

**UNDERSTANDING THE IMPACT OF SENIOR COMMUNITY CENTER
PARTICIPATION ON ELDERS' HEALTH AND WELL-BEING**

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Preface

This project addresses the impact of participation in community senior centers on the well-being of older adults. While community senior centers, as we know them, have existed since the 1970s, there is relatively little data available that can tell us how important these centers are to the health of our older adult population. As our population ages, it is essential that we discover all of the ways we can enhance the lives of older adults in Pennsylvania. Hopefully, this study will be the first of many to investigate the importance of senior center activity. We also hope that senior center personnel across the state will be inspired to carefully collect more detailed data on the health and well-being of center participants because it is through research that we can best determine the needs of older adults and work to meet those needs by providing helpful programming in our Pennsylvania senior centers.

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THE BENEFITS OF SENIOR CENTER PARTICIPATION:
A REVIEW OF THE LITERATURE

EXECUTIVE SUMMARY

- The basic definition of a senior center has remained consistent since 1979, with the “focal point” concept still being central to the development of programs and services in the center.
- Senior centers now offer a variety of programs to serve many needs of older adults including health programs, meals, recreation, socializing, and financial assistance. Researchers see meals as an essential service because dining offers health /nutrition benefits, as well as opportunities to socialize.
- Because all communities are unique, seniors in each community will have unique needs and their senior centers should provide unique services to meet their needs.
- Today senior centers follow the tenets of activity theory and Taietz’s voluntary organization model of participation. This means that social and physical activity is expected and rewarding among older adults. The voluntary organization model assumes that the most active seniors will voluntarily choose to participate in senior centers.
- Most research on senior center participation focuses on profiles of who participates, rather than the consequences of participation. While the research on who participates in centers is inconsistent, many researchers have found that women participate more, people with fewer health problems (and fewer problems with ADLs) participate more, and when programs are offered that the clients have suggested, they participate more (especially among African Americans).
- Because America’s aging population is becoming more diverse, researchers suggest that centers must provide higher quality programming, programs for ethnically diverse members, more programs for educated seniors, and more programs for physically active seniors.
- The benefits of health programs in senior centers are well established. Seniors exhibit healthier behaviors, less mental health problems (such as depression), and they have a more positive outlook on life when they attend health programs such as exercise programs or nurse-in –residence programs.
- Much of the research on senior center participation is cross sectional, and studied without a control group. Also, subjective measures are used too often rather than objective assessments for physical and mental well being. Samples are often too small to make appropriate generalization to a population.

THE BENEFITS OF SENIOR CENTER PARTICIPATION: A REVIEW OF THE LITERATURE

The Senior Center and its Programs

Clubs for older adults have existed since the 1800s and the first senior center was developed in the United States in the 1940s (Gelfand, 1999). The Older Americans Act of 1965, and later federal legislation for funding senior centers in the 1970s, are two factors that we can attribute to the increase in senior centers throughout the 1970s. The number of senior centers in the United States has gradually grown since the 1970s. While there is no formal census on the number of senior centers in today, estimates from the United States Administration on Aging are that the number of centers ranges from 10,000 to 16,000 (U.S. Administration on Aging, 2004).

The National Council on Aging's definition of senior center is:

a community focal point on aging where older persons as in individuals or in groups come together for services and activities that enhance their dignity, support their independence and encourage their involvement in and with the community.

(National Council on the Aging, 1979, p.15)

The basic definition for a senior center has changed very little since 1979. However, the needs and programs associated with senior centers have shifted over the years.

It was in the 1978 amendments to the Older Americans Act that the "focal point" aspect of service delivery in senior centers was accentuated (Wagner, 1995; Gelfand, 1999). This meant that senior centers were supposed to be seen as centralized service centers that offered a variety of programs and information. Wagner (1995) lists the following types of programs that are available in today's senior centers:

- Health and wellness programs
- Transportation services
- Arts and humanities programs
- Volunteer opportunities
- Meal programs
- Educational opportunities
- Employment assistance
- Financial assistance
- Recreation assistance
- Intergenerational programs
- Information, referral, and counseling
- Social and community action opportunities

(Wagner, 1995, p.6-7)

Gelfand (1999) sees recreational and educational activities as the central component of the senior center today. Gelfand states that recreation and education is separate from service delivery . According to Gelfand (1999) recreation and education is important in building the center as a focal point for seniors because it is through recreation and interaction that seniors will build their sense of community. Senior centers as education providers influence seniors to turn to the centers to answer their questions.

Jirovec et al. (1989) found that seniors participate in centers in order to meet recreational and social needs, not for health, shelter or food. However Jirovec did find that seniors wanted help in financial, legal, and transportation matters. Gelfand et al.'s (1991) questionnaire study of directors, staff and participants in 67 Maryland senior centers showed seniors identifying exercise as the most important program to them, while meals were rated second in importance. According to Gelfand and colleagues, directors had somewhat different ideas on what was important to the seniors. Directors rated meals as most important and exercise as second in importance. Gelfand et al. also conducted focus group interviews of senior center participants and found that socializing is a key factor in getting older adults interested in attending a center. Once seniors become interested, they are likely to select activities and programs that they find interesting. Examples of programs that seniors found interesting were crafts, exercise, information and assistance, and meals (Gelfand et al., 1991). Gelfand suggests that information and assistance, meals, socializing and transportation should all be offered daily at senior centers, while other activities can be offered according to participant interest. Sabin (1993) also suggests that meals are central to senior center programming. His study based on 1781 questionnaires shows that eating meals is related to a higher frequency of attendance at senior centers. In other words, those who eat meals at a senior center also attend other programs at the center. Of course, dining is a social activity as well as a nutritional one for most Americans, so the social benefits of eating should not be overlooked. In fact, Sabin also found that the socially active individual attends senior centers more than those who are isolated or lonely. Meals at senior centers should be viewed as an essential activity for drawing seniors into the center for other activities.

Candis Reinke (2001) reminds us that each senior center in the United States is unique because it reflects the unique demographic profile and culture of its community. She suggests that personnel from each senior center should ask themselves if they are prepared for the challenges of the future in their community. Once this question is considered, some senior center's staff may decide to steer away from trying to meet every senior need, and instead focus on a few common issues. She calls these specialized senior centers, "niche" centers (Reinke, 2001). A niche senior center targets a specific group of seniors and addresses their common needs or desires. Once the common needs are identified, programs are created to meet the commonality of the seniors in the community. Reinke (2001) uses the examples of rural niche senior centers and urban niche senior centers

Blieszner et al.'s (2002) study on the helping network of rural elders is an excellent example of a study that shows how rural communities can be very unique and diverse. They found that rural older elders with more education, less family contact, and a

preference for formal services were more likely to use formal services rather than informal services such as family care. They also suggest that community services need to be marketed differently to different subgroups of the older population. They point to community needs assessments and longitudinal data collection as key sources of information on how to best reach all types of older adults in a rural community (Blieszner et al., 2002). A discussion on assessment and evaluation of senior centers is presented later in this review.

