

2022

Evaluating the Implementation of a Wellness Initiative in an Independent Living Community

Pamela L. Hannon
University of Massachusetts Amherst

Follow this and additional works at: https://scholarworks.umass.edu/nursing_dnp_capstone



Part of the [Nursing Commons](#)

Hannon, Pamela L., "Evaluating the Implementation of a Wellness Initiative in an Independent Living Community" (2022). *Doctor of Nursing Practice (DNP) Projects*. 306.
Retrieved from https://scholarworks.umass.edu/nursing_dnp_capstone/306

This Open Access is brought to you for free and open access by the Elaine Marieb College of Nursing at ScholarWorks@UMass Amherst. It has been accepted for inclusion in Doctor of Nursing Practice (DNP) Projects by an authorized administrator of ScholarWorks@UMass Amherst. For more information, please contact scholarworks@library.umass.edu.

**Evaluating the Implementation of a Wellness Initiative in an Independent Living
Community**

Pamela L. Hannon

Elaine Marieb College of Nursing, University of Massachusetts, Amherst

Chair: Cynthia Jacelon

Mentor: Maureen O'Toole

Date of Submission: April 19, 2022

Table of Contents

Abstract.....	5
Introduction.....	6
Background.....	7
Problem Statement.....	8
Organizational “Gap” Analysis of Project Site.....	8
Review of the Literature.....	9
Eight Dimensions of Wellness.....	9
Emotional Dimension.....	12
Spiritual Dimension.....	13
Intellectual Dimension.....	14
Physical Dimension.....	15
Environmental Dimension.....	17
Financial Dimension.....	18
Occupational Dimension.....	18
Social Dimension.....	19
Evidence Based Practice: Verification of Chosen Option.....	22
Theoretical Framework.....	22
Implementation Science.....	22
Consolidated Framework for Implementation Research.....	23
Methods.....	25
Goals, Objectives, and Expected Outcomes.....	25
Project Design.....	26

Project Site and Population.....	26
Measurement Instruments.....	27
Data Collection Procedures.....	27
Pre- Implementation.....	27
Post- Implementation.....	28
Data Analysis.....	28
Qualitative Data.....	29
Quantitative Data.....	29
Ethical Considerations/Protection of Human Subjects.....	30
Results.....	30
Quantitative Data Analysis.....	31
Participation.....	31
Satisfaction.....	31
Qualitative Data Analysis.....	32
Age.....	32
Gender.....	33
Living Situation.....	33
Participation.....	34
Satisfaction.....	35
COVID-19.....	35
Discussion.....	36
Participation.....	36
Motivation for Participation.....	36

Barriers to Participation.....	40
COVID-19.....	42
Effects on Social Interaction.....	42
Effects on Programming.....	43
Satisfaction.....	43
Implementation.....	44
Setting Facilitators and Barriers.....	44
Conclusion.....	45
References.....	46
Appendix A. The Consolidated Framework for Implementation Research.....	51
Appendix B. Pre-Implementation Survey.....	52
Appendix C. Post-Intervention Interview Question Guide.....	54
Appendix D. Cost-Benefit Analysis.....	55
Appendix E. Site Presentation.....	56
Appendix F. IRB Determination Letter.....	64

Abstract

Background: An independent living community in New England is transforming their philosophical approach to wellness by implementing a new wellness initiative based on the Eight Dimensions of Wellness framework. *Purpose:* Using implementation science, we evaluated the process of implementing the Eight Dimensions of Wellness. *Methods:* A Pre-Implementation Survey was given to residents prior to the implementation and Post-Intervention Interviews of residents and staff was planned post-implementation. The post-intervention phase was not completed due to the delay in implementation at the site related to COVID-19. The data analysis of the of the Pre-Implementation Surveys included Kendall's tau and Kruskal-Wallis tests. The results were intended to guide the implementation at the project site. The results of the Post-Intervention Interviews were meant to provide feedback regarding the success of the implementation. *Results:* Program participation was significantly related to age ($p=.033$) and living situation ($p=.048$). A significant relationship was found between program satisfaction and program participation ($p<.001$) and living situation ($p=.016$). Barriers to participation included time conflicts or participation in activities outside the Community; physical limitations; and lack of interest. The social dimension of wellness was a common theme that emerged, particularly in the context of the COVID-19 pandemic. *Conclusions:* Applying implementation science provided a critical view of the process and success of the implementation of the philosophical shift to Wellness thinking at one independent living community.

Keywords: implementation science, independent living, Eight Dimensions of Wellness, COVID-19

Evaluating the Implementation of a Wellness Initiative in an Independent Living Community

Wellness becomes increasingly important with age, particularly for older adults to maintain independence. The leadership of an independent living facility in New England (referred to as the Community) had chosen to transition to a model of wellness based on the Eight Dimensions of Wellness, which is comprised of emotional, spiritual, intellectual, physical, environmental, financial, occupational, and social dimensions (Zechner et al., 2019). The Community's initiative included wellness promotion within the community; education and training of staff; assessing and tracking wellness of residents; and creating a culture of wellness. The planned changes included:

- offering specific programs and events associated with each dimension,
- adopting and using a standardized self-assessment wellness questionnaire for residents,
- partner with institutions of higher learning and health systems for collaboration opportunities,
- establish education and skills training programs for all team members,
- implement key performance indicators, consistent with industry standards that will utilize data to demonstrate the effectiveness of engaged living through wellness pursuits, and
- concentrate resources on wellness dimensions that have the greatest impact on successful aging including physical, social, emotional and intellectual.

The transition to this model focuses on fostering an understanding of wellness and its importance to residents. This was achieved by implementing a wellness questionnaire, developed

by leadership at the Community, and provided the necessary support to residents to enable them to incorporate wellness into their daily lives with the goal of maximizing wellness, while respecting autonomy.

There are multiple campuses within this organization. Due to this complexity, leadership planned on implementing the Eight Dimensions of Wellness incrementally, one campus at a time. The first campus was chosen as the project site and the principles of implementation science guided the evaluation (Bauer, et al., 2015). The use of implementation science allowed all stakeholders to participate in initial implementation and allowed improvements to be made prior to implementing the Eight Dimensions of Wellness throughout the entire organization after the completion of this project. This will increase the likelihood of success of the implementation as it moves forward to the other campuses within this organization.

Background

The population is aging, and according to the Centers for Disease Control and Prevention (National Center for Chronic Disease Prevention and Health Promotion, 2019), 15% of the population in the U.S. was over the age of 65 in 2016 and it is projected to increase to 25% by 2060. Helping older adults maintain independence is crucial to keeping this population healthy, as well as avoiding excessive health care costs. The World Health Organization's definition of health, included in the preamble to its Constitution, is "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (World Health Organization, 2020) and is further refined by the emphasis on inclusivity and equality of all people, and the concept of health and social measures. However, defining wellness can be a challenge.

There are several models of wellness including Six Dimensions of Wellness (National Wellness Institute, n.d.), Seven Dimensions of Wellness (International Council on Aging, 2020), Eight Dimensions of Wellness (Substance Abuse and Mental Health Services Administration, n.d.). There are common dimensions among each of these models, including emotional, spiritual, intellectual, physical, social, occupational/vocational. Additionally, the models from both Substance Abuse and Mental Health Services Administration (SAMHSA) and the International Council on Aging also included the environmental dimension. The SAMHSA model was the only model that addressed the financial dimension. Considered together, this forms an understanding of the breadth and complexity of health and wellness.

Problem Statement

An independent living community planned a transition to a new model of wellness, incorporating the Eight Dimensions of Wellness. Historically, resident engagement was low and Community leadership sought best strategies to measure the success of their change in philosophy. The goal was to maximize wellness among residents and long-term success of the organization.

Organizational “Gap” Analysis of Project Site

This site is part of a larger organization, which is made up of three campuses, located within a 20-mile radius. The campus that was the site for this DNP project consists of 134 individual independent living residences. Amenities include community areas, dining options, a pool, and a fitness center.

Prior to the implementation, the Community had a robust calendar with diverse programs and events. There were between four and 14 offerings daily in a typical month, with others that could be scheduled on an individual basis. There was a wide range of programs and events, from

social gatherings, physical activity classes, and outings for shopping and pleasure. There were regular programs and events offered from each of the Eight Dimensions of Wellness however the leadership of this organization sought to re-design this program to incorporate the Eight Dimensions with more intention.

Prior to implementation, Community leadership estimated that 70% of residents in this community regularly participated in at least one program or event, 20% had never participated, and 10% had participated in the past, but had withdrawn from participation. Although leadership sought to achieve 100% participation, it was acknowledged that this was not reasonable, as residents have autonomy to choose which offerings they participate in, and whether to participate at all. By creating an environment where the importance of wellness is understood and supported, the leadership additionally hoped to improve engagement scores which have been historically low, as previously determined by an outside consultant.

Review of the Literature

Eight Dimensions of Wellness

A review of the literature was completed to determine the extent that the Eight Dimensions of Wellness has been included in the literature. Several databases were used for searches, including PubMed, CINAHL, Academic Search Premier, and PsycINFO. Search terms included "*8 dimensions*" OR "*eight dimensions*" AND *wellness*. The inclusion criteria for PubMed were clinical trials, meta-analyses, randomized controlled trials, reviews, and systematic reviews, published in the last 5 years. For the searches in CINAHL, Academic Search Premier, and PsycINFO the inclusion criteria were articles published in peer-reviewed academic journals in English between 2015-2020. The full text of the articles identified were scanned to determine

relevance, and in all cases where articles were excluded, it was because the eight dimensions were different than what is being used in this project.

The search results from PubMed yielded 15 articles, all of which were excluded except one, due to lack of relevance. There were four articles identified in the CINAHL search, one of which was a duplicate and one was excluded due to relevance, resulting in two articles. The search of Academic Search Premier resulted in eight articles identified, all of which were excluded due to relevance, except one. Finally, the results of the PsycINFO search yielded one article. From these five articles identified, there were three duplicates, leaving two articles. A third article was identified from the references of both of these articles, leaving a total of three articles, one systematic review article (Zechner, et al., 2019), one article based on expert opinion (Garcia, 2015), and one hallmark article, also based on expert opinion, which was referenced from the other two articles (Swarbrick, 2006).

