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An Examination of Homebound Rural Seniors

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A report by
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Summary: An Examination of Homebound Rural Seniors

This report is based on the findings obtained from personal interviews of 196 homebound, rural elderly, age 60 and older residing in three selected counties of Pennsylvania: Fayette, Greene, and Schuylkill. The interviews were conducted from January 1, 1999 to November 1, 1999. Five Penn State students under the direct supervision of Dr. Jyotsna (Josi) Kalavar, principal investigator, carried out the interviews. The five student team members included Kerry Grimm, Noreen Hobbs, Tesha Honse, Cynthia Olavsky, and Valarie Washington. Mr. John Rapano served as the project consultant and offered expertise in recruitment, project planning, and project execution. This structured interview assessed socio-demographic indicators, service access, service delivery, and service utilization, as well as the assessment of depressive symptomatology using the Center for Epidemiological (CES-D) scale. Select open-ended questions, and in-depth case studies provided an in-depth understanding of the experience of being homebound.

The study provides baseline information about older homebound residents in the three counties of Pennsylvania mentioned above. Through face to face interviews with homebound seniors, an understanding of the "culture of homebound, rural elderly" was determined.

- Diversity within the gerontological population is an important consideration. Socio-demographic differences between and within counties are salient factors in service access, service delivery, and service utilization.
- Health is a significant variable that impacts mobility, depressive symptomatology, and quality of life.

INTRODUCTION

NEEDS STATEMENT AND RELATED RESEARCH

One of the more important social trends over the last 30 years has been the demographic change that reflects the “graying of America.” With the explosive growth of the gerontological population relative to other age groups, their issues and concerns warrant greater attention. It is estimated that one-quarter of those aged 65 and older live in areas defined as rural, and that 20 percent of Americans over age 65 are homebound (Smiciklas-Wright, Lago, Bernardo, and Beard, 1990). Several rural communities have seen an increase in the proportion of seniors that has been largely due to outmigration of youth and aging-in-place of adults. Despite their growing numbers, very little is known about the rural elderly. Much of the gerontological literature carries an “urban bias,” in that studies have largely focused on non-rural elderly or have focused on an “urban/rural” comparison.

Some researchers have used the term “rural disadvantage” when highlighting rural/urban differences on health dimensions (Kivett and Scott, 1979; Nelson, 1980). Repeatedly ignored in the gerontological literature are those rural elderly who are homebound seniors.

Homebound rural senior citizens represent a small but significant subgroup of rural older adults. They are difficult to identify, live in geographically dispersed communities (often with a limited tax base) that face many formidable challenges with service delivery, service access, and service utilization. Homebound elderly have been described with terms such as “unknown,” “unsought,” and “unreached” (Brickner, 1993). It is not surprising then that rural homebound elderly have very rarely been included in research studies.

Homebound rural seniors rely increasingly not only on kinship and non-kinship networks for informal support but also on formal support systems. Often, these formal support services have diverse funding sources, have different levels of coordination or involvement, and even differing definitions of who is considered homebound. These seniors also endure frequent disparities in the level of quality of these support systems when compared to urban counterparts.

Whether as clients, patients, consumers, or care receivers, they are perceived as individuals who are largely unable to improve their lives without assistance. As disability increases, there may be a corresponding change in social, financial, and cognitive forces that may lead to despair, depression, and hopelessness. The degree of success that various systems have in addressing the multifaceted needs of homebound seniors becomes a salient issue in maintaining quality of life. In light of these issues, it is imperative to develop a profile of homebound rural seniors, fill critical gaps in the research literature, as well as document their needs and perspectives so informed decision-making could occur.

PROJECT GOALS AND OBJECTIVES

Adapted from the Pennsylvania Department of Aging definition, recruitment of homebound seniors (age 60 and over) for this project was based on meeting one of the following two criteria:

- a) Self-definition of being homebound based on inability to leave the house without the assistance of another individual.
- b) A recipient of services delivered at home that may include home delivered meals or home health services based on assessment of “need.”

In this study, *An Examination of Homebound Rural Seniors*, three specific goals guided this project. They included:

- a) To further our understanding of the “culture of homebound rural elderly” in selected communities of rural Pennsylvania.
- b) To explore similarities or differences in the experience of being a homebound senior citizen in rural Pennsylvania.
- c) To provide critical information on the needs and perspectives of homebound seniors that policy makers in the state of Pennsylvania may use.

To address the above goals, the following research objectives guided this research project:

- 1) To assess socio-demographic characteristics of homebound seniors in Fayette, Greene, and Schuylkill counties as reflected by gender, race, education, marital status, household composition, and occupation, as well as provide comparative data on selected counties.
- 2) To examine the correlates of being a homebound senior citizen in Fayette, Greene, and Schuylkill counties that is, consider such indices as income, living arrangement, health, depression, transportation, social networks (kinship/non-kinship), and program availability. Separate correlates of homebound seniors are provided for each of the selected counties to facilitate comparisons.
- 3) To conduct a needs assessment of this targeted population, and to investigate the coordination (or lack of) between aging network services and health services in Fayette, Greene, and Schuylkill counties.

SERVICES FOR HOMEBOUND SENIORS

SCHUYLKILL COUNTY

The Schuylkill County Office of Senior Services is a public social service agency designated by the Pennsylvania Department of Aging as a Planning and Service Area (PSA) which involves itself with all issues concerning persons aged 60 and older who are residents of Schuylkill County. This agency

promotes a continuum of care designed to assist older persons in leading independent, meaningful and dignified lives in their own homes and communities as long as possible. In-home assistance may include assessment and care management, where caseworkers ensure the effective and coordinated delivery of service to individual clients and their families through the implementation of a plan of care, coordination, and follow-up of service delivery, and on-going case recording. Further, homebound clients may be eligible for volunteer services, transportation, aide services, nutrition services, skilled services such as R.N. and L.P.N., chore services, and assistance to caregivers.

FAYETTE AND GREENE COUNTIES

Fayette and Greene counties are part of a multi-county Planning and Service Area (PSA) served by a non-profit social service agency, the Southwestern Pennsylvania Area Agency on Aging, Inc. This agency is responsible for planning and coordinating services for adults age 60 and older in Fayette and Greene counties. Besides several direct services offered by the Area Agency on Aging, additional services are offered through 15 subcontracting agencies. Examples of direct services include Intake/Referral, Options Assessment, Legal Services, Family Caregiver Support Program, Protective Services, Nursing Home Diversion Program, PDA Waiver Program, and Apprise (assistance to Medicare beneficiaries). Other services provided through subcontractors include Home Delivered Meals, Personal Assistance Service, Personal Care, Home Support, Care Management, Prime Time Health, Home Health, and Options Intensive In-Home services. With the exception of Home Delivered Meals and Home Health, these Pennsylvania Department of Aging (PDA) services are available to persons who are homebound and meet the services eligibility requirement as determined through the assessment and care management process. In addition to home health services provided through the PDA, home health services are also available through a number of health based organizations throughout this service area.

METHODOLOGY

Using a total sample of 196 homebound rural seniors residing in Fayette (n=100), Schuylkill (n=60), and Greene counties (n=36), this comparative study provided insights into the similarities/differences within and across counties in the experiences of being a homebound rural senior.

Driven by socio-demographics, the above three counties of Pennsylvania were chosen for this study. According to the U.S. Census Bureau (1996), compared to the state average of 15.9 percent of senior citizens over age 65 in the population, Schuylkill County (20.6 percent), Fayette County (18.7 %) and Greene County (16.7 %) rank higher and represent varying proportions of seniors relative to the general

population. While Schuylkill and Fayette counties represent different geographical regions for comparative purposes, Fayette and Greene counties are located within southwestern Pennsylvania. Comparison of findings between the larger Fayette County and smaller Greene County with similar poverty rates (Fayette 22.8 percent; Greene 20.9 percent) and proportion of seniors, may provide determinations of the generalizability of research findings to the region of southwestern Pennsylvania. The smaller sample size for Greene County was determined based on recommendations from service providers in the county, and smaller proportion of homebound seniors than the other two counties.

