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Assessing the Benefits of a Collegiate-Run Wellness Program for Akron Inner City Residents

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ABSTRACT

This paper offers insight into the University of Akron Wellness Wednesday Program, an interprofessional organization of campus students and faculty that present wellness programming to three off-campus housing developments: Edgewood Village, Belcher Apartments, and Saferstein Towers I. The residents of these complexes receive wellness programming from many different disciplines for six months of the year, and then experience a large, four-month gap when the university breaks for summer. With this gap, residents often vocalized that they felt as if information was lost and that they were not able to remember as much when the program returned in the fall. In order to assess the residents' ability to retain and recall information, a pre-survey of topics covered by the programming was given in April of 2018 and a post-survey was given when residents returned to the program in September-November of 2018. The purpose of this study was to assess the program benefits, determine information that residents remember, and explore other strategies to reinforce retention. Improving the experience for each resident is the primary goal of this study. Limitations include a lack of participation in the post-survey, as many did not return for the programming after the summer break.

CHAPTER I

INTRODUCTION:

Wellness Wednesday is an interprofessional program led by The University of Akron College of Health Professions students and supervised by faculty. The students design and present monthly wellness programming to three Akron Metropolitan Housing Association sites each month: Edgewood Village, Belcher Apartments, and Saferstein Towers I. The programming takes place six months out of the academic calendar year: September, October, November, February, March, and April. Residents of these housing complexes that attend the wellness sessions are typically geriatric, and most are disadvantaged and/or disabled in some way.

While the students break for the summer months, the residents do not receive programming from The University of Akron or similar programming from other organizations. A common complaint among the residents is that they do not have consistent programming throughout the calendar year, and as a result, they feel as if they cannot remember the information taught well. As humans age, it is known that memory decreases. Ghisletta et al. (2012) found by following more than 6000 individuals over two decades that various brain functions decrease. There were differences in individual ability, but overall the functioning declined with increasing age. Additionally, the group concluded that the decline in all functions (fluid intelligence, memory, speed, and vocabulary skills) does occur at the same time (Ghisletta, Rabbitt, Lunn, and Lindenberger, 2012). With working with a population primarily over the age of 65, there is the reduced ability to recall information. Older adults, when compared to a younger, college-aged population, have a harder time differentiating ideas when asked to recall them (Lotz Stine and Wingfield, 1988). Despite these concerns voiced by the residents, the Wellness Wednesday program is well-received by the participants. They are always thrilled to see students and are

very thankful for the monthly interactions. For many of these individuals, this is the only wellness related programming that they attend, and it is important to note that they do benefit from the programs. In fact, health education programs have been shown to benefit older adults of many different backgrounds, leading to improvements in behavior, an increase in ability to perform instrumental activities of daily living, and better cognition (Dillard et al., 2018). In this study, research participation and advocacy training programs were implemented in the older adult population to increase the understanding of research and help individuals seek opportunities, such as clinical trials. This group found that the satisfaction with this type of programming was positive and that community involvement was predicted to increase (Dillard et al., 2018). There have been many other studies addressing the benefits and impacts of this type of education in the older adult population. In a study of older adults in rural areas which asked pre and post questions about type II diabetes and colorectal cancer, it was found that the knowledge of the conditions increased after health education programming (McLarry, 2007). Fasting blood glucose and fecal occult blood tests were performed but yielded insignificant results, showing that the health education programming did not necessarily translate to behavior change (McLarry, 2007). This study is very similar to Wellness Wednesday. While the survey given will provide insight on educational gains, it is unlikely that significant changes in behavior occur after the programming. In order to assess the type of information specifically retained by the residents, amount of information remembered by the residents, and the ability to recall information among the residents of the sites, a survey with information taught at the 2017-2018 Wellness Wednesday sessions was given in April of 2018 and then when the residents returned after the break for the 2018-2019 program year. This is a longitudinal study dealing with pre and post results of the same subjects.

The purpose of the project was to collect the educational feedback of residents from Edgewood Village Apartments, Belcher Apartments, and Saferstein Towers I Apartments to assess the benefits of The University of Akron College of Health Professions student-led interprofessional Wellness Wednesday program, supported by ARI-AHEC in partnership with Akron Metropolitan Housing Authority. The aim was to determine if residents still feel comfortable with the information after the break, see if year-round programming would be beneficial, and to gather the opinions of the residents so that the program may be improved in the future.

