

A Needs Assessment of Persons with Visual Impairments: Implications for Older Adults and Service Providers

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Cherry KE, Keller MJ, [Dudley WN](#). (1992). A needs assessment of persons with visual impairment: Implications for older adults and service providers. *J Gerontol Soc Wk*, 17, 99-116.

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Abstract:

The present study was designed to document the demographic characteristics of a sample of persons with visual disabilities and provide an index of their self-reported needs. An additional purpose was to determine whether the needs of the geriatric blind or severely visually impaired (over 70 years) differed in comparison to younger persons with visual disabilities. A needs assessment survey was administered to a sample of persons living in a metropolitan area who were visually impaired. The total sample was partitioned into four age groups, those less than 30 years, 30-49 years, 50-69 years, over 70 years. The results are discussed in terms of the special areas of need for persons with visual disabilities, in general and for older persons who are blind or visually impaired in particular. Implications for working with older persons with visual impairments are also suggested.

Article:

Persons who are blind or have severe visual impairments, as a special disability group, are a focus of concern. In general, the allocation of federal, state and local funds for services for persons who are blind or severely visually impaired underscores a societal awareness of the importance of the needs of this special population (Goodman, 1985; Gross, 1979). One immediate implication for the general public is the cost associated with rehabilitation and social service systems designed for persons with visual impairments. Thus, policy analysts and service agencies must carefully weigh the characteristics and self-expressed needs of the visually impaired to ensure optimum service provision and utilization.

From a demographic perspective, older adults have considerably higher incidence of visual impairment than do younger persons (Lowman & Kirchner, 1979). This is not surprising, given that the various causes of blindness, such as diabetes, macular degeneration, glaucoma and cataracts, are concomitants of biological aging (Worden, 1976). There are an estimated 4.5 million blind or severely visually impaired elderly adults in the United States at present (Select Committee on Aging, 1985). Moreover, the demographic projections for the year 2000 indicate a disproportionate increase in the number of legally blind and severely visually impaired persons over age 65, relative to other age groups (Kirchner, 1985; Lowman & Kirchner, 1979). In light of

these trends, it is essential to understand the service needs and characteristics of a constituency that is both visually impaired and aged.

Given the fact that persons over age 65 presently constitute the largest segment of the visually impaired population and are growing in number (Goodman, 1985), one important question is whether their service needs differ in comparison to younger persons. Both clinical as well as empirical research and literature suggest that impaired vision in later life can have consequences in various spheres of social, emotional, mental and physical well-being and functioning (Gillman, Simmel & Simon, 1986; Grieg, West & Overbury, 1986; Havlik, 1986; Soroka & Newcomb 1981.) In addition to blindness, older persons may be coping with other physical deficits, such as deafness, arthritis, and general infirmities of old age, thus it is reasonable to expect that their service needs are different from younger persons with visual impairments. Moreover, having a visual impairment may be a new experience for older adults, thus additional needs associated with the adjustment to blindness in later life might be expected (Rosenbloom, 1982; Wineburg, 1982).

Addressing the service needs of older persons with visual disabilities depends in part upon the adequacy of current information regarding their special needs and characteristics. There have been relatively few needs assessment endeavors directed toward older persons with visual disabilities. Love (1982) surveyed the orientation and mobility (OM) needs of older blind persons, from the perspective of the OM instructors. The results of Love's survey indicated that most of the elderly respondents used support canes and were mobile, although persons using walkers and crutches evidenced greater mobility difficulty. It is instructive to note that most of the OM instructors in Love's study reported needing more information as to how to work with the geriatric blind since they are likely to need additional devices, such as canes or wheelchairs to enable them to travel.

Given the scarcity of needs assessments designed for persons with blindness and severe visual impairments, the present survey was undertaken to provide an empirical description of the needs of this special population. Documenting the self-perceived needs of persons with blindness or severe visual impairments is essential, not only to ensure optimal service, but for the general goal of developing a more efficient and cost effective state service network. The present study was unique in its resolve to provide a broad and integrative picture of the needs of a large sample of persons with visual impairments. A second unique aspect of the study concerned the wide age range of the participants surveyed (3 to 98 years). Given the broad age span, it was possible to partition the total sample into four separate age groups to compare the needs of older persons who are blind or severely visually impaired (over age 70) relative to the other age groups (those under 30, 30-49, 50-69). The needs of elderly adults with severe visual impairments are poorly understood (Branch, 1989; Dinner & Raftary, 1984; Goodman, 1985; Worden, 1976), therefore it seemed important to determine whether older persons' pattern of responses to the needs assessment survey differed from those of other ages.