Through in-home interviews conducted using a structured interview format, this multi-method, cross-sectional study examined the correlates of being a homebound senior, conducted a needs assessment of this population, and investigated the coordination of selected human services in each county. Since these seniors are homebound, their familiar home care provider facilitated access, and interviews were always scheduled in advance.

This multi-method project featured a nested design with an in-depth, case study of five participants randomly selected from the sample of participants in each county. The sample size for this study reflected the trade off between logistic constraints, size of population, time, costs, and statistical power.

Multistage cluster sampling, a sampling procedure in which cluster sampling occurs at two or more steps was used. For example, within the state of Pennsylvania there are several counties that comprise primary areas. In this study, Fayette, Schuylkill, and Greene counties were selected because of heavy concentrations of senior citizens relative to the other age groups, and figures higher than the state average for percent population of seniors (65 years and older). Examining the locations within each county where homebound, rural seniors resided followed this. After these were identified and stratified by size of population under consideration, sample locations were divided into chunks. Finally, a random sample of homebound seniors was selected from the pool of eligible participants.

As confirmed by letters of cooperation received from various home care agencies, access to homebound rural seniors in Fayette, Schuylkill and Greene counties was provided by them. Additional resources for sample recruitment included publicity in county newspapers with contact telephone number listed, seeking the help of management in senior high-rise apartments (Schuylkill), and referrals from clergy. A letter describing the project was sent to the local sheriff or chief of police in each county explaining the general purpose of the study, its' importance, the organization sponsoring the study, the time frame, and names of project personnel.

Through the cooperation of home care providers, an initial cover letter was sent to eligible participants sampled in the study inviting their participation in this important project. A fact sheet that addressed major concerns that respondents may have about this study was also provided. The home care provider stressed the

salience of the study and invited the participation of the senior citizen, provided a demo copy of the Informed Consent form and explained why the signature was needed, offered the fact sheet, and requested permission for being contacted by a Research Coordinator. The Research Coordinator then followed-up with a telephone call, answered questions, and made arrangements to schedule an interview. Voluntary participation and anonymity of responses were stressed throughout the process, and informed consent was obtained. The home of the senior citizen was the site for completion of the interview. On average, the length of time needed to complete the interview was an hour.

Two Research Coordinators were hired, one responsible for Schuylkill County, and the other for Fayette and Greene County. Three additional Research Assistants were hired who reported to the Research Coordinator of their county for this project. All the above personnel were students of Penn State Fayette or Penn State Schuylkill, and they primarily engaged in data collection, data coding, and data entry. Communication between project members was primarily maintained electronically through the use of a listserv.

In appreciation for their time and participation in the project, older homebound seniors received \$20 gift certificates in Fayette and Greene counties. Based on recommendations from the Office of Senior Services in Schuylkill County, checks worth \$20 were mailed to seniors in Schuylkill County.

RESULTS

The initial proposed sample size for this study was 235 homebound rural elderly participants. However, as data collection progressed it became clear to project personnel and the Schuylkill County Office of Senior Services that participant recruitment was an issue in Schuylkill County. Despite various innovative approaches to sample recruitment (such as contacting clergy, management of senior high rise apartments, recruitment speeches in senior centers), the researchers were only able to generate 60 interviews with seniors in Schuylkill County.

The researchers also failed to address two variables in the interviews. One was ethnicity, which was erroneously overlooked in the Interview Schedule preparation. However, retrospective accounts from the research assistants who engaged in data collection suggested that less than 5 percent of this sample was non-White. Further, Census data (1990) shows that in Fayette County, 4.2 percent of the population was non-White; 1.5 percent of the population was non-White in Greene County; and 2.1 percent of the population was non-White in Schuylkill County. The second was that while the researchers addressed the social networks of the seniors, the researchers did not do so in a direct manner. For instance, the researchers can extrapolate from the people who performed various services for homebound seniors what

networks (kinship/non-kinship) they relied on for help. Again, the researchers erroneously overlooked to ask the size and composition of the seniors' social networks.

Consultations with senior gerontologists at Penn State University resulted in the choice of a different instrument to assess depression in late life. Apparently, there is more documentation addressing the reliability and validity of the Center for Epidemiological-Depression (CES-D) scale than of the Geriatric Depression scale.

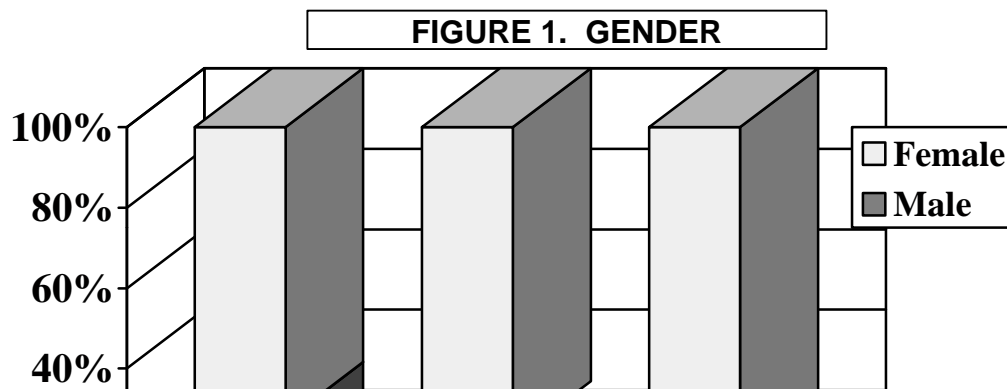
The socio-demographic profiles as well as results from the completed project of homebound rural seniors are presented over the next several pages. In addition to the write-up of findings, data is presented in both tabular and graphical forms. Please note that totals may not equal 100 percent due to rounding errors.

SOCIO-DEMOGRAPHIC PROFILE (GENDER)

A socio-demographic profile of the sampled population for this study is described in the following pages. For the entire sample, an overwhelming majority of the participants were female (76 %) compared to 24 percent male respondents (see Table 1). Compared to statewide data for Pennsylvania (1998), the gender breakdown for all seniors over 65 is as follows: 59.81 percent are males, and 40.18 percent are females. The gender breakdown by county is depicted below in Figure 1. Of those homebound seniors serviced in Schuylkill County by the Office of Senior Services, 73.96 percent are females and 26.03 percent are males.

