**Supplement 6. Physical activity assessment across included studies.**

|  |  |
| --- | --- |
| **Subjective assessment** | **Number of studies (N = 8)** |
| Compliant vs non-compliant with exercise prescription | N = 5 (Chien, Chen, Garet, & Wang, 2014; Corvera-Tindel, Doering, Gomez, & Dracup, 2004; L. Evangelista et al., 2003; L. S. Evangelista, Berg, & Dracup, 2001; van der Wal et al., 2006) |
| Daily physical activity, measured using a validated scale, International Physical Activity Questionnaire (IPAQ) | N = 2 (Klompstra, Jaarsma, & Strömberg, 2018; Oka, Gortner, Stotts, & Haskell, 1996) |
| The European Heart Failure Self-care Behaviour Scale | N = 1 (Gallagher, Luttik, & Jaarsma, 2011) |
| Compliance rate | N = 1 (L. S. Evangelista et al., 2001) |
| **Objective assessment** | **Number of studies (N = 9)** |
| Energy expenditure average daily kcal, estimated using accelerometer | N = 4 (Chien et al., 2014; Lee et al., 2016; Moreno-Suarez, Liew, Dembo, Larbalestier, & Maiorana, 2019; Pozehl et al., 2018) |
| Daily accelerometry units – lowest tertile vs highest tertile | N = 1 (Snipelisky et al., 2017) |
| Average daily accelerometer units | N = 1 (Witham, Argo, Johnston, Struthers, & McMurdo, 2006) |
| Steps per day total, measured using accelerometer | N = 3 (Alosco et al., 2012; Dontje et al., 2014; Werhahn et al., 2019) |
| Duration, hours/day, measured using accelerometer | N = 1 (Werhahn et al., 2019) |

**The assessment of barriers and enablers across included studies.**

| **Construct** | ***PA outcome*** | ***Construct and physical activity assessment*** |
| --- | --- | --- |
|  |  |  |
| **Age** | *Binary* | *Years*  *Compliant vs non-compliant with exercise prescription)* (Chien, Chen, Garet, & Wang, 2014; L. Evangelista et al., 2003; L. S. Evangelista, Berg, & Dracup, 2001)      *Daily accelerometry units – lowest tertile vs highest tertile* (Snipelisky et al., 2017) |
| *Continuous* | Years  *Average daily accelerometer units*(Witham, Argo, Johnston, Struthers, & McMurdo, 2006)  *Energy expenditure average daily kcal* (Chien et al., 2014; Lee et al., 2016; Pozehl, Mcguire, et al., 2018)  *Steps per day total*(Alosco et al., 2012; Dontje et al., 2014)*, IPAQ scale*(Klompstra, Jaarsma, & Strömberg, 2018) |
| **Comorbidity** | *Binary* | Charlson Comorbidity Index  *Compliant vs non-compliant with exercise prescription*(Corvera-Tindel, Doering, Gomez, & Dracup, 2004) |
| *Continuous* | Charlson Comorbidity Index  *Energy expenditure, average daily kcal*(Pozehl, Mcguire, et al., 2018) |
| **Social support** | *Binary* | High(>9) vs low(<=9) perceived social support scale score  *The European Heart Failure Self-care Behaviour Scale score2* (Gallagher, Luttik, & Jaarsma, 2011) |
| *Continuous* | *--* |
| **Negative attitude** | *Binary* | *--* |
| *Continuous* | Negative Attitude Scale*3*  *Energy expenditure (average daily kcal)*(Pozehl, Mcguire, et al., 2018) |
| **Positive attitude** | *Binary* | *--* |
| *Continuous* | Positive Attitude Scale*4*  *Energy expenditure, average daily kcal* (Pozehl, Mcguire, et al., 2018) |
| **Six-minute Walking Test (6MWT)** | *Binary* | Meter/minute  *Compliant vs non-compliant with exercise prescription*(Corvera-Tindel et al., 2004)  *Daily accelerometry units – lowest tertile vs highest tertile*(Snipelisky et al., 2017) |
| *Continuous* | Meter/minute  *Average daily accelerometer units*(Witham et al., 2006)  *Energy expenditure (average daily kcal)* (Pozehl, Mcguire, et al., 2018)  *Steps per day total*Werhahn et al. (2019) |
| **Physical functioning (self-report)** | *Binary* | Scale score (MOS SF-36)5  *Compliant vs non-compliant with exercise prescription*(L. S. Evangelista et al., 2001)  Scale score (KCCQ)6  *Daily accelerometry units – lowest tertile vs highest tertile*(Snipelisky et al., 2017) |
| *Continuous* | Scale score (KCCQ)6  *Energy expenditure and steps per day* (Pozehl, Mcguire, et al., 2018; Werhahn et al., 2019) |
| **Symptoms** | *Binary* | *--* |
| *Continuous* | KCCQ6, total symptom score (symptom subscale)  *Energy expenditure*(Pozehl, Mcguire, et al., 2018) |
| **Left Ventricular Ejection Fraction (LVEF), %** | *Binary* | Percentage, %  *Compliant vs non-compliant with exercise prescription*(Corvera-Tindel et al., 2004) |
| *Continuous* | Percentage, %  *Energy expenditure*(Chien et al., 2014; Lee et al., 2016; Pozehl, Mcguire, et al., 2018)  *Steps per day*(Dontje et al., 2014; Werhahn et al., 2019) |
| **Self-efficacy** | *Binary* | *--* |
| *Continuous* | An unspecified self-efficacy scale score  *A single-item exercise scale*(Klompstra et al., 2018)  Self-efficacy scale*7*  *Energy. Expenditure8* (Lee et al., 2016)  Self-efficacy scale*9* score  *Daily energy expenditure*(Chien et al., 2014)  Self-efficacy scale  *Steps per day, total*(Dontje et al., 2014)  Self-efficacy scale*10*  *Daily physical activity 11* (Oka, Gortner, Stotts, & Haskell, 1996)  KCCQ self-efficacy score  *Energy expenditure, kcal*(Pozehl, Mcguire, et al., 2018) |
| **Depression** | *Binary* | Presence of clinical depression  *Daily accelerometry units – lowest tertile vs highest tertile*(Snipelisky et al., 2017)  Hospital Anxiety and Depression scale (HADS) subscale score  *Compliant vs non-compliant with exercise prescription* (Corvera-Tindel et al., 2004)  Centre for Epidemiology Surveys-Depression scale (CES-D)  *Compliant vs non-compliant with exercise prescription* (van der Wal, van Veldhuisen, Veeger, Rutten, & Jaarsma, 2010) |
| *Continuous* | HADS score  *Total steps/day*(Alosco et al., 2012)  HADS score  *Accelerometry counts*(Witham et al., 2006)  PROMIS-29 score  *Energy expenditure, kcal*(Pozehl, Mcguire, et al., 2018) |
| **Digoxin prescription** | *Binary* | *Compliant vs non-compliant with exercise prescription*(Corvera-Tindel et al., 2004) |
| *Continuous* | *--* |
| **Doppler estimated filling pressure** | *Binary* | *Daily accelerometry units – lowest tertile vs highest tertile*(Snipelisky et al., 2017) |
| *Continuous* | *--* |
| **Dysphoria** | *Binary* | MAACL emotional dysphoria score  *Compliant vs non-compliant with exercise prescription*(Corvera-Tindel et al., 2004) |
| *Continuous* | *--* |