Who Participates?

Researchers began publishing findings from empirical studies on senior center participation in the 1970s. The early research on senior centers reflected the theoretical trends of the time, especially references to Cumming and Henry's (1961) disengagement theory (Wagner, 1995). Disengagement theorists assumed that older adults would lose ties with society and their loved ones. Therefore, centers of the 1970s tended to create programs that focused on maintaining and creating social ties. Early studies by Cutler (1973), Tissue (1971), Tuckman (1967), and Bley, Goodman, Dye, and Harel (1972) found that senior center participants possessed more benefits in terms of social well-being and physical health compared to those who did not attend senior centers. Toseland and Sykes' (1977) research on 137 older adults from a mailing list of a senior center in Wisconsin found that participants did not differ significantly from nonparticipants in senior center activities. However, a common problem in this early research, as with the research designs in the 30 years to follow, is that it lacked appropriate time-order considerations. As a result, it is difficult to determine whether psychological and physical well-being influences the decision to participate, or if participation influences well-being.

Philip Taietz (1976) investigated the issues of disengagement and activity in a study that conceptualized two models of the senior center: 1) the social agency model which views the center as service provider, especially for those who are disengaged and poor; and 2) the voluntary organization model which assumes that older adults who are more active in voluntary organizations and in their community will use senior centers more frequently. Taietz's results, which were based on a relatively large sample of 920 respondents, showed that senior center participation tends to follow the voluntary organization model. Senior center participants scored higher on community attachment measures and social participation measures than non-participants. This research supports the propositions of activity theory more than disengagement theory. Taietz's research has been referred to as "seminal" (Wagner, 1995) and his models were applied in other research on senior center organization (see Gelfand, 1999; Schneider et al., 1985; and Sabin 1993).

By the 1980s and 1990s researchers began to focus almost exclusively on profiles of participants rather than the benefits of participating in senior centers. The fact that many research findings discounted disengagement theory and supported activity and continuity theory influenced researchers to direct their efforts toward identifying the factors that lead to participation which was now assumed to be beneficial to the health and well-being

of older adults. Additionally, senior centers around the country were increasingly concerned with maintaining their funding. It is possible that the success of centers was determined by *numbers* of participants rather than the *consequences of participation*. Nevertheless, the research on who participates in senior center activities yielded very conflicting results over the past twenty years.

John A Krout is perhaps the most published scholar in the area of senior center participation. Much of his research focuses on the determinants of participation (Krout, 1985; 1988; 1991; 1994; 1995; Krout et al., 1990). According to Krout et al. (1990) participant versus nonparticipant comparisons have received more attention from researchers than any other topic related to senior centers. However, Krout notes, as do other researchers (see Strain, 2001; Calsyn and Winter, 1999) that findings are not consistent on which type of person participates more than others.

Krout et al. (1990) found that senior center participants had higher levels of social interaction, less income, and fewer problems with activities of daily living. The younger elders and the very old were most likely to participate compared with other age categories of older adults. Calsyn and Winter (1999) note that age is positively related to senior center utilization until about age 85, then attendance drops off.

Some researchers found no relationship between self-reported health status and center use (Krout et al., 1990), while others state that declining health is the main reason for decreasing activity in senior center activities (Calsyn and Winter, 1999). According to Gelfand (1999), many senior centers are offering more programs for older adults with chronic health problems or physical impairments. These programs are sometimes identified as services for the “frail” elderly (Krout, 1995). However, a clear definition and operationalization of the term “frail” does not yet exist (Gelfand, 1999)

Krout (1988) noted that sex and marital status do not always show a consistent relationship to attendance at senior centers. However, some studies have shown that women participate more than men (Sabin, 1993; Aday, 2003). Calsyn and Winter (1999) remind us that women’s higher participation rates in some studies is a reflection of the higher proportion of women in the older adult population. Ralston and Griggs (1988) found that wives were more likely to feel that their husbands should attend senior centers than husbands were to feel that their wives should participate. Studies often measure whether participants live alone or with others, rather than whether they are married. Those who live alone tend to participate more in senior center activities (Sabin, 1993; Strain, 2001; Aday, 2003).

Findings on race and senior center participation are rarely consistent (Sabin, 1993; Wagner, 1995). However, in their study on the utilization of senior centers, Ralston and Griggs (1985) found that African Americans are more committed to attend senior centers when the activities suggested by the participants were offered. Ralston and Griggs (1985) also note that African American older adults may not get the same opportunities to recreate throughout their lives compared to whites. They suggest that it is important that

senior centers present opportunities to all races in a community in order to encourage participation.

Krout (1988) points out that when it comes to measuring attendance at senior centers, researchers should be aware that frequency, duration, and stability of attendance are separate, but important dimensions. According to Krout, future research on participation in senior centers should take in to account how long people stay at events, as well as how many times they attend the center. Also, there is very little known about the factors that affect sporadic attendance. Family holidays such as anniversaries or birthdays might influence individuals to not attend during certain months because of alternative activities. On the other hand, some older adults may attend more during socially recognized holidays because of their desire to be with the friends they have met at the senior center.

Ronald Aday (2003) developed a demographic profile of senior center clients. This profile is based on a sample of 734 surveys from senior at centers California, Florida, Iowa, Maine, New Hampshire, Texan and Tennessee. His profile is interesting because it is based on data from several states across the country. He found that senior center participants tend to be 70-79 years old, widowed, female, white, high school graduates or some college, living alone and reportedly in “good” health.

Donna Wagner (1995) states that senior centers reflect the unique characteristics of each community in which they reside. Rural centers, with rural populations will have different participation patterns than urban centers. The average income and educational attainment in a community will be reflected in the needs of the residents and their senior center participation. Therefore, communities should be careful not to generalize all of the findings on senior center participation without first understanding their own community members and their needs. With this in mind, Wagner (1995) does suggest some general trends among the aging population that all communities should realize:

- Older adults of the future (Baby Boomers) will be more educated. The result of this higher education will be more interest in consumer issues, health issues, and self-help activities than the older adults of the 1970s, 1980s and 1990s.
- The new cohort of older adults will be ethnically diverse and centers will have to design programs that meet the needs of a diverse community.
- Older adults are becoming more polarized in terms of economic and financial status. While some seniors will be able to pay for a variety of high-quality services throughout their lives, others will be in great need of community support and assistance for services.
- While the older adult population is becoming healthier and older adults are living longer, we can expect to see older adults delaying retirement. Older adults will also pursuer a more vigorous lifestyle that we have seen in the past, and senior centers will have to meet the need for more programs for the physically active.

- As a result of higher education levels, and a more active lifestyle we can expect that baby boomers will have high expectations regarding service quality, access, and availability. Wagner states that, “It is extremely unlikely that this generation of “new old” will enter old age with a ‘something is better than nothing’ attitude or a sense of gratitude for whatever services or opportunities are present for them.”

(Wagner, 1995, p. 17).