TABLE 1. GENDER OF PARTICIPANTS

Subgroup	All respondents	Fayette County	Greene County	Schuylkill County
Total sample (n=196)	100%	51% (n=100)	18.40% (n=36)	30.60% (n=60)
Gender				
Male	24%	27%	22.20%	20%
Female	76%	73%	77.80%	80%

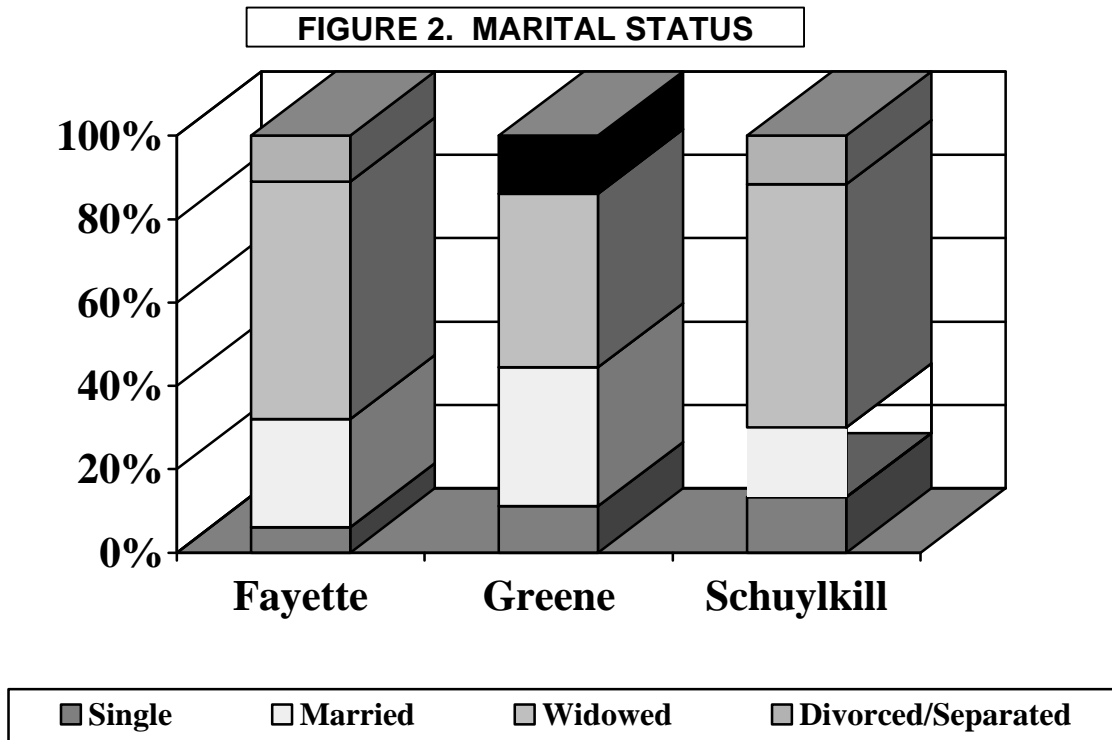


SOCIO-DEMOGRAPHIC PROFILE (MARITAL STATUS)

Widowhood was reported by the majority of the participants (54.6%). The marital status of respondents is shown in tabular form below (see Table 2). The breakdown by county is depicted below in Figure 2.

TABLE 2. MARITAL STATUS OF PARTICIPANTS

Subgroup	All respondents	Fayette County	Greene County	Schuylkill County
Marital status				
Single	9.20%	6%	11.10%	13.30%
Married	24.50%	26%	33.30%	16.70%
Widowed	54.60%	57%	41.70%	58.30%
Separated/Divorced	11.70%	11%	13.90%	11.70%

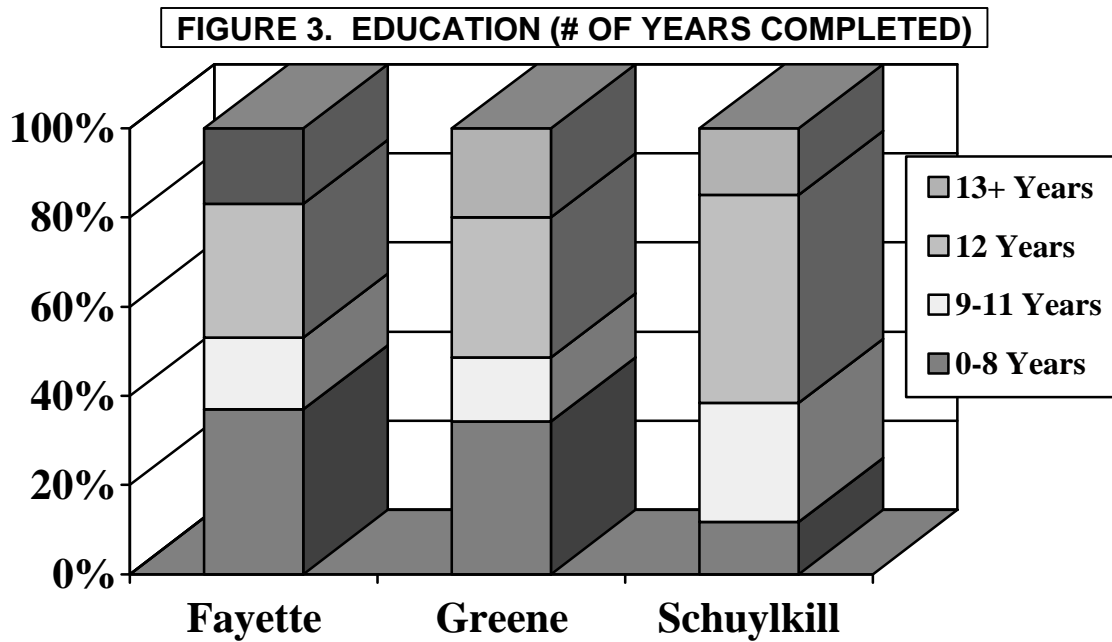


SOCIO-DEMOGRAPHIC PROFILE (EDUCATION)

Highest educational attainment was divided into four categories. Table 3 shows the educational profile of the overall sample as well as the breakdown by county. Figure 3 shows a graphical breakdown of educational attainment by county.

TABLE 3. HIGHEST EDUCATIONAL ATTAINMENT OF PARTICIPANTS

Subgroup	All respondents	Fayette County	Greene County	Schuylkill County
Education (years)				
0-8 years	28.60%	37%	34.30%	11.70%
9-11 years	19.0%	16%	14.30%	26.70%
12 years	35.40%	30%	31.40%	46.70%
13+	17%	17%	20%	15%



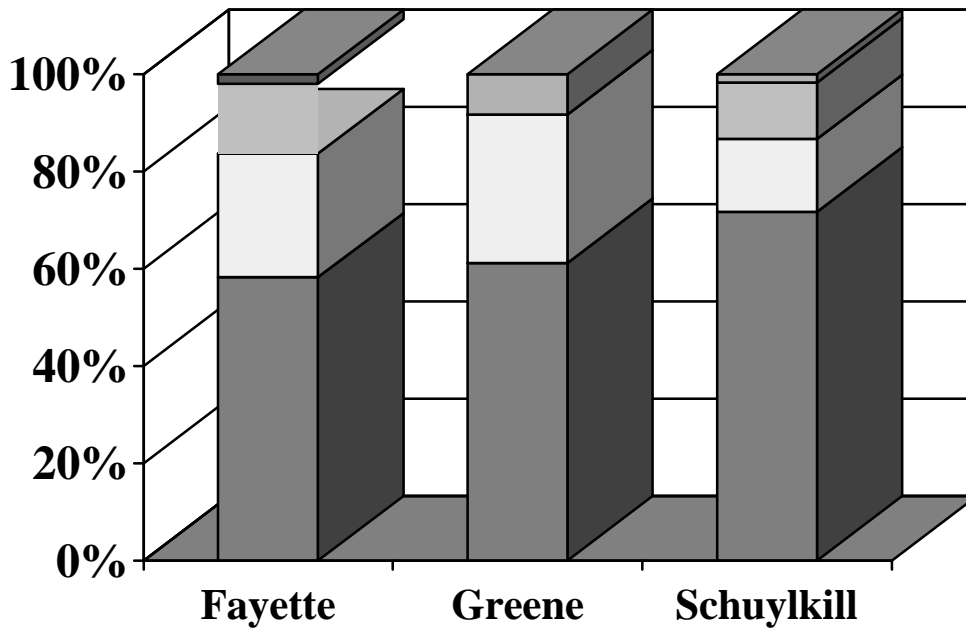
SOCIO-DEMOGRAPHIC PROFILE (LIVING ARRANGEMENT)

The majority of this sample (63.1%) reported “living alone.” Table 4 shows the respondents’ living arrangements for each county. Figure 4 shows a graphical breakdown of living arrangement by county.

