.90±13.00, post-WFCR 77.40±8.30, pre-UC 80.40±11.90, post-UC 77.00±19.00; No significant difference

			between and within groups following intervention. Total cholesterol (mg/dL) (3 mo): pre-WFCR 199.40±65.70, post-WFCR 154.10±72.00, pre-UC 169.80±41.80, post-UC 175.60±67.40; Significant difference between groups (p=0.04) following intervention. LDL-C (mg/dL) (3 mo): pre-WFCR 107.60±51.80, post-WFCR 114.40±45.60, pre-UC 115.00±35.50, post-UC 105.30±60.00; No significant difference between and within groups following intervention. HDL-C (mg/dL) (3 mo): pre-WFCR 47.10±11.10, post-WFCR 54.80±10.80, pre-UC 44.40±10.30, post-UC 42.90±9.90; Significant difference between groups (p<0.001) following intervention. Triglycerides (mg/dL) (3 mo): pre-WFCR 176.10±189.90, post-WFCR 119.00±46.50, pre-UC 137.20±63.40, post-UC 147.20±92.20; No significant difference between and within groups following intervention. BMI (Kg/m^2) (3 mo): pre-WFCR 25.40±2.90, post-WFCR 25.00±3.00, pre-UC 25.20±4.30, post-UC 24.00±3.60; No significant difference between and within groups following intervention. Waist circumference (cm) (3 mo): pre-WFCR 84.90±7.40, post-WFCR 80.60±8.20, pre-UC 82.10±9.70, post-UC 84.50±12.10;

			Significant difference between groups ($p<0.001$) following intervention. Hip circumference (cm) (3 mo): pre-WFCR 95.00±7.50, post-WFCR 93.80±6.00, pre-UC 92.80±9.10, post-UC 94.10±8.30; No significant difference between and within groups following intervention. Waist-hip ratio (%) (3 mo): pre-WFCR 0.89±0.05, post-WFCR 0.86±0.05, pre-UC 0.89±0.06, post-UC 0.90±0.08; No significant difference between and within groups following intervention. FBS (mg/dL) (3 mo): pre-WFCR 134.00±93.00, post-WFCR 116.10±42.90, pre-UC 140.40±92.10, post-UC 126.10±40.10; No significant difference between and within groups following intervention. HsCRP (mg/dL) (3 mo): pre-WFCR 2.80±5.00, post-WFCR 1.60±0.30, pre-UC 3.50±5.40, post-UC 1.20±1.30; No significant difference between and within groups following intervention. Homocysteine (µmol/L) (3 mo): pre-WFCR 9.40±2.80, post-WFCR 12.40±3.20, pre-UC 8.60±2.50, post-UC 10.30±3.20; No significant difference between and within groups following intervention. Leptin (ng/dl) (3 mo): pre-WFCR 11.90±10.80, post-WFCR 12.70±14.80, pre-UC 10.10±7.40, post-UC 16.20±14.20; No significant difference between and within groups following intervention.

Tyni-Lenne et al.[31] 2002, Sweden	Study design: single blind RCT with 3 parallel arm, comparison: y (AC: group B with relaxation therapy [2x/wk for 8 wks, 60 min duration, relaxation training consisted of modified Jacobson's approach and autogenous training] and UC: Group C as control involved in normal daily activities); 1 centre; quality: 3/5	N=24 (100.0% female); mean age: 55.0± 8.0 yrs; ethnocultural background: NR, CHD type: cardiac syndrome X (100.0%), (& 0% HF); Males for comparison: no	Functional capacity ($VO_{2\ peak}$) (l/min) (2 mo): pre-WFCR 1.26±0.01; post-WFCR 1.45±0.20; pre-AC 1.14±0.01; post-AC 1.15±0.10. pre-UC 1.12±0.01; post-UC 1.11±0.10. Significant difference within WFCR ($p<0.03$) and between WFCR vs AC ($p<0.04$) and between WFCR vs UC ($p<0.02$) following the intervention. Functional capacity (6MWD) (m) (2 mo): pre-WFCR 555.00±47.00; post-WFCR 587.00±49.00; pre-AC 573.00±54.00; post-AC 565.00±47.00. pre-UC 576.00±64.00; post-UC 545.00±46.00. Significant difference within WFCR ($p<0.006$) and between WFCR vs AC ($p<0.0004$) and between WFCR vs UC ($p<0.003$) following the intervention. Peak work rate (W) (2 mo): pre-WFCR 97.00±5.00; post-WFCR 127.00±14.00; pre-AC 91.00±15.00; post-AC 89.00±11.00. pre-UC 93.00±16.00; post-UC 94.00±10.00. Significant difference within WFCR ($p<0.002$) and between WFCR vs AC ($p<0.0001$) and between WFCR vs UC ($p<0.002$) following the intervention. Exertion (Borg RPE rating) (2 mo): pre-WFCR 12.00±3.00; post-WFCR 13.00±3.00; pre-AC 13.00±3.00; post-AC 14.00±3.00. pre-UC 14.00±1.00; post-UC 14.00±2.00. Significant difference within WFCR ($p<0.05$), AC ($p<0.03$) group and between WFCR vs UC ($p<0.02$) and