We hypothesize that there will be a significant difference in knowledge between the pre survey and the post survey when the residents experience a gap of four months in Wellness Wednesday programming.

CHAPTER II

REVIEW OF LITERATURE:

As individuals navigate through the decades of life, it is known that memory and recall functioning declines. Research has been done across the lifespan to study the effects of age on cognitive abilities. In a study that tested many different aspects of memory and recall, such as vocabulary, memory tasks, speed, visual search and more, it was found that in general, the decline in ability tends to occur simultaneously across the different subsets of abilities (Ghisletta et al., 2012). There were differences in individual ability, but overall the functioning declined with increasing age. Additionally, the group concluded that the decline in all functions (fluid intelligence, memory, speed, and vocabulary skills) does occur at the same time (Ghisletta et al., 2012). In addition to the functional decline, recall has been studied between young adults and older adults. When younger adults with a mean age of 19.4 years were compared with older adults with a mean age of 70.8 years, it was found that the older adult population had a harder time discriminating among the units of the phrases when there was a higher density of information (Lotz Stine and Wingfield, 1988). Through this study that asked participants to recall 36 sentences with differing numbers of preposition units, the conclusion was that the difficulty of the sentences may have contributed to the differences in text organization between the younger adult and older adult populations (Lotz Stine and Wingfield, 1988). In addition to these findings, there has been research that aimed to pin point the beliefs in different aged populations of how memory can be best controlled. A study by Hertzog, McGuire, Horhota, and Jopp looked at recall of words by providing younger adult and older adult populations 40 words and then allowing a four-minute period to recall as many as possible, followed by an interview about perceived-control of memory (2010). In a younger population with a mean age of 20.5

years, feedback was that there was knowledge of memory strategies. With the older adult population, it was expressed that memory and mind exercises were means to achieve control; Their feedback was parallel with the "Use it or Lose it" principle. With this study, there are documented differences in the ways that differently aged populations perceive control over memory abilities (Hertzog et al., 2010).

With these known reductions in memory and recall ability, there have been studies that focus on the effects of program interventions with the older adult population that influence memory capabilities and quality of life. In a study that performed a pre and post test of knowledge of type II diabetes and colorectal cancer in a community-based education program, it was found that knowledge increased from the pre-test to the post-test. Participants that experienced the health education programming were able to remember information covered during the programming and increase knowledge on the post-test (McLarry, 2007). In addition to measuring the knowledge retained, this study encouraged participants to participate in health screening after completion of the post-test where fasting blood glucose and fecal occult blood tests were performed. Results were non-significant, showing that while knowledge and memory may increase with health programing, behavior change is not guaranteed (McLarry, 2007).

When looking at the changes in memory and information retention with community wellness programming, we can see that there is an impact. However, it has been found that different types of community programming and interventions can cause different effects in the older adult population. Olson and McAuley (2015) looked at older adults that had type II diabetes and implemented physical activity interventions as well as having an educational control group. The experimental, activity intervention group received walking instruction, group workshops, home logs, and more, while the control group went through a diabetes and health

education course. Between the two groups, it was found that the physical intervention group had short-term improvements in physical activity levels, self-efficacy, and self-regulation. However, the effects were short-lived, as physical activity adherence did not continue to improve after six months (Olson and McAuley, 2015). From this study, we can see that active interventions with older adult populations may produce positive effects that translate to many components of behavior change, but they may not be long-lasting and beneficial after programming is discontinued.

Similarly, other studies that have measured success of interventions with the older adult population, one study examined components that can predict success in programming with older adults. As a component of the Self Determination Theory of behavior, autonomy is one of the key psychological needs that must be met for success. Autonomy allows the participant to actively be involved in choosing their health behaviors and goals (Chang, Yu, and Jeng, 2015). This investigation studied the effects of implementing a leisure education program for older adults, as leisure activities can promote autonomy in older adults. A pre- and post- test were completed after the experimental group received programming. The programming consisted of education pertaining to leisure activity. Subjects covered units of information where they considered the benefits of leisure activity, overcoming barriers, planning for activity, finding resources to succeed, and more. It was found that in adults aged 65 and older, leisure autonomy and self-rated health were higher in the experimental group after receiving the program education (Chang et al., 2015). This is important because motivation is critical in the older adult population in order to successfully implement and continue any sort of wellness programming. When the client feels in control and more confident about their health, the probability of success is higher.