The discussion is organized as follows. The administrative and methodological aspects of the survey are highlighted first; then the demographic characteristics and self-expressed needs of the sample are discussed. In the final section, special areas of need for the geriatric blind are emphasized and some general implications for older adults and service providers are suggested.

THE SURVEY

Origin and Design. The Georgia Department of Human Resources, Division of Rehabilitation Services (DRS), contracted with the University of Georgia to conduct a needs assessment project. The DRS, a state and federally funded agency, sponsors a variety of programs and services designed to foster self-sufficiency in persons with disabilities. A task force of professionals and visually impaired consumers from the University and the DRS designed and piloted the needs assessment questionnaire. The survey questions were designed to gain information relevant to three DRS programs, i.e., the Employment, Independent Living, and Disability Adjudication programs. Thus, there were a total of five dimensions assessed in the survey, including demographic characteristics, disability adjudication, independent living skills, mobility and transportation needs, and interest in employment.

Data Collection and Scoring. Survey participants were contacted through a collaborative effort involving state service providers, rehabilitation counselors, ophthalmologists, optometrists, hospitals, school systems, nursing homes, news media and advocacy groups. The various referral agents informed potential survey participants about the needs assessment project and these persons then self-selected to participate. All referrals were pursued by the project coordinator who ensured that all prospective participants were screened for degree of blindness, which was defined as (a) central visual acuity of 20/200 or less in the better eye even with the use of corrective lenses, (b) field of vision is limited to 20 degrees or less, or (c) inability to read ordinary newsprint with use of corrective lens. Blindness was operationally defined as (a) lack of light perception, (b) inability to see to the side without turning the head, (c) inability to read ordinary newsprint with glasses, and (d) inability to see the number of fingers held at arm's length. All persons were telephone interviewed by volunteers who were trained prior to the administration of the survey. All respondents self-selected to participate in the study and the data collected was self reported by the respondents.

Data summary and analysis followed. Comparisons were made by entering the responses into contingency tables which expressed response frequency by age group for each question in the survey. The chi square statistic was used to determine whether the patterns of expressed need and age group membership were independent. Where there was evidence of a statistical association between age and the frequency of response ($p < .05$), the chi square values are reported. To identify the source of the significant differences within each table, standardized residuals were computed for each question. Standardized residuals which exceed the criterion value indicate which cell or cells of the contingency table contribute to the overall significance of the chi square statistic (Hayes, 1988), and thus aid in the interpretation of significant age group by response frequency associations.

DEMOGRAPHIC CHARACTERISTICS

Survey Participants. A total of 303 persons from eight Atlanta area counties participated in the study (range = 3 to 98 years, mean age (M) = 59.3). These persons lived in city/town areas (.76), the suburbs (.09), and in rural areas (.15). Participants' protocols were partitioned into four age groups for data summary and analysis. Although the criterion for age group inclusion was somewhat arbitrary with respect to the more typical conventions (e.g., 65 + , 85 +), the present divisions were employed to ensure that sample sizes within each group were proportional. The

first age group was comprised of persons who were less than 30 years of age (M = 19.7 years, SD = 7.5 years). The second group included persons between the ages of 30 and 49 (M = 40.1, SD=5.7), the third group were between 50 and 69 (M = 60.2, SD=5.3), and the fourth group were over age 70 (M 80.3, SD = 6.7). There were 59, 96, 75 and 73 respondents in each of the four age groups, respectively.

Visual Impairments. The types and frequency of reported visual impairments did not statistically differ among the age groups. Most persons had an inability to read newsprint with glasses (.83), others could not see the number of fingers held at arms length (.49), or could not see to the side without turning the head (.63), and others (.20) could not see light.

The relationship between age of onset and chronological age was

Table 1 (cont.)

Summary of Educational Attainment, Special Classes and Employment Status by Age Group

	under 30	30-49	50-69	over 70	Composite
Employment Status ^c					
Working (part or full time)	.33 (.77)	.40 (2.35)	.31 (.65)	.03 (-4.00)*	.27
Not working	.67 (-.47)	.60 (-1.43)	.69 (-.40)	.97 (2.44)*	.73

^a χ^2 (12, n = 288) = 33.082, p = .001

^b χ^2 (6, n = 303) = 87.642, p < .001

^c χ^2 (3, n = 295) = 30.903, p < .001

Note. Entries are proportion scores. Standardized residuals are given in parenthesis, where * indicates a significant departure from the expected frequency of occurrence. Negative values denote fewer responses than expected, and positive values indicate a greater number of responses than expected.