The first article identified in the initial search process was a systematic review (Zechner et al., 2019). Based on the Johns Hopkins Nursing Evidence-based Practice Rating Scale (Newhouse, et al., 2005), the level of evidence was Level II with high-quality results. The next article was considered Level V with good quality, as it was from a publication by the Colorado Nurses Association, rather than a peer-reviewed academic journal (Garcia, 2015). The final article, identified from the references of the initial articles, was Level V with high quality evidence (Swarbrick, 2006).

A systematic review examined Swarbrick's (2006) Eight Dimensions of Wellness in the literature (Zechner et al., 2019). The authors noted that this was adopted by SAMHSA, a division of the U.S. Department of Health and Human Services, in 2011, however there were no studies that had used this framework. In this review, they looked specifically at the older adult

population with mental health disorders, which is appropriate since this framework was intended to serve the population with mental health disorders. The search was expanded to look at each of the dimensions individually, or together, if more than one dimension was addressed in a single study. They found that all of the dimensions were represented in the literature, with evidence of the importance of each dimension. The authors concluded that the Eight Dimensions of Wellness is an appropriate framework for future studies.

The hallmark article by Swarbrick (2006) was where the concept of the Eight Dimensions of Wellness was initially proposed and ultimately used as the basis for SAMHSA (n.d.) to formalize into a framework. Although this article was based on expert opinion, as well as personal experience, it is important as a foundation for further development and study. In this initial article, Swarbrick detailed seven of the eight dimensions, excluding the dimension of financial, but the importance of this concept was detailed in this article.

The final article, though weak in evidence, was included as an example of the Eight Dimensions of Wellness as it has been used in practice (Garcia, 2015). This brief expert opinion article was found in a column of a nursing association newsletter, aimed at improving wellness. It was specifically targeting those with behavioral and substance use problems but was written in a manner that was also applicable to the general population. Although the importance of the Eight Dimensions of Wellness was discussed, no evidence was provided.

These three articles show the progression of the development of the Eight Dimensions of Wellness, from the first conceptualization (Swarbrick, 2006) to its formalization (Zechner, et al., 2019) and practical application (Garcia, 2015). It is important to note that although Swarbrick intended this model for mental health disorders, the approach was to apply the concept of wellness to the context of mental health, rather than creating the concept within the context of

mental health. This suggested generalizability to the general population, and a need for further study to confirm this. Additionally, although the Eight Dimensions of Wellness was developed for the population with mental illness, it has not been found in the literature for the intended population (Zechner et al.), so it is not surprising that its use has also not been found in the general population. This does not indicate that it is not an effective intervention, but rather that further research is needed. For this reason, literature reviews were conducted for each of the Eight Dimensions of Wellness as separate constructs.

Emotional Dimension

For the dimension of emotional wellness, a search was conducted in the database CINAHL with the terms *emotional wellness AND older adults or elderly or seniors or geriatrics*, with inclusion criteria peer-reviewed journal articles published in English between 2015 and 2020. This yielded six articles, and the full text of each was scanned for relevance. One article was excluded because it was not related to emotional wellness, leaving a total of five articles for review.

Two of the articles used a yoga intervention. In a pre-post design study, Lindahl et al. (2016) found yoga to improve emotional wellness, as defined by decreased Perceived Stress Scale scores. Yoga and tai chi were also found to improve relaxation and happiness in a qualitative study, which examined to frail older adult population (Saravanakumar, et al., 2018). The authors also concluded that these interventions were feasible in this vulnerable population. The Resilient Aging program was used as an intervention in a pre-post pilot study by Fullen and Gorby (2016), and emotional wellness was found to improve, measured by Perceived Wellness Survey scores. Emotional wellness, measured with the Wellness Assessment Tool, had a strong association with better cognitive function in an observational study (Strout & Howard, 2015).

Finally, in a systematic review, Strout et al. (2015) found interventions that had a positive impact on emotional wellness included aromatherapy, massage, meditation, music therapy, theater, and voice.

All of the articles reviewed reported improved emotional wellness. These results show that emotional wellness is amenable to a variety of interventions. Additionally, there are a variety of measurement tools used, indicating there is no standardized way emotional wellness is defined or measured.

Spiritual Dimension

For the dimension of spiritual wellness, a search was conducted in the database CINAHL with the terms *spiritual wellness AND older adults or elderly or seniors or geriatrics*, with inclusion criteria peer-reviewed journal articles published in English between 2015 and 2020. This yielded three articles, one of which was excluded because it did not pertain to older adults, for a total of two articles for review, both of which were reviewed in previous sections.

Strout and Howard (2015) found spiritual wellness was associated with slower cognitive decline, based on the Wellness Assessment Tool, though not as strongly as with emotional wellness, as discussed previously. In the systematic review, Zechner et al. (2019) reported that spiritual wellness was not well represented in the literature, lacking both interventions and measurement tools. They also highlighted the importance of spiritual wellness for older adults as they face end of life.

Although spiritual wellness has been shown to have a positive impact on the overall wellness of older adults, it has not received as much attention from the research community as some of the other dimensions. However, it can be an increasingly important issue as people age

and approach the end of life, and so it remains an important consideration for the wellness of older adults.

Intellectual Dimension

For the dimension of intellectual wellness, a search was conducted in the database CINAHL with the terms *intellectual wellness* AND *older adults or elderly or seniors or geriatrics*, with inclusion criteria peer-reviewed journal articles published in English between 2015 and 2020. This yielded five articles, four of which were previously included in this review. After full-text scanning, one of these five articles was excluded, due to lack of relevance, since intellectual wellness was not directly addressed. The remaining four articles were included.

In the systematic review by Strout et al. (2016), intellectual wellness, along with physical wellness, was the most commonly researched of the dimensions of wellness that were considered, excluding environmental and financial, and half of these studies found a positive impact on cognitive health. Conversely, the systematic review by Zechner et al. (2019) found no studies investigating intellectual wellness in older adults with serious mental illness. In the pre-post study by Fullen and Gorby (2016), intellectual wellness, determined by Perceived Wellness Survey scores, decreased after participants completed The Resilient Aging program. The authors suggested that this was due to dissatisfaction with intellectual wellness offerings or due to the complexities of discussions that occurred during the study. Finally, intellectual wellness was examined in relation to cognitive decline by Howard et al. (2016), rather than factors that lead to intellectual wellness, but this study was included because it highlighted the importance of intellectual wellness. In this longitudinal pre-post study, intellectual wellness activities included computer interactions, crossword puzzles, arts and crafts, reading, and enrollment in educational

courses. From these, reading and computer activities were found to be protective against cognitive decline.

Some studies have found intellectual wellness to be positively influenced by interventions, but others have not. This might be due in part to lack of a standard definition of intellectual wellness or measurement tools to evaluate it. Additionally, intellectual wellness activities involving reading and computer use were associated with less cognitive decline.

Physical Dimension

For the dimension of physical wellness, a search was conducted in the database CINAHL with the terms *physical wellness AND older adults or elderly or seniors or geriatrics*, with inclusion criteria peer-reviewed journal articles published in English between 2015 and 2020. This yielded 21 articles, six of which were previously included in this review. After scanning full text of the new articles, ten of these 15 articles were excluded, due to lack of relevance to wellness and two were excluded because they discussed planned interventions. The remaining three articles were included, in addition to the six previously included articles, which were all determined to be relevant, for a total of nine articles.

In two systematic reviews, the physical dimension was the most (Strout et al., 2016) or one of the most (Zechner et al., 2019) widely studied dimensions. Additionally, studies involving physical wellness were more likely to have statistically significant results, although only 50% of the time (Strout et al., 2016). Physical activity was found to be protective of wellness related to cognitive function, and physical wellness was additionally found to have the strongest association with cognitive function in a longitudinal pre-post study by Howard et al. (2016) and an observational study by Strout et al. (2015), second only to emotional wellness (Strout et al.). In the two studies that used interventions related to the physical dimension, both found that

wellness improved. Tai chi and yoga were found to improve balance, confidence, posture, and body awareness in a qualitative study (Saravanakumar, et al. 2018) and physical wellness improved, measured with Perceived Wellness Survey, after the Resilient Aging program (Fullen & Gorby, 2016).

Maintaining cognitive health is a major component of overall wellness for older adults. Higher levels of physical activity, such as biking, Pilates, yoga, and tai chi, swimming, hiking, or walking, were found to be protective against cognitive decline in older adults in an observational study (Howard et al., 2016). Physical wellness had strong association with cognitive health, second to emotional wellness, as measured by Wellness Assessment Tool in an observational study (Strout & Howard, 2015). In a cross-sectional observational study, Hodgkin et al. (2018) found that rural older adults self-reported physical health as the strongest predictor of perceived wellness. In an observational study, Foster et al. (2015) determined that physical wellness and future physical wellness were viewed as components of holistic wellness by older adults, based on Perceived Wellness Survey.

There were no identified measurement tools that were used consistently among studies, although the Perceived Wellness survey was used in two of the studies (Foster et al., 2015; Fullen & Gorby, 2016). The interventions or predictors of wellness were also diverse, although tai chi and yoga were components of two of the studies (Howard et al., 2016; Saravanakumar et al., 2018). Physical dimension is an important component of overall wellness in older adults, though there is little consistency of measurement in the literature. Additionally, the physical dimension was the most frequently studied dimension in the literature. This does not necessarily indicate that the physical dimension is the most important for overall wellness but it does show

that more research is needed for the other dimensions to be able to get a more complete understanding of these complex interactions.

Environmental Dimension

For the dimension of environmental wellness, a search was conducted in the database CINAHL with the terms *environmental wellness AND older adults or elderly or seniors or geriatrics*, with inclusion criteria peer-reviewed journal articles published in English between 2015 and 2020. This yielded three articles, one of which was previously included in this review. After scanning full text of the new articles, one of these two articles was excluded, due to relevance, as it pertained to nursing students' perspectives of wellness of older adults. A total of two articles were included for review.

The environmental dimension of wellness was found to be one of the most researched dimensions of wellness (Zechner et al., 2019). In a small literature review integrated with the authors' multidisciplinary expert opinion, Engineer et al. (2018) reported the importance of the built environment for wellness of older adults, particularly considering aging in place. These considerations include safety, accessibility, and convenience. Safety measures such as predictable spatial patterns, handrails, slip-free flooring, and accessible storage are important considerations for aging in place and wellness of older adults.