In order to ensure success in all older adult populations, one study enacted a program to increase research participation of older adults. This population is generally excluded from medical trials and studies, so Dillard et al. (2018), created the DREAMS program to inform older adults of the research and trial process and to increase participation. A pre- and post- test were given before and after the programming. It was found that health education programming like the DREAMS program increases the likelihood of healthy behavior, improves instrumental activities of daily living performance, and increases the understanding of research processes. Additionally, health literacy tends to increase, depression decreases, and the quality of life for participants increases (Dillard et al., 2018).

With this information, it is easy to draw parallels to the Wellness Wednesday programming. With the goals of providing wellness education, promoting healthy habits, and improving quality of life, this programming is not the first of its kind. It is known that older adults of minority populations who reside in low-income communities are under poverty-related stress and tend to cope with many chronic health conditions (Dillard et al., 2018). Most of the residents that attend the Wellness Wednesday programming do fall into this category. When looking at information known from published literature, knowledge of the cognitive changes in the older adult population, and requests of residents attending the Wellness Wednesday program, there seems to be a gap in research pertaining to information retention over extended breaks in annual programming.

Research Question: Will there be a significant difference in the amount of information retained between the pre-survey administered in April 2018 and the post-survey administered in September-November 2018?

CHAPTER III

METHODS:

The Wellness Wednesday Program is presented one Wednesday a month at each of three Akron Metropolitan Housing Authority (AMHA) locations (Edgewood, Belcher and Towers I). Wellness Wednesday programming is presented during September, October, November, February, March and April. There is a break from May through August where residents do not receive any programming. This study was approved in by The University of Akron IRB (Appendix A). In April of 2018, residents were asked to voluntarily participate in the study. A script detailing the purpose of the study as well as what was required of the residents was read at each location during the April 2018 Wellness Wednesday programming (Appendix B). Participants were informed that they could opt out of the study at any time. Residents were asked to answer 10 questions about effectiveness, comprehension and retention of content, and social improvement from the Wellness Wednesday program during the April, 2018 sessions. The post survey was administered in September-November, 2018 after the summer break. Participants were asked to complete a survey of questions related to topics covered during the 2017-2018 Wellness Wednesday programming before and after the break. The survey consisted of ten multiple choice and/or true/false questions (Appendix C). Additionally, an "Additional Comments" question was at the end of the survey for any additional comments from the residents. Residents were instructed to choose the correct response.

The primary investigator (P.I.) was present during the survey in order to answer questions and to provide clarity if necessary. To retain the anonymity of the residents, each was assigned a unique identifier (I.D.). A separate list was retained by the P.I. that matched the participant names with their unique I.D. If the participant completed the post survey, the same I.D. was assigned. All

survey materials were kept in a locked office in InfoCision Stadium at The University of Akron. Many of the residents that completed the pre-survey did not complete the post survey for the following reasons: Did not return for post survey or refused to complete the post survey. As such, quantitative results were not able to be obtained. Qualitative comments left on the surveys were analyzed due to low participation completion of the post-survey.

CHAPTER IV

RESULTS:

Twenty individuals completed the pre-survey while only eight individuals completed the post-survey, with some of the post-survey individuals not completing the entire survey. With lack of participation with the post-survey, most of the data obtained was qualitative by comments left on surveys by participants. Quantitative statistical analysis was not performed due to low response rate in the post survey. Additionally, many of the post survey respondents did not answer all the questions. Sixty percent of the post survey respondents replied that they felt unable to retain the information over the summer break. Survey questions 1, 9, and 10 as well as the comment section relate more to participant perceptions and feelings. As such, the remainder of the results focus on this data.

- “I love the beautiful people that teach and hope to see you next year. Good information!”
- “I plan to come back and learn more. Love it?”
- “I love this program I have learn a few things.”
- “Keep up good work.”
- “Love it”
- “Need to exercise more.”