Table 2

Personal and Living Situations and Source of Income by Age Group

	under 30	30-49	50-69	over 70	Composite
Personal Situation ^a					
Homemaker	.07 (-1.14)	.08 (-1.01)	.19 (1.70)	.14 (.45)	.12
Student	.49 (7.77)*	.08 (-1.24)	.03 (-2.46)	.00 (-3.07)*	.13
Seeking work	.05 (-.98)	.19 (3.23)*	.07 (-.65)	.01 (-2.16)	.09
Unable to work	.02 (-2.18)	.17 (1.59)	.19 (1.92)	.04 (-1.81)	.11
Retired	.00 (-3.82)*	.02 (-4.46)*	.23 (-.13)	.75 (8.69)*	.25
Other	.08 (1.07)	.08 (1.30)	.03 (-.99)	.01 (-1.45)	.05
Non-applicable	.29 (.57)	.38 (2.43)	.26 (.27)	.05 (-3.58)*	.25
Living Situation ^b					
Alone	.07 (-2.31)	.24 (.67)	.16 (-.96)	.33 (2.27)	.21
Family/Relatives	.88 (1.54)	.71 (-.00)	.80 (.97)	.47 (-2.36)	.71
Non-Family	.03 (-.19)	.05 (.61)	.02 (-1.16)	.06 (.65)	.04
Nursing Home	.02 (.27)	.00 (-1.13)	.01 (-.00)	.03 (1.06)	.01
Retirement Center	.00 (-1.31)	.00 (-1.69)	.01 (-.84)	.11 (3.96)*	.03

(.46), and there was no evidence of an association between service awareness and age group membership.

Table 3 presents participants' prior and current receipt of services and interactions with a state counselor. It is interesting to note that those over 70 were significantly less likely to have received services or to have worked with a state counselor, whereas those persons 30-39 were more often receiving DRS services. These findings suggest that some modification in DRS service delivery may be necessary to better serve visually disabled elderly adults.

Modes of Communication

Few persons reported communicating in written form; only .37 use large print, .33 write without seeing, .32 type and .21 use braille. The reported frequencies of using large print and writing without seeing did not differ by age group. In contrast, there is a significant relationship in the use of typing $\chi^2(3, n = 302) = 32.258, (p = .001)$ and braille ($\chi^2(3, n = 302) = 30.89, p = .001$). The association occurred because those in the 30-49 age group were more likely to use braille and type, compared to the composite score, whereas those over 70 were significantly less likely to use braille or type for their written communications (Table 4).

Activities of Daily Living

The activities assessed in the survey were money identification, money management, grocery shopping, labeling, cooking and housekeeping (Table 5). Significant age group differences were

observed in each of the six daily living activities. In fact, a remarkably consistent pattern emerged: persons over age 70 were more likely to express a need for assistance in each of these categories of daily living activities, compared to the respective marginal totals.

In brief, those over 70 were significantly more likely to express needed assistance with money identification, compared to the composite, $\chi^2(3, n = 303) = 14.339, p = .002$. The same trend was evident with money management, $\chi^2(3, n = 302) = 29.803, p = .001$. Moreover, persons over 70 tended to express the need for assistance with greater frequency than the other age groups in gro-

Table 3
DRS Service Recipients and Those Who Have Worked with a State Rehabilitation Counselor by Age Group

	under 30	30-49	50-69	over 70	Composite
	Received DRS Services ^a				
Yes, previously	.24 (-.96)	.43 (2.05)	.44 (1.96)	.07 (-3.59)*	.31
Yes, currently	.35 (1.75)	.39 (3.26)*	.14 (-1.72)	.03 (-3.56)*	.23
No	.41 (-.46)*	.18 (-4.04)*	.42 (-.39)	.90 (5.52)*	.46
	Worked with a State Rehabilitation Counselor ^b				
Yes	.65 (.94)	.81 (3.47)*	.59 (.52)	.07 (-5.40)*	.55
No	.35 (-1.03)	.19 (-3.84)*	.41 (-.57)	.93 (5.97)*	.45

^a $\chi^2(6, n = 290) = 98.299, p = .001$
^b $\chi^2(3, n = 291) = 94.033, p = .001$

