**SDC Summary of included qualitative papers and participant characteristics**

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| **Author (Yr) Country** | **Qualitative Aim** | **Qualitative**  **Methodology** | **Qualitative Sample** | **Description of Intervention** | **Main Findings** |
| Adsett et al. (2019)25  Australia | To describe the motivators and barriers experienced by people with HF participating in aquatic exercise training programs compared to land-based training. | Mixed Methods nested within a larger crossover design trial    Thematic framework approach;  Individual semi-structured interviews | HF  Purposive sampling 48/61 questionnaire  14 interviewed  7 declined either  intervention  7 from aquatic group  9 male  Mean age = 70 yr | Aquatic exercise  -Thermoneutral water  (32-34◦C)  -Same exercises as those on land  -Water turbulence and hydrotherapy equipment  60 min, 1x/wk, 6 wk  Group Class - Hospital facility  Theory: none stated | Five Themes:   1. Skilled and compassionate workforce 2. Sense of safety 3. Perceived health benefit 4. Tailoring care to the individual 5. Inclusiveness and enjoyment |
| Cacciata et al. (2021)34  USA | To explore facilitators and challenges to exergaming in patients with HF | Qualitative sub-study  Content analysis;  Individual semi-structured interviews | HF  Purposive sampling  13/16 patients  8 male  Mean age = 57.3 yr  5 White  3 Black  3 Hispanic  2 Asian | Motivational support with exercise advice from HF team and structured access to Nintendo Wii Sports  30 min, 1x/d, 12 wk  Phone support at wk 2,4,8, and 12  Independently-led  Home-Based  Theory: none stated | Facilitators had Four Themes:   1. Enjoyment and competition motivated gaming 2. Accessibility at home gave freedom and lowered barriers to exercise 3. Experienced physical benefits when decreasing sedentary lifestyle 4. Experienced psychosocial benefits on stress, mood, and family interactions.   Challenges had Two Themes:   1. Engagement diminished over time because of boredom playing similar games 2. Frustrations due to game difficulty and lack of improvement |
| Clark, Baker, and Taylor  (2016)40  Australia | To describe the experiences of older adults with CVD after using individualized music during walking-based exercise | Inductive thematic analysis;  Individual semi-structured interviews | Older adults with CVD who are graduates of CR  27 patients  21 male  Mean age = 67.3 yr | Walking with individualized music on mp3 device  -Music selection individualized to each participant by music therapist  -Telephone follow-up  once wkly for 6 wk, mo thereafter  -asked to complete > 150 min of brisk walking-based exercise/wk, 26 wk  Independently-led  Home-based  Theory: Clark and colleagues’ (2016) conceptual framework; Flow theory | Four Themes, 13 categories:   1. Listening to music while walking evokes psycho-emotional responses    1. Experiences of flow    2. Impact on mood    3. Memories    4. Meaningful associations 2. Listening to music stimulates physical responses    1. Energizing    2. Influence on walking speed    3. Impact on walking style 3. Listening to music can influence exercise behavior    1. Overcoming barriers    2. Impact on walking duration    3. Establishing and maintaining walking habits 4. Walking with music can lead to negative experiences    1. Difficulty using technology    2. Safety concerns    3. Annoying after effects |
| Conboy et al.  (2020)73  USA | To gain a deeper understanding of patients’ perspectives on their participation in the Tai Chi program to guide further program development | Nested qualitative assessment of a pilot program  Thematic analysis; Semi-structured focus group by cohort | History of acute coronary syndrome, stable angina or revascularization procedure  21/24 patients  16 male  Age range 44-82 yr  20 White | Tai Chi  60 min  -LITE dose: 1x/wk x 12 wk  -PLUS dose: 3x/wk x 12 wk, followed by 1-2 x for another 12 wk.  Group Class - CR building  Theory: Behavior Change | 1. Barriers to physical activity and traditional CR 2. Perceived benefits of the Tai Chi program 3. Barriers to Tai Chi program and feedback on program improvement 4. Subjects’ felt markers of personal training success |
| Dale et al.  (2015)74  New Zealand | To conduct a process evaluation of the HEART intervention to determine what worked and what did not, as well as acceptability and usability | Process evaluation using mixed-methods (QUAN -> qual)  Semantic thematic analysis; Individual semi-structured interviews | Ischemic Heart Disease (IHD)  Purposive sampling  17/75 patients  13 male  Mean age = 61 yr  14 White | Home-based mHealth intervention  -3 -5 Text messages/wk  -Interactive website  -Individualized exercise prescription  30 min, 5x/wk, 24 wk  Independently-led  Home-based  Theory: Behavior Change; Social Cognitive Theory | Five themes:   1. Program engagement 2. Motivation to exercise 3. Program satisfaction 4. Tailoring the program 5. Personal contact |
