Katie Sites

PHYT 752

Module 4: Evidence Table

PICO: In obese older adults living in rural eastern North Carolina, is having free health fairs in small towns better than providing patient education materials at local medical clinics at increasing physical activity to reduce obesity?

WL = weight loss. PA = Physical Activity. SA= successful aging. WEL = Weight Efficacy Lifestyle Questionnaire. SESPAN = Southeast Seattle Senior Physical Activity Network. SCT= social cognitive theory. TPB= theory of planned behavior. TTM= transtheoretical model. WC= waist circumference.

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| **Author, Year, Journal, Title** | **Purpose**  **Design** | **Subjects** | **Intervention** | **Outcome Measure** | **Results** | **Application to PICO** | **Comments** |
| Rejeski et al, 2011. *Gerontology Series B: Psychological and Social Sciences*  Weight Loss and Self-Regulatory Eating Efficacy in Older Adults: The Cooperative Lifestyle Intervention Program | To test the hypothesis that WL and PA would result in improved self efficacy better than PA or SA alone.  RCT | N = 261  Randomized into WL + PA, PA alone, or SA control | WL+ PA= caloric intake restriction based on weight, nutritional and behavioral group counseling, 150 min/week PA  PA= 150 min/week PA  SA= educational seminar; no info on WL or PA | -BMI  -WEL  -PA  Measured at baseline, 6 mo, 12 mo, and 18 mo | -WL + PA had significant treatment effect  -WL+PA significantly improved WEL scores  -WL+PA and PA had significantly higher PA levels than SA  -WEL scores correlated with #days caloric goals were met  -WL+PA, PA had higher meeting attendance than SA | Both health fairs and patient educational material would be effective in reducing obesity in rural Eastern NC; I can provide patient education (behavioral modification training) in both settings. | Supports nutritional and PA interventions for reducing weight in older adults in NC.  No WL only group  All subjects older, white, rural NC |
| Cheadle et al, 2010. *Urban Health*  Promoting sustainable community change in support of older adult PA: evaluation findings from the Southeast Seattle Senior PA Network. | To explain the methods and results of the Southeast Senior PA Network (SESPAN) program.  Cross-Sectional | N = ?  Community dwelling older adults | Community outreach with various organizations to increase PA on a large scale in Seattle. | -Number of contacts  -Community Changes  -(no specific outcome measure administered to participants) | -SESPAN created numerous older adult programs to ↑ PA  -Over 600 contacts made  -12 new walking groups formed  -9 new exercise classes formed | Increasing PA at the community level will involve a multidisciplinary approach and multiple community organizations to make the program viable and sustainable. | Large scale interventions need adequate funding, community contacts, and time to implement new programs  Program design impossible to replicate |
| Conn et al, 2003. *Health Behavior*  Randomized trial of 2 interventions to increase older women's exercise. | Determine whether two limited contact interventions (motivation and prompting) could increase PA in older community dwelling women.  RCT | N = 190  Randomized into motivational or instructional and prompted or non-prompted  \*M and I groups divided into P or NP | M = individual and group sessions based upon SCT, TPB, and TTM.  I = individual and group sessions with standard info about PA  P= phone and mail prompting  NP= no prompt | -PA (pedometer)  - Baecke Physical Activity Scale (BPAS  -Rate of Perceived Exertion (RPE)  -Houston Physical Activity Scale (HPAS)  Baseline and 3 mo post-intervention | -Prompted subjects had ↑ levels of PA and better BPAS scores (p=0.03)  - Motivation and prompting was not more effective at increasing HPAS scores (p=0.33), RPE scores (p=0.78), DigiWalker scores (p=0.19), or the overall amount of exercise (p=0.49). | Following up with participants helps to maintain a high level of compliance  Delivering prompts (mailing, flyers, emails, etc.) to participants in rural NC may enhance weight loss  Educational material does not need to be motivational to be effective | Prompting is an effective treatment for increasing episodic exercise and overall level of PA.  Only assessed aerobic exercises, no other behavior changes. |
| Stoley et al, 2008. *Obesity .*  Obesity Reduction Black Intervention Trial (ORBIT): Six-month Results | Test the efficacy of a "culturally proficient" approach to WL aimed at black women.  RCT | N = 213  Intervention = 107  Control = 106 | Intervention = group and individual exercise and counseling sessions based on SCT to ↑ self efficacy; monthly motivational interviews  Control = weekly newsletters with general health info | -BMI & weight  -(Health Eating Index (HEI)  -Block '98 Food Frequency Questionnaire (FFQ)  -International Physical Activity Questionnaire--Long Format (IPAQ))  baseline and 6 mo | -Intervention group had significantly higher intake of fruit and higher HEI scores at the 6 month follow up (p=0.006 and p =0.001).  -The intervention had significantly higher levels of vigorous and moderate PA at the 6 month follow up (p=0.001 & p=0.05). | -Behavioral interventions are effective in reducing weight and BMI in AA women  -WL interventions need to be individually tailored.  -Taking cultural background into account when creating weight loss programs helps enhance program success.  - Including both didactic material and fun exercises helps reduce BMI and weight. | Food intake and PA were self reported; obese women tend to under report the amount of food intake and over report PA  Control group could have received PA (contamination) |