Table 5 (cont.)
Activities of Daily Living by Age Group

	under 30	30-49	50-69	over 70	Composite
Yes	.24 (-.55)	.19 (-1.63)	.23 (-.80)	.47 (3.19)*	.28
No	.76 (.34)	.81 (1.00)	.77 (.49)	.53 (-1.97)	.72
			Labeling ^d		
Yes	.22 (.43)	.13 (-1.56)	.15 (-.95)	.32 (2.38)*	.20
No	.78 (-.21)	.87 (.77)	.85 (.47)	.68 (-1.17)	.80
			Cooking ^e		
Yes	.12 (-1.64)	.16 (-1.31)	.25 (.64)	.35 (2.34)*	.22
No	.88 (.87)	.84 (.69)	.75 (-.34)	.65 (-1.24)	.78
			House Keeping ^f		

^a χ^2 (3, n = 302) = 14.339, p = .002 ^d χ^2 (3, n = 302) = 19.040, p < .001.
^b χ^2 (3, n = 302) = 29.803, p < .001. ^e χ^2 (3, n = 302) = 11.441, p = .01
^c χ^2 (3, n = 302) = 17.932, p < .001. ^f χ^2 (3, n = 302) = 14.339, p = .002

cery shopping (χ^2 (3, n = .302 = 17.932, p = .001, labeling (χ^2 (3, n = 302) = 19.04, p= .001), cooking (χ^2 (3, n=302 =11.441, p = .01),and housekeeping (χ^2 (3, n = 302) = 14.339, p = .002).

To summarize, the results are generally suggestive of an age-related increase in the need for assistance with activities of daily living. These trends must be interpreted within the context of the total sample, however. That is, with the exception of grocery shopping, the majority of the sample tended not to express a need for assistance with these activities. This trend may be due, in part, to the fact that money identification, money management, labeling, cooking, and housekeeping are, in a sense, home-bound activities, whereas grocery shopping requires the coordination of a complex set of component activities (e.g., compiling a list, transportation, orientation within the market, finding the desired items, etc.) Speculatively, it may be that there is a direct relationship between living skill complexity and the increased need for assistance. It would be interesting and informative to determine whether such an increase would be

exaggerated for older persons with blindness, as the present data suggest. The issues involved here are clearly complex, and further research would be necessary before firm conclusions are warranted.

Independence

Very few of the participants (.32) were as independent as they would like to be, and transportation problems were most often cited as the primary obstacle to independence (.56). Other obstacles to independence included; their visual handicap (.12), lack of training/ skills (.11), illiteracy (.04), need for financial resources (.04), and other (.13). When asked what might increase their sense of independence, many did not comment (.54), and others mentioned a job (.08), transportation (.19), orientation/mobility training (.07), aids and equipment (.05), money (.02), reading aids (.01), and other, non-specified aids (.04).

It is interesting to note that self-perceived independence did not differ by age group. In fact, those over 70 were somewhat more likely to view themselves as sufficiently independent, relative to the other age groups (.41 persons over 70 considered themselves independent, compared to only .27 of those 50-69 and 30-49 and .34 of those under 30). This is a somewhat surprising, and important finding. One plausible reason for the relatively greater sense of independence in older persons with visual impairments is that they may be comparing themselves to their cohorts' respective capabilities and activities. This finding has potentially interesting implications for life satisfaction and independence in later adult life for persons with visual impairments, and may be an important area for further inquiry.

Mobility, Travel and Transportation

Mobility and Mobility Training. Most persons (.63) could readily move around in their everyday surroundings without difficulty. Those in the two younger groups reported comparatively less difficulty moving around in the everyday environment, whereas the two older groups were somewhat more likely to express difficulty in moving around, $\chi^2(3, n = 301) = 13.299, p = .004$ (see Table 6). This differential pattern of responses appears to be responsible for the significance of the relationship as none of the standardized residuals exceeded the critical value.

The incidence of mobility training is also presented in Table 6. Of particular interest is the significant age group by response frequency association, $\chi^2(3, n = 299) = 26.236, p = .001$, which is largely due to the fact that a substantial number of persons 70 + had not received mobility training. The observation that those between 50-59 were also somewhat less likely to receive mobility training is also worthy of mention. These results suggest that mobility training services may require a greater breadth of focus than has been the case in the past, to better serve the older, visually disabled constituency.