The importance of lighting, particularly adequate lighting levels while minimizing glare, daytime interior lighting to maintain circadian rhythm and promote sleep, fewer transitions between different lighting levels and increasing contrast between objects, but minimizing contrast of solid spaces can help older adults to compensation for changes in visual acuity that may occur with age. Reducing extraneous noise and temperature control can add to comfort and health. Opportunities for social interaction and access to nature are also important for wellness.

Many of these can be accomplished through the use of technology, especially voice-controlled devices and medical device connectivity.

Financial Dimension

For the dimension of financial wellness, a search was conducted in the database CINAHL with the terms *financial wellness AND older adults or elderly or seniors or geriatrics*, with inclusion criteria peer-reviewed journal articles published in English between 2015 and 2020. This yielded two articles, one of which was previously included in this review. After scanning full text of the new article, it was excluded, due to relevance, as it did not relate to financial wellness of older adults. The search with the same terms and criteria was repeated in the Business Source Complete database. This yielded five new articles, but all were excluded after scanning full text, since none involved older adults. A PubMed search using the terms “*financial wellness*” AND *older adults or elderly or seniors or geriatrics* with the criteria clinical trial, meta-analysis, randomized controlled trial, review, systematic reviews, published in the last 5 years yielded no results. This is somewhat consistent with the findings from the systematic review by Zechner et al. (2019) which found few articles related to the financial dimension of wellness.

Occupational Dimension

For the dimension of occupational wellness, a search was conducted in the database CINAHL with the terms *occupational wellness AND older adults or elderly or seniors or geriatrics*, with inclusion criteria peer-reviewed journal articles published in English between 2015 and 2020. This yielded four articles, including one duplicate and one which was previously included in this review. After scanning full text of the two new articles, one was excluded, due to

lack of relevance, as it pertained to an occupational therapy intervention. This left a total of two articles for review.

In a qualitative study, Mulholland and Jackson (2018) examined the role of occupation on wellness in older adults. Occupation was defined as anything that was regularly performed and was personally meaningful, including things such as housework and social interaction, such as attending church. Two themes were identified, including “occupation as marker for wellness” and “sustaining a sense of occupational identity” (Mulholland & Jackson, p. 659-660).

Participants in the study revealed that occupational wellness was not only a way to assess overall wellness, but also as a method to improve it. The authors concluded that occupational wellness was crucial to maintaining wellness, even as the occupational activities may evolve over time. In the systematic review by Strout et al. (2016) the one study that pertained to occupational wellness did not demonstrate statistical significance for improving wellness related to cognitive function.

Although Strout et al. (2016) did not find statistical significance for the effects of occupational wellness on cognitive function, there may be other benefits to overall wellness that were uncovered by Mulholland and Jackson (2018). The benefits, such as improved sense of purpose, reduced depression and anxiety, and as a marker for mental health. This demonstrates that there is a need for further research on this topic.

Social Dimension

For the dimension of social wellness, a search was conducted in the database CINAHL with the terms *social wellness* AND *older adults or elderly or seniors or geriatrics*, with inclusion criteria peer-reviewed journal articles published in English between 2015 and 2020. This yielded ten articles, including five that were previously included in this review. After

scanning full text of the five new articles, two were excluded, due to lack of relevance, as one was a brief product review, and one was a computer application protocol. This left a total of eight articles for review.

The two systematic reviews identified in this search, both of which were previously included, found conflicting results. Zechner et al. (2019) found that the social dimension of wellness was one of the most researched of the dimensions in the population of older adults with severe mental illness, particularly social skills and community functioning. In contrast, Strout et al. (2016) did not find social dimensions among the most studied, but the population was community-dwelling older adults, so the social dimension might not be as much of a challenge to this population as for those with severe mental illness, and therefore not as strong a focus of the research. Studies examining how social dimension factors could affect wellness were also not consistent.

The Resilient Aging program was used as an intervention in a pre-post pilot study by Fullen and Gorby (2016), and social wellness was found to decrease, measured by Perceived Wellness Survey scores. The authors speculated that this occurred due to frustration with lack of support from family members after experiencing increased social opportunities during the program. Krause-Parello and Kolassa (2016) used the Social Support Strategy Indicator (CSI) in a cross-over study to find that social support in the form of a pet therapy visit improved heart rate and blood pressure measurements compared to a social visit from a human alone.

The positive effects of the social dimension on wellness was also demonstrated by three observational studies. In the longitudinal observational study by Howard et al. (2016), the domains within the social dimension that were found to protect against cognitive decline were ability to continue to perform everyday tasks and functions, and not feeling lonely. In the cross-

sectional study by Hodgkin et al., (2018), wellness was found to be predicted by less reported loneliness, social network size, and community participation for rural older adults.

Through a mixed methods study, Andonian identified a theme “contribution and engagement in relationships and the global community” (2018, p. 153) in a group of older adult immigrant of lower socioeconomic status resulting from computer use. This was thought to have a positive impact on the wellness of this population. Finally, the need for community support to facilitate older adults aging in place within their communities was highlighted by Stone (2016) in an expert opinion article, whether in their own homes or alternative housing within their community. Stone suggested that this social support would allow older adults to maintain their health and wellness as they age.

The results of this search support the findings of Zechner et al. (2019) that the social dimension has been well-studied relative to the other dimensions of wellness. Strout et al. (2016) did not find support in the literature for this same effect, but their review was limited to randomized controlled trials (RCT). This divergence may be due to the nature of social interaction which is much more difficult to control for in a RCT. This is supported by the other finding in this review.

These studies did find support for the importance of social interventions having a positive impact on wellness in older adults, including pet therapy (Krause-Parello & Kolassa, 2016), performing everyday tasks (Howard et al., 2016), decreased loneliness (Hodgkin, 2018; Howard et al., 2016), social network size (Howard et al.) computer use (Andonian, 2018), and social network size (Hodgkin). The only social intervention that was found to not improve wellness was the Resilient Aging program, though it did have positive impact on other dimensions of

wellness (Fullen, & Gorby, 2016). Overall, the social aspect is important for helping older adults to achieve and maintain optimal wellness.

Evidence Based Practice: Verification of Chosen Option

Although the concept of the Eight Dimensions of Wellness was not found extensively in the literature, its use is beginning to emerge. This was the model the independent living community had chosen to implement. The Eight Dimensions of Wellness as a whole had not been shown to be an effective intervention, however each of the individual dimensions, either alone or in combination, has been shown to have efficacy in improving wellness in the older adult population.

Theoretical Framework

Implementation Science

This DNP project applies implementation science which is the bridge connecting research and the resulting evidence-based practice, and the real-world practice setting (Bauer et al., 2015; Geng, Peiris, & Kruk, 2017). The ongoing, widespread problem of poor patient safety and inefficiency in the healthcare system was detailed by the Institute of Medicine (1999, 2001) in two landmark publications, *To Err is Human: Building a Safer Health System* and *Crossing the Quality Chasm: A New Health System for the 21st Century*. These problems can be attributed in large part to the lack of proper implementation of research findings, or any implementation at all.

When research is incorporated into practice, which only occurs half of the time, it takes about 17 years (Bauer et al., 2015). This has typically not been considered problematic by researchers, though entities funding these studies have begun to focus more on the practical relevance of the studies their dollars are paying for (Bauer et al., 2015; Geng et al., 2017). As a result, implementation science has stepped up to fill this void. This is evidenced by an increase in

federal funding for research focusing on implementation, which has increased since the Affordable Care Act was enacted (Bauer et al., 2015).

The focus of implementation science, as its name suggests, is on the process of implementation, rather than evaluating the evidence being implemented. This is recognized as a crucial step in the research process, without compromising rigor, integrity, or fidelity, and results in an improvement in relevance (Geng et al., 2017; Rapport et al., 2018). Relevance of the research allows the findings to be applied across diverse settings, and the impact of the research findings focus on the successful use of EBP, rather than exclusively on the health impact (Bauer et al., 2015). Even with interventions with successful outcomes on health, if implementation fails, the consequence can be poor outcomes and wasted resources, but successful implementation can create sustained improvements to systems, processes, and individual performance (Rapport et al., 2018).

A resource-intensive intervention, no matter how efficacious, may have little positive impact in a resource-limited environment (Geng et al., 2017). This is because implementation is not feasible. By identifying the barriers that limit use of the EBP, a more practical intervention implementation strategy can be created- one that can positively affect health and well-being, rather than remaining in the research realm.

Consolidated Framework for Implementation Research

The theoretical framework underpinning this project is the Consolidated Framework for Implementation Research (CFIR), which is a comprehensive theory developed to incorporate the overlapping, but insufficient, theories that relate to IS (Damschroder et al., 2009). The CFIR is relatively parsimonious, considering the complexity and breadth of implementation science. In

addition to the authors' initial paper, a website with tools for using CFIR, was also developed (The Consolidated Framework for Implementation Research, 2020).

There are five domains in the CFIR: the intervention, inner setting, outer setting, individuals involved, and the implementation process, which are all depicted in the diagram of the CFIR (see Appendix A; Damschroder et al., 2009). In the model, the intervention is situated on the borders of the image. On the left border, the intervention is ill-fitting, which is depicted with a simple puzzle metaphor. After the implementation process, the modified intervention on the right side of the image is more in harmony with the needs of the stakeholders.

The first domain is the intervention (Damschroder et al., 2009). The intervention includes core components, which are fixed, and an adaptable periphery, which allows the intervention to be tailored to needs of the stakeholders through the implementation process.

The next two domains are the inner and outer settings (Damschroder et al., 2009). The inner setting, which is influenced by structure, policies, and culture, is the organization where the intervention will be taking place. The outer setting is the wider environment of the inner setting, which includes economic, social, and political components. The inner and outer setting can often influence each other, and do not have strict boundaries. In the diagram of the CFIR, the border between the inner and outer settings are not regular or tightly-fitting, which signifies the complex relationship between these two entities.

The fourth domain is comprised of the individuals involved with the intervention, which includes all stakeholders (Damschroder et al., 2009). The unique needs and ideas of all the stakeholders, which may be conflicting, will influence the success or shortcomings of the implementation process and final outcome. In the diagram, the individuals involved are located

at the center, depicting their influence on and how they are influenced by the implementation process.

