HEALTHY STEPS FOR OLDER ADULTS (HSOA)—A Falls Prevention Program Outcome Evaluation

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BACKGROUND

Falling in the older adult population is a significant event:
- The total cost of fall injuries was $50 billion in 2015, and 75% of this cost was financed through Medicare and Medicaid.
- The expected toll for older adult falls is expected to increase to as much as $77.7 billion by 2020 as the population of individuals ages 65 and older continues to increase.
- Falls are the leading cause of fatal injury and the most common cause of non-fatal trauma-related hospital admissions among older adults in the United States, causing over 2.8 million injuries, over 800,000 hospitalizations, and more than 27,000 deaths annually (NCOA, 2018).

Risk factors for falling and the severity of the sustained injury that results is compounded with increased age:
- Changes in hearing, vision, balance
- Muscle weakness/fatigue
- Hormonal changes and dietary habits leading to higher risks of developing osteoporosis, which contributes increased likelihood of fall-related fractures
- Increased side effects from addition of medications

Dissemination of information and behavior change modifications that address healthy aging and fall risk and prevention is paramount as the average age of the population increases:

COMPREHENSIVE EVALUATION OF THESE PROGRAMS IS NECESSARY TO JUSTIFY FUNDING, IMPROVE DELIVERY OF THE INTERVENTIONS TO THE COMMUNITY AND TO REDUCE STATISTICS RELATED TO FALLS.

METHODS

A program evaluation of the Healthy Steps for Older Adults (HSOA) fall prevention program was conducted under the following study parameters:

Participants
A convenience sample of twenty participants ages 58 to 81, recruited from Calvary United Methodist Church and the York Alliance Church via advertisements in the respective church bulletins.

Intervention
A two-day informational and interactive learning session conducted by certified HSOA facilitators. Day 1 of the session defined falls, identified fall risks, and provided information on how to reduce the risks of falling. Day 2 described balance and strength training to reduce fall risk. A larger sample size in the future might provide a more definitive answer.

RESULTS

The HSOA program, for this group of 20 participants, was effective (85.71%) based on our definition.

- **Age as a predictor of likelihood for positive behavior change**
  - Binary logistic regression indicated that there was no association between age and likelihood for modifying behavior related to fall risk. However, examination of the descriptive results suggest that there may be a relationship between age and likelihood to make a positive behavior change toward reducing fall risk. A larger sample size in the future might provide a more definitive answer.

- **Relative fall-risk as a predictor of likelihood for positive behavior change**
  - The physical skills screening established a fall risk of either low, moderate or high for each participant, and the data above suggests that there may be a good correlation between knowing one’s own individual fall risk and the likelihood for making a positive behavior change to reduce fall risk. The binary logistic regression was negative for this test.

- **Additional conclusions**
  - The limitations suggest that improvements can be made to better evaluate and better implement the program in future attempts, including engaging family members into the program for more accurate data collection and accountability, improving consistency between questionnaires, and establishing a standardized definition of program “effectiveness”.

DISCUSSION AND CONCLUSION

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LIMIITATIONS

Evaluation of the HSOA program was burdened with significant limitations:

1. **External Validity** – The sample size was very small (20) making it difficult to support trends in the data with statistically significant tests.
2. **Reliability** - The majority of the data collected is self-reported data and therefore carries intrinsic bias as well as questions of how reliable the data is. Possibly, participants are avoiding a social desirability bias, or are simply trying to appease the facilitator who ran their program with positive answers.
3. **The age of the participants presented an issue for data collection**, particularly the four-week follow-up data. 30% never answered the phone when called. Of the participants that did respond, a significant portion had forgotten that they had taken the course. The data acquired in conversations with these individuals may not be completely reliable.
4. **The method of data collection** was also a limitation, especially for the four-week follow-up questionnaire. A phone call may not have been the best way to contact these participants. An email or a pre-stamped letter might have allowed for a better response rate.
5. **The setup of the program provides a challenge for retention**. Participants had to dedicate two consecutive 8-hour days. Also, the physical skills screening could be a challenge for participants in wheelchairs or who have other issues that prevent them from fully participating.
6. **Evaluating program “effectiveness”** is not standardized and is open to interpretation. Subjective interpretation of effectiveness based on the opinion of the participants does not necessarily match data that supports behavior changes based on the information learned during the intervention. Subjective appreciation for the lessons learned in the program may not be enough to consider the program “effective”.
7. **The supplied questionnaires were lacking** in their ability to provide data for comparison. The questions asked using the HSOA provided pre-intervention questionnaires were different from the questions asked in the post-intervention questionnaire.

CORE COMPETENCIES

- IAR Collects valid and reliable quantitative and qualitative data, IRB Contributes to the development of program goals and objectives, IBE Contributes to implementation of organizational strategic plan, IBIG Collects information that can inform options for policies, programs, and services, 1B7 Describes implications of policies, programs, and services, 1E5 Collaborates with community partners to improve health in a community, 1E5 Recognizes limitations of evidence.

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