Travel. The specific techniques participants use to facilitate travel were assessed next. Many persons (.76) reportedly use the following techniques and aids to help them travel: a cane (.47), sighted guide (.58), low vision aids (.32), and/or a guide dog (.04). The association between age and use of a sighted guide was significant (see Table 6). Those under 30 reportedly use a sighted guide about

Table 6
Everyday Mobility, Mobility Training and Travel Needs by Age Group

	under 30	30-49	50-69	over 70	Composite
	Mobility in Everyday Surroundings ^a				
No Difficulty	.78 (1.44)	.69 (.69)	.56 (-.78)	.51 (-1.32)	.63
Have Difficulty	.22 (-1.88)	.31 (-.91)	.44 (1.02)	.49 (1.72)	.37
	Mobility Training ^b				
Received Training	.64 (1.97)	.56 (1.28)	.44 (-.37)	.24 (-2.88)*	.47
No Training	.36 (-1.85)	.44 (-1.20)	.56 (.35)	.76 (2.70)*	.53
	Use of Sighted Guide to Aid in Travel ^c				
Use Guide	.54 (-1.35)	.67 (-.37)	.81 (.98)	.78 (.64)	.71
No Sighted Guide	.46 (2.09)	.33 (.57)	.19 (-1.52)	.22 (-.98)	.29

^a $\chi^2(3, n = 301) = 13.229, p = .004$ ^b $\chi^2(3, n = 299) = 26.236, p = .001$ ^c $\chi^2(3, n = 251) = 11.284, p = .010$

half of the time, whereas those in the other age groups were more likely to rely upon sighted guides to aid in travel in comparison, $\chi^2(3, n = 251) = 11.284, p = .001$.

Transportation. Most participants reported that they were unable to travel to all the places they needed to in the community (.66). With respect to public transportation, most reported having access to public transportation (.60), although many thought that public transportation was inadequate (.78). The four age groups also responded similarly to the questions concerning accessibility and adequacy of public transportation.

With respect to private transportation, most participants (.82) had access to private transportation, although the majority (.68) did not consider their mode of private transportation to be adequate. Further, the association between age and having access to sufficient private transportation was significant, $\chi^2(3, n = 227) = 17.02, p = .001$. This result occurred because

those under 30 were more likely to have access to sufficient private transportation, compared to the other age groups.

CONCLUDING COMMENTS AND FUTURE IMPLICATIONS

The present findings are suggestive of age-related differences in the service needs of older adults who are blind or visually impaired. Although the composition and regional constraint of the present sample necessarily limit generalization of the findings, the results indicate that the needs of older adults with visual impairments in this study differed from younger persons in several ways. The implications of these differences for older adults and service providers are discussed below.

Implications for Older Adults. The present findings indicated that visually disabled elderly adults have more difficulty with tasks of everyday living than younger adults. This finding is compatible with the Branch et al. (1989) and the Select Committee on Aging (1985) reports which similarly document age-related difficulties with activities of daily living. To what extent these self-reported difficulties are mediated by or exacerbated by age-related difficulties in other areas, such as concomitant health problems, is not presently clear. Future research should be directed toward disentangling the effects of visual impairment from other age-related conditions to permit a more precise specification of the relationship between self-reported service needs, vision loss, and aging.

As a second point, the survey results also indicated that older persons were less likely to live with family members or relatives compared to the other age groups. For this reason, it is necessary to enable them to be as independent as possible as they are not likely to have others available for immediate assistance and the possibility of institutionalization is greater (Branch et al., 1989). It is interesting to further note that a large number of older persons in the survey viewed themselves as independent, although they generally expressed a greater need for assistance with lower level activities, such as daily living skills, compared to younger persons with visual impairments. With respect to activities outside of the home and travel, older adults reported a greater reliance on sighted guides to aid them than did younger persons. Furthermore, virtually none of the older adults had received mobility training. Older blind persons appear to be more dependent outside of the home and in need of help with mobility and travel. To increase their sense of independence outside of the home, it may be necessary to provide more direct assistance in the areas of travel and mobility (cf. Love, 1982).

In sum, additional study of visually impaired older adults is clearly needed. While this study indicated their needs are different from younger persons, further investigation is warranted to determine how to effectively and efficiently reach this group, identify their needs, and design services and delivery systems for them.

Implications for Service Providers. The implications for workers who may or will have elderly clients with visual impairments are best discussed at two levels. At the individual level, it is essential to acknowledge the age-related differences in the needs of older persons who are visually impaired. At the community/state level, other implications for serving the geriatric blind population are: (a) specific training programs for workers in the field; (b) a restructuring of

service goals for the elderly; and (c) coordination of community/ state agencies to promote optimum service delivery. These implications are discussed in turn.