The factors mentioned above will impact senior center participation and the evaluation of senior centers by the participants. Senior center directors of the future will have to determine their priorities for programming, especially in terms of increasing and maintaining a high frequency of participation versus developing high-quality programming that seniors find beneficial.

The Benefits of Participation

As mentioned earlier, most research on senior center participation investigates the factors that lead to attendance and participation, not the consequences of participation among older adults. However, Wagner’s (1995) prediction that future older adults will have high standards for programming and they will demand results from programs, suggests that it is now time to consider the impact of senior center participation on the well-being of older adults.

Schneider et al.’s (1985) panel study of 500 older adults focused on the impact of senior center participation on health, life outlook, institutionalization, and use of other government services. The researchers collected data before the implementation of services and two years later, after services had been in place. No significant differences were found on measures of health, life outlook, rates of institutionalization, or use of other government services between participants of senior centers and non-participants.

Ronald Aday’s (2003) report on identifying important linkages between successful aging and senior center participation states that an important goal of senior centers is to provide a social environment conducive to the development of a social support system. This social support system will reduce loneliness and depression, and enhance life satisfaction. His study, based on 734 surveys from senior centers in Florida, Iowa, Maine, New Hampshire, Texas, and Tennessee, is one of the few studies that actually included measures of psychological and physical well-being as indicators of the *consequences* of center participation. Over 90% of Aday’s respondents felt that their health was better or about the same compared to a year earlier. Over 75% of his respondents reported that the center helped them to remain independent. Aday also found statistically significant correlations between:

- Attending health promotion programs and practicing healthy behavior
- Hours spent at the center and possessing a healthy mental outlook
- Hours spent at the center and practicing healthy behavior

Aday's article includes a sample of the questionnaire he used in his study. This questionnaire should prove to be quite useful in future research. The survey includes both self-reported subjective measures of physical well-being and an objective measure (a standardized scale) to measure depression. The major drawback of this study is that it did not include a control group to which we can compare the positive effects of senior center participation to those seniors who did not participate in a center.

Gitelson, McCabe, Fitzpatrick, and Case (2003) studied 1100 seniors who participated in meal programs at 18 centers in Arizona and South Carolina. Eighty percent of their respondents felt that benefits of the center were to provide opportunities to make friends and to provide a healthy meal. A majority of respondents also stated that their center was important in making them feel like a part of a group, having fun, improving their quality of life, maintaining new friendships, feeling more relaxed, providing a place to go each day, and improving their physical health. Like Aday's (2003) study, Gitelson et al. did not compare the findings to a control group of seniors who did not participate in a center. Therefore, it is not possible to attribute all of the successes of the respondents to the senior center itself. Also, Gitelson et al.'s assessment instrument includes only subjective measures on physical and psychological well-being. For example, all of the measures ask the respondent to evaluate the center on how important it was to their health, rather than requiring respondents to state present facts about their health or well-being.

The level of involvement older adults have in the implementation of programs can increase the benefits of senior center participation (Williams et al., 1998; Perkinson, 1992). For example, Perkinson (1992) found that when seniors work as volunteers in their own center they feel more empowered and they become less dependent on the center to meet their needs. Williams et al. (1998) found that when the activities of the senior center focus on helping others (making crafts for distribution to a nursing home rather than "just for fun"), the seniors have higher ratings of satisfaction with life and they even take more efforts to recruit others to the center. These researchers also found that seniors take on leadership roles and donate some of their own items (in this case it was craft items) to the center when they know the project is designed to help other people (Williams et al., 1998).

There are several studies that assess the effectiveness of specific health programs for seniors (See Campbell and Aday, 2001; Phelan et al., 2002; Stewart et al., 1997; Wallace et al., 1998;). Of course, these studies tend to be more narrowly focused on a specific program. It is also likely that health programs that are meant to address concerns such as exercise and nutrition have clear goals to improve these health factors. Therefore, establishing whether the goals have been met is possible.

One example of an assessment of a specific program is Campbell and Aday's (2001) study of the benefits of a senior center's nurse-managed wellness program among 111 older adults. The program at hand was a Nurse on Duty (NOD) program that included regular health screenings for early detection (blood pressure for example), nursing management for long-term conditions, and referral to other health care providers.

Findings revealed that those who consulted regularly with the nurse were more likely to increase their healthy behavior and subsequent health knowledge. Participants in the NOD program also reported greater psychological comfort and confidence in the ability to maintain a healthy lifestyle (Campbell and Aday, 2001).

One of the more scientific studies that utilized a pre-test-posttest design is Phelan et al.'s (2002) assessment of outcomes from a community-based health enhancement program. Their sample consisted on 304 senior center participants aged 65 and older in western Washington. The Health Enhancement Program (HEP) is a community-based wellness intervention program. Components of the program included a baseline health measure, the development of individualized "health action plans," exercise classes, chronic disease self-management courses, and pairings with a trained senior "health mentor" who offered peer support. Psychosocial issues such as depression were also monitored and when seniors exhibited signs of depression or other challenges, they were encouraged to meet with a social worker. The impact of the HEP program was very positive for the center participants. Most interesting is that the percentage of participants found to be depressed decreased significantly from the time of enrollment to the measurement time one year later. Also, physical activity increased and exercise readiness increased during the one-year measurement period. This study illustrates the importance of have clear goals and a measurable outcome before program implementation (measured by a pre-test) and clear measurable outcomes after the program (measured by a posttest).

Wallace et al.'s 1998 study on the effectiveness of a community-based health promotion program for older adults is an example of a study that included a control group of senior center members who did not engage in the multiple-risk factor intervention in which exercise was the central component. After six months in the exercise program the intervention group had significantly higher scores on the Medical Outcomes Study Short-Form 36 health assessment scales (these scales measure health factors such as physical functioning, role limitations, energy/fatigue, etc.) compared to the control group. The intervention group also had fewer depressive symptoms as measured by the CES-Depression scale. After 6 months, seniors who were in the control group were allowed to join the intervention group in order to obtain the benefits of participation. This study is rare because it includes many of the components of an effective investigation of the benefits of program participation. The researchers included a control group, the program was carefully designed and implemented, and the measures for evaluation included standardized, objective scales that have survived scientific scrutiny in the medical and mental health community.

