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| Supplemental Digital Content 1  *Included Articles* | | | | | |
| Author, Year, Location | Design | Theory | Sample  Characteristics | Intervention | Results |
| Arkkukangas  et al., (2019)  Sweden | Randomized  controlled  trial | Transtheoretical Model | Mean age of all  groups: 83  Exercise  Program  n=61  Exercise  Program +  Motivational  Interviewing  (MI)  n=58  CON n=56 | **Intervention Duration**  **(Months):** 3  **Interventionist**:  Physical Therapists  **Intervention:** Otago  Exercise Program  (OEP)/OEP with MI | **Outcome Measure:**  Frändin/Grimby Activity  Scale  No difference between groups  in the Frändin/Grimby Activity  Scale  Within groups, the OEP + MI  group significantly improved  (*P* = .02) physical  performance, fall self-  efficacy, activity levels,  handgrip strength, adherence  to the exercises and decline in  fall frequency  Differences in the OEP and  control groups in the  Frändin/Grimby Activity Scale  not significant |
| Barreto et al.,  (2018)  France | Randomized  controlled  trial | None Noted | Multi domain +  Omega 3: mean  age: 76, n=417  Omega3: mean  age: 76.1, n=422  Multidomain:  Mean age, 75.5  n=420  Placebo + usual  care: Mean age:  75.6, n=420 | **Intervention Duration**  **(Months):** 36  **Interventionist:** PA  instructor  **Intervention:**  Cognitive training,  Nutritional and PA  counseling, Omega 3  supplements | **Outcome Measure:** MET-  min/week  Nutritional and PA counseling  increased MET-min/week at 6  months (*p*≤ 0.002) and had  limited decline at 2 and 3 year  follow up. Omega-3  supplementation  did not affect PA levels |
| Bickmore,  et al., (2013)  United States | Randomized  controlled  trial | None Noted | Mean age of all  participants: 71.3  Treatment n=132  CON: n=131 | **Intervention Duration**  **(Months):** 12  **Interventionist**:  Embodied  Conversational Agent  **Intervention:**  Coaching daily for 2  months then  intermittently for 10  month maintenance  phase | **Outcome measure:** Steps via  pedometer  Statistically significant  increase at 2 months ( *p*=.01)  No longer significant at 12  months (*p* =.09) |
| De Vries, et al.,  (2015) | Randomized  controlled  trial | None Noted | Intervention:  mean age: 78.4,  n=64  CON: mean age:  78.6,n=65 | **Intervention Duration**  **(Months): 6**  **Interventionist**:  Physical Therapists  **Intervention:**  Coach2Move**.** Goal  oriented treatment plan  fitting barriers of the  patient and his or her  environment. | **Outcome Measure:** LASA  Physical Activity  Questionnaire (LAPAQ).  Between group mean  differences for PA: 17.9 min  per day at 6 months |
| Herhelegiu  et al., (2017)  Romania | Randomized  controlled  trial | Transtheoretical  Model | Mean age:  Intervention:  74.8, n=100  CON: Mean age:  75, n=100 | **Intervention Duration**  **(Months):** 6  **Interventionist**:  Geriatrician  **Intervention:** Monthly  15-30-minute  counseling sessions | **Outcome Measures:**  Mets  collected via the International  Physical Activity  Questionnaire (IPAQ)  Intervention: PA increased by  a median of 180.0 MET  minutes/week (95%  confidence interval (CI)  43.4±316.6, *p* = 0.01)  Control group: PA decreased  by a median of 346.5 MET  minutes/week (95% CI  178.4±514.6, *p* <0.001) due to  seasonal effect |
| Kerr et al.,  (2018)  United States | Cluster  randomized  controlled  trial | Social Cognitive  Theory | Intervention:  Mean age:  85.3.n=151  CON: Mean age  81.9, n=156 | **Intervention Duration**  **(Months):** 12  **Interventionist:** Health  Educators and Peer  Leaders  **Intervention:**  Individual-goal setting,  Interpersonal- group  walks, and community  level-pedestrian  advocated  improvements  in walkability | **Outcome Measure:**  Accelerometer reading  Intervention; Significant  increase in PA (about 56 min  of moderate-vigorous PA per  week or 119 min of light PA)  Control group: no change  overall |