CHAPTER V

DISCUSSION:

The purpose of this study was to determine resident retention of material presented during the academic year Wellness Wednesday programming after a four-month break in Wellness Wednesday programming via a pre- and post-survey. We hypothesized that there would be a significant difference in retention between the pre- and post- surveys when the residents experienced a gap of four months in Wellness Wednesday programming. Information gathered from this study lead to implications about the effectiveness and perceptions of residents relative to the Wellness Wednesday programming. After analyzing the results, it appeared that there was not enough collective feedback from the post-survey to make conclusions on their retention of material covered in the programming. Twenty individuals completed the pre-survey while only eight individuals completed the post-survey, with some of the post-survey individuals not completing the entire survey. However, residents did complete the "Additional comments" section on the survey. Review of this data suggests that the Wellness Wednesday program is both beneficial to the residents who attend and to students who create program material. With the interprofessional nature of the programing, students benefit as much as the residents do. Students from different health majors such as exercise science, nursing, nutrition, and psychology come together. There is a different health theme every month that the students from each discipline take and create materials relevant to their discipline that is educational for the residents. Themes encompass health and wellness topics that the residents request, such as cardiovascular health, mental health education, goal setting, processes of aging, and more. Materials and activities created by the students center around the monthly themes, allowing an educational experience for all parties involved. In this study, due to lack of quantitative data, we are unable to support or

reject our hypothesis. Qualitative feedback from the pre and post-surveys show that residents are appreciative of the programming and willing to attempt behavior change, with statements such as, “I love the beautiful people that teach and hope to see you next year. Good information!” and “Need to exercise more.” Even if participants were not able to recall all the program content, effort and heart were present. As past research has found, wellness programming for individuals of this age group lead to improvements in behavior, an increase in ability to perform instrumental activities of daily living, better cognition, more involvement in the community, and positive feedback (Dillard, et al., 2018). This study aligns with that research in that participants of programming perceive it as beneficial and use it as a platform for goals and behavior change. Results from this study will be used to improve and enhance future Wellness Wednesday programming.

Limitations of this study include small sample size, voluntary resident attendance to programming, and lack of post-survey participation. Future research may choose to study methods of distributing reminders over the summer that remind residents of the programming commencing again in September for better retention and results with pre- and post- survey studies. This study can then be paired with that future research to see if timely reminders increase post-survey participation, therefore leading to more conclusive results about information retention. Furthermore, exploring resident retention patterns or lack thereof can be used to develop more effective dissemination strategies to reinforce health education material. Overall, this study was successful in collecting feedback from residents about their qualitative perceptions and feelings about the Wellness Wednesday program.

CONCLUSION:

This study provided feedback about the Wellness Wednesday program that will be used in the future. Though quantitative results were not analyzed, qualitative results provided commentary on the program impacts, participant feelings, and opportunities for behavior change. Results will be provided to the 2019-2020 Wellness Wednesday Program Coordinator in order to improve health education dissemination. Additionally, collaborating with AMHA to develop an effective reminder system for residents may improve program participation and adherence. Personally, this program and research allowed the opportunity to learn an astonishing amount about the research process, how to treat human subjects, and how to work with the data you have, but were not necessarily expecting. Learning to provide a script for participants, administer a survey, and use appropriate language and communication techniques were milestones achieved. Additionally, I was able to become more attentive and answer questions in a more personal and understandable manner.

Going forward as a physician assistant, I will have a much better understanding of proper communication with my patients, successful information delivery methods, and answering questions accordingly. I will also be better equipped to participate in clinical research and patient-centered care.

ACKNOWLEDGEMENTS

I would like to thank Dr. Judith A. Juvancic-Heltzel, Dr. Laura A. Richardson, and Melissa G. Smith for their contributions, guidance, and unwavering support throughout the Honors Project process. I would also like to thank Greta Lax, AHEC Center Director, for promoting and allowing me to implement the project during Wellness Wednesday programming. I extend my deepest appreciation to Akron Metropolitan Housing Authority for granting permission to execute this project, and to the residents of these sites that participated in the study. Finally, I would like to thank The University of Akron and The Williams Honors College for providing opportunities and support for student-led research.

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APPENDIX A: UNIVERSITY OF AKRON IRB APPROVAL

Office of Research Administration
Akron, OH 44325-2102

NOTICE OF APPROVAL

Date: April 4, 2018

To: Alaina Gent
Department of Sport Science and Wellness Education

From: Sharon McWhorter SM

IRB Number: 20180312

Title: Assessing the benefits of a collegiate-fun wellness program for Akron inner city residents

Approval Date: April 4, 2018

Thank you for submitting your Request for Exemption to the IRB for review. Your protocol represents minimal risk to subjects and qualifies for exemption from the federal regulations under the category below:

- ☐ **Exemption 1** – Research conducted in established or commonly accepted educational settings, involving normal educational practices.
- ☑ **Exemption 2** – Research involving the use of educational tests, survey procedures, interview procedures, or observation of public behavior.
- ☐ **Exemption 3** - Research involving the use of educational tests, survey procedures, interview procedures, or observation of public behavior not exempt under category 2, but subjects are elected or appointed public officials or candidates for public office.
- ☐ **Exemption 4** – Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens.
- ☐ **Exemption 5** – Research and demonstration projects conducted by or subject to the approval of department or agency heads, and which are designed to study, evaluate, or otherwise examine public programs or benefits.
- ☐ **Exemption 6** – Taste and food quality evaluation and consumer acceptance studies.