Summary and Recommendations

This review presented information on the types of programs that are common in senior centers, findings on the types of people who participate in senior centers and findings from studies that evaluated the effectiveness of senior center programs. Several problems with prior research in the area of senior center participation have emerged throughout this review:

- Most studies are based on cross-sectional research where data is collected at only one time period. As a result, it is difficult to establish causality and identify which factors are determinants of participation, and which factors are consequences of participation. Researchers should collect data at two time periods. Baseline measures of health and well-being should be recorded more than once, at the beginning of program participation and again during or after program participation.
- Most studies do not include a comparison or control group. Therefore, it is not possible to conclude whether the seniors who participate in senior centers experience health or well-being changes because of the participation or other factors that may affect all older adults in a particular community. Future studies should include comparison groups of older adults who do not visit senior centers. Another strategy that works well when studying a new program in a specific center, is to assign participants into two groups, one that participates in the new program and one that does not.
- Too often researchers use self-reported and subjective measures of health and psychological well-being. For example, subjects are asked if they feel their health is “poor,” “fair,” “good,” or “excellent,” rather than having their health symptoms recorded (blood sugar, weight, heart rate, etc.). While there tend to be strong correlations between subjective physical and mental health and objective measures, it is more accurate to include objective measures in research. This is especially necessary when measuring mental health. Depression, for example is easily measured by several standardized scales like the CES-Depression scale (Radloff, 1977). These instruments can often identify depression among individuals who do not know they are depressed. On a subjective measure (“How would you rate your emotional health?”), an extremely depressed respondent might state that their mental health is “just fine.”
- Many times the research samples are small, or are drawn from only one or two senior centers. Researchers need to employ national, representative samples as well as case studies in specific senior centers. Senior centers of the future will have to balance the unique needs of communities with the national trends in the aging population. In order to make appropriate decisions about balancing these needs, center directors and staff should have data available to them from case reports and national analyses.

In order to address these important issues, we recommend that senior centers move toward a commitment to conduct detailed assessment and evaluation of clients and services. The recent national movement toward accreditation of senior centers has increased the awareness of needs assessment and evaluation of senior centers around the country. As stated by the National Council on the Aging (NCOA), accreditation is:

...the official recognition that a senior center is meeting its mission in a nationally accepted professional fashion. It is based on compliance with nine standards of senior center operations developed by the national Institute of Senior Centers (NISC).

(NCOA, 2004)

Only 102 senior centers are currently accredited throughout the United States (NCOA, 2004). However, with increased demands on center's budgets, many centers may have doubtful futures (Krout, 1993). It will become even more important in the years to come for senior centers to demonstrate that their programs are beneficial and that they deserve continued funding (Krout, 1993). The assessment and evaluation process that leads to accreditation is one way to produce important evidence that a senior center is successful. If senior centers begin to regularly collect information on their clients and programs, we will gradually learn more about the benefits of senior center participation and how centers affect the larger community.

Self-assessment, conducted by the staff of advisory committee of a senior center can be more helpful to a senior center's future than research collected by academic scholars for the sole purpose of publication. Of course, technical assistance can be added when necessary or when total objectivity is required (Lutz, 1993). The National Council on the Aging has provided useful guides for evaluation (see Krout, 1993; Lutz, 1993; NCOA, 1995). Generally these guides encourage the staff and leadership of senior centers learn about the uniqueness of their communities and design ways to measure how well the centers are meeting the senior's needs (Reinke, 2001). Additionally, an evaluation is conducted for the following reasons:

- To assess if the center's objectives and goals are being met
- To assess the effectiveness of management and administration policies
- To assess the need for program change
- To monitor program implementation and performance
- To improve the overall delivery of services
- To determine who is being served by programs
- To identify particular programs or aspects of center operation that are working well or those that need improvement
- To provide data useful to short and long-range planning
- To assist in the setting of priorities and the allocation of resources
- To assist in the assessment and improvement of staff performance
- To determine unintended as well as intended program impacts
- To provide staff with a sense of accomplishment and heightened awareness of what they can achieve

(Krout, 1993, p. 3)

While detailed longitudinal data collection on mental health, physical health, satisfaction with services, and types of services utilized may seem redundant and time consuming, it

does produce the information necessary for determining how best to meet the needs of older adults in our communities.

The current research show that senior centers are currently serving the needs of thousands diverse older adults across the country. As our population ages and becomes even more diverse, it is important that professionals be aware of the new and unique needs of older adults. As they seek out services and activities from senior centers in the years come we should be prepared to meet their needs.

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UNDERSTANDING THE IMPACT OF SENIOR COMMUNITY CENTER
PARTICIPATION ON ELDERS' HEALTH AND WELL-BEING: AN ANALYSIS OF
YORK AND CLEARFIELD COUNTIES

EXECUTIVE SUMMARY

- This report focuses on understanding the characteristics of home care consumers who utilize community senior centers, and home care consumers who do not utilize senior centers. Both Area Agencies on Aging in Clearfield and York counties provided fifty cases of each consumer group. A comparison between all home care consumers in Clearfield and all home care consumers in York was conducted. Within each county an analysis that compared of the characteristics of senior center participants and non senior center participants was conducted. The final analysis was a combined county analysis that predicted which home care consumers were most likely to participate in senior centers.
- Home care consumers in Clearfield county as compared to home care consumers in York county were older, were in better cognitive and physical health, have higher incomes, are more likely to have supplemental health insurance, are more likely to live alone, and be in need of caregiver resources. These results indicate that differences in senior center participation may be due to the rural and urban characteristics of the counties. Geographic barriers may prevent older adults from accessing the social service system in rural areas.
- Non senior center participants as compared to senior center participants have higher levels of ADL and IADL impairment. Non senior center participants are also more likely to have higher levels of emotional need. In terms of financial and healthcare resources, non senior center participants have lower levels of financial need, and subsequently are not as likely to require medical assistance. However, they are also not as likely as senior center participants to have Medicare Part B. This may indicate a gap in their insurance coverage.
- Differences between counties, and senior center participants and non senior center participants, point to the need to develop unique programs that meet the diverse needs of older adults based on county and consumer characteristics. By understanding county and consumer characteristics senior center programs can be designed to effectively serve older adults from various backgrounds.

UNDERSTANDING THE IMPACT OF SENIOR COMMUNITY CENTER PARTICIPATION ON ELDERS' HEALTH AND WELL-BEING: AN ANALYSIS OF YORK AND CLEARFIELD COUNTIES

This report focuses on understanding the characteristics of two groups of home care consumers. The main objective of this study is to determine the characteristics among older adults that lead to participation in community senior centers. The first group of home care consumers were previous senior center participants, whereas the second group had never utilized senior centers. Two Area Agencies on Aging provided the cases. Samples were drawn from York and Clearfield counties. These counties were selected for their urban and rural characteristics, respectively. This preliminary research lays the groundwork for understanding the relationship between senior center participation and home care use. Because a sample of home care users was drawn and their previous senior center participation history determined, it is methodologically unsound to credit differences in the samples based on senior center participation. Therefore, descriptive statistics for each group are presented. Additionally, the two groups of home care consumers are compared. Within each county, the groups were compared on various demographic, medical, social support, and cognitive and physical health characteristics. The final analysis presented is a comprehensive analysis based on the total sample, Clearfield and York counties combined. This analysis predicts the characteristics of home care consumers who utilize senior centers versus consumers who do not utilize senior centers.