The implementation process is the final domain (Damschroder et al., 2009). It is spread along the bottom of the diagram, with arrows from left to right, showing the progression of the adaptation of the intervention, leading to a better fit with the individuals involved. The implementation process is comprised of multiple circular arrows, showing that this transformation is an iterative process, as well as conveying the complexity of the process.

The CFIR is a suitable model for this project because each of the domains of the CFIR are represented. The administrators at the site have chosen to implement philosophy of the Eight Dimensions of Wellness, which are core components, but the specific programming can be considered to be part of the adaptable periphery as this can be modified. The stakeholders, including residents, staff, and administrators are included as the individuals involved, and the inner setting is the community. This model is a particularly good fit because as implementation progresses through other affiliated locations, the inner setting can be modified to fit the new location, but the outer setting remains stable. The most important component is the process that will take the unadapted intervention to an adapted state and allow an appropriate intervention that will meet the needs of the stakeholders and create a successful outcome.

Methods

Goals, Objectives, and Expected Outcomes

The goal of this project was to provide feedback to the Community leadership to facilitate successful implementation of the new wellness initiative. Objectives were identifying facilitators and barriers encountered during the implementation of the Eight Dimensions of Wellness. This allowed modification to the implementation during the process, as well as when it is

implemented at other sites within the organization. This was accomplished by determining the factors (age, gender, living arrangement, distance moved from prior home, weekly hours participating in Community-sponsored programs and events, satisfaction with Community-sponsored programs and events) that enhanced the implementation process. Expected outcomes included successful implementation of the Eight Dimensions of Wellness, with Community offerings more suited to residents' needs, evidenced by positive feedback from residents and staff related to the implementation.

Project Design

This project had two phases, the pre-implementation phase and the post-implementation phase. Prior to the site implementing the new wellness philosophy, the Pre-Implementation Survey (see Appendix B) was used to collect quantitative and qualitative data, including demographic data, as well as residents' participation, satisfaction, perceptions of the planned implementation, and the effects of COVID-19 on participation. The data from the surveys provided guidance for the implementation process. Post-Intervention Interviews (see Appendix C) were planned to evaluate the implementation process. As the implementation progresses to other campuses within the organization, the iterative process described in the CFIR will allow modifications to be made to the implementation.

Project Site and Population

This project was conducted at an independent living community in New England, where residents are at least 62 years old. This Community is part of a larger organization, with other similar sites, including independent living and assisted living communities. There was a robust calendar with a wide variety of programs and events offered every day. Residents were able to choose offerings to participate in or chose not to participate at all. All residents were invited to

participate in this project on a voluntary basis. Staff who are involved in this project would have also been invited to participate, such as those who were responsible for development, planning, and implementation of this initiative. See Appendix D for cost-benefit analysis.

Measurement Instruments

The Pre-Implementation Survey (see Appendix B) was conducted to evaluate the needs of the Community residents prior to the implementation process. The Pre-Implementation Survey was developed by the DNP student for this project. The survey was used to collect demographic data, including age and gender; time spent in activities away from the community; and location of residence prior to moving to the community, as well as questions that examine residents' attitudes and perceptions of the current program offerings, the planned changes, and how often these offerings are used. Questions types included multiple choice, Likert-like, binary, and open-ended questions. Surveys were sent out via internal mail prior to the implementation to allow for alterations in the implementation process.

Semi-structured Post-Intervention Interviews with staff and residents were developed by the DNP student and planned to be conducted after the implementation process was complete. This would have been used to identify any themes that could be used to identify any important factors in the implementation process that facilitated or hindered the success of the implementation, which would have allowed any alterations prior to moving forward with implementation at other sites within the organization.

Data Collection Procedures

Pre-Implementation

The Pre-Implementation Survey was sent to all residents prior to the implementation. A secure, locked drop box was provided on site for residents to return completed surveys. The DNP student collected and reviewed all surveys.

The results were disseminated and discussed in an in-person presentation (see Appendix E). The presentation was well-attended, and included residents, staff, and leadership from the site, as well as from other campuses. At the conclusion of the presentation, questions were answered from those in attendance.

Post-Implementation

Due to delays resulting from COVID-19, the site was not able to complete the implementation of the wellness initiative. This delayed the implementation beyond the timeline of this project, so the post-implementation phase of this project was regrettably not completed.

All residents, as well as staff who were involved in the implementation process, would have been invited to interviews, which would have been conducted in-person or virtually with the DNP student. Interviews were planned to be conducted after the completion of the implementation process at the project site.

Data Analysis

The goal of the Pre-Implementation Survey and Post-Intervention Interview was to identify themes in the attitudes and perceptions of the residents regarding the planned implementation and the implementation process. These data would have also been used to compare the residents' views of the implementation compared to how the staff perceives the residents' views and to identify barriers to implementation prior to implementation as well as factors that would be important for future implementation at the other campuses of the organization.

Data analysis focused on whether the implementation process would have met meet the needs of all residents' backgrounds, characteristics, and current circumstances. Participation in the community programs and offerings prior to the implementation was examined to determine if it was affected by the location where the community members lived prior to moving to this community to uncover a possible reason for lower participation. Residents who lived close to the community may have continued to participate in their same activities outside this community, rather than because their needs were not being met within the community.

Qualitative Data

Qualitative data gathered from open-ended questions on Pre-Implementation Survey was analyzed to identify common themes in perceptions of the implementation process of the Eight Dimensions of Wellness and the impacts of COVID-19. Data gathered pre-implementation will allowed staff to determine residents' needs with the intent to modify the implementation to improve satisfaction with the wellness program based on the Eight Dimensions of Wellness. Post-implementation data would have been used to evaluate the successes and challenges of the implementation, allowing for further modifications prior to implementation at additional sites. Additionally, staff would have gained a better understanding of their own perceptions of the residents' values and attitudes regarding the implementation.

Quantitative Data

Non-parametric inferential statistical analyses were conducted to determine relationships between demographic data and both participation in and level of satisfaction with wellness offerings prior to the implementation of the Eight Dimensions of Wellness using IBM SPSS Statistics, Version 25.0. Non-parametric statistical tests such as Kruskal-Wallis and Kendall's tau b were chosen based on the characteristics of the data being analyzed (Polit, 2010). The Kruskal-

Wallis test was used when the dependent variables were ordinal and the independent variables were nominal, which included participation and satisfaction as the dependent variables and gender and living arrangement as the independent variables. Kendall's tau b was used when both the independent and dependent variables were ordinal, and both had the same number of possible values. This included age and current satisfaction, and miles moved from and satisfaction. Kendall's tau c was used when both the independent and dependent variables were ordinal and but did not have same number of possible values. Kendall's tau c was used for age and weekly participation in programs, miles moved from and weekly participation in programs, weekly participation in programs and satisfaction, and time spent in activities outside the site and weekly participation in programs.

These data were used to help determine where to focus implementation strategies to improve satisfaction. For example, if residents who spend more time in activities outside the community are less satisfied, efforts to reach out to this group during the implementation process may improve participation in and satisfaction with the wellness program.

Ethical Considerations/Protection of Human Subjects

The University of Massachusetts, Amherst Internal Review Board waiver was obtained prior to initiating the DNP Project (see Appendix F). All participation was completely voluntary. There was no risk for participants beyond usual participation in any programs or events. Participant confidentiality was maintained by coding with individual numbers. All physical data collected was kept in a locked cabinet. All electronic files were password-protected. Only the DNP student had access to the files.

Results

This project was conducted at an independent living community In New England, in which residents are at least 62 years old. Data collection occurred during November 2020. At the time of the project, there were 172 residents, and all residents were invited to participate in the Pre-Implementation Survey. The response rate was 56% (n=97). Of the residents who returned the survey, 70% (n= 68) were female and 48% lived alone (n= 47). The age ranges of the respondents were 6% (n=6) 62-74 years old; 21% (n=20) 75-79 years old; 25% (n=24) 80-84 years old; 21% (n=20) 85-90 years old; and 27% (n=26) over 90 years old.

Quantitative Data Analysis

Participation

Program participation was related to age and living situation. Older residents had statistically significant lower participation in the current program (Kendall's tau $c r_{\tau} = -.160$, $p=.033$). Residents who lived alone had statistically significantly lower rates of participation (mean rank=40.91) than residents who did not live alone (mean rank=51.63; Kruskal-Wallis H (1) = 3.922, $p= .048$). There was no statistically significant relationship between distance moved from and current program participation (Kendall's tau $c r_{\tau} = .065$, $p=.442$); hours spent in activities outside the site and current program participation (Kendall's tau $c r_{\tau} = .038$, $p=.614$); or resident gender and current program participation (Kruskal-Wallis H (1) = .009, $p=.923$).

Satisfaction

Satisfaction was measured on a Likert-like scale from 1-5, with 5 being the most satisfied. A significant relationship was found between program satisfaction and both program participation and living situation. Residents with higher levels of participation were more likely to be satisfied (Kendall's tau $r_{\tau} = .372$, $p< .001$). Residents who lived alone had statistically significantly higher rates of satisfaction (Kruskal-Wallis H (1) =5.819, $p=.016$) than residents

who did not live alone. The satisfaction score mean rank for residents who lived alone was 53.90 and the mean rank for residents who did not live alone was 41.10. Measured on a 5-point scale, the mean satisfaction score for residents who live alone was 4.21 and the mean satisfaction score for residents who do not live alone was 3.79. There was no statistically significant relationship between resident age and current program satisfaction (Kendall's tau b $r_{\tau} = -.051, p=.558$); distance moved from and current program satisfaction (Kendall's tau b $r_{\tau} = -.017, p=.845$); hours spent in outside activities and current program satisfaction (Kendall's tau b $r_{\tau} = .128, p=.165$); or resident gender and current program satisfaction (Kruskal-Wallis $H(1) = .391, p=.532$).

Qualitative Data Analysis

To analyze the qualitative data, each of the five open-ended questions on the Pre-Implementation Survey were evaluated until themes emerged. These themes were further evaluated by demographic and other characteristics of the participants, including age, gender, living situation, miles moved from, hours of weekly participation in programs, satisfaction with programs, and weekly hours spent in outside activities.