TABLE 4. LIVING ARRANGEMENT BY COUNTY

Subgroup	All respondents	Fayette County	Greene County	Schuylkill County
Living arrangement				
Live alone	63.10%	58.20%	61.10%	71.70%
Live with spouse	24.10%	25.50%	30.60%	15%
With family, not spouse	6.70%	14.30%	0%	11.70%
With non-family	6.20%	2%	8.30%	1.70%

FIGURE 4. LIVING ARRANGEMENT



Live Alone
 With Spouse
 With Family, not Spouse
 With Non-Family

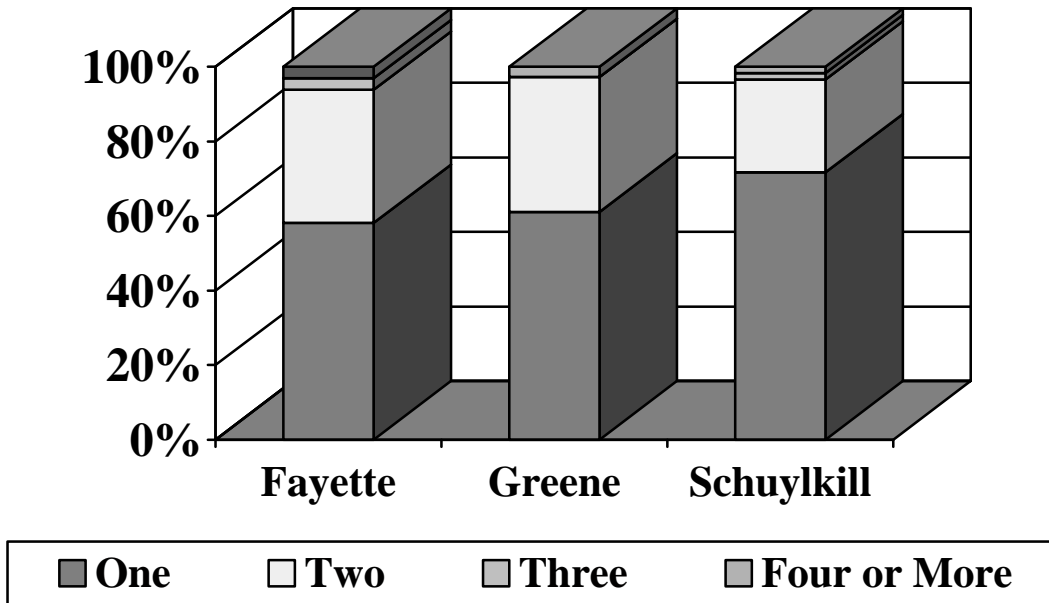
SOCIO-DEMOGRAPHIC PROFILE (HOUSEHOLD SIZE)

Single-person households accounted for a majority of this sample (62%). The size of the household as considered by county is shown in Table 5. Figure 5 shows a graphical breakdown of household size by county.

TABLE 5. HOUSEHOLD SIZE OF PARTICIPANTS

Subgroup	All respondents	Fayette County	Greene County	Schuylkill County
Household size				
One	62%	58.20%	61.10%	71.70%
Two	32.50%	35.70%	36.10%	25%
Three	2.10%	3.10%	0%	1.70%
Four or more	2.60%	3.10%	2.80%	1.70%

FIGURE 5. HOUSEHOLD SIZE

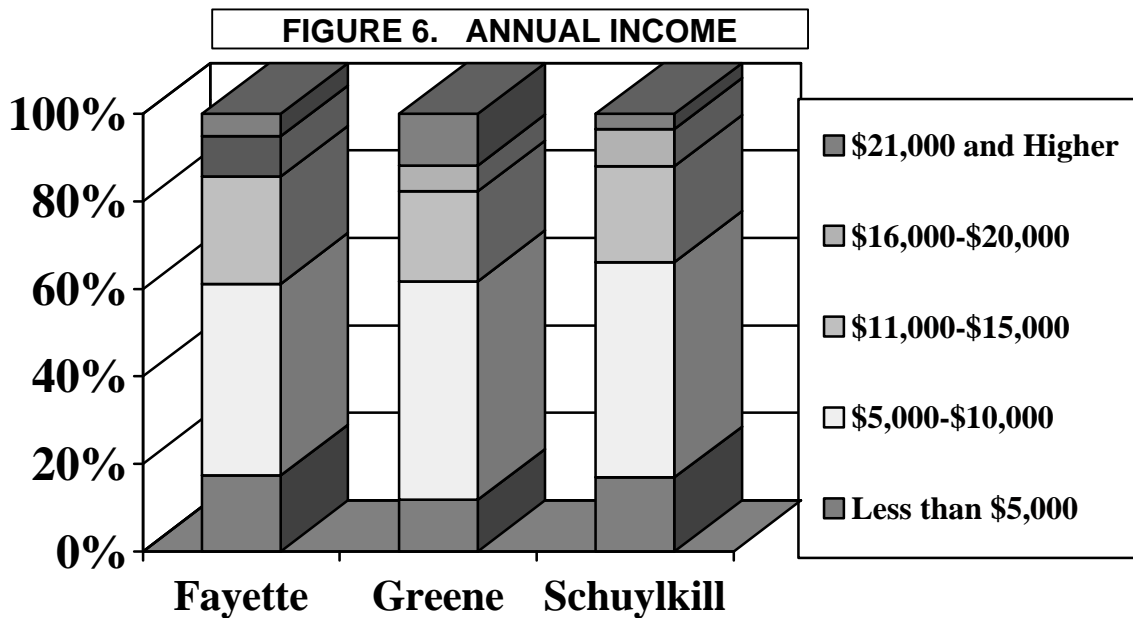


SOCIO-DEMOGRAPHIC PROFILE (INCOME)

In the overall sample, the majority (85.6 %) of respondents reported annual incomes below \$15,000. A tabular breakdown of income by county is shown in Table 6. Figure 6 shows a graphical breakdown of reported income by county.

TABLE 6. ANNUAL INCOME OF PARTICIPANTS

Subgroup	All respondents	Fayette County	Greene County	Schuylkill County
Income				
Less than \$5000	16.20%	17.30%	11.80%	16.90%
\$5000-\$10,000	46.40%	43.90%	50%	49.20%
\$11,000-\$15,000	23%	24.50%	20.60%	22%
\$16,000 -\$20,000	8.40%	9.20%	5.90%	8.50%
\$21,000 and higher	5.70%	5.10%	11.80%	3.40%



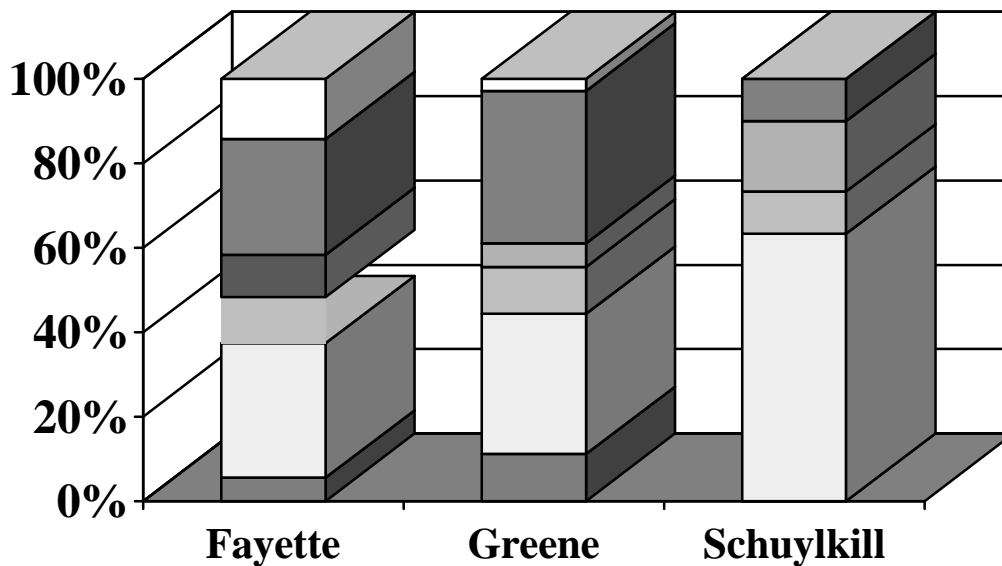
SOCIO-DEMOGRAPHIC PROFILE (PREVIOUS OCCUPATION)