Pennsylvania Demographics

According to the U.S. Census Bureau (2001) Pennsylvania is one of the oldest states. Currently over 15% of the population in Pennsylvania is aged 65 and older. This is a positive change of almost five percent since 1990. Almost two percent of Pennsylvania's population is aged 85 or older. The population 85 and older is the fastest growing, a fact that is clearly indicated by the 38% growth in this population since 1990. Clearfield County has 14,094 persons aged 65 and older. This is 16.9% of the county's population and is a positive growth of 8.5%, since 1990. Over two percent of the population of Clearfield County is 85 or older. York is a younger county. There are 51,492 persons aged 65 or older. This is 13.49% of the population of York County and is a 15.86% change since 1990. Only 1.6% of the population in York County is aged 85 or older (U.S. Census Bureau, 2001). Statewide, almost 10% of the population aged 65 and older are below the poverty level (U.S. Census Bureau, 2000). In Clearfield, 9.6% of seniors are below poverty level. The number is lower in York, only 6.8% are below the poverty level. Statewide, 12% of Pennsylvania's seniors are eligible for medical assistance. In Clearfield, 17% of seniors are eligible for medical assistance. York has one of the lowest levels of medical assistance eligibility. In York 7.4% of the senior population is eligible for medical assistance (Pennsylvania Department of Health, 2002).

Study Methodology

The Area Agencies on Aging in Clearfield and York counties were visited by the principal investigators. At least fifty cases of home care users who were previous senior center participants and fifty cases of home care users who were not previous senior center participants were randomly selected from each AAA. The Comprehensive Options Assessment Form (COAF) was used to gather data on the home care consumers. The following domains were extracted from the COAF: Demographics (age, income, ethnicity, marital status, gender, living arrangements), Health (Activities of Daily Living (ADLs), Instrumental Activities of Daily Living (IADLs), physical health, mobility), Cognitive Function, Caregiver Support, Physical Environment, Financial Resources, and Health Insurance Coverage. To the extent possible, care was taken to ensure that the cases collected did not have missing data. Cases with missing data on certain variables were excluded from the analysis. On average, particularly with regard to marital status, an average of 14 cases total had missing data. Descriptive statistics were computed (means, frequencies) for all project variables for each county. Within each county the factors for both groups were compared. Interval or scale variables, such as age and income, were analyzed with an independent samples t-test, whereas nominal variables, such as marital status and living arrangements, were analyzed using chi-square statistics. A comparison of project variables for all home care consumers in Clearfield and York counties was also conducted. Interval variables were analyzed with an independent samples t-test, and nominal variables were analyzed with chi-square statistics. Lastly, a combined county analysis was conducted to determine which factors predict whether a consumer utilized senior centers.

Description of the Clearfield County Sample

One hundred and five home care consumers were sampled from Clearfield County. Fifty-five older adults were previous senior center participants, and fifty had not utilized senior centers. The sample was mostly Caucasian (99%) with one African American. Regarding gender, one third (34%) of the sample was male. The average age of the sample was 81. The youngest person sampled was 63 and the oldest was 95. Over half (57%) of the sample were widowed. One-third (31%) were married. Two percent were divorced and five percent were single. Given these marital statistics it is not surprising that two-thirds of the sample lived alone. Only 21% lived with their spouse, 7.6% lived with their children, 1.9% lived with their relatives, and 3.8% had other living arrangements. The average consumer monthly income was \$978.00. The lowest sampled monthly income was \$302.00 and the highest was \$4,786.00. Ninety percent of the sample had Medicare Part A and Medicare Part B health insurance coverage. A minority of the sample had Medigap and Medicare HMO insurance, 2.1% and 1.1% respectively. A small portion (6.4%) of the sample was on medical assistance. Even though a negligible number of consumers possess supplemental health insurance, almost one-third (28.7%) had long term care insurance. Ninety-nine percent of the sample had a regular physician, and 40% had been hospitalized in the past year. Twenty-four percent of the sample were veterans. Every case sampled had missing information on whether the home care consumer was clinically eligible for nursing home placement.

Demographic characteristics for home care users in Clearfield and York counties are presented in Table 1.

Description of the York County Sample

One hundred and two home care consumers were sampled from York County. Of these, 52 older adults were not previous senior center users. The remaining 50 had previously used senior centers. The sample was predominately Caucasian (86%) and African-American (12%). Similar to national aging demographics, seventy-five percent were female and 25% were male. Half of the sample were widowed, and twenty-seven percent were married. Surprisingly, a high number were divorced (17%) or single (6%). Reflective of marital status, half of the sample lived alone, almost an equal number lived with spouse (20%), and children (16%). A minority lived with other relatives (7%), or had unspecified living arrangements (6%). The average age of the sample was 76 years; the youngest was 61 and the oldest 96. The average yearly income was \$11,472. The income level ranged from a yearly low of \$0.00 to a high of \$37,000. Health insurance coverage varied widely; 78% had Medicare Part A, 58% had Medicare Part B, 37% had some form of Medigap or supplemental health insurance, and 18% had medical assistance. Every home care user had a regular physician and half of the sample had been hospitalized in the past year. Fourteen percent were United States veterans. Only six percent were clinically eligible for nursing home placement. Demographic characteristics for home care users in Clearfield and York counties are presented in Table 1.

Demographic Comparison of Clearfield and York Counties

In order to determine the similarities and differences of home care consumers in Clearfield and York counties the two groups were compared. Regarding demographic characteristics, consumers in Clearfield County were on average two years older than York consumers. Consumers in Clearfield were predominately Caucasian, whereas almost fourteen percent of the consumers in York were African American. Consumers in Clearfield had an average income of twenty-two dollars more a month than consumers in York. Similarly, consumers in Clearfield had more financial resources than consumers in York. Around 30% of consumers in each county were married. There were significant differences in regards to consumers who were widowed and divorced. Fifty-seven percent of consumers in Clearfield were widowed, and half of the consumers in York were widowed. Only two percent of consumers in Clearfield were divorced, whereas almost 17% of consumers in York were divorced. Surprisingly, even though consumers in York were less likely to be married, and more likely to be divorced, they were less likely to live alone. Fewer consumers in Clearfield were living with their children or with relatives than consumers in York. In fact, there were fifteen percent more consumers in Clearfield than in York who lived alone. Clearfield County had more veterans in home care than York County, 24% versus 14% respectively. There were also differences in health care insurance coverage in the two samples. Consumers in Clearfield were more likely to have Medicare Part B coverage than consumers in York. However, consumers in York were more likely to have Medigap coverage. Consumers in Clearfield were more

likely to have long term care insurance. There were more consumers in York (20%) with medical assistance as compared to six percent of consumers in Clearfield. Half of the consumers in York had been hospitalized in the past year, whereas 40% had been hospitalized in Clearfield. Lastly, there were differences in caregiver resources and experiences. Caregivers in York reported higher levels of caregiving stress, caregiving burden, and fewer respite resources than in Clearfield. Consumers in Clearfield reported lower levels of caregiver availability/capability than consumers in York. Characteristics of home care consumers in both counties are presented in Table 1.

Table 1: Descriptive Characteristics of All Home Care Consumers in Clearfield and York Counties

| | Clearfield County | York County |
|---|-------------------|-------------|
| Age | 81.05 | 79.02 |
| Male | 34.3% | 25.5% |
| Caucasian | 99% | 86.3% |
| Monthly Income | \$978.00 | \$956.00 |
| Financial Resources | 10.92 | 12.42 |
| IADLS | 6.03 | 6.32 |
| ADLS | 7.19 | 9.32 |
| Cognitive Function | 1.53 | 2.23 |
| Physical Health | 2.88 | 2.9 |
| Mobility | 1.81 | 2.20 |
| Marital Status | | |
| Married | 31.9% | 27.1% |
| Widowed | 57.1% | 50.6% |
| Divorced | 2.2% | 16.5% |
| Single | 5.5% | 5.9% |
| Living Arrangements | | |
| Alone | 65.7% | 51% |
| With Spouse | 21.0% | 20.6% |
| With Children | 7.6% | 15.7% |
| With Relatives | 1.9% | 7.8% |
| Other | 3.8% | 4.9% |
| Veteran | 24% | 13.9% |
| Clinically Eligible for Nursing Facility | All were missing | 24% |
| Caregiver Availability | 11.14 | 4.92 |
| Physical Environment | .28 | .66 |
| Hospitalized in Past Year | 39.8% | 52.5% |
| Medical Insurance | | |
| Medicare Part A | 89.2% | 90.9% |
| Medicare Part B | 90.3% | 67.8% |
| Medigap | 2.1% | 43.2% |
| Medicare HMO | 1.1% | 2.3% |
| Medical Assistance | 6.4% | 20.2% |
| Long-term Care Insurance | 28.7% | 2.3% |
| Caregiver Stress | .34 | .83 |
| Respite Availability | .31 | .51 |
| Caregiver Availability/Capability | 11.14 | 4.92 |
| Caregiver Burden | .52 | 1.25 |
| Total Sampled | 105 | 102 |

Note: Numbers provided are averages or percents. Shaded factors indicate statistically significant differences at the $p < .05$ level.

Comparison of Senior Center and Non Senior Center Participants in Clearfield County

An analysis was conducted to determine how the two groups of home care users were similar and/or different from each other in each county. In Clearfield County the two groups shared similar demographic characteristics. They did not differ significantly on gender, marital status, financial resources, income, living arrangements, and veteran status. The two groups also shared similar health characteristics. They had similar IADL, physical health, and cognitive functioning levels. Similarly, they had an equal number of hospitalizations in the last year. The two groups had similar health care insurance coverage. The two groups had equal coverage of Medigap insurance, Medicare Part A insurance, medical assistance, and long term care insurance. The caregivers had equal amounts of caregiver stress.

There were a few differences between senior center participants and non senior center participants in Clearfield County. The two groups differed in age. Previous senior center participants were on average three years older than non senior center participants. Previous senior center users had higher levels of need of caregiver availability and capability as compared to non senior center users, 12.63 and 9.17 on the COAF respectively. However, caregivers of previous senior center participants had more respite resources available than caregivers of non senior center participants, .19 and .46 on the COAF, respectively. Given these differences it is surprising that both groups reported equal levels of caregiver burden. Previous senior center participants were more likely to have their emotional behavior characterized as stable versus non senior center participants, .85 and 2.14 on the COAF, respectively. Previous senior center users also had lower ADL levels (6.5) as compared to non senior center participants (8.05). Previous senior center users had lower levels of mobility need (1.58) versus 2.12 of non senior center users. Previous senior center users were also more likely to have Medicare Part B health care insurance than non senior center users. Lastly, the physical environment of senior center participants was better than for non senior center participants.

In sum, as compared to senior center participants, non senior center users in Clearfield were younger, had higher levels of emotional need, had more ADLS, had higher levels of mobility impairment, and were not as likely to have Medicare Part B health insurance coverage. Non senior center participants reported lower levels of caregiver availability. Their caregivers reported a higher need for respite care than caregivers of seniors who participated in senior centers. A comparison of senior center participants and non senior center participants is presented in Table 2.

Comparison of Senior Center and Non Senior Center Participants in York County

An analysis was also conducted to determine how senior center participants and non senior center participants differed in York County. The sample was compared with regard to demographic characteristics, physical, emotional, and cognitive health, and

caregiver resources. On most demographic characteristics the two groups were similar. The two groups did not differ in age, gender, ethnicity, and consumer income. The two groups also had similar social resources. A difference did not exist in caregiver stress, respite availability, caregiver burden, and caregiver availability/capability. In terms of health, the two groups had similar levels of physical health, mobility, and emotional behavior. Similarly, both groups were equally clinically eligible for nursing home placement. The two groups reported equal health insurance coverage of Medicare Part A and Part B, and Medigap insurance. They also reported an equal number of hospitalizations. Lastly, the two groups shared a similar physical environment.

There were several statistically significant differences between the two groups. Many of the differences can be explained by examining the marital status of the two consumer groups. The two groups differed in marital status. Non senior center participants were more likely to be married (35% versus 16% of senior center participants). Senior center participants were most likely to be widowed (65% versus 40% of non senior center participants). Approximately 16% of consumers in both groups were divorced.

The differences in marital status explain the differences in their living arrangements. Persons who were previous senior center users were most likely to live alone. Fifty-six percent lived alone, 20% lived with children, 10% lived with relatives, 8% lived with their spouse, and the remaining 6% had other living arrangements. Only 46% of non senior center participants lived alone. Thirty-three percent lived with their spouse, twelve percent lived with their children, five percent lived with relatives, and four percent had other living arrangements.

The difference in marital status explains the difference in financial resources. Even though the consumer's income was similar, senior center participants had fewer financial resources, as they are more likely than non senior center participants to live alone. The senior center participants had financial need levels of 13.25 on the COAF compared to 11.57 for non senior center participants. With regard to health insurance, 30% of former senior center users were on medical assistance, whereas only 13% of non senior center users were on medical assistance. Of the 14 consumers who were veterans, only three were previous senior center users.

Non senior center participants have higher levels of physical and cognitive impairment. On average home care users who were not previous senior center consumers had 7 IADLS compared to 5.5 for senior center consumers. The same trend was seen with regard to ADL levels. Non senior center participants had higher ADL levels than senior center users, 10.5 compared to 8, respectively. There was a difference in cognitive function as well. Non senior center consumers had significantly higher levels of cognitive impairment, 1.56 compared to 2.97, respectively.

In sum, senior center participants in York are more likely than non senior center participants to be widowed, live alone, have fewer financial resources, and have medical assistance. Non senior center participants are more likely to be married, live with others, and have higher levels of IADL, ADL, and cognitive impairment. A comparison of

senior center participants and non senior center participants is presented in Table 2. Table 2 does not provide a statistical comparison between counties.

