Successful Aging in the Heartland: The Challenge of Preparing Interdisciplinary Healthcare Teams for Our Aging Population

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Abstract

The purpose of this project was to study successful aging in the rural elderly population in Missouri using an interdisciplinary approach. Phelan concluded that older adults’ definition of successful aging was multidimensional, encompassing physical, functional, psychological, and social health. Successful aging, defined by the Lancy Research Group in 2004, consisted of feelings of satisfaction with life, adaptive physical and cognitive functioning, perceptions of adequate social support, and active engagement in life. The 2005 interdisciplinary research team included nursing, psychology, social work, communication disorders, physical fitness, nutrition, and economics. The elderly, a largely understudied population, was surveyed to determine their views on successful aging. Undergraduate students in each discipline developed and conducted a survey at 11 meal service programs provided by Care Connection, a statewide program supporting independent living. There were 345 participants ranging in age from 60-98 (M = 77). Descriptive statistics and frequencies were tabulated on demographic and general questions, and a factor analysis was performed on the 25 statements related to successful aging. Four factors emerged from the factor analysis. The four factors that loaded highest (.40 or higher) were Active Engagement, Sense of Well-Being, Functional Independence, and Adaptability. An interdisciplinary healthcare approach was essential to help identify successful aging in older adults living in the rural heartland. The survey findings benefit both the elderly in the region and facilitate the training of future healthcare and service providers.

Keywords: Successful aging, Interdisciplinary research, Rural elderly

1. Introduction

Aging brings inevitable changes which affect quality of life. However, there is little consensus as to how these changes are related to aging successfully. As the senior population grows and the supply of healthcare professionals vital to facilitating healthy aging shrinks, determining what comprises successful aging and how to help older adults attain it, becomes critical.

A definition of successful aging provided by Flood states that successful aging is “a favorable outcome as perceived by the individual, and his [or her] ability to cope or adapt to the cumulative changes associated with the passage of time, while experiencing a sense of meaning or purpose in life.” Intellectual, social, and emotional well-being, along with the physical ability to perform various tasks, have also been identified as bases of successful aging. According to Wagnild, good indicators of successful aging include: independence, risk taking, absence of disease and disability, continued physical activity, social involvement, and having the right to fail. Successful aging may be defined in different ways by different groups of people, and results of several studies suggest that researchers’ ideas regarding what constitutes successful aging may differ from those of aging participants. Phelan, Anderson, LaCroix and Larson compared the definitions of successful aging of 770 Japanese and 1,173 Caucasian
participants, ages 65 and older, with definitions of successful aging proposed by researchers. The participants' definition was multidimensional, encompassing physical, functional, psychological, and social health. The authors noted that no previously published definitions had included all four of these themes. A high proportion of participants (75%) from both racial groups identified 13 qualities as being pertinent to successful aging. Two of these qualities dealt with physical health, one related to functioning, eight qualities dealt with psychological health, and the last two dealt with social health. Among Caucasians, those who rated their health as excellent were less likely than those who reported poorer health to indicate that their thoughts on successful aging had changed in the past two decades.

Individual’s views on successful aging may be influenced by contextual factors, such as socioeconomic and cultural variables. Paul, Fonseca, Martin, and Amado compared independent elders from Portugal living in rural areas (n = 117) with independent elders living in urban settings (n = 117). Participants were interviewed regarding their life satisfaction and daily activities. The results revealed that the two communities differed in education level and financial status, which were both higher for the urban elderly. However, the rural elders reported higher levels of autonomy, larger social networks, lower feelings of anxiety, and more positive attitudes towards aging than did urban elders. Rural participants were also more likely to be living with a spouse than were the urban participants. Interestingly, urban dwellers were more prone to help each other by watching grandchildren or volunteering in activities than were rural individuals. Urban elderly were also more likely to be cohabiting with their children. The authors suggested that rural participants may benefit from living in a less stressful environment that encourages community members to maintain higher levels of activity (e.g., caring for livestock and farming) and is less likely to be polluted. In contrast, urban elders may experience more isolation and pressures associated with living in a metropolitan area (e.g., crowding, busy traffic, and fear of crime).

Research on the aging population is growing ever more important as the population explodes at record rates. It is projected that by 2025, 20% of the population will be over age 65. In many rural areas, the proportion of residents over age 65 is growing at a rate far above the national average. This is certainly true in the Midwestern state of Missouri where 13.5% of the population is over age 65. Seventeen Missouri counties already have over-65 populations of 20% or more. In order to promote optimal physical, mental, and spiritual health in the aging population, health care professionals need to be able to identify and understand successful aging. Since successful aging involves all aspects of an individual’s life, it is important that health care professionals recognize the importance of collaborating with other professionals to help elderly populations attain successful aging.