Age

Younger participants were more concerned about physical health and older participants were more likely to be limited by physical abilities.

- Younger (62-74) participants were more likely to report physical exercise/classes as a reason for participating.
- Participants who were 75-79 reported interest/enjoyment as a reason for participating more than older or younger participants.
- Older participants were more likely to report physical limitations as a reason for not participating in programs than younger participants.

- Younger participants were more likely to report gym/equipment/fitness center as an interest compared to older participants.
- There was a trend that showed younger participants were more likely to report pool/swimming as an interest.
- Participants who were between 62-74 years old were more likely to report health/medical offerings as an interest than participants older than 74 years old.

Gender

All participants identified as either female or male. Women were more likely to have conflicts preventing participation, such as time conflicts, outside activities, and physical limitations. Men were more likely to report participation not being affected by COVID.

- Male participants were more likely to report lack of interest as a reason for not participating in Community offerings than female participants.
- Female participants were more likely to report physical limitations as a reason for not participating in Community offerings than male participants.
- Female participants were more likely to report time conflicts/outside activities as a reason for not participating in Community offerings than male participants.
- Male participants were more likely to report gym/equipment/fitness center as an interest than female participants.
- Female participants were more likely to report pool/swimming as an interest than male participants.
- Female participants were more likely to report staying current/ new experiences/ learning as a motivation for participation than male participants.

- Male participants were more likely to report no change in needs due to COVID-19 than female participants.

Living Situation

Participants who lived alone were more likely to report participating for emotional experiences, such as socialization, enjoyment, and interest. Participants who did not live alone were more likely to participate for informative experiences, such as health/medical offerings and discussions or talks.

- Participants who lived alone reported interest/enjoyment as a reason for participating more than participants who did not live alone.
- Participants who lived alone reported socialization as a motivation for participation more than participants who did not live alone.
- Participants who did not live alone reported health/medical offerings as an interest than more than participants who did live alone.
- Participants who did not live alone reported discussion/talks as an interest more than participants who did live alone.

Participants who lived alone faced more barriers to accessing Community offerings, such as physical limitations and time conflicts. Participants who did not live alone were more likely to report not being affected by COVID-19.

- Participants who lived alone were more likely to report physical limitations as a reason for not participating in Community offerings than participants who did not live alone.
- Participants who lived alone reported time conflicts/outside activities as a reason for not participating more than participants who did not live alone.

- Participants who did not live alone were more likely to report no change in needs due to COVID-19 than participants who did live alone.

Participation

Physical abilities were related to participation, as a barrier for those who have limitations and as an interest (physical exercise/classes) for those who participate for more hours per week.

- Participants who participated in fewer Community offerings per week reported physical limitations as a reason for participating less than participants who participated in more Community offerings per week.
- There was a trend that showed participants who participated in more Community offerings were more likely to report physical exercise/classes as an interest.

Participants who participated in fewer activities outside the Community reported socialization opportunities as a motivation for participation in programs; participants who participated in more activities outside the community reported informative experiences as a greater motivation.

- There was a trend that showed participants who participated in fewer activities outside the community were more likely to report socialization as a motivation for participation.
- There is a trend that showed participants who participated in more activities outside the community were more likely to report discussion/talks as an interest.

Satisfaction

Participation in Community offerings of highly satisfied participants was limited by time (time conflicts/outside activities). Participants who reported greater levels of satisfaction with Community offerings reported conflicts/outside activities as a reason for not participating more than participants who reported lower levels of satisfaction with Community offerings.

COVID-19

The needs of participants who did not live alone were less likely to be impacted by COVID-19.

- Participants who did not live alone were more likely to report no change in needs due to COVID-19 than participants who did live alone.
- Participants whose needs were being better met prior to the COVID-19 pandemic were less likely to experience a change in needs due to COVID-19.
- Participants who reported greater levels of satisfaction with Community offerings reported no change in needs due to COVID-19 more than participants who reported lower levels of satisfaction with Community offerings.

Discussion

The results of this project revealed some of the motivations for participation in programs offered by the Community. These themes are consistent with the Eight Dimensions of Wellness and can provide a framework for implementing the new wellness initiative and meeting the needs of all community members. Barriers to participation, motivation for participation, and factors involved in satisfaction were identified. Additionally, the effects of COVID-19 on participants' needs were uncovered. Finally, participants' thoughts regarding the upcoming implementation of the new wellness program were evaluated to provide feedback for the pending rollout.

Participation

Motivation for Participation

Themes related to motivation for participation in the current Community offerings were identified through the qualitative analysis. Themes included physical health, health/medical topics, discussions/talks, interest/enjoyment, staying current/new experiences, and socialization.

Physical health or staying active was reported as the greatest motivation for participation in programs by 52.6% of participants. Exercise classes were more likely to be reported as a reason for participating in younger participants. Participation was greatest in participants with moderate amounts of time spent in activities outside the community (30-39 hours per week) and moderate participation in programs within the community (4-6 hours per week). There was also a trend that showed that participants who spent more time in Community offerings were more likely to report physical exercise or exercise classes as a motivation for participation. This prioritization of physical health as a component of wellness was also reflected in the literature. Physical activity was found to be protective of wellness related to cognitive function, and physical wellness was additionally found to have the strongest association with cognitive function (Howard et al., 2016; Strout et al., 2015). The physical dimension was the most commonly studied of all the dimensions of wellness. This may be due to a more direct perceived connection with physical health and wellness, or even equating physical health with wellness. This may also explain the prioritization of physical health by participants. Whether the results are more a reflection of participants' interests or their understanding of wellness, physical health and exercise classes were valued and should be prioritized during the implementation. Some of the specific physical elements that participants reported as important included mobility/balance, strength, comfort, and specific medical conditions. Physical activity was found to be protective against cognitive decline in older adults (Howard et al., 2016), so offerings related to physical health can have positive impacts on wellness, beyond the physical dimension. One participant summarized this as the desire to be "staying above ground."

In addition to exercise classes, use of the fitness center, also described by participants as gym or fitness equipment, was also a motivation for participation. Participants who were

younger or male were more likely to report using the fitness center as a motivation for participation. Additionally, participants who reported the fitness center as an interest also reported higher levels of satisfaction. This indicates the fitness center is an important component of participants' wellness as well as satisfaction. Similarly, the pool was also identified as important to participants. Participants who were younger, female, or lived alone were more likely to indicate using the pool to be a motivation for participation. This was also true for participants who spent less than 30 hours per week in Community offerings. This suggests that the pool is important to many participants, particularly those who might not participate in other offerings.

Similar to participants' interest in physical health programs focused on exercise, health and medical programs were also identified as an interest. These programs were more likely to be an interest of those participants who lived alone and those under the age of 74 years old. These programs included vaccination clinics, COVID-19 testing and information, hearing aid clinics, blood pressure checks, medicine wheel, and health information presentations, in the form of health fairs, discussions with health topics, and individual and group information sessions provided by Community staff. One participant expressed the desire for "more sophisticated health-related topics."

Participants identified interest or enjoyment as a motivation for participating. This was most commonly reported by participants who lived alone or were between 75-79 years old. Additionally, participants who were motivated to participate in Community offerings were also more likely to be satisfied with offerings than those who were not. Though this may seem intuitive, this confirms that offerings that provide interest or enjoyment are related to both participation and satisfaction.

Community offerings providing discussions or presentations were also found to be a motivation for participation. This was more common in participants who spent more time each week participating in community offerings as well as those who spent more time in activities outside the community. This suggested that time conflicts are not a major barrier to participation in discussions or presentations. Participants reported different motivations for participation in discussions or presentations. Some reported wanting to stay current or learn new things, and others enjoyed the social experience. Some of the offerings that participants reported included lectures from guest speakers or TED talks, book discussions, and play reading.

The theme of socialization was prominent throughout the responses. Participants who lived alone were more likely to report socialization as a motivation for participation, as were those who participated in fewer activities outside the community. This suggested that participants rely on community offerings for socialization. Social offerings that were commonly mentioned by participants included book groups, writer's groups, play reading, knitting groups, social gatherings such as Oktoberfest. Additionally, the negative effects of COVID-19 on socialization were more frequently reported than safety concerns related to the pandemic.

The social dimension of wellness has been previously demonstrated in the literature. Wellness, and specifically protection from cognitive decline, has been linked with the social dimension of wellness. Domains within the social dimension that were found to protect against cognitive decline were ability to continue to perform everyday tasks and functions, and not feeling lonely (Howard et al., 2016). Wellness was also predicted by less frequently reported loneliness, social network size, and community participation (Hodgkin et al., 2018). Participants cited a disruption in social activities, both in interacting with others and participation in usual routines. This highlighted the importance of the social dimension of wellness and indicates the

importance of the social dimension during the implementation. It is vital to consider the social aspect of wellness during the implementation of the new wellness program. Because of the diverse interest and needs of community members and the importance of socialization being so pervasive, it is important to consider the social aspect of all programs, not just those that are considered purely social events, such as exercise classes.

Some of the participants reported a more holistic view of wellness as motivation for participation. Comments such as “I participate in order to maintain my well being” and “to keep my mind body and soul healthy and active” were not among the most common, which indicated that holistic wellness had not been embraced by the majority of participants. This is another opportunity for promotion of the Eight Dimensions of Wellness during the implementation process.

Barriers to Participation

Four themes emerged identifying barriers to participation, including time conflicts or participation in activities outside the Community; physical limitations; lack of interest; and COVID-19 restrictions. These four barriers can potentially be addressed when implementing the new wellness program to reduce barriers to participation.

Time conflicts were more commonly identified as a barrier by female participants, participants who lived alone, and those with higher levels of satisfaction. Although this project did not examine the sources of time conflicts, these may often be unavoidable. One participant stated, “we have family living close by- and we participate in activities with them when possible!” This was not an indication that the offerings from the Community are lacking, but rather personal choice led to lower participation. Residents of the Community may still achieve the overall goal of greater wellness, even with lower levels of participation, if they choose. Some

types of time conflicts can be addressed during the implementation. Some participants commented that the time of offerings were not convenient. This indicated that a varied schedule might serve more residents, or more promotion is needed about the offerings. Promotion also needs to be done in a manner that facilitates participation. One participant mentioned that forgetfulness was a barrier to participation. There was one participant revealed that a reason for not participating in offerings was, “sometimes too many to choose.” Generally, with varied scheduling and more tailored programs, time conflicts may be lessened, allowing increased participation if residents wish.