Table 2: Descriptive Characteristics of Consumers in Clearfield and York Counties

| Factors | Clearfield | | York | |
|--|---------------------------|-------------------------------|---------------------------|-------------------------------|
| | Senior Center Participant | Non Senior Center Participant | Senior Center Participant | Non Senior Center Participant |
| Age | 82.56 | 79.30* | 77.56 | 80.44 |
| Male | 27.3 | 42.0 | 22.0 | 28.8 |
| Caucasian | 100 | 98 | 88.0 | 84.6 |
| Monthly Income | 1012.95 | 938.85 | 912.17 | 997.17 |
| Financial Resources | 11.19 | 10.56 | 13.26 | 11.57* |
| IADLS | 5.73 | 6.44 | 5.77 | 6.86* |
| ADLS | 6.55 | 8.05* | 8.02 | 10.59* |
| Cognitive Function | 1.36 | 1.76 | 1.56 | 2.91* |
| Physical Health | 2.76 | 3.02 | 2.86 | 2.97 |
| Mobility | 1.58 | 2.12* | 2.07 | 1.17 |
| Emotional Behavior | .85 | 2.15* | 1.67 | 1.67 |
| Marital Status | | | | |
| Married | 30.0 | 34.1 | 16.2 | 35.4* |
| Widowed | 60.0 | 53.7 | 64.9 | 39.6* |
| Divorced | 2.0 | 2.4 | 16.2 | 16.7 |
| Single | 4.0 | 7.3 | 2.7 | 8.3 |
| Living Arrangements | | | | |
| Alone | 70.9 | 60.0 | 56.0 | 46.2* |
| With Spouse | 23.6 | 18.0 | 8.0 | 32.7* |
| With Children | 3.6 | 12.0 | 20.0 | 11.5 |
| With Relatives | 0.0 | 4.0 | 10.0 | 5.8 |
| Other | 1.8 | 6.0 | 6.0 | 3.8 |
| Veteran | 23.6 | 24.5 | 6.0 | 21.6* |
| Clinically Eligible for Nursing Facility | missing | missing | 25.0 | 23.5 |
| Physical Environment | .22 | .37* | .70 | .63 |
| Hospitalized in Past Year | 40.7 | 38.8 | 57.4 | 48.1 |
| Medical Insurance | | | | |
| Medicare Part A | 94.0 | 83.7 | 87.2 | 93.9 |
| Medicare Part B | 96.0 | 83.7* | 71.8 | 64.6 |
| Medigap | 3.9 | 0.0 | 45.0 | 41.7 |
| Medicare HMO | 0.0 | 2.3 | 0.0 | 4.2 |
| Medical Assistance | 5.9 | 7.0 | 29.3 | 12.5* |
| Long-term Care Insurance | 29.4 | 27.9 | 2.5 | 2.1 |
| Caregiver Stress | .29 | .41 | .71 | .95 |
| Respite Availability | .19 | .46* | .44 | .58 |
| Caregiver Availability/Capability | 12.63 | 9.17* | 4.76 | 5.07 |

| | | | | |
|------------------|-----|-----|------|------|
| Caregiver Burden | .46 | .59 | 1.29 | 1.20 |
| Total Sampled | 55 | 50 | 50 | 52 |

*Indicates a statistically significant difference at the $p > .05$ level within a county.

Combined County Analysis

Senior Center Participants Compared to Non Senior Center Participants

Which demographic, social, and physical health characteristics predict whether a consumer in home care was a previous senior center participant? In other words, how do home care users who were not previous senior center participants differ from home care users who were senior center participants? In order to answer this question, a logistic regression was conducted. A logistic regression is used to predict the probability that a consumer will be classified into a senior center participant as opposed to the other probability that a consumer will be classified as a non senior center participant. A logistic regression simultaneously controls for all demographic, social, and physical factors. It tests whether or not a home care user was a previous senior center participant. Both Clearfield and York counties were pooled for this analysis. The model accurately classified 74% of the home care users. The model explained approximately 30% of the differences between home care users who were senior center participants and the home care users who were not previous senior center participants. Out of the factors sampled, five were statistically significant. The odds of being a non senior center participant increase by 55% for each one unit increase in emotional behavior. The odds of being a non senior center participant increase by 16% for each IADL and ADL developed. The odds of being a non senior center participant decrease by 17% as financial need increases by one unit. The odds of being a senior center participant increase by 81% if they are on Medical assistance. Similarly the odds of being a senior center participant increase by 23% if they have Medicare Part B.

In other words, non senior center participants are more likely to have higher levels of emotional need, and higher IADL and ADL levels. Non senior center participants are less likely to have Medical assistance, and Medicare Part B. They also are more likely to have lower levels of financial need than previous senior center participants. Previous senior center participants do not differ from non senior center participants with regard to county lived in, gender, cognitive function, hospitalizations, income, Medicare Part A insurance, Medigap insurance, Medicare HMO insurance, age, marital status, veteran status, or living arrangements. The results of the logistic regression are presented in Table 3. Even though caregiver factors are not presented in the table it should be noted that an analysis was conducted that included caregiver factors. The caregiver factors were not significant.

Table 3: Logistic Regression Predicting the Characteristics of Senior Center and Non Senior Center Participants

| Factor | Exp(B) | % Change in Odds | Significance Level |
|---------------------|---------------|-------------------------|---------------------------|
| County | 1.324 | 32% | .587 |
| Female | 1.969 | 97% | .327 |
| Cognitive Function | 1.091 | 9% | .488 |
| Emotional Behavior | 1.551 | 55% | .006* |
| Financial Resources | .828 | 17% | .035* |
| Hospitalizations | .816 | 17% | .641 |
| Income | .999 | 0% | .139 |
| Medicare Part A | 1.466 | 46% | .640 |
| Medicare Part B | .227 | 77% | .023* |
| Medigap Insurance | .409 | 59% | .139 |
| Medicare HMO | .000 | -- | .999 |
| Medical Assistance | .186 | 81% | .046* |
| Age | 1.014 | 0% | .656 |
| Married | 1.505 | 51% | .683 |
| Widowed | .500 | 50% | .205 |
| Lives Alone | 1.119 | 12% | .854 |
| Lives with Spouse | .782 | 28% | .824 |
| IADL/ADL | 1.160 | 16% | .002* |
| Veteran | 1.274 | 27% | .755 |
| Constant | .947 | -- | .986 |

*Statistically significant differences at the $p < .05$ level.

Summary of Significant Findings

Table 4 compares the significant findings between consumer groups for Clearfield, York, and the combined county analysis. In examining the significant findings across all three analyses, it is evident that non senior center participants as compared to senior center participants have higher levels of ADL and IADL impairment. Non senior center participants are also more likely to have higher levels of emotional need. In terms of financial and healthcare resources, non senior center participants have lower levels of financial need, and subsequently are not as likely to require medical assistance. However, they are also not as likely as senior center participants to have Medicare Part B. This may indicate a gap in their insurance coverage.