| Devi et al.  (2014)35  United Kingdom | To explore patient experiences of using a new web-based CR program | Generic qualitative research approach  Foundational thematic analytic process; Individual semi-structured interviews | Angina  Maximum variation sampling  16 patients  12 male  Age range = 46-80 yr | Home-based CR program entitled ‘Activate Your Heart’ via password protected website  -Online exercise diary with feedback  -Individualized exercise plan  30 min, 5x/wk, 6 wk  Scheduled chat room wkly  Theory: Behavior Change | Two themes:   1. Patient benefits and program facilitators    1. Improved exercise levels    2. Improved psychological well-being    3. Patient empowerment    4. Internet enabled facilitators 2. Program barriers    1. Lack of time    2. Timing    3. Internet stereotype    4. Motivation |
| Dinesen et al.  (2019)75  Denmark | To explore the experiences of cardiac patients and their partners of participating in the Teledialog Telerehabilitation Program (TTP). | Descriptive case study  Semi-structured interviews with patient and partner groups at the same time | Cardiac patients  14 patients  9 male  Age range = 47 – 85 yr  13 partners/son  Age range = 40 - 82 yr | Home-based telerehabilitation entitled TTP:  -monitoring equipment (telehealth monitor, blood pressure monitor, weight scale, electrocardiography device, FitBit pedometer, Web portal, digital rehabilitation plan, tablet)  -Individualized exercise plan  -12 wk  Theory: “communities of practices” learning theory; Self-determination theory | Four themes from cardiac patients:   1. Use of technology 2. Autonomy 3. Relatedness 4. Competences   Two themes from partners/son:   1. Use of technologies 2. Being a partner |
| Frost et al.  (2019)27  United Kingdom | To identify and explore change processes explaining the effects of the Rehabilitation Enablement in Chronic HF (REACH-HF) intervention taking account of reach, amount of intervention received, delivery fidelity and patient and caregiver perspectives | Mixed Methods parallel to RCT using data from intervention group  Process evaluation using linked data from multiple sources to build individual case studies; 2 Individual semi-structured interviews with field notes per person | HF reduced ejection fraction  Maximum variation sampling  19/107 patients  12 male  Mean age = 70 yr  19 White  17/53 caregivers  “Predominantly female”  Mean age = 63 yr | Home-based program, entitled REACH-HF:  -Self-help manual  -Choice of two exercise programs: chair-based or walking)  -Facilitator support with in-person or telephone sessions  -12 wk  -Home-based  Theory: none stated | Key processes that explained the effects of the REACH-HF intervention:   1. Adaptation 2. Competence 3. Comorbidities 4. Social context |
| Hagglund, Boman, and Brannstrom (2017)28  Sweden | To describe participants’ experiences of Tai Chi group training | Qualitative data from a mixed methods study  Content analysis; Individual semi-structured interviews | HF  10/25 patients  8 male  Age range 71-85 yr | Tai Chi:  -Adjusted for HF, Chair  -60 min, 2 x/wk, 16 wk  -Group Class -Local Training Center  Theory: none stated | One Comprehensive Theme: Finding a new, feasible and meaningful activity  4 categories:   1. To learn and perform the Tai Chi movements 2. The importance of the leader and the group 3. Perceptions of health in relation to Tai Chi training 4. Tai Chi training at home and other physical activities |
| Hannan et al. (2021)76  Australia | To explore perceptions about wearable physical activity monitors (WPAM) use, Personal Activity Intelligence (PAI), impact on motivation, barriers to exercise, and predictions of long-term use. | Concurrent mixed methods study  Thematic analysis; Individual semi-structured interviews | Purposive sampling  20/21 patients  16 male  Mean age = 56 yr | WPAM (Lynk2) collecting PAI, heartrate, calories burned, training zones.  -Encouraged to accrue 100 PAI/wk  -Meet for 30 min with physiotherapist and exercise physiologist at pre intervention, 3 and 6 wk.  -Independently-led  -Home-based | Three Global Themes and 14 subthemes:   1. Lynk2 Device    1. Functionality    2. Usability    3. Wearability    4. Safety    5. Motivation from device    6. Comparing other devices    7. Future intention to use and recommend 2. Perceptions of PAI    1. Participant understanding    2. Interest and effect 3. Factors Affecting Exercise    1. Logistical barriers    2. Psychological barriers    3. Environmental barriers    4. Health barriers    5. None |