| Kolt et al.,  (2012)  New Zealand | Cluster  randomized  controlled  trial | None Noted | Intervention:  Mean age: 73.9,  n=165  CON: Mean age:  74.3, n=165 | **Intervention Duration**  **(Months):** 3  **Interventionist:**  Primary Care Physician  **Intervention:**  Group 1: Green  prescription with  pedometer and  in person prescription  followed by 3 telephone  counseling sessions  provided by activity  counselor  Group 2: Green with  in person prescription  followed by 3 telephone  counseling sessions  provided by activity  counselor- No  pedometer-focus on  setting time goals rather  than step counting | Group 1 (pedometer-based)  increased leisure  walking by 63.0 min/wk on  average, more than double the  increase in Group 2 (no  pedometer) of 30.9 min/wk at  3-4 months |
| McMurdo,et al.,  (2010)  Scotland | Randomized  controlled  trial | Self-regulation  Theory | Mean age of all  groups: 77.3  BCI n=68  BCI + pedometer  n=68  CON n= 68 | **Intervention Duration**  **(Months):** 6  **Interventionist:**  Trained study  coordinators  **Intervention:**  Group1: Behavioral  Change Intervention  (BCI)  Group 2: Behavioral  Change Intervention  (BCI) plus pedometer  Group 3: Usual Care  Participants were  contacted 1x/week for  the first month, then  every 2 weeks for 2  months, and then  monthly | **Outcome Measure:**  Accelerometer reading  Secondary outcome- lower  extremity function  Results: PA at 3 months was  higher in the BCI group than in  the control group (*p*=.002) and the pedometer plus group  (*p*=.04).  No significant difference  between BCI group and BCI +  pedometer |
| Mutrie et al.,  (2012)  United  Kingdom | Randomized  controlled  trial | Social Cognitive  Theory | Intervention  mean  age of 71.6  Control mean  age of 70.0  n=20  CON n=21 | **Intervention Duration**  **(Months):** 3  **Interventionist:** Nurse  **Intervention:**  Two 30-minute nurse  led counseling sessions,  use of pedometer  Control group: received  intervention 12 weeks  later | **Outcome Measures:** Sealed  pedometers and an *activ*PALtm  monitor.  **Results:**  12 Weeks: Intervention  increased step counts  by 2119 steps/day (*p* = .001) |
| Rasinaho et al.,  (2011) Finland | Randomized  controlled  trial | Social Cognitive  Theory  Transtheoretical  Model | Mean age of  both groups:  77.6  Intervention:  n=318  CON: n=314 | **Intervention Duration**  **(Months):** 24  **Interventionist:**  Physiotherapist  **Intervention:** 1 hour of  face to face counseling  followed by phone  counseling sessions 3  times per year | **Outcome Measures:** Number  of physical activities attended  **Results:** Effect was  significant for water aerobics  (odds ratio (OR) 2.49, 95%  confidence interval CI 1.16–  5.36), and for walking for  fitness (OR 1.58, 95% CI  1.05–2.40)  Participants followed for 3.5  years |
| Robare et al.,  (2011)  United States | Randomized  controlled  trial | Social Learning  Theory | Mean age of  both groups:  73.9  Lifestyle Plus  n = 188  Education and  Counseling  n = 201 | **Intervention Duration**  **(Months):** 24  **Interventionist:** Health  Counselors  **Intervention:**  BECI: Brief education  and counseling  interventions  BECI-plus: Received  brief education and  counseling intervention  plus a physical activity  intervention (the Key to  Life Exercise  Intervention) and, for  those with a history of  hypertension, a dietary  sodium nutritional  intervention | **Outcome Measures:**  Modified Activity  Questionnaire  **Results:** Levels of PA  Declined 1.6 hours per week in the BECI-plus group |
| Thompson et  al., (2014)  United States | Randomized  controlled  trial | None Noted | Mean age: 79.5  Intervention:  n=25  CON: n=24 | **Intervention Duration**  **(Months):** 12  **Interventionist:**  Counselor  **Intervention:** Face to  face counseling every 2  months, phone  counseling weeklyand  FitBit. Utilized  READY, get SET, and  GO from theGo4Life  materials Control  group: FitBit only | **Outcome Measures:** Activity  units (using accelerometer),  B/P, Cholesterol, weight,  %body fat, glucose, Hgb a1c%  **Results:** No significant  differences between  intervention group and control  group |