Table 4: Summary Table of Significant Findings: Compared to Senior Center Participants Non Senior Center Participants Have the Following Characteristics

| Factors | Clearfield Non Senior Center Participants* | York Non Senior Center Participants** | Combined Counties |
|--|--|--|--|
| Age | Younger | | |
| Male | | | |
| Caucasian | | | |
| Monthly Income | | | |
| Financial Resources | | Less financial need | Less financial need |
| IADLS | | More IADL impairments | More IADL impairments |
| ADLS | More ADL impairments | More ADL impairments | More ADL impairments |
| Cognitive Function | | More impairments | |
| Physical Health | | | |
| Mobility | More impairments | | |
| Emotional Behavior | Higher emotional need | | Higher emotional need |
| Marital Status | | | |
| Married | | More likely to be married | |
| Widowed | | Less likely to be widowed | |
| Divorced | | | |
| Single | | | |
| Living Arrangements | | | |
| Alone | | Less likely to live alone | |
| With Spouse | | More likely to live with spouse | |
| With Children | | | |
| With Relatives | | | |
| Other | | | |
| Veteran | | More likely to be a veteran | |
| Clinically Eligible for Nursing Facility | | | |
| Caregiver Availability | | | |
| Physical Environment | more inadequate | | |
| Hospitalized in Past Year | | | |
| Medical Insurance | | | |
| Medicare Part A | | | |
| Medicare Part B | Not as likely to have Medicare Part B | | Not as likely to have Medicare Part B |
| Medigap | | | |
| Medicare HMO | | | |
| Medical Assistance | | Not as likely to have medical assistance | Not as likely to have medical assistance |
| Long-term Care Insurance | | | |
| Caregiver Stress | | | |
| Respite Availability | Higher need for respite | | |
| Caregiver Availability/Capability | Less likely to have caregivers available | | |
| Caregiver Burden | | | |
| Total Sampled | 105 | 102 | 207 |

*This is not a comparison to York County. This is a within county comparison.

**This is not a comparison to Clearfield County. This is a within county comparison.

Conclusion & Discussion

Compared to home care users who had not previously used senior centers, previous senior center users do have lower levels of IADL, and ADL impairment. Although it may be tempting to conclude that senior centers appear to offer a protective health benefit, it should be kept in mind that this analysis could not offer that comparison. People who use senior centers may be different than non users. Senior center participants are physically able to attend. Since they have fewer social and financial resources, they have an added incentive to participate in senior center activities. Non senior center participants have higher levels of physical impairment. They are also more likely to live with others. It is probable that their social and healthcare needs are being met by family members, and thus senior center participation is not viewed as an alternative source of support.

Second, in order to fully understand the effect of senior center participation on health and well being, it is important to fully examine the complete range of senior center utilization. This study did not examine length of senior center use. It is possible that some senior center users only participated once, or for a relatively short time period. It is also important to consider the frequency of senior center participation. Some consumers may have participated on a daily basis whereas others participated on a monthly basis. It is equally important to note the senior center activities that engaged a consumer. Some may have participated in the meal program, whereas others spent the entire day at the center engaging in various programs. In short, the knowledge that a person attended a senior center is not sufficient information to definitively conclude that senior center utilization positively impacts health and well-being.

The results seem to indicate that non senior center participants differ from senior center participants, perhaps due to the rural and urban characteristics of the counties. For example, in Clearfield county non senior center participants have a higher need for caregivers and their caregivers have a higher need for respite care than senior center participants. Older adults in rural areas may not have an extended family network to rely on, as their adult children may have migrated for career opportunities. The characteristics of non senior center participants in York may also be a reflection of county characteristics. There are more veterans in urban areas than in rural areas. Veterans who have experienced wartime stress, may not feel that traditional senior centers understand or meet their unique needs. Non senior center participants in York have higher levels of social support in terms of living with a spouse and having lower financial need than senior center participants. This could reflect lifelong living in an urban area and employment with pension plans. Additionally because employment is more readily available in urban rather than in rural areas, adult children may choose to remain in the area and thus are available to provide support.

In examining the characteristics of persons who do not participate in senior center programs it becomes apparent that they have higher levels of physical, emotional, and cognitive impairment than senior center participants. It is possible that these older adults and their families would benefit and require the services offered by senior centers.

However, senior centers may not be designed or equipped to accommodate the needs of more frail older adults. Conversely, older frail adults and their families may not be aware of senior center offerings. These families may require more outreach and/or a modification of current senior center programming to meet the needs of older adults with impairments.

Based on county characteristics, there are more older adults in poverty and with medical assistance in Clearfield county than in York county, it was expected that more home care consumers in Clearfield would have medical assistance, and have higher levels of financial need than in York county. Surprisingly, the exact opposite was found. Older adults in rural areas may have increased difficulty accessing the social service system. They may face geographic barriers, such as distance and lack of transportation. They may also not be aware of services, or have family members available to assist them in navigating the social system. This too, points to need to increase outreach, and develop unique programs to meet the diverse needs of older adults.

In order to encourage senior center participation and effectively market senior center programs, the characteristics of the county, and the characteristics of the older adults must be used to understand the needs of the population. Only then can sustainable programming be offered. This will become particularly crucial as baby boomers age. The senior centers must reflect the differences between counties in order to maximize programming success. Programs must be designed according to user need. In Clearfield County for example, non senior center participants are younger than senior center participants. Perhaps younger home care consumers, who do not consider themselves “old”, perceive senior centers as a place for older adults. If programs were designed to cater to a younger population then it is probable younger older adults would be more likely to attend.

Limitations

There are several limitations that must be taken into consideration when interpreting the results. The most serious limitation is the retrospective collection of data. Data was collected from consumers who were receiving home care. From these consumers, a group of previous senior center participants and a group of non senior center participants was selected. Since the data was collected retrospectively, it is difficult to determine the proper time ordering of chronological events. Older adults have different trajectories into home care. Unless older adults are followed prior to home care entry, the sequence of events and incidents that lead to home care use cannot be estimated with certainty. Thus, since both groups of consumers are in home care, we are unable to determine how or even if senior center participation delays the need for home care use.

Second, the data was collected from the COAF. Different caseworkers have different styles with regard to recording information. Thus, there may be inconsistencies in the data based on how the caseworkers collected information. This is especially relevant when considering missing data. For example, one caseworker may indicate on the COAF that a particular consumer does not have Medigap insurance, whereas another caseworker

may choose to convey the same information by leaving that section blank. In the first instance it is known with certainty that the consumer does not have Medigap insurance; in the later, the information is coded as missing. This is particularly noticeable in the Clearfield data where more consumers have Medicare Part B than Medicare Part A health insurance coverage. Due to coding inconsistencies, particularly in regard to health insurance coverage, the statistics may be inaccurate.

Following the same line of thought it also needs to be noted that persons who utilize senior centers may differ fundamentally from persons who do not participate in senior center offerings. Factors that may influence senior center utilization include; access to transportation, geographic proximity to a senior center, personality traits such as shyness, and knowledge of senior center offerings, to name a few. Unless similar groups of older adults are compared, in terms of social, demographic, and physical characteristics, it is difficult to determine whether the characteristics of the older adult or senior center participation impact home care use.

Due to the limited number of samples collected from each county, approximately 100 consumers were sampled in each county, it is not possible to run a comprehensive multivariate analysis per county. Thus, it is quite probable that if an analysis were conducted that simultaneously examined all factors some of the differences between consumer groups would not be statistically significant.

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