The 2004 Lancy Group explored various aspects of aging in the rural heartland and identified domains of successful aging to be used in educating interdisciplinary healthcare teams for work with rural populations. The four components identified by the Lancy Group as comprising successful aging were feelings of satisfaction with life, adaptive physical and cognitive functioning, perceptions of adequate social support, and active engagement in life. The research supported the idea that successful aging is multidimensional, encompassing all areas in the Lancy multidisciplinary healthcare research team.

While reviews of the literature have revealed that issues in successful aging coexist and are interrelated, only a few studies have addressed the concept of successful aging as it relates specifically to rural populations using an interdisciplinary approach. The goal of this study was to determine how older adults in rural Mid-America view successful aging. The findings of this study are expected to benefit both the elderly in the region and facilitate the training of future healthcare and service providers.

2. Methodology

To accomplish the goals of this study a team of interdisciplinary scholars was assembled. Faculty mentors and undergraduate researchers were selected from each of seven areas: nursing, dietetics, physical fitness, psychology, social work, communication disorders, and economics. We put together a survey, based on findings from the 2004 Lancy Group qualitative study and previous literature, asking older adults about issues in their lives regarding health, physical, nutritional, psychological, social, communication, and economic factors. This quantitative research selected a convenience sample of older adults. The survey entitled “Aging in the Heartland,” consisted of demographic questions including gender, year of birth, ethnicity, duration of residence in a rural area, and individual annual income. General questions related to activities, communication, dietary habits, concerns, expenses for prescription drugs, medical conditions, use of assistive devices, outlook on life, and employment. In addition, the survey contained 25 statements identified both in the literature and earlier research to be important in successful aging. Participants were asked to respond to each statement based on a four category Likert scale ranging from strongly disagree to strongly agree. The survey contained two open-ended questions allowing participants to provide additional input.

Participants were 345 older adults. Inclusion criteria for these participants were that they must be cognitively intact, at least 60 years of age, and a resident of a rural area. The sample included older adults attending congregate meal services provided by Care Connection at eleven sites in west-central Missouri. Participants were recruited through flyers and
announcements produced by Care Connection staff at the meal service locations. Flyers were posted at the specific locations a minimum of one day prior to survey administration.

Researchers distributed written informed consents and surveys to participants following a short explanation of research purpose. Participants were told that it would take them approximately 15 to 20 minutes to complete the six-page survey. Surveys were distributed during the social time prior to serving the noon meal. All information was collected anonymously. Student researchers were present in the room to answer any questions the participants had and to offer assistance. Upon completion of the data collection, the surveys were labeled for computer entry and identification purposes. Surveys were anonymous, but were numbered and coded to identify location.

Data were tabulated and analyzed using the Statistical Package for the Social Sciences (SPSS). General questions were analyzed using frequency. Means and standard deviations were calculated on the demographic and general questions where appropriate. A factor analysis was performed on the 25 statements related to successful aging in order to combine items into a smaller number of concepts using varimax rotation. After conducting the factor analysis and based upon eigen values greater than one, the 25 statements were reduced to eight factors. Items with loading values greater than 0.40 were identified as important to the factor. Based on these criteria four of the eight factors had three or more factors loading on them and were included in the final analysis.

3. Data

3.1 demographic data

The sample consisted of 119 males (35%) and 220 females (64%) with six not responding. The mean age was 77.77 and the median age was 79 with a standard deviation of 7.751. The oldest participant was 98. Of those surveyed, 286 were White/Non-Hispanic, 35 were Native American, 6 were Multi-Ethnic, 1 was African American, 1 was Hispanic/Latino, 3 identified as other, and 16 did not respond to this item. Most (49.6%) participants indicated that they had lived in a rural area all their lives. Only 8.1% reported having lived in a rural setting 10 years or less. The income distribution was fairly concentrated with 58.5% of the participants indicating they made $40,000/year or less. Only 3.2% reported earnings over $50,000/year and 34.5% did not answer this question.

3.2 exercise data

Of the participants responding, 71.6% reported that they walked for exercise three hours or less per week while only 7.5% reported walking at least an hour a day. Seventy-eight percent of the respondents stated they garden three hours or less per week. A small number, 4.6%, reported gardening at least one hour a day. The majority of respondents (71.5%) reported doing three hours or less of housework per week. Of those surveyed, 89.6% stated that while giving up some activities due to aging, they have replaced them with equally rewarding endeavors.

3.3 communication data

When asked about modes of communication, 59.1% of participants indicated they either use the telephone exclusively or in combination with writing to communicate with others. The majority (74.2%) reported that speaking and expressing themselves is easy. While 70% reported they do have difficulty hearing, fewer than 50% said they often ask others to repeat themselves in conversations.