| Heron et al.  (2017)37  United Kingdom | To assess the feasibility of evaluating the effectiveness of a novel adapted home-based CR program with or without a pedometer initiated within 4 wk of a first TIA or minor stroke of atherosclerotic origin. QUAL: to explore participants’ views of the program and research methods | Qualitative focus group within a pilot study  Qualitative content analysis; One focus group with topic guide | TIA/minor stroke patients  7/15 patients  3 male  Age Range = 55-82 yr  4 from Group 3  1 from Group 2  2 from Group 1 | Home-based CR program entitled ‘The Healthy Brain Rehabilitation Manual’:  -Manual with information on  preventative topics  -Moderate physical  activity described as  using the talk/sing test, or with those with pedometers, a cadence of 100 steps/min  -Follow up telephone call by general  practitioner at wk 1 and 4  -6 wk  -Independently led  -Home-based  Theory: Theory of planned behavior; behavior change | Three themes:   1. Use of the manual 2. The study design    1. Recruitment and randomization    2. Telephone follow up    3. Pedometers 3. Suggested changes |
| Hwang et al.  (2017)29  Australia | To describe patient experiences and perspectives of a group-based HF telerehabilitation program delivered to the homes via online video-conferencing. | Convergent mixed-methods  Thematic analysis; Individual semi-structured interviews | HF  Maximum variation sampling  17 patients  15 male  Mean age = 69 yr  15 White | Telerehabilitation program:  -Live videoconferencing (Adobe Connect 9.2)  -Monitoring Equipment  -2x wkly, 12 wk  -Group-based  Theory: TElehealth in CHronic disease (TECH) model | Three themes:   1. Motivating influences of telerehabilitation    1. Improved health outcomes    2. Access to care    3. Social support    4. Safe    5. Improved knowledge in HF self-management 2. Inhibiting influences    1. Fear of the unknown    2. Lack of prior computer experience    3. Prior exercise concern    4. Technical difficulties 3. Suggestions for improvements and advice for others |
| Jones et al.  (2007)38  United Kingdom | To explore patients’ reasons for non-participation in or non-adherence to a home or hospital-based CR program | Qualitative sub-study of Birmingham Rehabilitation Uptake Maximization (BRUM) study clinical trial  Individual semi-structured interviews | Purposive sampling  49 patients non-adherent to either a CB-CR or HB-CR program  33 male  28 in CB-CR  21 in HB-CR  18 White | Home-based CR with Heart Manual, home visits, and telephone follow up.  -6 wk of exercises  combined with walking  -12 wk of follow up  Theory: None stated | Four main categories for non-adherence:   1. Alternative exercise and activities 2. Other health problems 3. Personal reasons 4. Program related |
| Jones, Greenfield, and Jolly  (2009)77  United Kingdom | To compare views of patients who had completed a home or hospital-based CR program and explore the benefits and problems of each program | Qualitative sub-study of (BRUM) study clinical trial  Five focus groups, each for a different delivery of CR; semi-structured. | Participants having fully completed either a CB-CR or HB-CR program.  Purposive sampling  26/525 patients  19 male  16 for CB-CR  10 for HB-CR  Age range = 45 – 75 yr  14 White | Same as above | Three themes common to both the hospital and home programs:   1. Loss of confidence 2. Continuing to exercise 3. Benefits of CR   Themes exclusive to home-based program:   1. Patients’ experience of the home-based program 2. Heart manual 3. Relaxation tapes 4. Experience of nurse support 5. Experience of home exercises 6. Benefits of home program |
| Klompstra et al.  (2017)26  Sweden | To describe the experiences of patients with HF when using an exergame platform at home | Qualitative descriptive study using content analysis with inductive approach  Individual semi-structured interviews | HF  Purposive sample recruited from the RCT  14 patients  8 male  Age Range 54-81 yr | Exergaming with Wii sports  -30 min, daily, 12 wk  -Independently led  -Home-Based  Theory: None stated | Three categories:   1. Making exergaming work 2. Added value of exergaming 3. Low appeal of exergaming |
| Klompstra et al.  (2021)31  Sweden | To describe the experience of physical activity in patients with HF who were randomized to a control group in which they received exercise advice and motivational support | Qualitative descriptive interview study  Qualitative content analysis using inductive approach; Individual semi-structured interviews | HF  Purposive sampling  15 patients  9 male  Age Range 37-82 yr | -Individualized exercise advice and motivational support from HF nurse or physiotherapist  -Called once during wk 2,4,8, and 12 for encouragement  -In hospital follow-up at 3, 6, and 12 mo  -Home-based  Theory: None stated | Four categories, and subcategories:   1. Affected by study participation 2. Impact of having heart failure 3. Mixed feelings when physically active 4. Influence of the social and physical environment |
| Knudsen et al.  (2021)78  Denmark | To explore patients’ experiences of tele-rehabilitation and the perceived gains of taking part in the program. | Phenomenological-hermeneutic study  Analysis using theory of Ricoeur; Individual semi-structured interviews | Patients having completed a cardiac tele-rehab study  7 patients  7 male  Age Range = 46 – 70 yr | Home-based Tele-rehab:  -monitoring equipment (heart rate monitor, blood pressure monitor, weight scale, smartphone with alarm, website)  -60 min, 3x/wk, 12 wk  -Independently-led  -Once per wk tele-consultation with physiotherapist, nurse or dietician via phone, e-mail or text  Theory: None stated | Five Themes:   1. Physical activity with regard to an active or sedentary lifestyle 2. Recognition of adapting the recommendations of the program 3. Adherence to the program 4. Experiences regarding how telemonitoring contributed to rehabilitation progress 5. Self-image concerning patient expectations of their lives and current perception |
| Murphy et al.  (2021)39  Australia | To assess acceptability amongst women of a women-only yoga-based CR program | Qualitative data from a Mixed Methods Pilot Study  Thematic analysis; Semi-structured focus groups | Inpatients at the time of an acute cardiac event  12/22  0 male | Yoga:  -Adjusted and chair  -60 min education  followed by 60 min yoga, 1x/wk, 7 wk  -Group Class - CR building  Theory: None stated | Theme 1: Suitability of yoga for CR   1. Physical health benefits 2. Mental health benefits 3. Renewed confidence in the body 4. Maintenance after program completion   Theme 2: Benefits of the women-only group   1. Sense of camaraderie 2. Sense of comfort and ease |
| Okwose et al.  (2020)32  United Kingdom | To identify barriers and facilitators to engagement and adherence to a home-based physical activity program, and to identify ways in which it could be integrated into the care pathway for patients with HF | Qualitative focus group study embedded within a pilot study  Thematic analysis; Three focus groups with structured guide | HF  Purposive sampling 16 patients  13 male  Mean Age = 68 yr  completed program, still in program, declined program, declined CB-CR. | Home-based behavioral intervention entitled “Active-at-Home-HF”:  -Increase baseline physical activity by 2000 steps/d using pedometer  -Focus on duration instead of intensity  of exercise  -12 wk  -Lifestyle coach using BCT  -Wkly structured telephone calls  -Home-based    Theory: Health behavior change theory | Ten Themes:   1. Fear of undertaking physical activity 2. Family members influence physical activity efforts 3. Physical activity programs require endorsement by clinicians 4. Completion of a CR program provides confidence to complete a physical activity program at home 5. Coach support increases motivation long term 6. Wkly agreed targets increased confidence and motivation 7. A credible team increased the likelihood of participation 8. The surrounding environment creates barriers to increased physical activity 9. Participation prompts an increase in everyday activity levels 10. Support to maintain long-term activity levels would be beneficial |
| O’Shea et al.  (2020)79  Ireland and Belgium | To explore participants’ views and experiences of an eHealth phase 3 CR intervention: Physical Activity Towards Health (PATHway) | Mixed Methods multicenter RCT    Thematic Analysis; Individual semi-structured interviews | Participants having just completed CR 44/60 patients  34 male  Mean age = 61 yr | Home-based, technology enabled complex behavior change intervention personalized to each individual based on baseline assessments.  -6 devices: portable PC with PATHway software, Microsoft Kinect camera, Microsoft Band 2 heart rate monitor, Blood pressure device, Zensor 3-lead ECG device, a headset  -11 components: ExerClass (aerobic and resistance exercises), Screening, Dashboard, Text messages, Assessment, ExerGame, Instructions, Good Habits Visualization, Practice exercises, and Calendar  -26 wk  -Independently led  -Home-based  Theory: Behavior change | Five Themes, multiple subthemes:   1. Feedback on components of the PATHway system 2. Motivation 3. Barriers to using PATHway 4. Enablers to using PATHway 5. Post program reflection |