			between AC vs UC ($p<0.02$) following the intervention. Peak HR (bpm) (2 mo): pre-WFCR 108.00±13.00; post-WFCR 102.00±17.00; pre-AC 114.00±17.00; post-AC 113.00±16.00. pre-UC 109.00±12.00; post-UC 106.00±10.00. No significant difference within and between groups following the intervention. QoL (Sickness impact profile) (2 mo)*: pre-WFCR 7.00 (2.00-23.00); post-WFCR 4.00 (1.00-9.00); pre-AC 9.00 (2.00-20.00); post-AC 9.00 (2.00-15.00). pre-UC 6.00 (1.00-22.00); post-UC 9.00 (2.00-23.00). Significant difference within WFCR ($p<0.02$), AC($p<0.03$) group and between WFCR vs UC ($p<0.02$) and between AC vs UC ($p<0.009$) following the intervention. Coherence (score) (2 mo)*: pre-WFCR 148.00 (135.00-162.00); post-WFCR 155.00 (128.00-166.00); pre-AC 144.00 (127.00-161.00); post-AC 140.00 (130.00-164.00). pre-UC 146.00 (116.00-187.00); post-UC 144.00 (126.00-185.00). No significant difference within and between groups following the intervention. Stress (crisis inventory) (2 mo)*: pre-WFCR 33.00 (19.00-80.00); post-WFCR 26.00 (8.00-62.00); pre-AC 44.00 (31.00-83.00); post-AC 43.00 (22.00-65.00). pre-UC 44.00 (12.00-45.00); post-UC 40.00 (16.00-57.00). Significant difference within WFCR ($p<0.02$) and between WFCR vs UC

			(p<0.006) and between AC vs UC (p<0.04) following the intervention.
Wojcieszczyk et al. [32][81] 2012, Poland	Study design: RCT, comparison: y (Classical CR, Classical CR and cognitive behavior psychotherapy); 1 centre; quality: 1/5	N=68 (100.0% female); mean age: 62.07± 6.00 yrs; ethnocultural background: NR; CHD type: MI (% NR), (& 0% HF); Males for comparison: no	QoL (SF-36) (3 mo)¶: PCS: Significant difference within WFCR group following intervention (p NR). PCS improved after 12 wks of intervention (p NR). MCS: Significant difference within WFCR group following intervention (p NR). MCS improved after 4 wks of intervention (p NR). Depressive symptoms (Beck Depression Inventory)¶: Significant difference within WFCR group following intervention (p NR).

*Data reported as median and interquartile range.
‡ number yes ratings out of 5 shown.
¶ outcome data by comparison arms not available.
§ only one participant, SD not available.
^data reported as change from pre- to post-intervention.
6MWD, 6 min walk distance; AC, active comparison; AC1, active comparison control group 1; AC2, active comparison control group 2; ACS, acute coronary syndrome; AMI, acute myocardial infarction; AT, Aerobic training; BMI, Body mass index; bpm, beats per minute; CABG, coronary artery bypass grafting; CAQ, Cardiac anxiety questionnaire; CCA, Circumflex coronary artery; CCI, Cardiac control Index; CES-D, Centre for epidemiological studies depression scale; CR, cardiac rehabilitation; CS-PFP, continuous scale physical performance test, EBBS, Exercise Benefits and Barriers Scale; FBS, Fasting blood sugar; ft, feet; GDS, Geriatric depression scale; HADs, Hospital anxiety and depression scale; HDL-C, High density lipoprotein cholesterol; HF, heart failure; HPLPII, Health-Promoting Lifestyle Profile II; HsCRP, High-sensitivity C-reactive protein; HAQ, Health anxiety questionnaire; HR, heart rate; $HRR_{1,}$ Heart rate recovery in 1 min; $HRR_{2,}$ Heart rate recovery in 2 min; HRQL, Health related quality of life; LDL-C, Low density lipoprotein cholesterol; UC, usual care, ICAM-1, Intercellular adhesion molecule-1; IPAQ, International physical activity questionnaire; ISWD, Incremental shuttle walk distance; LAD, Left anterior descending artery, LV, Left ventricle; µmol/L, micromole per litre; m, meters; MACE, major adverse cardiovascular events; MCS, Mental component summary; MDT Qol, Multiple discrepancies theory quality of life; METs, Metabolic equivalent of tasks; MICE, moderate to vigorous intensity continuous exercise; MI, myocardial infarction; mo, months; MOS SF-36, Medical outcome study Short form questionnaire 36 (quality of life); MLHFQ, Minnesota living with heart failure questionnaire; MSPSS, Multidimensional Scale of Perceived Social Support; NR, not reported;