3.4 nutritional data

Only 17.7% of participants reported eating more than three cups of fruit a day, 21.2% reported eating more than three cups of vegetables daily, and 21.4% of respondents indicated they consumed more than three dairy products per day. About 90% stated they eat at least 2 meals a day. Most (73.4%) of the participants reported having changed their diet to maintain or improve their health, and only 4.1% of respondents admitted to not eating healthfully.

3.5 economic data

When participants were asked how much they spend monthly on prescription drugs, responses varied greatly from $0 to $2000. The average monthly expenditure was $132.06. Most (59.1%) responded they do not expect their prescription drug expenses to decrease while under half responded they expect their drug expenditures will increase. Approximately
one-third (34.2%) of participants chose not to respond to the question about drug expenditures. Ten percent of the respondents stated they work part time.

3.6 health data

About half of respondents indicated they had arthritis/joint conditions/brittle bones, hypertension/high blood pressure, or vision problems. Most did not report serious physical or mental health problems. Eyeglasses were the most commonly used assistive device. Over 75% reported they believe that seeing a healthcare provider regularly is important. Good health was a concern for 66.4% and one-third (33.6%) reported worrying about their physical health. Fewer than 10% indicated that getting necessary health care was difficult.

3.7 coping data

Most (58%) people who took the survey reported a positive outlook on life. Over 74% of those surveyed agreed that accepting help from others and flexibility in coping is important. Ninety-six percent recognized religion as an important part of growing older. The majority (87%) valued relationships and physical proximity to family and friends, and 64.6% also provide guidance and support. Independence, living in a rural community, and being close to nature was crucial to a majority (82.6%) of those surveyed. Almost 65% felt that volunteering is important. The majority (64%) felt that the most difficult thing about growing older is outliving the people close to them, but most indicated they do not often feel sad.

3.8 factor analysis data

Table 1. survey items incorporated into the four factors

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<td>Variables</td>
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<td>Flexible coping</td>
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<td>Religious/Spiritual beliefs</td>
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<td>Health providers seen regularly</td>
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<tr>
<td>Relationships with family and friends</td>
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<td>.357</td>
<td>.475</td>
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<td>Provide guidance, encouragement, finances to family</td>
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<td></td>
<td>.579</td>
<td></td>
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<tr>
<td>Able to do things independently</td>
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<td>.600</td>
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<td>Rural community closer to nature</td>
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<td>.727</td>
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<td>Volunteering is important</td>
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<tr>
<td>Living close to people who are important to me</td>
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<td>.679</td>
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<td>Changed diet to maintain/improve health</td>
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<td>.303</td>
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<td>Finding activities equally enjoyable</td>
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<td>.587</td>
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<tr>
<td>Good health</td>
<td></td>
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<td>.687</td>
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<td>Normally I eat healthy</td>
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<td>.467</td>
<td>.337</td>
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<td>Speaking and expressing myself is easy</td>
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<td>.408</td>
<td>.351</td>
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<td>Participation in activities is important</td>
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<td>.697</td>
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<td>Recode physical appearance</td>
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<td>.466</td>
<td>.510</td>
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<td>Recode often feeling sad or blue</td>
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<td>.742</td>
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<td>Recode health problems</td>
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<td>Recode rural decreases quality of life</td>
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<tr>
<td>Recode worry about physical health</td>
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<td>.767</td>
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Note: Extraction Method: Principal Component Analysis; Rotation Method: Varimax with Kaiser Normalization
A Rotation converged in 9 iterations.
Table 1 shows the four factors revealed in the factor analysis. Factor 1 was labeled Active Engagement, Factor 2 was labeled Sense of Well Being, Factor 3 was labeled Functional Independence and Factor 4 was labeled Adaptability.

4. Conclusion

This study sought to investigate the factors that older adults living in the Midwest view as most important with respect to “successful aging.” Another goal of this study was to evaluate the extent to which participants were aging successfully. The remainder of this section will discuss the factors that emerged from the factor analysis and will consider implications of the results of this study. Limitations of the study and suggestions for future research will also be discussed.

Factor I was labeled “Active Engagement.” Items that loaded highest on this factor dealt with the importance of religious/spiritual beliefs, how a rural community tends to bring one closer to nature, the importance of living close to those who are significant, and the importance of participating in activities, including volunteering. Another set of items loading at the .40 level or higher on this factor dealt with seeing health care providers regularly, speaking and expressing oneself easily, and eating healthfully. Perhaps these last items dealing with health maintenance and ease of communication play an important role in supporting elders’ ability to maintain a more active lifestyle. This would be a hypothesis worthy of investigation in future research. Previous studies have found that older adults who stay socially engaged and who maintain a variety of roles in life tend to enjoy better mental and physical health, as compared to those who are less engaged with life. Guse and Masesar also found that enjoying nature and being helpful to others were rated as important components of successful aging by their sample of rural Canadians, and Paul et al. have suggested that a rural setting may encourage its members to maintain higher levels of activity. Future research should be directed to explore the notion that living in a rural community facilitates successful aging by encouraging people to stay more active.

