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- **Website:** www.Bingocize.com
- **Program Synopsis**
 - Bingocize® is an evidence-based 10-week program that combines a bingo-like game with exercise and health education. The unique addition of bingo addresses many of the barriers to older adults' participation because the game is fun, familiar, and done in a group setting (Beauchamp, 2019; Picorelli, Pereira, Pereira, Felicio, & Sherrington, 2014; Taylor & Pescatello, 2016). The program has been shown to increase older adults' functional fitness, health knowledge, and social engagement in a variety of settings. A mobile app version is also available.
- **Program goals:**
 - The overall goals of the program are to help older adults:
 - Improve and/or maintain mobility and independence,
 - Learn and use health information focused on falls reduction and other health-related behaviors, and
 - Socially engage with other older adults.
- **Reasoning behind the program design and elements:**
 - A significant barrier to improving the health and well-being of sedentary older adults is getting them to adhere to an exercise-based health promotion program (Picorelli et al., 2014).
 - Older adults enjoy and are more likely to participate in programs that are game-centered, interactive, and socially engaging.
 - Multimodal interventions (targeting multiple aspects of physical and/or cognitive health, such as health education and exercise) are most likely to produce improvements (Park et al., 2011).
- **Target population**
 - The program targets sedentary older adults at all ability levels in a variety of settings including certified nursing facilities, assisted living, independent living, and community senior centers.
- **Essential program components and activities:**
 - Participants (Bingocizers®) complete a series of strategically inserted exercises designed to

increase or decrease the intensity and volume of exercise. Health education questions are also inserted into the game. Participants rest while numbers are called for the bingo game, complete more strategically inserted exercises or health education questions, rest during number calling, and so on. This pattern is continued until a Bingocizer[®] wins the game. Small prizes (not included with program) are awarded to winners. Additional games are played until all planned exercises are completed.

- **Length/Timeframe of program**
 - Participants play Bingocize[®] for one hour 2 times per week for 10 weeks OR
 - The program is even more beneficial if played on an ongoing basis.
- **Recommended class size:** 8-20; >20 requires two certified leaders
- **Desired outcomes**
 - Improved lower/upper body strength, gait, balance, and range of motion,
 - Improved aspects of cognition (executive function),
 - Increased social engagement,
 - Improved knowledge of falls risk reduction and other important health topics, and
 - Improved patient activation.
- **Measures and evaluation activities**
 - Recommended pre-participation forms include STEADI patient referral form, demographic questionnaire, health history, informed consent, and physician's release. Recommended outcome measures are functional reach, chair stand, Tinetti Falls-Efficacy Scale (Tinetti, Richman, & Powell, 1990), PACES-8 (Mullen et al., 2011), and the WHOQOL-BREF (Skevington, Lotfy, & O'Connell, 2004). All forms and outcome measure instructions are available on the online training website. Certified leaders complete an evaluation of the training, and participants complete an evaluation of the program.
- **Health outcomes and evidence supporting health outcomes:**
 - Community-dwelling physically inactive older adults (N=85) participated for approximately one hour, twice per week, for 10 weeks. They played in groups and were randomly assigned to either an experimental (Bingo + Health Education + Exercise; n =47) or control (Bingo + Health Education; n = 38) group.
 - Upper body strength improved for both groups, $F(1, 81) = 11.40$, $p < .01$, but the improvement was significantly greater for the experimental group (interaction), $F(1, 81) = 4.78$, $p = .03$.
 - Lower body strength improved for both groups, $F(1, 80) = 13.38$, $p < .01$, but the improvement was significantly greater for the experimental group, $F(1, 81) = 4.44$, $p = .04$.
 - As expected, health knowledge on fall risk and osteoarthritis showed a main effect, such that both groups improved their knowledge of the topics, $F(1, 83) = 275.56$, $p < .001$, suggesting the program can be effective for improving health knowledge with or without including the exercise component.
 - Health activation values significantly increased from pre- to post-intervention for both groups, $p < 0.05$. Attendance was high (>93% in both groups) (Crandall et al., In Review).

- Gait performance associated with fall risk was assessed in participants (N=38; Falls et al., 2018). Pre/post gait analysis at self-selected (SS) and fast walking speeds was measured using the GAITRite® Electronic Walkway.
 - Significant improvements (group x time) were observed for the experimental group at fast walking speed for ambulation time (AT) ($\lambda = .878$, $F(1, 36) = 5.01$, $p = .031$, $ES = .122$); velocity ($\lambda = .886$, $F(1, 36) = 4.61$, $p = .039$, $ES = .114$); and step length ($\lambda = .864$, $F(1, 36) = 5.64$, $p = .023$, $ES = .136$). Significance at SS speed included AT ($\lambda = .892$, $F(1, 36) = 4.37$, $p = .044$, $ES = .108$) single support ($\lambda = .887$, $F(1, 36) = 4.59$, $p = .039$, $ES = .113$); and double support time ($\lambda = .886$, $F(1, 36) = 4.63$, $p = .038$, $ES = .114$).
- **Program Costs:**
 - Licensing cost: 2-year license \$250.00 per facility.
 - Training cost: Online Certification \$150.00 per person; Recertification \$75.00 after 2 years; online access to targeted educational and marketing materials for participants, as well as a manual for certified leaders.
 - Equipment cost: “Bingocize® in a Box”-durable and reusable box contains equipment for up to 20 participants; Includes resistance bands and therapy balls. \$250.00 (shipping not included).
 - Prizes are awarded to game winners. Typical prizes include small personal items e.g. lotion, shampoo, etc. (prizes are not provided). Bingocize® t-shirts, hats, and other merchandise are available [online](#) for certified leaders and participants.
 - An optional Mobile App is available as an add-on to the original license (contact bingocize@wku.edu for pricing information).

Resource Requirements

- **Facility:**
 - Large room with tables and sturdy chairs without wheels; participants should be able to stand and move at least 4 feet from the table in each direction.
 - Room size should allow space for certified leader to move about the room.
 - Class size- up to 20 participants if one certified leader; more than 20 requires two certified leaders.
 - A strong WIFI connection is needed for the mobile app add on; a variety of low cost tablets can be used for each participant. Tablets not included.
- **Equipment and material:**
 - A reusable “Bingocize® in a Box” is available and contains equipment for up to 20 participants and includes resistance bands and therapy balls. Targeted educational and marketing materials for participants and an instruction manual for certified leaders are available for download on the online training site.
 - Small prizes (not included) for Bingocize® game winners; \$1.00-\$2.00 per prize; 2-3 prizes awarded per game
- **Training Requirements:** Individual on-line leader training consists of four self-paced modules; [click here to view the online training site](#). Training is available in Bowling Green, Kentucky or onsite. Contact bingocize@wku.edu for more information.

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