Nearly half of the overall sample (42.3%) reported having worked in a factory or small-scale industry. Previously held coal mining positions did not feature in Schuylkill County, and all respondents in Schuylkill County had worked previously (see Table 7). Figure 7 shows a graphical breakdown of previously held occupation by county and gender.

TABLE 7. PREVIOUS OCCUPATION OF PARTICIPANTS

Subgroup	All respondents	Fayette	Greene	Schuylkill
Previous Occupation				
Coal mining	4.81%	5.50%	11.10%	0%
Factory/Industry	42.25%	31.90%	33.30%	63.30%
Retail	10.70%	11%	11.10%	10%
Secretary/Entry-level	11.23%	10%	5.60%	16.70%
Professional/Managerial/Educational	23.53%	27.50%	36.10%	10%
Didn't work	7.49%	14.30%	2.80%	0%

FIGURE 7. PREVIOUS OCCUPATION



■ Coal Mining	□ Factory/Industry
■ Retail	■ Secretary or Entry-Level
■ Professional/Managerial/Educational	□ Didn't Work

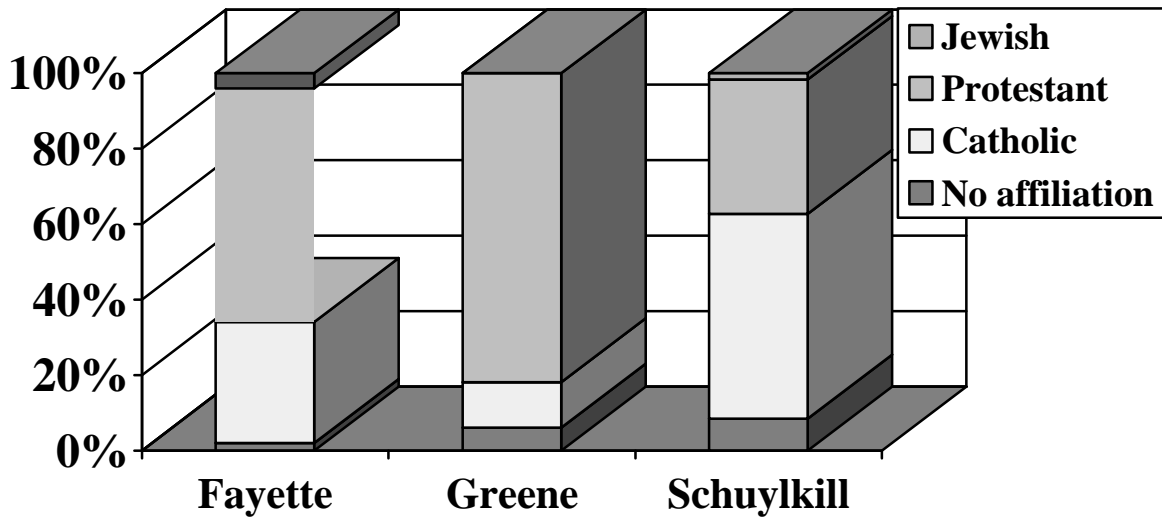
SOCIO-DEMOGRAPHIC PROFILE (RELIGION)

Overall, the sample was largely Protestant (57.30%). While Schuylkill County participants were largely Catholic (54.20%), the respondents in Greene and Fayette counties were largely Protestant (see Table 8 & Figure 8).

TABLE 8. RELIGION OF PARTICIPANTS

Subgroup	All respondents	Fayette County	Greene County	Schuylkill County
RELIGION				
No affiliation	4.80%	2.10%	6.10%	8.50%
Catholic	35.40%	32%	12.10%	54.20%
Protestant	57.30%	61.90%	81.80%	35.60%
Jewish	2.60%	4.10%	0%	1.70%

FIGURE 8. RELIGION



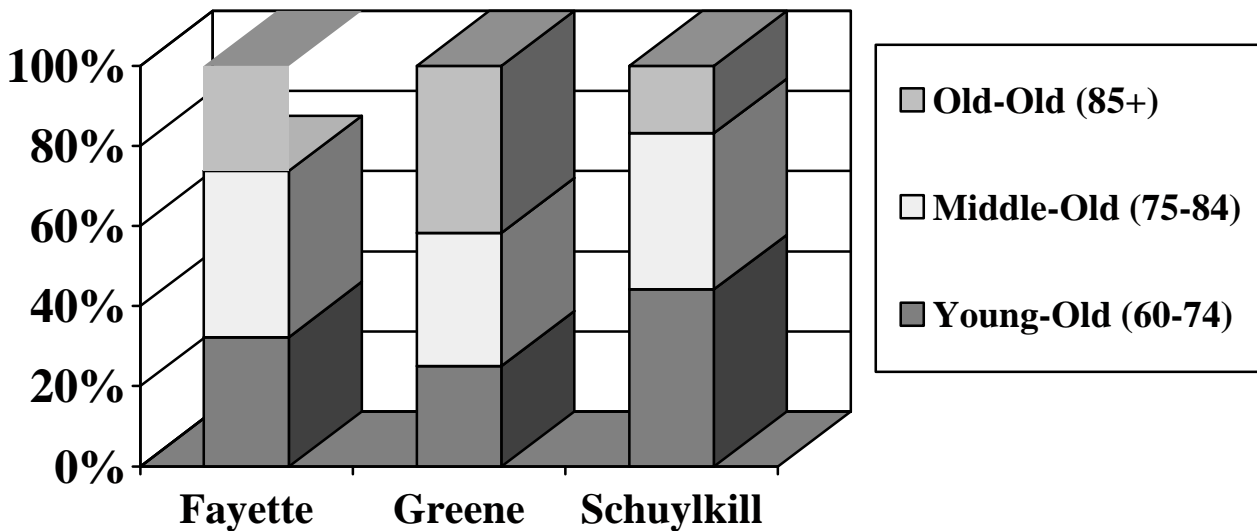
SOCIO-DEMOGRAPHIC PROFILE (AGE)

For the entire sample, the majority of participants were under age 85. Statewide data for Pennsylvania (1988) seniors over age 65 show that 52.21 percent belong to the Young-Old age group; 36.15 percent are Middle-Old; and 11.6 percent are in the Old-Old category. Age differences among respondents by county is shown below (see Table 9). The age breakdown by county is depicted below in Figure 9.

TABLE 9. AGE OF PARTICIPANTS

Subgroup	All respondents	Fayette County	Greene County	Schuylkill County
Age				
Young-Old (60-74 years)	38.7%	32.3%	25%	44.1%
Middle-Old (75-84 years)	40.2%	41.4%	33.3%	39%
Old-Old (85+ years)	21%	26.3%	41.7%	16.9%

FIGURE 9. AGE



ANALYSIS OF DIFFERENCES WITHIN AND BETWEEN COUNTIES ON SELECTED INDICATORS

INCOME

Analysis of variance (ANOVA) procedure is used to test the hypothesis that several means are equal.