As with time conflicts, individual physical limitations cannot be resolved, in many cases, though accessibility must be addressed. The most common limitations reported were mobility/pain and sensory impairments, such as difficulty with sight and hearing. As the new wellness program is initiated, accessibility is a crucial, both with the rollout and structure of the new program. Two participants cited age as a barrier, with one connecting age with physical limitations. This again highlighted the importance of accessibility or suitable modification, as well as promotion of offerings as appropriate for all ages. These barriers were consistent with the literature that examined the environmental dimension of wellness, including safety, accessibility, and convenience (Engineer et al., 2018).

The third barrier was lack of interest, which was greater for male participants than female participants. This was reported as a reason for not participating by 15.5% of participants. This barrier can be reduced by varied programming, especially tailored to current residents’ interests and modified over time as needs and interests may change. Some participants explained that their needs were met in other ways, so their wellness was not being compromised by lack of participation. One participant stated, the offerings “do not meet my needs, I have a personal

program, professionally designed, specific to my unique needs” and another explained “internet and news provides adequate information.” Several participants referred to changing needs over time, with one pointing out, “Some programs I'm not interested in (eg hearing loss, visual loss, Parkinson's support, etc.); but I may need some of these programs someday!” Interest and needs can be fluid, so continuously re-evaluating the changing needs and desires of community members will facilitate participation and wellness.

The final barrier to participation identified was the effects of the COVID-19 pandemic. Participants commented on both the quality and quantity of the Community offerings due to COVID-19. One participant commented, “reduced events and limited size of groups impacts the experience- not as fulfilling as they were prior to COVID” and another stated, “Normally [Community] offers some really good programs.” The effects of COVID-19 on wellness and participation are discussed further in the following section.

COVID-19

In the context of the COVID-19 pandemic, only 19.6% of participants reported that their needs related to the wellness programs and offerings had not changed, and 68% of these participants spend four hours or less in community programs. This indicates that COVID-19 had significant impact on needs that had previously been met with the Community wellness offerings. Participants who did not live alone and male participants were more likely to report no change in their needs related to the pandemic. It should be noted that only 4.2% of male participants lived alone and 45.3% of female participants lived alone. This demonstrates the importance of socialization during the pandemic.

Effects on Social Interaction

The importance of the social dimension of wellness has only been compounded by the pandemic. Participants commonly referred to isolation as a negative consequence of the pandemic. One participant described “curtailment of outings to concerts, museums, theaters, various sites unnecessary but regrettable loss of stimulus in everyday life, minimally compensated for via Zoom.” Another participant related socialization to wellness and how it has been affected by COVID-19, describing “wellness includes personal- face to face visiting and without this we have isolation.” Another participant simply, but profoundly, stated, “It has isolated me.”

Effects on Programming

Participants commented on various aspects of the effects of COVID-19. Both the amount and quality of offerings were affected, as described by one participant as a “loss of programming.” Several participants commented on difficulties resulting from COVID-19, such as difficulty hearing others due to mask wearing and social distancing, as well as outdoor seating being less comfortable. Some participants also expressed a need for more information regarding the pandemic, including information on mental health, loss, stress, and COVID-19 specific information. One participant concluded that “pandemic has increased the importance of attending events.” Another participant summed up the effects of the pandemic with “reduce events and limited size of groups impacts the experience- not as fulfilling as they were prior to COVID.” Although the COVID-19 pandemic will not last forever, this shed light on some of the needs of the residents that were heightened during the pandemic, but will remain relevant, perhaps even more so, in post-COVID-19 times.

Satisfaction

Participation was related to satisfaction. Participants who had higher levels of participation had greater satisfaction. This could be due to people participating more because they are satisfied with the programs offered, or it can be because people are more satisfied if they experience more offerings. Participants who reported higher levels of satisfaction were more likely to report that their needs had not changed as a result of the COVID-19 pandemic.

Implementation

Overall, 36.3% of participants reported that they were familiar with the planned implementation of the new wellness initiative. However, some of the comments regarding implementation made it clear that this was not the case, such as several participants alluding to the implementation having already occurred. Most of the comments were neutral or mixed (46.7%), 30% were positive, and 23.3% were negative. For all types of comments, a majority displayed a lack of understanding of the new wellness initiative or the implementation process. This indicates a robust education plan is needed prior to, during, and after the implementation process.

Additionally, communications regarding programming, and in particular the new initiative, are important. Some participants were not fully aware of the existing offerings. One participant reported “all are held in the morning-I am a late sleeper” but at the time of the survey, offerings were held throughout the day and evening. This indicates that communication with all community members throughout the implementation process will foster participation and promote success.

Setting Facilitators and Barriers

Leadership of this organization was very supportive of this initiative. However, staff had expressed concern that some of the residents had reservations regarding the proposed changes.

There was concern that this could negatively affect participation in this DNP project. Conversely, residents could have looked at this as an opportunity to be involved in the implementation process, so efforts were made to include all stakeholders in recruitment and facilitate their participation.

Conclusion

The Eight Dimensions of Wellness, as first proposed by Swarbrick (2006) and adopted by the Substance Abuse and Mental Health Services Administration (n.d.), was used as the framework for improving wellness in an independent living community. The implementation process was evaluated, using implementation science, to improve the process at the DNP project site as well as other sites within the organization in the future. The use of implementation science provided a means of implementing and evaluating organizational change, both efficiently and comprehensively. This work is crucial, because wellness is multifactorial, complex, and very individual. By incorporating a comprehensive wellness program, though more difficult, the benefit will be of greater for all residents, creating a more supportive environment and fostering independence throughout the aging process.

References

- Andonian, L. C. (2018). Meanings and experiences associated with computer use of older immigrant adults of lower socioeconomic status. *Canadian Journal of Occupational Therapy, 85*(2), 146–157. doi: 10.1177/0008417418754395
- Bauer, M. S., Damschroder, L., Hagedorn, H., Smith, J., & Kilbourne, A. M. (2015). An introduction to implementation science for the non-specialist. *BMC Psychology, 3*(1), 1-12. doi: 10.1186/s40359-015-0089-9
- Consolidated Framework for Implementation Research. (2020). Retrieved from <https://cfirguide.org/>
- Damschroder, L. J., Aron, D. C., Keith, R. E., Kirsh, S. R., Alexander, J. A., & Lowery, J. C. (2009). Fostering implementation of health services research findings into practice: A consolidated framework for advancing implementation science. *Implementation Science, 4*(50), 1-15. doi: 10.1186/1748-5908-4-50
- Engineer, A., Sternberg, E. M., Najafi, B., & Sternberg, E. M. (2018). Designing interiors to mitigate physical and cognitive deficits related to aging and to promote longevity in older adults: A review. *Gerontology, 64*(6), 612–622. doi: 10.1159/000491488
- Foster, T., Galjour, C., & Spengel, S. (2015). Investigating holistic wellness dimensions during older adulthood: A factor analytic study. *Journal of Adult Development, 22*(4), 239–247. doi: 10.1007/s10804-015-9215-4
- Fullen, M. C. & Gorby, S. R. (2016). Reframing resilience: Pilot evaluation of a program to promote resilience in marginalized older adults. *Educational Gerontology, 42*(9), 660–671. doi: 10.1080/03601277.2016.1205409

- Garcia, C. (2015). What are the Eight Dimensions of Wellness in Your Life? *Colorado Nurse*, 115(1), 6. Retrieved from https://d3ms3kxrsap50t.cloudfront.net/uploads/publication/pdf/1145/CO2_15.pdf
- Geng, E.H., Peiris, D., & Kruk, M.E. (2017). Implementation science: Relevance in the real world without sacrificing rigor. *PLoS Medicine*, 14(4), 1-5. doi: 10.1371/journal.pmed.1002288
- Hodgkin, S. P., Warburton, J., & Hancock, S. (2018). Predicting wellness among rural older Australians: A cross-sectional study. *Rural & Remote Health*, 18(3), 1–13. doi: 10.22605/RRH4547
- Howard, E. P., Morris, J. N., Steel, K., Strout, K. A., Fries, B. E., Moore, A., & Garms-Homolová, V. (2016). Short-term lifestyle strategies for sustaining cognitive status. *BioMed Research International*, 2016, 1–8. doi: 10.1155/2016/7405748
- Institute of Medicine. (1999). To err is human: Building a safer health system. Retrieved from <http://www.nationalacademies.org/hmd/~media/Files/Report%20Files/1999/To-Err-is-Human/To%20Err%20is%20Human%201999%20%20report%20brief.pdf>
- Institute of Medicine. (2001). Crossing the quality chasm: A new health system for the 21st century. Retrieved from <http://www.nationalacademies.org/hmd/~media/Files/Report%20Files/2001/Crossing-the-Quality-Chasm/Quality%20Chasm%202001%20%20report%20brief.pdf>
- International Council on Aging. (2020). Active aging and wellness. Retrieved from <https://www.icaa.cc/activeagingandwellness/wellness.htm>