| **Education** | *Binary* | Education above junior  *Energy expenditure*(Chien et al., 2014)  College or over  *Energy expenditure MET/min/week*(Lee et al., 2016)  College or over  *Compliance rate*(L. S. Evangelista et al., 2001)  Post-secondary degree  *Energy expenditure, kcal*(Pozehl, Mcguire, et al., 2018) |
| *Continuous* | Years  *Accelerometer, steps per day*(Alosco et al., 2012) |
| **Employment** | *Binary* | Yes vs no  *Energy expenditure* (Lee et al., 2016; Pozehl, Mcguire, et al., 2018) |
| *Continuous* | *--* |
| **Ethnicity** | *Binary* | Caucasian vs non-Caucasian  *Daily accelerometry units – lowest tertile vs highest tertile*(Snipelisky et al., 2017)  *Energy expenditure* (Pozehl, Mcguire, et al., 2018) |
| *Continuous* | *--*  Caucasian vs non-Caucasian  *Energy expenditure* (Pozehl, Mcguire, et al., 2018) |
| **HF duration** | *Binary* | Years  *Compliant vs non-compliant with exercise prescription*(Corvera-Tindel et al., 2004) |
| *Continuous* | Years  *Energy expenditure total*(Lee et al., 2016) |
| **HFrEF (Yes)** |  | HFrEF vs HFpEF  *Energy expenditure, kcal*(Pozehl, Mcguire, et al., 2018) |
|  | -- |
| **pro-BNP** | *Binary* | -- |
| *Continuous* | ng/mL  *Duration, hours/day*(Werhahn et al., 2019) |
| **Hostility** | *Binary* | MAACL hostility score  *Compliant vs non-compliant with exercise prescription*(Corvera-Tindel et al., 2004) |
| *Continuous* |  |
| **Income** | *Binary* | *--* |
| *Continuous* | Above poverty  *Energy expenditure*(Lee et al., 2016) |
| **Left Atrial Volume index (LAV)** | *Binary* | l/m2  *Daily accelerometry units – lowest tertile vs highest tertile*(Snipelisky et al., 2017) |
| *Continuous* | *--* |
| **Left Ventricular Assist Device (LVAD)** | *Binary* | Pre-post LVAD  *Energy expenditure total* (Moreno-Suarez, Liew, Dembo, Larbalestier, & Maiorana, 2019) |
| *Continuous* | *--* |
| **Left Ventricular Remodelling (LVR)** | *Binary* | Relative myocardial wall thickness  *Daily accelerometry units – lowest tertile vs highest tertile*(Snipelisky et al., 2017) |
| *Continuous* | *--* |
| **Partner** | *Binary* | Living with a spouse, Yes vs No  *Daily energy expenditure*(Chien et al., 2014)  Marital status  *Compliance rate*(L. S. Evangelista et al., 2001) |
| *Continuous* | *--* |
| **PeakVO2** | *Binary* | mL/kg/min  *Compliant vs non-compliant with exercise prescription*(Corvera-Tindel et al., 2004) |
| *Continuous* | mL/kg/min  *Steps/day, total*(Werhahn et al., 2019) |
| **Perceived exertion** | *Binary* | *--* |
| *Continuous* | *IPAQ scale*(Oka et al., 1996) |
| **Quality of Life (QoL)** | *Binary* | KCCQ scale6 total score  *Daily accelerometry units – lowest tertile vs highest tertile* (Snipelisky et al., 2017) |
| *Continuous* | KCCQ scale 5 total score  *Energy expenditure*(Lee et al., 2016; Pozehl, Mcguire, et al., 2018) |
| **Renal function** | *Binary* | Estimated glomerular filtration rate (eGFR) ml/min  *Accelerometer unitslowest tertile vs highest tertile*(Snipelisky et al., 2017) |
| *Continuous* | *--* |
| **Smoking** | *Binary* | *--* |
| *Continuous* | Smoking (yes vs no)  *Energy expenditure*(Lee et al., 2016) |
| **Symptom distress** | *Binary* | -- |
| *Continuous* | MSAS-SF 12  *Energy expenditure, total daily* (Chien et al., 2014) |

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