- In Fayette County, gender differences in income were analyzed using one-way ANOVA. Male respondents significantly reported higher incomes than female respondents in this county (This was significant at $p < .001$ level) No other differences within county were found.
- No significant differences between counties were found using one-way ANOVA.

HEALTH

- Overall health ratings for each of the three counties are listed below. These self-reported health ratings of overall health ranged from 1=Poor to 5=Excellent. In Fayette county, the mean rating was 2.15 (SD=.69), compared to the mean rating of 2.34 (SD=.69) in Schuylkill County and the mean rating of 1.92 (SD=.84) in Greene County. Using ANOVA, such differences in health rating were found to be significant at the $p < .05$ level.

The Chi-square procedure tabulates a variable into categories, and then computes a chi-square statistic. This goodness-of-fit test compares the observed and expected frequencies in each category to test either that all categories contain the same proportion of values or that each category contains a user-specified proportion of values.

- Statistically significant results from Chi-square tests ($p < .05$) for differences in health status was found between counties:
 - Of those who reported heart trouble, the majority resided in Fayette County (58.9%) compared to Schuylkill (18.9%) and Greene County (22.2%).
 - None of the Schuylkill County residents reported having liver trouble or jaundice. Of those who reported this health problem, the majority were in Fayette County (55.6%) followed by Greene County (44.4%).
 - Fewer seniors in Schuylkill County reported gall bladder problems than Fayette or Greene counties. Of those who reported they had a gall bladder problem, 50 percent resided in Fayette County compared to Greene (38.9%) and Schuylkill (11.1%) counties.

- Fayette County participants were twice as likely to report nervousness than Greene or Schuylkill County participants were. Of those who reported nervousness, 55.9 percent were residents of Fayette County compared to 21.5 percent residents of Schuylkill and 22.6 percent participants of Greene County.
- A statistically significant difference in health status as determined by Chi-square analyses by age was found within counties. The age groups include Young-Old (60-74), Middle-Old (75-84) and Old-Old (85+).
 - For instance, within Fayette and Schuylkill counties diabetes was more likely to be reported by the Young-Old age group than any other age group. Stomach ulcers in Fayette County were more likely to be reported by the Young-Old age group than the other two age groups.
 - In Fayette and Schuylkill counties, kidney trouble was most likely to be reported by the Young-Old age group than any other age group.
- Statistically significant differences in health status as determined by Chi-square analyses by gender was found within counties ($p < .05$).
 - In Greene County, only female respondents reported diabetes as a health condition.
 - In Schuylkill County, 90.6 percent of those who reported circulation trouble were female respondents. Similarly, 95.2 percent of those who reported cataracts in this county were female respondents. However, 100 percent of those who reported gall bladder problems were male in Schuylkill County.
 - In Fayette County, 83.3 percent of those who reported bladder trouble were female compared to 16.2 percent male respondents who reported the same health problem.

TRANSPORTATION

- Significant differences in the need for transportation assistance was found between counties.
 - The highest need was reported in Fayette County (mean=3.01, SD=1.72), followed by Greene County (mean=2.44, SD=1.54) and Schuylkill County (mean=2.02, SD=1.51). ($F=7.119$, $p < .001$).
 - Ability to get around within the community also showed significant differences between counties. Residents of Schuylkill County reported being less restricted in their ability get around the community (mean=2.00, SD=.76) than those in Fayette (mean=1.84, SD=.85) and Greene County (mean=1.47, SD=.65; $F=5.079$, $p < .05$).
- Considering present transportation options available to senior respondents, it appears that the majority of those who ride by taxi or use an agency vehicle are in Schuylkill County. Residents of Fayette are

more likely to ride with a family member, neighbor, and friend or pay someone to provide a ride than use a taxi or an agency vehicle.

- When asked to state what they would like to see different with their transportation options, 100 percent of those who requested discounted taxi service were in Fayette County, 84.6 percent of those who requested taxi service at no charge were in Fayette County and 15.4 percent in Greene County. Increase volunteer efforts was cited by a majority of respondents in Schuylkill (58.3%), 25 percent of respondents in Greene, and 16.7 percent of respondents in Fayette County.
- Within Fayette County, the only statistically significant result is for the ability to get around within community by age. The Young-Old reported greater restriction to get around within the community (mean=1.53, SD=.67) than the Old-Old (mean=1.81, SD=.90) or Middle-Old (mean=2.10, SD=.89) ($F=4.241, p<.017$).

LIVING ARRANGMENTS/HOUSEHOLD COMPOSITION

- A statistically significant result from Chi-square for differences according to gender within County ($p<.05$) is described below.
 - In Fayette County, 78.9 percent of those who live alone are female respondents compared to 21.1 percent male respondents. Similarly, those who live with family (other than spouse) were more likely to be female respondents (85.7%) than male respondents (14.3%).

SOCIAL NETWORK

- In the overall sample, non-kinship networks were less likely to provide assistance in several ways that may be needed by the senior respondent: use of the telephone when needed, less likely to provide assistance with getting to farther places when needed, less likely to do grocery shopping for senior, less likely to do the laundry, less likely to assist with intake of medicine, and less likely to provide money management assistance than kinship networks. However, assistance with housework and yard work were likely to be equally sought from both kinship and non-kinship networks. No significant differences between counties were determined.

PROGRAM AVAILABILITY

- There were statistically significant results from Chi-square tests for differences in services received, problems with services, between counties ($p<.05$).
 - Fayette County respondents were most likely to report receiving home delivered meals (60.4 %) than Schuylkill respondents (22.3%) or Greene County residents (17.3%). Similarly, Fayette

County respondents were most likely to report receiving housekeeping assistance (44.4%) than Greene County respondents (38.9%) or Schuylkill seniors (16.7%).

- Schuylkill County residents were more likely to not use existing services because they indicated they were not eligible to receive services (56.8%) compared to 29.7 percent of seniors in Fayette County and 13.5 percent of seniors in Greene County.
- Of those who reported problems with existing services, the majority of respondents were from Fayette County (76.2%) compared to 9.5 percent of respondents from Schuylkill County or 14.3 percent of seniors from Greene County.
- Of those who reported lack of coordination of services, the majority of respondents were from Fayette County (63.6%) compared to 4.5 percent from Schuylkill County, and 31.8 percent from Greene County.
- Waiting lists were cited as a problem by nearly 25 percent of all respondents. Those who cited this problem were more likely to be from Fayette County (52.3%) followed by Greene County (40.9%) and Schuylkill County (6.8%).
- Service evaluation by respondents was significantly different between counties in the area of home delivered meals, personal care, and transportation related services.

DEPRESSION (CES-D) SCALE

Depressive symptomatology was measured by the Center for Epidemiological Studies- Depression (CES-D) scale developed by Radloff (1977) for use with community populations. This is a 20-item rating scale with scores that may range from 0-60. Higher scores reflect greater depressive symptomatology. This scale discriminates between clinically depressed patients and others, and it correlates highly with other depression scales such as the Beck Depression Inventory. Acceptable reliability and validity have been established for the general population by several authors (Radloff, 1977; Weissman, Sholomskas, Pottenger et al, 1977; Ross and Mirowsky, 1984; Snyder, 1987;).

- CES-D scores varied significantly between counties. The mean score in Fayette County is 22.85 (SD=9.35), is 20.66 in Schuylkill County (SD=8.61), and 27.92 (SD=10.06), $F=6.812$, $p<.001$.
- Correlations measure how variables are related to one another, and may range from +1 to -1. Correlations between CES-D total score and age ($r=-.196$, $p<.007$) as well as with overall health rating ($r=-.353$, $p<.001$) are both statistically significant and negative in Fayette County.