| Selman et al. (2015)23  USA | To explore participant experiences of Tele-yoga to assess acceptability and appropriateness of intervention, educational control and study design, and explore potential active ingredients of the intervention | Qualitative data from controlled pilot study  Qualitative content analysis  Minimal realist  Paradigm; Individual semi-structured interviews | HF or COPD  12/15 patients  6 Tele-yoga  6 Education control  2 male  Mean age = 71.2 yr  11 White | Home-Based Yoga:  -Adjusted and chair  -60 min, 2x/wk, 8 wk  -Group Class (but only  able to see instructor)  -Videoconferencing (DocBox) installed in  homes of IG  -Home-Based  Theory: None stated | 1. Acceptability of the intervention    1. Experiences of taking part in Tele-Yoga 2. Appropriateness of the intervention    1. Patients’ well-being, symptoms and function 3. Potential active ingredients of the intervention    1. Reported effects 4. Participation in the research    1. Motivations    2. Expectations 5. Acceptability of the testing procedures    1. Perceptions of measures and home physiological testing |
| Smith et al.  (2021)30  United Kingdom | To address the uncertainties of whether the REACH-HF intervention could be delivered with acceptable fidelity and HFpEF patients; and caregivers; experiences of participation in the intervention | Process evaluation sub-study of the REACH-HFpEF pilot trial    Thematic analysis; Individual semi-structured interviews | HF preserved ejection fraction (HFpEF)  Purposive sampling  15 patients  6 male  Mean age = 70.4 yr  7 caregivers  2 male  Mean age = 62.8 | Home-based program, entitled REACH-HF:  -Self-help manual  -Choice of chair-based or walking programs: -Facilitator support with in-person (up to 4 visits) or telephone sessions (2-4 calls)  -12 wk  -Home-based  Theory: Health behavior change | Three themes, and related subthemes:   1. Understanding their condition    1. Reaction to diagnosis 2. Emotional consequences of HF    1. Loss of identity    2. Recognizing and responding to emotion 3. Responses to the REACH-HF intervention    1. Engagement with intervention    2. Changes in health-related behaviors    3. Monitoring and symptom tracking    4. Unique caregiver views and experiences |
| Thorup et al. (2016)33  Denmark | To explore pedometer use and self-determined motivation for walking during a cardiac telerehabilitation program from patients’ and health professionals’ experiences | Qualitative sub-study of the RTC; Ethnography-inspired  Deductive Content Analysis; Individual semi-structured interviews | ACS, HF, CABG or valve surgery  11 patients  8 male  Age Range: 36-85 yr  Health professionals  5 nurses  6 physiotherapists | Walking with a Fitbit Zip pedometer (also given weight scale, sphygmomanometer, tablet computer)  -Step goal made with nurse and physiotherapist  -Daily  -13 wk (with all equipment)  -52 wk (with Fitbit)  Theory: Self Determination Theory | Three Themes, Six Subthemes:   1. Independence from standardized rehabilitation    1. Individual choice and decision for walking activity    2. Tailoring walking activity 2. Conscious awareness of walking activity    1. Feedback on walking activity    2. Knowledge leading to awareness of walking 3. Interaction with others in relation to walking activity    1. Feelings of being under surveillance, yet supported    2. Support from next of kin |
| Wahlstrom, Karlsson, and Medin  (2018)36  Sweden | To describe perceptions and experiences of MediYoga among patients with symptomatic PAF | Inductive explanatory design    Qualitative content analysis with inductive method; Individual semi-structured interviews | Paroxysmal Atrial Fibrillation (PAF)  12/44 patients  7 male  Age range = 49 – 82 yr | MediYoga:  -Sitting in chair or on  Floor  -Also given a CD-record of the yoga program and encouraged to do independently at home  -60 min, 1x/wk, 12 wk  -Group Class - In Hospital  Theory: None stated | Three categories:   1. A time for sense of existence and presence 2. A way of gaining well-being and increased consciousness    1. Experience of an increased well-being    2. Increased awareness of the connection between physical and mental functions 3. Access to a tool to gain willpower and relief of symptoms    1. An accessible tool    2. Reduction of bodily symptoms |
| Yeh et al.  (2016)24  USA | To qualitatively explore perceived physical and psychosocial effects and overall patient experience with a 12-wk Tai Chi intervention and an education control group in a clinical trial of patients with chronic HF | Qualitative sub-study    Grounded theory; Individual semi-structured interviews | HF  Random subset  17/100 patients  8 male  Mean age = 71yr  17 White | Tai Chi:  -60 min, 2 x/wk, 12 wk  -Group Class - CR building  Theory: None stated | 1. Empowerment/perceived control 2. Awareness/mindfulness 3. Stress management and non-reactivity/resiliency 4. Renewed social role 5. Physical function |