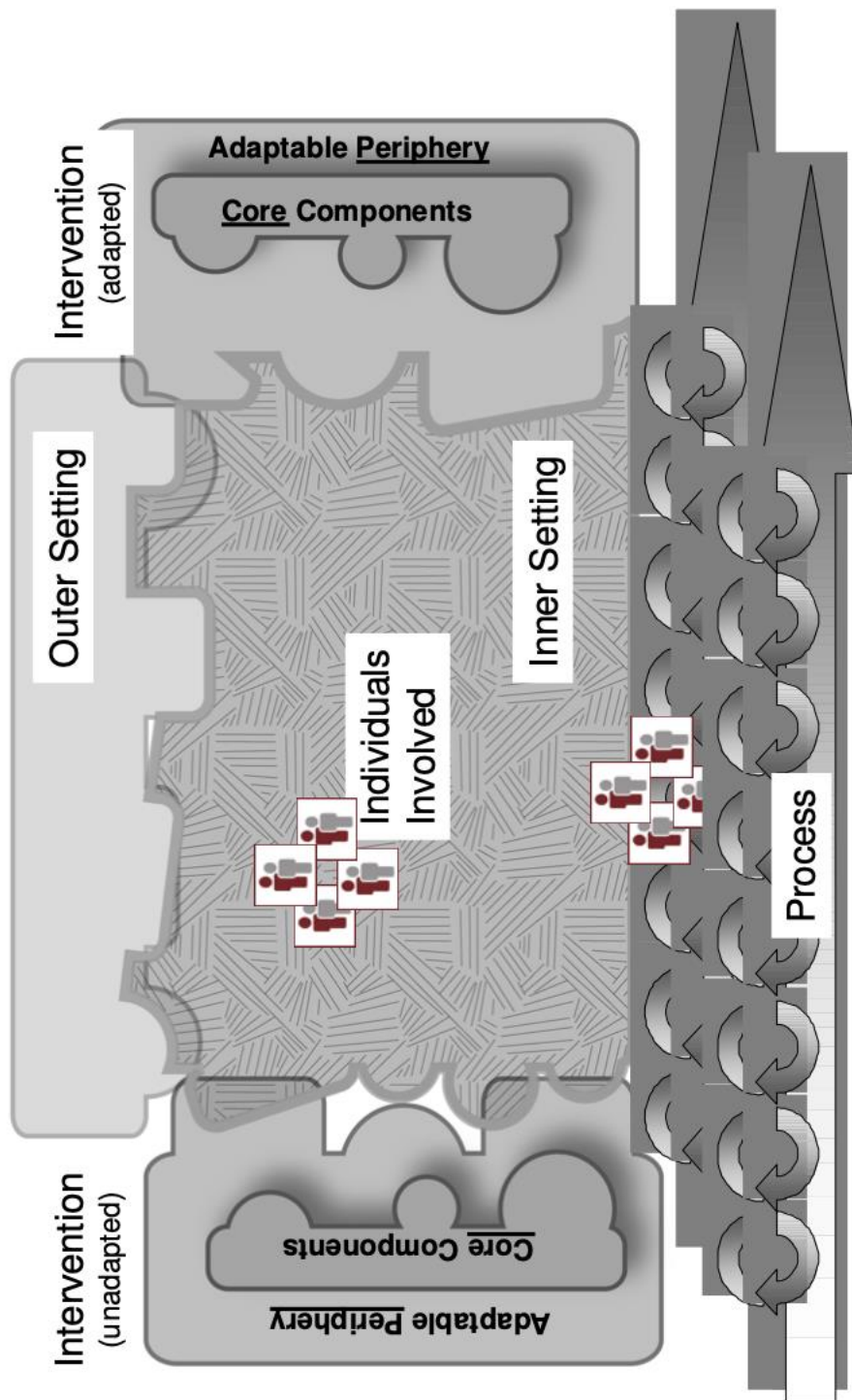
- Krause-Parello, C. A. & Kolassa, J. (2016). Pet therapy: Enhancing social and cardiovascular wellness in community dwelling older adults. *Journal of Community Health Nursing*, 33(1), 1–10. doi: 10.1080/07370016.2016.1120587
- Lindahl, E., Tilton, K., Eickholt, N., & Ferguson-Stegall, L. (2016). Yoga reduces perceived stress and exhaustion levels in healthy elderly individuals. *Complementary Therapies in Clinical Practice*, 24(2016), 50–56. doi: 10.1016/j.ctcp.2016.05.007
- Mulholland, F. & Jackson, J. (2018). The experience of older adults with anxiety and depression living in the community: Aging, occupation and mental wellbeing. *British Journal of Occupational Therapy*, 81(11), 657–666. doi: 10.1177/0308022618777200
- National Center for Chronic Disease Prevention and Health Promotion. (2019). Promoting health for older adults. Retrieved from <https://www.cdc.gov/chronicdisease/resources/publications/factsheets/promoting-health-for-older-adults.htm>
- National Wellness Institute (n.d.). The six dimensions of wellness. Retrieved from https://www.nationalwellness.org/page/Six_Dimensions
- Newhouse, R., Dearholt, S., Poe, S., Pugh, L.C., & White, K. (2005). The Johns Hopkins Nursing Evidence-based Practice Rating Scale. Retrieved from http://evidencebasednurse.weebly.com/uploads/4/2/0/8/42081989/jhnedp_evidence_rating_scale.pdf
- Polit, D. F. (2010). *Statistics and data analysis for nursing research* (2nd, ed.) Pearson Education.
- Rapport, F., Clay-Williams, R., Churruca, K., Shih, P., Hogden, A., & Braithwaite, J. (2018). The struggle of translating science into action: Foundational concepts of implementation

- science. *Journal of Evaluation in Clinical Practice*, 24(1), 117–126. doi: 10.1111/jep.12741
- Saravanakumar, P., Higgins, I. J., Van Der Riet, P. J., & Sibbritt, D. (2018). Tai chi and yoga in residential aged care: Perspectives of participants: A qualitative study. *Journal of Clinical Nursing*, 27(23–24), 4390–4399. doi: 10.1111/jocn.14590
- Stone, R. I. (2016). Successful aging in community: The role of housing, services, and community integration. *Generations- Journal of the American Society on Aging*, 40(4), 67–73.
- Strout, K. A., David, D. J., Dyer, E. J., Gray, R. C., Robnett, R. H., & Howard, E. P. (2016). Behavioral interventions in six dimensions of wellness that protect the cognitive health of community-dwelling older adults: A systematic review. *Journal of the American Geriatrics Society*, 64(5), 944–958. doi: 10.1111/jgs.14129
- Strout, K. A. & Howard, E. P. (2015). Five dimensions of wellness and predictors of cognitive health protection in community-dwelling older adults: A historical COLLAGE cohort study. *Journal of Holistic Nursing*, 33(1), 6–18. doi: 10.1177/0898010114540322
- Substance Abuse and Mental Health Services Administration. (n.d.). Promoting wellness: A guide to community action. Retrieved from <https://store.samhsa.gov/product/Promoting-Wellness-A-Guide-to-Community-Action/sma16-4957>
- Swarbrick, M. (2006). A wellness approach. *Psychiatric Rehabilitation Journal*, 29(4):311-314. doi: 10.2975/29.2006.311.314
- World Health Organization. (2020). WHO remains firmly committed to the principles set out in the preamble to the Constitution. Retrieved from <https://www.who.int/about/who-we-are/constitution>

Zechner, M. R., Pratt, C. W., Barrett, N. M., Dreker, M. R., & Santos, S. (2019). Multi-dimensional wellness interventions for older adults with serious mental illness: A systematic literature review. *Psychiatric Rehabilitation Journal*, 42(4), 382–393. doi: 10.1037/prj0000342

Appendix A

The Consolidated Framework for Implementation Research



(Damschroder et al., 2009)

Appendix B

Pre-Implementation Survey

[Community] is interested in your ideas about programs offered. Please complete each question by choosing the appropriate response. For open-ended questions, you may use the back of the page if more space is needed.

1) What is your age?

- 50-59
- 60-69
- 70-79
- 80 or greater

2) What is your gender?

- Female
- Male
- Other _____

3) Do you live alone?

- No
- Yes

4) How far away did you live prior to moving to [Community]?

- <10 miles
- 11-25 miles
- 26-50 miles
- 51-100 miles
- >100 miles

5) On average, how many hours per week do you participate in wellness programs and events organized by [Community]?

- 0
- <2
- 2-4
- 4-6
- 6-8
- >8

6) How many hours per week do you spend doing activities not organized by [Community]?

- <10
- 10-19
- 20-29
- 30-39
- >40

7) How satisfied are you with the current offerings of wellness programs and events organized by [Community]?

- Very satisfied
- Somewhat satisfied
- Neutral
- Somewhat unsatisfied
- Very unsatisfied

8) List reasons you do or do not participate in wellness programs and events organized by [Community]?

9) What wellness offerings at [Community] are you interested in?

10) What is your greatest motivation for participating in wellness programs and events organized by [Community]?

11) How has the COVID-19 pandemic changed your needs related to the wellness programs and events organized by [Community]?

12) Are you aware of the planned implementation of the Eight Dimensions of Wellness at [Community], a model that incorporates multiple aspects of wellness?

- No
- Yes

13) If you answered “Yes” to Question 12 please describe your thoughts regarding this change.

This concludes the survey. Thank you for your participation!

Appendix C

Post-Intervention Interview Question Guide

This interview is completely voluntary and confidential. The purpose is to evaluate the implementation of the wellness initiative at Loomis Village to provide feedback to leadership.

- 1) How has the wellness initiative met your needs?
- 2) How has the wellness initiative not met your needs?
- 3) How was the implementation of the wellness initiative communicated to you?
- 4) What would you change about the implementation process?
- 5) How has the wellness initiative impacted your experience during the COVID-19 pandemic?

Appendix D

Cost-Benefit Analysis

The estimated costs, according to the leadership of the community include:

- fitness space and equipment
- additional staffing for wellness programming administration
- expanded creative arts spaces
- enhanced social and gathering spaces
- wellness assessment questionnaire
- team member education, including hiring practices
- outside spaces maintenance, including recreation and fitness equipment
- technology

The desired benefits, though intangible, include positioning this independent living community as a leader in the region and creating an opportunity for all residents to maximize their wellness and independence.