Linear regression estimates the coefficients of the linear equation, involving one or more independent variables that best predict the value of the dependent variable. In other words, to what extent does variability in the dependent variable depend upon manipulations of the independent variable.

- In regression for the entire sample using all explanatory variables (age, gender, marital status, education, living arrangement, income, overall health rating, and importance of religion), but not controlling for county, the only variable that was statistically significant was overall health rating by respondent. This is true for Fayette County also.
- However, the same regression for Schuylkill and Greene counties show that none of the explanatory variables are statistically significant.

MOBILITY LIMITATIONS

- For the entire sample, the extent of mobility limitations is significantly correlated with total CES-D score (.142, $p < .05$), age (.180, $p < .01$), overall health rating (-.22, $p < .002$), ability to get around the house (-.529, $p < .00$), and ability to get around the community (-.488, $p < .00$). Female respondents also had more limitations than male respondents (-.158, $p < .02$) and those who lived with others had more mobility limitations (.212, $p < .003$).

In stepwise regression, tests are performed at each step to determine the contribution of each predictor already in the equation if it were to enter last.

- Using stepwise regression, and extent of mobility limitations as the dependent variable - the following variables made it to the final model. In Fayette County, the variables in the final model include ability to get around in the house, ability to get around in the community, age, and whether individual lives alone. In Schuylkill County, the variables in the final model were ability to get around in the house, ability to get around in the community, and age. In Greene County, the variables in the final model are ability to get around in the community, gender, and overall health rating.

ANALYSIS OF OPEN-ENDED QUESTIONS

The project survey included four open-ended questions designed to learn more about how the survey respondents felt about being homebound and their views on services for homebound seniors. The four open-ended questions are shown on the following page. The researchers analyzed the responses to these open-ended questions and identified the themes emerging from the responses. The discussion below focuses on the main themes, defined as themes mentioned by at least five respondents. Minor themes, which were mentioned by fewer than five respondents, are not discussed.

Open-Ended Questions
1. What is your experience of being homebound?
2. There are many services out there for homebound seniors like you. How could such services be made available so more people can use them?
3. Are there services out there that you do NOT use? And, why not? What would it take for you to use these services?
4. If you could create one program for homebound seniors, what would that be?

The first open-ended question was: “What is your experience of being homebound?” A total of 190 respondents had some type of response to this question. The 14 main themes emerging from their responses are shown on the following page. Some respondents mentioned multiple themes in their responses, while others mentioned just a single theme.

Many respondents had very negative views about being homebound. Over one-fourth of the respondents (28%) said – in ways varying from one person to another– that they missed getting out and doing things. Respondents mentioned missing the outdoors, traveling, driving, and going to church. One-eighth of the respondents (12%) indicated they were depressed. Some respondents mentioned feeling “miserable,” “terrible,” or wanting to die. More than one-tenth of the respondents (11%) said they were lonely. Respondents mentioned feeling cut off and missing their spouse and friends. One-tenth of respondents (11%) indicated feeling frustrated or angry about their situation. Seven percent of respondents said that they missed being independent, while four percent said that being homebound was a boring existence. One-tenth of respondents (11%) said simply that they did not like being homebound.

On the other hand, more than one-sixth of the respondents (18%) said that they accepted being homebound and that they have adjusted to it. About one-tenth of respondents (11%) said that being homebound is part of life, and that nothing can be done about it. Six percent of respondents indicated that children and other family members help out by running errands, doing household chores, or providing emotional support. Five percent of respondents mentioned that they still get out and do things. Three percent of respondents reported that they were happy. Another 3 percent said they were thankful that their situation was not worse. Three percent also said that they did not really feel homebound.

Question 1: “What is your experience of being homebound?”

Main Themes	Number of Respondents Mentioning Theme	Percent of Respondents Mentioning Theme

I miss getting out and doing things	53	28%
I accept it and I've adjusted to it	35	18%
I'm depressed	23	12%
I'm lonely	21	11%
It's part of life—what can you do?	21	11%
I don't like it	20	11%
I'm frustrated and angry	20	11%
I miss being independent	13	7%
Family members help out	12	6%
I still get out and do things	10	5%
It's boring	7	4%
I'm happy	5	3%
I'm thankful it's not worse	5	3%
I don't feel homebound	5	3%

The second open-ended question was: “There are many services out there for homebound seniors like you. How could such services be made available so more people can use them?” A total of 175 respondents had some type of response to this question. The seven main themes emerging from their responses are shown on the following page. Again, some respondents mentioned multiple themes in their responses, while others mentioned just a single theme.

Nearly one-half of the respondents (46%) said that the services should be advertised and that service providers should get the word out. These respondents appeared to interpret the question as one pertaining to awareness of services rather than to availability or access. Respondents mentioned advertising through TV, radio, newspapers, the mail, bulletin boards, and flyers. They also mentioned getting the word out through senior centers, community centers, the meals-on-wheels program, doctor’s offices, churches, and word of mouth. In a related theme, 10 percent of respondents said that they or other seniors are not aware of all the services that exist. Five percent of respondents said that people should call or write to find out more about available services.

Question 2: “There are many services out there for homebound seniors like you. How could such services be made available so more people can use them?”

Main Themes	Number of Respondents Mentioning Theme	Percent of Respondents Mentioning Theme
Advertise, get the word out	81	46%
Not sure	34	19%
People aren't aware of the services that exist	17	10%
Better transportation	13	7%
People should call or write to find out more about available services	8	5%
I'm dissatisfied with the services I've used	7	4%

I'm satisfied with the services I've used	6	3%
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Seven percent of respondents said that transportation should be improved. Some indicated that transportation is not available to them, while others said that public transportation schedules are limited.

Some respondents used this question as an opportunity to provide their views on the quality of services they had used. Four percent said they were dissatisfied with the services they had used, while 3 percent said they were satisfied. About one-fifth of the respondents (19%) were not sure about an answer to this question.

The third open-ended question was: “Are there services out there that you do NOT use? Why not? What would it take for you to use these services?” A total of 180 respondents had some type of response to this question. The nine main themes emerging from their responses are shown on the following page. As before, some respondents mentioned multiple themes in their responses, while others mentioned just a single theme.

One-third of the respondents (33%) said that they do not have a need or desire for services. Some respondents indicated that family members take care of their needs. Others said that they dislike large crowds, do not like to socialize, or feel that senior centers are dominated by “cliques” and gossiping.

About one-sixth of the respondents (17%) said that they or other seniors are not aware of all the services that exist. One-tenth of the respondents (10%) indicated that services are inconvenient or that waiting lists are too long. With respect to convenience, respondents complained about inconvenient and inconsistent pick-up times, having to call a day in advance for transportation, and that using services is too much trouble.

About one-tenth of respondents indicated that they did not know of any services out there that they did not use already. Eight percent of respondents said they needed transportation in order to make greater use of services.

**Question 3: “Are there services out there that you do NOT use? Why not?
What would it take for you to use these services?”**

Main Themes	Number of Respondents Mentioning Theme	Percent of Respondents Mentioning Theme
I have no need or desire for services	59	33%
People aren't aware of the services that exist	31	17%
Services are inconvenient and waiting lists are too long	18	10%

I don't know of any services I don't already use	16	9%
Need transportation	15	8%
I'm not physically able to use services	15	8%
I can't afford services	6	3%
I use services already	6	3%
Not sure	6	3%

The fourth open-ended question was: “If you could create one program for homebound seniors, what would that be?” A total of 176 respondents had some type of response to this question. The seven main themes emerging from their responses are shown on the following page. Although the question asked respondents to name just one program, some respondents mentioned more than one type of program in their responses, while others mentioned just a single program.