NSTEMI, non-ST-elevation myocardial infarction; NYHA, New York Heart Association classification; PCS, Physical component summary; PHQ-2, patient health questionnaires-2; PHQ-9, patient health questionnaires-9; PMR, Progressive muscle relaxation; QoL, Quality of life; RCA, Right coronary artery; RCT, randomized controlled trial; RPE, Rating of perceived exertion; RPP, rate pressure product; SA, stable angina; SASS, Self-anchoring striving scale; sec, seconds; SCAD, Spontaneous coronary artery dissection; SF-12, Short form questionnaire 12; STOP-D, Supervision Tool for Outcomes and Process in Depression; TNF-α , Tumor necrosis factor-α; UA, unstable angina; VO_{2Peak}, maximum rate of oxygen consumption measured during cardio-pulmonary exercise test; W, watts; wks, weeks; WFCR, women-focused cardiac rehabilitation; WRIP, Women's Role Interview Protocol; y, yes; yr, year;

Table 2: Summary of findings and certainty assessment: women focused CR compared to active comparison

Certainty assessment							№ of patients		Effect		Certainty	Importance
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Intervention	active comparison	Relative (95% CI)	Absolute (95% CI)		
Functional capacity METs												
5	randomised trials	not serious	not serious	not serious	serious [a]	none	176	163	-	MD **0.15 higher** (0.3 lower to 0.59 higher)	⊕⊕⊕◯ MODERATE	IMPORTANT
Functional capacity VO2 Peak												
3	randomised trials	not serious	serious [b]	not serious	serious [a]	none	113	111	-	MD **0.22 higher** (0.19 lower to 0.63 higher)	⊕⊕◯◯ LOW	IMPORTANT

Certainty assessment							№ of patients		Effect		Certainty	Importance
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Intervention	active comparison	Relative (95% CI)	Absolute (95% CI)		
QOL SF-36 PCS												
3	randomised trials	not serious	not serious	not serious	serious [a]	none	192	149	-	MD **6.37 higher** (3.14 higher to 9.59 higher)	⊕⊕⊕◯ MODERATE	IMPORTANT
QOL SF-36 MCS												
3	randomised trials	not serious	serious [c]	not serious	serious [a]	none	192	149	-	MD **4.66 higher** (0.21 higher to 9.11 higher)	⊕⊕◯◯ LOW	IMPORTANT
QOL SF-36 Physical functioning												

Certainty assessment							№ of patients		Effect		Certainty	Importance
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Intervention	active comparison	Relative (95% CI)	Absolute (95% CI)		
2	randomised trials	serious [d]	serious [c]	not serious	serious [a]	none	155	114	-	MD **10.03 higher** (1 higher to 19.06 higher)	⨁◯◯◯ VERY LOW	IMPORTANT

QOL SF-36 Role Physical

2	randomised trials	serious [d]	serious [c]	not serious	serious [a]	none	155	114	-	MD **10.21 higher** (1.34 higher to 19.07 higher)	⨁◯◯◯ VERY LOW	IMPORTANT

QOL SF-36 Bodily pain

Certainty assessment							№ of patients		Effect		Certainty	Importance
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Intervention	active comparison	Relative (95% CI)	Absolute (95% CI)		
2	randomised trials	not serious	not serious	not serious	serious[a]	none	155	114	-	MD **6.92 higher** (1.81 higher to 12.04 higher)	⨁⨁⨁◯ MODERATE	IMPORTANT

QOL SF-36 Vitality

2	randomised trials	not serious	not serious	not serious	serious[a]	none	155	114	-	MD **7.83 higher** (3.6 higher to 12.05 higher)	⨁⨁⨁◯ MODERATE	IMPORTANT

QOL SF-36 Social functioning

Certainty assessment							№ of patients		Effect		Certainty	Importance
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Intervention	active comparison	Relative (95% CI)	Absolute (95% CI)		
2	randomised trials	not serious	not serious	not serious	serious[a]	none	155	114	-	MD **8.45 higher** (2.8 higher to 14.09 higher)	⊕⊕⊕◯ MODERATE	IMPORTANT

QOL SF-36 General Health

2	randomised trials	not serious	not serious	not serious	serious[a]	none	155	114	-	MD **1.98 higher** (2.23 lower to 6.19 higher)	⊕⊕⊕◯ MODERATE	IMPORTANT

QOL SF-36 Mental Health

Certainty assessment							№ of patients		Effect		Certainty	Importance
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Intervention	active comparison	Relative (95% CI)	Absolute (95% CI)		
2	randomised trials	not serious	not serious	not serious	serious [a]	none	155	103	-	MD **7.45 higher** (1.59 higher to 13.31 higher)	⊕⊕⊕◯ MODERATE	IMPORTANT

QOL SF-36 Role emotional

2	randomised trials	not serious	not serious	not serious	serious [a]	none	155	114	-	MD **6.73 higher** (0.86 higher to 12.61 higher)	⊕⊕⊕◯ MODERATE	IMPORTANT

CI: Confidence interval; **MD:** Mean difference

Explanations

a. Total population size or number of events is less than 400.

b. I square is substantial >50%.

c. P value for heterogeneity (chi square) is <.05, I square is substantial >50%.

d. The absence of allocation concealment correlates with >20% of the weighted trial.