Appendix E
Site Presentation



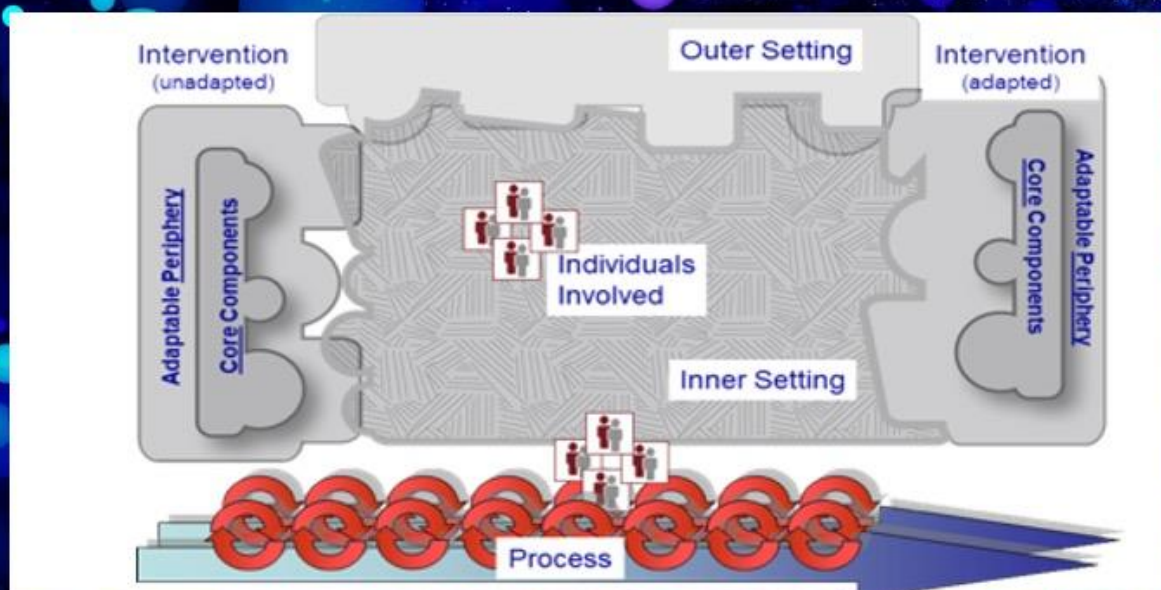
**EVALUATING THE
IMPLEMENTATION OF A
WELLNESS INITIATIVE IN
AN INDEPENDENT LIVING
COMMUNITY**

PAMELA HANNON, BSN, RN



Eight Dimensions of Wellness

- Emotional
- Spiritual
- Intellectual
- Physical
- Environmental
- Financial
- Occupational
- Social



Quantitative Analysis- Participation

Program participation was related to age and living situation

Older residents had statistically significant lower participation in the current program (Kendall's tau $c r_{\tau} = -.160$, $p = .033$)

Residents who lived alone had statistically significantly lower rates of participation (mean rank=40.91) than residents who did not live alone (mean rank=51.63; Kruskal-Wallis $H(1) = 3.922$, $p = .048$)

Quantitative Analysis- Satisfaction

Residents with higher levels of participation were more likely to be satisfied

(Kendall's tau $r_t = .372$, $p < .001$)

Residents who lived alone had statistically significantly higher rates of satisfaction than residents who did not live alone

(Kruskal-Wallis $H(1) = 5.819$, $p = .016$)

Measured on a 5-point scale

- mean satisfaction score for residents who live alone was 4.21
- mean satisfaction score for residents who do not live alone was 3.79
- overall satisfaction 4.0

Qualitative Analysis Themes

Participation

COVID-19

Satisfaction

Implementation

Participation: Motivation

Physical health or staying active was reported as the greatest motivation for participation in programs by 52.6% of participants

- Fitness center/gym/fitness equipment
- Health and medical programs
- Discussions or presentations

The importance of socialization was a prominent theme throughout responses

Participation: Barriers

Barriers to participation included time conflicts or participation in activities outside the Community; physical limitations; lack of interest; and COVID-19 restrictions.

- Time conflicts were more commonly identified as a barrier by female participants, participants who lived alone, and those with higher levels of satisfaction.
- The most physical common limitations reported were mobility/pain, sight, and hearing.
- Lack of interest was reported as a reason for not participating by 15.5% and sensory impairments, such as difficulty with of participants and greater for men.
- The effects of the COVID-19 pandemic affected both the quality and quantity of the Community offerings due to COVID-19.

COVID-19

- **Effects on Social Interaction**
 - The importance of the social dimension of wellness has only been compounded by the pandemic.
 - Participants commonly referred to isolation as a negative consequence of the pandemic.
- **Effects on Programming**
 - both quality and quantity of offerings affected
 - difficulty hearing others due to mask wearing and social distancing
 - outdoor seating being less comfortable
 - need for more pandemic-related information on mental health, loss, stress, and COVID-19 specific information

COVID-19

“Wellness includes personal-face to face visiting and without this we have isolation”

Satisfaction

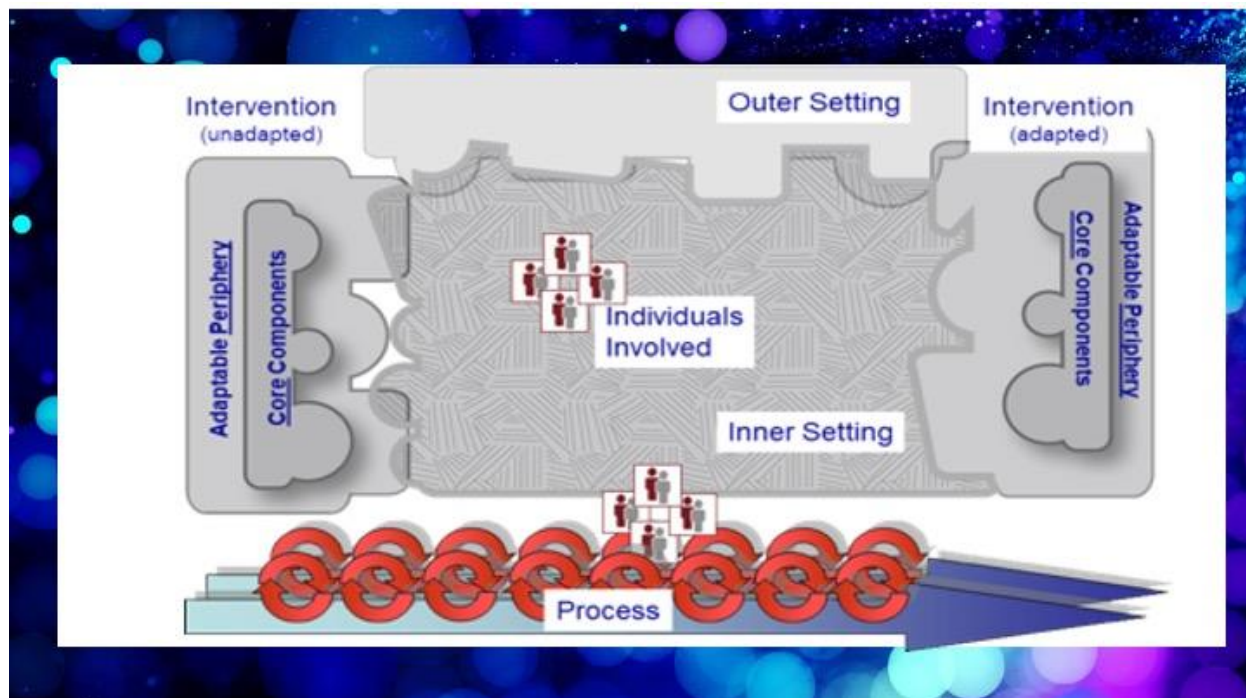
- Participants with higher levels of participation had greater satisfaction
- Participants who reported higher levels of satisfaction were more likely to report that their needs had not changed as a result of the COVID-19 pandemic.

Implementation

36.3% of participants reported that they were familiar with the planned implementation of the new wellness initiative

- 46.7% neutral or mixed
- 30% positive
- 23.3% negative

Majority displayed a lack of understanding of the new wellness initiative or the implementation process



References

Bauer, M. S., Damschroder, L., Hagedorn, H., Smith, J., & Kilbourne, A. M. (2015). An introduction to implementation science for the non-specialist. *BMC Psychology*, 3(1),1-12. doi: 10.1186/s40359-015-0089-9

Geng, E.H., Peiris, D., & Kruk, M.E. (2017). Implementation science: Relevance in the real world without sacrificing rigor. *PLoS Medicine*, 14(4), 1-5. doi: 10.1371/journal.pmed.1002288

Rapport, F., Clay-Williams, R., Churruca, K., Shih, P., Hogden, A., & Braithwaite, J. (2018). The struggle of translating science into action: Foundational concepts of implementation science. *Journal of Evaluation in Clinical Practice*, 24(1), 117–126. doi: 10.1111/jep.12741

Substance Abuse and Mental Health Services Administration. (n.d.). Promoting wellness: A guide to community action. Retrieved from <https://store.samhsa.gov/product/Promoting-Wellness-A-Guide-to-Community-Action/sma16-4957>

Swarbrick, M. (2006). A wellness approach. *Psychiatric Rehabilitation Journal*, 29(4):311-314. doi: 10.2975/29.2006.311.314



Questions???

Pam Hannon
PLHANNON@UMASS.EDU

Appendix F

IRB Determination Letter

UMassAmherst

Human Research Protection Office

Mass Venture Center
100 Venture Way, Suite 116
Hadley, MA 01035
Telephone: 413-545-3428

Memorandum – Not Human Subjects Research Determination

Date: October 19, 2020

To: Pamela Hannon, College of Nursing

Project Title: *An Implementation Science Project to Evaluate the Implementation of a Wellness Initiative in an Independent Living Community*

HRPO Determination Number: 20-226

The Human Research Protection Office (HRPO) has evaluated the above named project and has made the following determination based on the information provided to our office:

- The proposed project does not involve research that obtains information about living individuals [45 CFR 46.102(f)].
- The proposed project does not involve intervention or interaction with individuals OR does not use identifiable private information [45 CFR 46.102(f)(1), (2)].
- The proposed project does not meet the definition of human subject research under federal regulations [45 CFR 46.102(d)].

Submission of an Application to UMass Amherst IRB is not required.

Note: This determination applies only to the activities described in the submission. If there are changes to the activities described in this submission, please submit a new determination form to the HRPO prior to initiating any changes. **Researchers should NOT include contact information for the UMass Amherst IRB on any project materials.**

A project determined as “Not Human Subjects Research,” must still be conducted ethically. The UMass Amherst HRPO strongly expects project personnel to:

- treat participants with respect at all times
- ensure project participation is voluntary and confidentiality is maintained (when applicable)
- minimize any risks associated with participation in the project
- conduct the project in compliance with all applicable federal, state, and local regulations as well as UMass Amherst Policies and procedures which may include obtaining approval of your activities from other institutions or entities.

Please do not hesitate to call us at 413-545-3428 or email humansubjects@ora.umass.edu if you have any questions.



Iris L. Jenkins, Assistant Director
Human Research Protection Office