More than one-fifth of the respondents (22%) said they would create some type of visitation program. Respondents said that such a program would alleviate loneliness and boredom, as well as help seniors to keep their minds active. It would also permit someone to check up on the homebound periodically to see how they were doing. More than one-fifth of respondents (21%) also said they would create social or recreational activities programs. Activities mentioned by respondents included get-togethers, knitting, music, arts and crafts, games, and trips to the mall. About one-sixth of respondents (18%) did not know what type of program they would create.

About one-sixth of respondents (16%) said they would create a program to provide help with housekeeping and errands. Respondents mentioned that they could use help with cooking, cleaning, repairs, and snow removal. About one-eighth of respondents (13%) indicated that they would improve transportation services. Respondents felt that public transportation should be more convenient and more frequent.

Six percent of respondents said they would create some type of religious activities program. Three percent said that existing programs were sufficient and that there was no need for any new program.

Question 4: “If you could create one program for homebound seniors, what would that be?”

Main Themes	Number of Respondents Mentioning Theme	Percent of Respondents Mentioning Theme
Visitation program	38	22%
Social and recreational activities	37	21%
Don't know	32	18%
Help with housekeeping and errands	28	16%
Better transportation	23	13%

Religious activities	11	6%
There's no need for any new program	5	3%

FINDINGS

The success of the project in meeting its goals was impacted by inherent difficulties in reaching the target population. It was necessary to rely largely on providers of services in the three counties to provide access to subjects, so it is not clear how much this contributed to a “selection bias” in the sample.

The results of the study, however, may be extrapolated to other rural counties in Pennsylvania. Results show that in the three counties studied, there is a common “culture of homebound rural elderly.” Specifically, the modal profile indicates that members of this group are likely to be female, middle-old, widowed, with high school education, reporting one or more health limitations, and with incomes less than \$10,000 per year.

The extent of and reason for mobility limitations for the target population have been associated with multiple factors. For the entire three county sample, the extent of mobility limitations is significantly correlated with total CES-D score, age, gender, living alone, overall health rating, ability to get around in the house, and ability to get around in the community.

The study helped to identify several socio-economic differences within the three counties, including:

- Age: 40 percent of the respondents in Greene County were 85 years old or older, compared to 25 percent of the residents in Fayette County and less than 20 percent of the residents in Schuylkill County.
- Income: highest in Greene County, lowest in Fayette County. Female respondents reported lower incomes than male respondents in all counties. Similarly, health limitations were more likely to be reported by female respondents than male respondents. This raises the question of the relationship between reported income and health limitations.
- Religious denomination: almost 50 percent of the respondents in Schuylkill County were Catholic, while almost 80 percent of the respondents in Greene County were Protestant.

CONCLUSIONS

The study highlighted significant differences in the overall health ratings by respondents in each of the three counties. Residents of Fayette County reported the lowest rating of overall health while residents of Greene County reported the highest rating of overall health. The overall health status of respondents from Fayette County is worse in such areas as heart trouble, liver trouble, gall bladder, and nervousness or tension. Diabetes as a health limitation was more likely to be reported by participants in Greene County, cataracts were more likely to be reported in Schuylkill County.

Reported depressive symptomatology varied significantly between counties. Participants in Greene County reported more depressive symptomatology than residents of Schuylkill and Fayette counties.

There are significant differences within the three counties in service provision. Participants rated problems with use of services highest in Fayette County and lowest in Schuylkill County. Specifically, respondents in Fayette County identified problems with coordination of services, problems with service delivery, and waiting lists as greater than respondents in the other two counties. This may indicate differences in service provision within the counties as well as differences in service resources. Fayette County has several service providers, compared to one lead agency in each of the other two counties. In Schuylkill County, the singular Office of Senior Services involves itself with all issues concerning persons 60 years old and older in Schuylkill County.

Another significant difference in service provision as examined by county is transportation. All three counties have the shared-ride program for senior citizens through the Pennsylvania Department of Transportation and medical assistance transportation through the Pennsylvania Department of Public Welfare. Taxi service (demand responsive transportation) in Fayette and Greene counties is limited to only a few communities. Not only did 75 percent of respondents in Schuylkill County indicate they were able to get around the community by taxi but residents of this county also reported the highest percentage of volunteer transportation.

Problems with housekeeping and home maintenance were a major challenge for many of the respondents, but most appeared able to manage with a combination of formal and informal supports. It is important to note that frequently the resources available were either inadequate or not totally dependable.

The study showed that many of the homebound perceive their situation negatively. This may not only reflect societal perceptions but also the continuing emphasis on service recipients as “needy people” by service providers, care managers, social workers, and volunteers. Many respondents stressed loneliness, depression, and lack of mobility as a result of being homebound.

The study also showed that many needs of homebound senior citizens were being met. Although most lived on fixed, low incomes, there were no significant reported problems with housing, health care, or nutrition. However, many of the homebound believe that they are not aware of services that are available

to them. The multitude of service providers, with separate organizations providing care management, home health services, in-home services, home delivered meals, and volunteer services appears to foster this perception.

It remained unclear whether respondents were unwilling to comment freely on current services for fear of losing them or whether they did perceive many of their needs being met. Research personnel frequently reported that adults had expressed concerns about whether the interview would result in any "loss of service" being currently received.

RECOMMENDATIONS

The results of this study suggest specific policy implications not only for the counties involved in the study but also possibly for other county officials and state policy makers working with the homebound rural elderly. Specific recommendations include the following:

1. The homebound rural elderly should be treated as individuals and not as a homogenous group. The study indicates that there are differences in many socio-economic factors and individual abilities both within and between counties that impact the target populations' service use.
2. Services to rural homebound senior citizens require fewer allocations than are required for individuals in long term care facilities, while enabling the consumers of service to maintain an independent lifestyle in the community. Because of the differences between counties, the required service utilization of this target population should be assessed in each of the Pennsylvania Department of Aging Planning and Service Areas regularly and as a part of the formal three-year planning cycle.
3. The target population should be surveyed regularly to determine the best match between available resources and the needs of the individual. As this study indicates, it is difficult to identify these individuals and to win their trust. Information, however, should not be gathered by representatives of the organizations who serve them, and who will ultimately be involved in decisions that may be involved in the transition from independence to more restrictive long term care living situations.
4. The need for specialized transportation is evident. Even in Fayette and Greene counties, where public or agency transportation was available, transportation was not always accessible or it required the assistance of an escort who had to pay an unsubsidized fare. Demand responsive transportation, that includes allowing an escort to ride for the same fare, greater driver assistance to the passenger, and increasing volunteer efforts are recommended.

5. Participants in this study were asked the open-ended question, “If you could create one program for homebound seniors, what would it be?” This question sought to identify the greatest unmet needs for the target population as perceived by the respondents. The greatest response, identified by 22 percent, was to create some type of visitation program. The second greatest response, identified by 21 percent, was social and recreational activities.
6. While the study indicates a need for more formal services, it is important not to replace informal care systems with formal care systems. The formal care systems on which many homebound persons depend (i.e. home health services, in-home care services, home delivered meals) concentrate on meeting their physical needs. These programs are restricted to persons meeting a strict definition of being homebound, impacting negatively on the homebound person’s ability to “get out and do things,” adding to the perception of isolation and loneliness.
7. Informal care systems can maximize the use of existing resources by becoming part of a network of “public/private partnerships” between public agencies and community organizations such as churches, civic organizations, intergenerational groups, and other volunteer efforts. Such efforts should not only serve the care recipient but also use the assets of the rural homebound individual as a contributing member of the community.

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