Factor II was labeled “Sense of Well-being.” Items that loaded highest on this factor seemed to deal with having a positive outlook on life (e.g., whether participants believed their appearance was pleasing, the frequency with which they felt “sad or blue,” and whether they had a tendency to worry about things such as health). These items seemed to share a common theme addressing whether the individual held a positive versus negative outlook on life. It may be that, for rural Americans, maintaining a positive outlook on life is an important determinant of successful aging. Previous studies have found that outlook on life may contribute to successful aging. For instance, Strawbridge and colleagues found that over half of their sample perceived themselves as successful agers, whereas more “objective criteria” (i.e., Rowe and Kahn’s 1998 criteria) would have classified only 18.8% of the sample as having aged successfully. This finding seems to imply that an elder’s subjective “state of mind” may be just as important as more “objective” factors, such as physical health, in determining whether or not one ages successfully.

Factor III was labeled “Functional Independence.” Items that loaded highest on this factor dealt with the extent to which participants were able to do things independently, ratings of their own health, how quality of life was impacted by living in a rural area, the extent to which participants provided guidance and encouragement to family, and the extent to which health problems limited their daily activities. It seems plausible that health is a major factor underlying participants’ sense of independent functioning. This interpretation is consistent with previous research that highlights the role of health in aging successfully. Further research in this area should continue to explore how individuals’ health may have a pervasive impact on several variables related to successful aging, including functional independence.

We labeled Factor IV “Adaptability.” Items that loaded highest on this factor dealt with the extent to which participants utilize a flexible coping strategy, including changing their diet to maintain or improve health. Several authors have suggested that a flexible coping approach may contribute to successful aging. In a study conducted by Phelan et al. 75% or more of the participants, both Japanese Americans and Caucasian Americans, reported being able to cope with the challenges of their later years as well as being able to adjust to changes related to aging were important aspects of successful aging. Knight and Ricciardelli reported that 32% of the participants in their study indicated that compensating was important in adjusting to age related losses. Both studies point to the possibility that stressful aging may be aided by utilizing flexible coping strategies. Future research may want to concentrate on how coping style is related to the ability to age successfully.

It should be noted that the results of our study might not generalize beyond the limits of our sample of older adults who attended the Care Connection meal program and who agreed to participate in the study. Thus, our sample may represent a selection bias. However, participants were sampled from eleven of the 115 counties in Missouri. It should also be noted that the factors that emerged from the present study were, to some extent, pre-determined by the questions included in the survey administered to participants. That is, had we asked questions about such issues as sexual activity, we may have found evidence for the existence of another factor labeled “Importance of Sexual Activity.” Likewise, had we asked more questions aimed at particular areas (e.g., communication), we may have found evidence for the existence...
of additional factors. Certainly, factors emerging from the present data set would need to be cross-validated on another sample of participants given the preliminary nature of this investigation.

It is important to note that several of the participants in our study complained about the length of the survey and many participants indicated that some of the items were confusing or difficult to comprehend. Negatively worded items such as, “Living in a rural area decreases my quality of life,” seemed especially problematic. Future investigators conducting research with this population would be advised to limit the length of their questionnaires and would also do well to avoid negatively worded items.

Another problem with the current study was that we provided no clear definition to participants of what constitutes a “rural” community. This may have interfered with participants’ ability to accurately respond to some of the questions (i.e., some may have erroneously assumed that they did not live in a rural area or vice versa). We also failed to include questions that assessed the extent to which participants themselves felt they had aged successfully, and we overlooked the inclusion of an important demographic question related to their level of education. Participants were frequently observed discussing their answers with one another; thus, some participants may have been influenced by those around them when completing their surveys, rather than providing their own responses. However, the placement of the demographic questions at the beginning of the survey may have helped minimize this source of distortion since the discussion between participants usually occurred at the beginning of the study and did not last throughout the entire survey. Nevertheless, those conducting further research in this area should take these concerns into consideration when designing their research materials and procedures.

Despite the limitations previously noted, our findings provide preliminary evidence for the existence of at least four factors that may play an important role in contributing to successful aging among rural Midwesterners. These factors are worthy of future investigation and need to be cross-validated using an independent sample. This study was unique in that it utilized the perspective of an interdisciplinary research team to examine factors that may be associated with successful aging among rural older adults living in the Midwest portion of the United States. Additionally, the mean age of the participants in the study was just over 78 years old, categorizing most of our sample as members of the “old-old” age group. Further, although our sample consisted primarily of Caucasian females, a sizeable number of Native Americans participated in the study, constituting over 10% of the sample. Thus, the present study was unique in a number of ways and explored possible determinants of successful aging among a sample of the population, older adults living in Midwestern rural America, which had previously been overlooked in the literature.

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6. References