| Morgan et al, 2011.  *Obesity.*  1. The SHED-IT community trial study protocol: a randomized controlled trial of WL programs for overweight and obese men.  2. 12-Month Outcomes and Process Evaluation of the SHED-IT RCT: An Internet-Based WL Program Targeting Men. | Assess whether a low dose internet based WL program is an effective intervention for overweight men  RCT | N = 159  Randomized into Resources, online, or control group | Resources = received SHED-IT handbook, dvd, and support book. Measured weight and WC 1x/week; PA diary 4x/week. Received feedback forms about their progress.  Online (Resources +Internet) = same intervention as above + access to CalorieKing website (SCT)  Control = none. | -BMI, WC, weight, BP, HR, %body fat, PA (pedometer)  -Australian Eating Survey  - Dietary Questionnaire for Epidemiological Studies  -Alcohol Use Disorders Identification Test  -Sitting Questionnaire  - SF-12  -Epworth Sleepiness Scale  -Intl Index of Erectile Function-5  -All tested at baseline, 3 mo, 6 mo | -Data were only collected on 65 subjects  -Significant difference in WL between groups (p=0.48)  -All groups did lose a significant amount of weight at the 3 mo (p=0.001) and 12 mo (p=0.001).  -No significant differences in percent of WL between groups (p=0.06).  -Both groups made significant improvements in BMI,BP, HR, and WC (all p=<0.001). | Behavioral counseling and SCT enhances WL interventions.  Subjects made lifestyle and behavioral changes to maintain their WL long term.  Emphasizing the importance of making changes in diet and PA will benefit rural NC participants | This study was divided into multiple publications (protocol, diet results, PA results, etc.)  No true control  Highly variable SES which could impact nutritional options |
| Wilcox et al, 2006.  *Public Health.*  Results of the First Year of Active for Life: Translation of 2 Evidence-Based PA Programs for Older Adults Into Community Settings | Evaluate the effectiveness of two PA interventions on increasing self reported PA and QOL in a community setting.  Pre/Post Intervention test design | N = 838  Put in Active Choices (AC) group or Active Living Every Day (ALED) group. | AC = Individually tailored phone counseling sessions 2x/month based on SCT (self efficacy). 6 mo  ALED = group counseling sessions based on SCT (self efficacy). 20 weeks | - BMI (kg/m2)  - Community Healthy Activities Model Program for Seniors  -Depression Scale  -Perceived Stress Scale  -Satisfaction with body function and appearance  -AC given at baseline and 6mo; ALED given at baseline and 20 wk | - 608 participants (275 in the AC group and 333 in the ALED group) were analyzed  -Both groups had significantly higher level of moderate and vigorous PA (p=0.001) & overall PA (p=0.001).  -Both groups had significantly improved satisfaction with body image (p=0.001), depressive symptoms (p=0.05) & perceived stress levels (p=0.05). | Behavioral interventions are crucial for increasing PA in older adults.  Both group and individual formats are effective means for delivering behavioral modification strategies. These concepts could be applied to a community health fair: group discussions on ↑ PA | Outcome measures were self report (↓ accuracy)  Subjects analyzed were older, white, college educated women  Sustainability needs to be addressed |
| Brownson et al, 2004.  *Preventative Medicine*  A Community-Based Approach to Promoting Walking in Rural Areas | Determine whether an ecological modeled intervention is effective at ↑ PA in rural community settings  Quasi-experimental | N = 929  Bootheel = 500  comparison communities= 429 | Difficult to determine differences between intervention groups and details about interventions  A questionnaire was given about levels of self efficacy, social support, perceived barriers to walking, health behaviors, motivation, access to resources, and if they preferred to walk alone or with others.    Attempted to est. community walking groups | -Rate of Walking Trail Use  -Total Number of Minutes Spent Walking, in the past 7 days  -Total Minutes Walked for Exercise  Frequency of measures not specified but study from 1996-2001 | -From 1998 to 2004, rate of walking trail use doubled (8% to 17%).  -Low SES showed most improvement.  -No group in any community showed significantly change from the intervention ("intervention effect").  -16.9% of the study's population used walking trails and of this group, 32% showed an increase in their PA level.  -Those living close to the walking trails had a higher intervention effect and showed higher levels of PA. | Ensuring that walking trails and community resources are available to participants will enhance results.  Individualization and motivation are two factors that should be included when planning a community based intervention program for WL. | It is unclear what the method of analysis was for this study: how the intervention communities were analyzed compared to the comparison communities, and what the results were of each. A more organized approach would have yielded better results. |
| Shuger et al, 2011.  *Behavioral Nutrition and Physical Activity*  Electronic feedback in a diet- and physical activity-based lifestyle intervention for WL: a randomized controlled trial. | Determine whether self monitoring technology is effective alone and in combination with group WL interventions to reduce weight and WC in sedentary obese adults.  RCT | N = 197  Randomized into Standard Care (SC), Group Weight Loss (GWL), Group Weight Loss + SenseWear Armband (GWL +SWA), or SenseWear Armband (SWA). | SC = control group. Received WL manual based on SCT  GWL = WL manual, 14 group WL sessions, weekly weigh ins, 6 phone counseling sessions  GWL+SWA = same as GWL but wore SWA 16h/day  SWA = WL manual + SWA 16h/day | -weight (kg), WC, BMI, and % body fat)  -taken at baseline, 4 mo and 9 mo  -PA level as measured by SenseWear Armband was measured at baseline and 9 mo | -Intervention groups had significant weight loss at the 9 month follow up (all p values = 0.05 or less).  -At the 4mo follow up, the SWA and the SWA+ WL group had significant WL (p = 0.003 and p = 0.001).  - At the 9 mo follow up, the SWA+WL group showed significant WL compared to the control group (p = 0.001).  -Participants with the SWA had higher WL and WC reduction than those without. | Recording daily food intake, minutes of PA, and emotional issues may enhance WL programs.  Technology may help monitor PA and caloric intake  Older adults may not utilize technology, which may limit the clinical use of the SWA. | Very high attrition rate  Majority were females  Technology may assist patients to self monitor their PA, diet, and emotional habits which may enhance overall WL |