At the individual level, service providers should acknowledge that older persons with visual impairments or blindness are unlike their younger counterparts in many ways (Branch et al., 1989; Halvick, 1986; Dinner & Raftary, 1984). Thus, it may be necessary for service agencies and workers in the field to realign their perceptions of needs and expectations for elderly clientele. The service needs of older persons with visual disabilities differ from young persons in at least two ways. First, older adults are more likely to have multiple health problems or other disabilities that will present a challenge for service delivery. Service providers working with visually impaired older adults should consult with public health and aging service providers to determine what health and age-related conditions hinder independent functioning in conjunction with visual impairments so that an interdisciplinary case management approach can be provided with older clients. Second, older persons with visual impairments do not seem to be interested in vocational training, but would be receptive to services that foster independent living or promote greater life satisfaction. Administrators and service providers, along with older visually impaired adults, will need to determine policies and programs specifically designed for servicing elderly clients. This point is reinforced by the fact that age is a most powerful predictor of the onset of vision impairments (National Center for Health Statistics, 1978; Silverston, Casabianca & Plunkett, 1987). When these fundamental issues are addressed, service providers will be in a better position to provide optimum services for elderly adults with visual impairments.

At the community/state level, the first implication concerns the breadth of training for service providers who will work directly with older persons who are blind or severely visually impaired. Assuming that the dramatic increase in the number of elderly blind persons is a relatively recent phenomenon, it is likely that rehabilitation professionals may not have been trained to address the special needs and problems associated with aged persons who are blind or visually impaired. Therefore, it may be prudent to develop and implement specific training programs on how to work with older, visually impaired clients (Goodman, 1985; Love, 1982).

The second implication is that service goals need to be restructured for the constituency of older persons with visual impairments (Silverston et al., 1987). Agencies delivering services to visually impaired persons should evaluate their goals as they relate to an aging population. Services for the elderly who are blind or severely visually impaired should center around promoting life satisfaction and independence, not vocational potential. Some modification in existing services may therefore be necessary. For example, services may need to be less generic and more individualized for older adults who are visually disabled as they may need differing degrees of help with self care and daily living skills depending on their health and clinical status. One additional point to consider is whether an older client's visual disability was congenital or a concomitant of aging. In the latter case, it may be necessary to provide additional services for personal and social adaptation to blindness in later life. The service needs of older persons who have recently become blind or visually impaired may differ substantially from congenitally blind or visually disabled older persons. This is an important question for future research.

The third implication concerns service delivery and the importance of an integrative, inter-agency approach to servicing older adults with visual impairments. The present findings indicated

that only a small number of older persons were currently receiving DRS services or had received them in the past. This low service utilization rate is consonant with the national trend (Hendriks, 1986) and is probably due to the traditional vocational orientation of rehabilitation services. The failure to utilize services may also be indicative of shortcomings or inadequacies in both service marketing techniques and coordination of service delivery systems. Although the present survey was not designed to yield firm conclusions on this topic, it seems apparent that some modification in service marketing and delivery may be necessary to reach the older constituency of the visually impaired population.

One direction for improving service delivery to the older visually disabled population would be to encourage collaborative endeavors between the various agencies on aging, senior centers and blind rehabilitation service agencies. Asche (1980), for example, reported a study in Arkansas where blind agencies provided in-service training to staff members at community centers for senior citizens. The focus of the training was to provide fundamental information concerning the effects of blindness or visual impairment on elderly adults and to teach the centers' staff basic techniques to facilitate adaptation to blindness in later life. The Asche study is noteworthy in exemplifying a successful collaboration between two agencies and the resulting service delivery benefit for older persons who are visually disabled. Finally, inter-agency exchanges such as the Asche study may result in the prevention and early detection of visual impairments and diseases among older persons which is obviously an important consideration. The significance of early detection and prevention of visual loss is further amplified by the demographic trend of increasing numbers of older persons in society today.

In closing, the present study was a first step toward better understanding the service needs of the visually impaired population in Atlanta, Georgia. Understanding the complex relationship between service needs, service utilization and aging is a timely imperative, and is clearly an important focus for future study.

NOTE

1. Due to an oversight in the subject recruitment procedure, there is no record of the individual respondent's source of referral. It is conceivable that the referrals were non-random which may have resulted in a sample bias. The results of this study should be interpreted with caution in light of this constraint.

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