Annual continuation applications are not required for exempt projects. If you make changes to the study's design or procedures that increase the risk to subjects or include activities that do not fall within the approved exemption category, please contact the IRB to discuss whether or not a new application must be submitted. Any such changes or modifications must be reviewed and approved by the IRB prior to implementation.

Please retain this letter for your files. This office will hold your exemption application for a period of three years from the approval date. If you wish to continue this protocol beyond this period, you will need to submit another Exemption Request. If the research is being conducted for a master's thesis or doctoral dissertation, the student must file a copy of this letter with the thesis or dissertation.

☑ Approved consent form/s enclosed

APPENDIX B: RESIDENT SCRIPT

Hello everyone. My name is Alaina Gent and I am an exercise science student at The University of Akron. Today, I would like to administer a survey in order to gather some responses about the Wellness Wednesday program we have put on throughout the 2017-2018 Fall and Spring academic semesters. Our goal is to always create and present the best program possible in a way that ensures that our knowledge conveyed is understood and retained to the greatest effect. My goal with this survey is to see how you currently understand and remember the material we have reviewed throughout this past year's program, and then administer it again when we join back together in September 2018 to see if the results of changed. Questions on the survey pertain to information we covered this past year, opinions you may have, and how the program has influenced you. With this information, I hope to see what you are retaining, what teaching methods you may respond to better, and any comments or suggestions you may have about the program. We will then be able to use these results to better the program as a whole. Additionally, this feedback may help us expand the program and have a greater impact on the Akron community.

If you would like to participate, I welcome and value your input. This information obtained will be kept confidential. I will only know the surveys from one another by a numbering system. You will be given a number on your survey each time (pre and post) so that way we can compare your data for both the pre and post survey. The link between your name and number will be destroyed after the second survey so that your name will not be able to be identified, and no identifying information will be released to anyone at anytime. The data will be looked at as an overall trend, so your individual data will never be singled out. If you would like to participate and have any questions, please raise your hand or call me over if you would like to

speak privately. If you do not feel comfortable completing this survey, that is completely acceptable. Thank you for attending April's Wellness Wednesday program. As always, we do our best to put on a program to benefit you to the greatest extent possible. Thank you.

APPENDIX C: SURVEY

Wellness Wednesday Effectiveness Survey

Please answer the numbered questions below to the best of your ability. All questions pertain to the University of Akron's monthly Wellness Wednesday program and will help us understand knowledge gained and how to better tailor the program.

Age: _____ Number: _____

1. Do you feel you can remember information learned each month from 2017-2018 Wellness Wednesday?
    a. Yes
    b. No

2. Which listed below is an example of a SMART goal?
    a. I plan to walk more
    b. I plan to walk for 20 minutes, three times per week
    c. I plan to eat better

3. Which is an exercise to perform to help prevent a fall?
    a. Bicep curls
    b. Sideways walks
    c. Neck rolls

4. How does exercise improve pulmonary health?

a. Improves COPD

b. Cures chronic lung diseases

c. Improves lung capacity

5. Which is an exercise to isolate and stimulate the calf muscles to improve foot circulation?

a. Ankle pumps/Ballerina exercise

b. Arm circles

c. Neck circles

6. If you have neuropathy, which remedy should you avoid?

a. Cold water bottle directly on skin

b. ABC exercise

c. Tennis ball foot rolls

7. What should you drink during exercise if exercising for less than 60 minutes?

a. Sports Drink

b. Water

c. Protein solution

8. True or False, exercise can help improve memory:

a. True

b. False

9. Do you feel a sense of encouragement from others after a year of Wellness Wednesday?
    a. Yes
    b. No
    c. Somewhat

10. Do you feel like you lose/forget some of the information during winter and summer break (when there are no Wellness Wednesday programs)?
    d. Yes
    e. No

Additional comments are welcome below: