The Importance of Friendship and Family Support in Adaptation to Chronic Vision Impairment

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DEALING with chronic physical impairment and its resulting disability becomes more normative in later life, especially for women (Penning & Strain, 1994). The study of adaptation to the stressor of physical impairment and disability is especially important in elders because of its impact on life satisfaction and depression (Gurland, Wilder, & Berkman, 1988; Williamson & Schulz, 1992). One difficulty in describing the complex process through which successful adaptation is facilitated is that some of the prior research in this area is based on samples that are heterogeneous with respect to the life events or stresses experienced (Cutrona, Russell, & Rose, 1986). In the current study of support in disabled elders, the stressor of chronic physical impairment was exemplified by age-related vision loss, which varies in severity and requires great functional, psychological, and social adjustment in elders who have been sighted until late life.

Vision impairment has been identified as the second most common cause of disability for persons aged 65 and above (Ford, Folmar, Salmon, Medalie, Roy, & Galazka, 1988). This does not refer to normal changes in vision with age, but to vision impairment resulting primarily from age-related eye disease, which causes functional limitations and cannot be corrected with refraction, medicine, or surgery. The most recent data from The Lighthouse National Survey on Vision Loss (1995), based on multiple indicators of functional vision problems, indicate that as many as 17% of all middle-aged and older Americans self-report a vision impairment. The prevalence of vision impairment increases with age. Fifteen percent of individuals 45–64 years, 17% of those aged 65–74 years, and 26% of those 75 years old and older self-report a vision loss (The Lighthouse Research Institute, 1995). The characteristics of the vision loss itself (e.g., peripheral or central field loss, lens opacity) are variable and often multiple, depending on the type and severity of age-related eye disease experienced. The major types of eye disease causing vision impairment in elders include senile macular degeneration, glaucoma, and cataracts (Podgor, Lesley, & Ederer, 1983). Most visually impaired elders have some degree of partial vision as opposed to being totally blind. Vision impairment, which is strongly associated with difficulty in performing daily living activities, has been demonstrated to be an independent, significant predictor of functional disability in elders after controlling for age, gender, and comorbidity (Horowitz, 1994; LaForge, Spector, & Sternberg, 1992).

The experience of vision loss in old age often results in depression, decreased morale, lowered self-esteem, and feelings of excessive dependence (Branch, Horowitz, & Carr, 1989; Gillman, Simmel, & Simon, 1986). Successful adaptation includes learning compensatory skills, renegotiating supportive relations, and maintaining mental health. Social support has been demonstrated to be a critical factor in adaptation to stress in elders. The experience of vision impairment and disability is likely to alter the need for psychosocial and material resources from elders’ social networks. Family members and significant others can play an important role in elders’ adaptation, such as providing encouragement for the initiation and completion of rehabilitative services (Lindenberg, 1980; Moore, 1984). Alternately, significant others can be overprotective and actually promote the development of excessive disability (Moore, 1984). Overall, the dynamics of support use are clarified when people experience major life crises and transitions since support is most likely to be needed and accepted under these circumstances (Albrecht & Adelman, 1987).

The Role of Friendship and Family Support in Adaptation to Chronic Impairment

While the linkage of stress, social support, and mental health is well established in the gerontological literature (e.g., George, 1989; Kessler & McLeod, 1985), comparison
of the amount and the effect of support received from specific sources within the broad context of social support has received less attention. Although the informal support network of elders includes family members, friends, and neighbors, friends have long been described as an underutilized resource for elders (Cantor, 1979). Family members are prominent in the study of elders’ support relationships, while the support from non-kin relations is often overlooked. While it is not suggested that age peers can replace family members, especially in the role of caregiver for frail elders, they do play an important role as providers of a combination of multiple support components in later life (Antonucci, 1990; Shea, Thompson, & Blieszner, 1988). For example, research has shown that while family members are most often the providers of instrumental support to elders, friends also provide instrumental support to both relatively healthy (Reinhardt & Fisher, 1988) and chronically impaired elders (Roberto, 1992). The finding that friends are most willing and able to meet such needs when they are relatively less extensive (Cantor & Little, 1985), does not diminish the importance of their support.

The role of friend, defined by its voluntary nature, affective base and mutual choice, can be lifelong. Many elders maintain friendships through advanced old age, often over many decades (Blieszner, 1989; Johnson & Troll, 1994). Close friends may help each other come to terms with the failing health and chronic disability that may be experienced in old age. Research has demonstrated that friendship is increasingly important for physically impaired persons (Adams, 1986; Lubben, 1989). Friends, who are usually similar in terms of gender, social class, marital status, and age group (Dono, Falbe, Kail, Litwak, & Sherman, 1979), seem well suited to provide help in the socialization to age-related change such as learning new roles or relinquishing old roles. Further, friends, who are often age peers, may provide a unique sense of ego support and reaffirmation of an individual’s personal worth in later life (Cantor, 1979). The study of multiple support sources of elders who are experiencing the stressor of late life chronic physical impairment, including both kin and non-kin relations, is critically important.

Theoretical guidance regarding the study of kin and non-kin support providers is provided by Weiss’s (1974) theory of social provisions. Weiss maintains that individuals require six key social provisions, which include both assistance-related (reliable alliance, guidance) and nonassistance-related components (social integration, reassurance of worth, nurturance, and attachment) in order to maintain well-being and to avoid loneliness. These components, provided by primary group relationships (characterized by closeness, warmth and commitment), supply distinctive benefits. For example, an individual lacking attachment would experience emotional isolation, while someone lacking social integration would experience social isolation. Considered together, these components provide an assessment of total perceived support quality.

Weiss (1974) holds that relationships tend to become specialized in their provisions and, as a result, individuals must maintain a number of different relationships for well-being. Some of these provisions are typically provided by kin and others are typically provided by friends. Reliable alliance (instrumental support) is most often provided by kin regardless of the level of mutual affection or whether one has reciprocated for past help. Guidance, especially important in times of stress, is provided by significant others who are seen as trustworthy and authoritative. Friendships offer provisions associated with a community of interest such as social integration. Reassurance of worth is provided by relationships that support a person’s competence in a social role, such as colleagues in the workplace or family members in the home. Opportunity for nurturance is provided by a relationship in which the individual takes responsibility for the well-being of another, such as a child. Attachment-providing relationships tend to be an exception where specialization is concerned. The marital relationship is defined by its sense of attachment, but attachment can also be provided by other relationships with family members or close friends.

Overall, rather than designating which person will satisfy a specific need, Weiss’s (1974) model holds that multiple needs must be satisfied by one’s support network. Moreover, he notes that there is probably an element of almost every relational provision in each supportive relationship. Weiss’s theoretical model has received substantial empirical support (Cutrona & Russell, 1987; Felton & Berry, 1992; Mancini & Simon, 1984).

It should also be stressed that gender seems to be a differentiating factor in describing adult friendships, with differences between women and men in the utilization and effect of supportive relationships (Wright, 1989). Women tend to have more intimate friendships than men, who seem to focus their friendships around activities (e.g., Antonucci, 1990). Furthermore, while women are likely to have a female friend as a confidant, men are more likely to rely on their spouse as a confidant, and thus confine emotionally supportive interaction to their wives (Hess & Soldo, 1985). These gender differences are characteristic throughout the life span and they continue throughout adulthood into old age (Wright, 1989). They do not, however, negate the importance of friendship for the psychological well-being of older men. It is important to include both women and men in research examining friend and kin support providers in later life.

In addition to the differential function of family and friendship relations, research has examined the effect of these relations on psychological well-being. There seems to be more solid empirical evidence of a positive relationship between friendship support and well-being than family support and well-being in elders (Peters & Kaiser, 1985). These findings are intriguing given the major role of the family in the lives of elders, especially as providers of instrumental support. Focusing on the differential nature of friendship as optional and family relations as obligatory, Antonucci and Jackson (1987) have suggested that these relationships are judged by different standards. While family members are obligated to provide support in times of need, support provided by friends is optional and thus particularly appreciated when received. Larson, Mannell, and Zuzanek (1986) found that, in comparison with family members, the unique
qualities of friendship interactions including openness, reciprocity, and positive feedback along with the spontaneous affection and joy inherent in friendship interaction were partly responsible for the link between friendship relations and subjective well-being in elders.

**Study Purpose and Overview**

In this study of friendship as a resource for older females and males who are adjusting to late life chronic vision impairment, friendship is studied in the context of family support. Separate assessment of friend and family support permits the investigation of a differential effect of support type on multiple outcome variables. Elders have relationships with kin and friends at varied levels of affective closeness (Antonacci, 1990). Given the importance of close, primary relationships for the receipt of support components (Albrecht & Adelman, 1987; Cantor, 1979; Weiss, 1974), this research assesses the amount of support chronically impaired elders perceived from their closest family member and their closest friend. The primary focus of this study is to test the hypothesis that total perceived support adds unique variance to adaptation after accounting for total perceived family support. While the focus is on friendship and family support, sociodemographic variables that have been demonstrated to be related to adaptive status in later life are also assessed. These variables include gender, age, marital status, living arrangements, education, and socioeconomic status. Because of the importance and multiple functions of spousal relationships, a dichotomous variable was created to indicate whether or not the closest family member described by participants was a spouse. Other predictor variables that were examined include vision status, health status, and functional disability. The degree of the vision disability has been identified as a potential predictor of adaptation, although empirical findings have been inconsistent. There is some evidence that degree of residual vision is related to well-being and adaptation to vision loss (Schultz, 1977). However, other work has found that neither the suddenness of onset of the vision loss, nor the degree of impairment, influences adaptation (Horowitz, Reinhardt, McInerney, & Balistreri, 1994). Because dealing with chronic physical impairment and resulting disability becomes more normative in later life, self-rated physical health and functional disability are included as predictor variables.

Three measures of adaptation to chronic impairment are utilized. While measures of subjective well-being address the broad concept of adaptation to later life, this research focused on adaptation to a specific chronic impairment. Thus, adaptation is assessed with both domain-specific (adaptation to vision loss) and global indicators (life satisfaction and depressive symptoms). Global indicators of both positive and negative aspects of adjustment are used given the orthogonal nature of these outcome variables. Thus, assessment of a differential effect of family and friendship variables on multiple adaptation variables is possible.

While total support scores will be used in analyses to examine the effects of kin and non-kin support, an additional focus of this study is to examine support components by relationship type and gender. Specific hypotheses, based on Weiss’s (1974) theoretical model, were formulated to guide these analyses. Regarding relationship type, two main effects are expected with scores for instrumental assistance higher for family support than friend support, and social integration higher for friend support than family support in elderly females and males. Regarding relationship type and gender, two interactions are expected. Specifically, it is expected that for friendship support, attachment scores will be higher for women than men, and social integration scores will be higher for men than women.

**METHOD**

**Participants**

Study participants were 343 community-residing females (n = 188) and males (n = 155) who ranged in age from 65 to 100 (M age = 79.22; SD = 7.34), who experienced age-related (rather than lifelong) vision loss. A 100% sample of participants was taken as cases were closed at a vision rehabilitation service agency serving both urban and suburban populations. While 93% (n = 318) of the original sample had a close family member, just over one quarter of respondents, 77% (n = 264), had a close friend. While females (10.6%) were significantly more likely than males (3.2%) to be lacking a close family member (x^2[1, n = 343] = 6.91, p < .01), there were no significant gender differences in the proportion of respondents who lacked a close friend (20.7% of females and 25.8% of males). Only two respondents lacked both a close friend and a close family member. Because the focus of this research is on examining the unique effect of friendship support on adaptation after accounting for family support, the analyses described in this report were conducted on the subsample of elders who had both a close friend and a close family member, that is, 70% (N = 241) of the original sample.

A comparison was conducted between the 241 elders in the subsample and the remaining elderly participants (n = 102) on several major variables. Results demonstrated that subsample participants were significantly younger, with better self-rated health and less functional disability than elders who were not in the subsample. The two groups of elders did not differ by gender, marital status, or education, and they did not have significantly different scores for vision loss severity, life satisfaction, depressive symptoms, or adaptation to vision loss.

In the subsample of 241 elders, 130 were female, 111 were male, and age ranged from 65 to 99 (M age = 78.60; SD = 7.14). Most participants were Caucasian (85%), with at least a high school degree (65%), and without a spouse (58%; including 44% widowed, 7% divorced or separated, and 7% never married), although only 39.8% lived alone. Participants were normally distributed among the five SES categories of the four-factor Hollingshead Index. All respondents experienced "low vision," that is, some degree of vision impairment that is not correctable by refraction, medicine, or surgery (Faye, 1984). As expected, the most common eye diseases reported involved age-related eye disease. Forty-eight percent reported having macular degeneration, 38% had cataracts, and 26% reported having glaucoma. Just under one half of respondents (48.5%) reported...
that they had more than one vision problem. Most respondents (76%) indicated that they had experienced a gradual rather than a more sudden vision loss, which is typical of age-related vision impairment.

Characteristics of Closest Family Member and Closest Friend

Since perceived support measures focused on each respondent's closest friend and closest family member, demographic characteristics of these two persons were examined. The age of closest family members ranged from 27 to 94, with an average age of 60.50 (SD = 15.54). The relationship type of the closest family member was almost equally divided among spouses (32.8%), children (38.2%), and other relatives (29%). Male respondents (50.5%) were more likely to describe their spouse as their closest family member, and females (43.1%) were more likely than males (32.4%) to describe a child as their closest family member (χ²[2, N = 241] = 31.46, p < .001). Not all married respondents chose their spouse as their closest family member. Nearly one third (30.3%) of the 33 married females and 20.3% of the 69 married males selected other relatives as their closest family member (percentages did not differ significantly).

The age of closest friends ranged from 30 to 99 with an average age of 70.01 (SD = 12.31). While the majority of respondents (88.4%) reported same-gender friendships, more males (21.6%) than females (3.1%) reported cross-gender friendships (χ²[1, N = 241] = 20.05, p < .001). The number of years respondents maintained their friendships ranged from 1 to 72 with an average of 28.18 years (SD = 18.69). There were no gender differences in this variable. Only 17% of respondents reported that they had maintained a relationship with their closest friend for less than 10 years.

Measures

Sociodemographic variables. — Single-item indicators were used to assess gender, age, marital status, education, and living arrangements. Socioeconomic status was assessed with the Hollingshead 4-factor index of social position (Hollingshead, 1975).

Vision status and health status. — The Functional Vision Index (Horowitz, Teresi, & Cassels, 1991) was used as a subjective indicator of vision loss severity. Items assess functional vision problems (e.g., Does trouble with your vision make it difficult for you to read medicine bottle labels?). When you are walking in the street, can you read the street name signs?). Possible scores range from 1 to 15. A high score indicates high vision loss severity. Comorbid physical health status was assessed with a single-item rating on which respondents rated their health on a 5-point scale ranging from poor (5) to excellent (1). A high score indicates poor overall health status.

Functional disability. — A modified version of the OARS Multidimensional Functional Assessment Questionnaire (Center for the Study of Aging and Human Development, 1975) was used to assess functional disability in everyday tasks. The modification involved the addition of 4 items that address specific functional tasks that may be affected by vision loss, including identifying clothing, coins, bills, and the food on one's plate, and the ability to travel in unfamiliar places. Seven personal tasks (sample α = .82) and 11 instrumental tasks (sample α = .88) were assessed, and a combined index of 18 personal and instrumental tasks of daily living was created (sample α = .89). Items were scored on a 3-point scale: (0) does task with no difficulty; (1) does task with difficulty; (2) needs help/cannot do task. Possible scores range from 0 to 30. A high score indicates high functional disability.

Social support network: Size and contact frequency. — Respondents were asked to list the number of family members (children, siblings, and other close relatives) and close friends they had as a measure of kin and friend social network size. "Close" was defined as, "persons you feel close to, that you feel at ease with, can talk to about private matters, or can call on for help." The frequency of both telephone and in-person contact (on a 6-point scale ranging from [0] never see to [5] every day) with both respondents' family network members and close friends was also assessed. Scores were summed for in-person and telephone contact. Possible scores range from 0 to 30 for family contact and 0 to 10 for friend contact.

Friendship support quality. — To assess friendship support quality, respondents were first asked to think of the friends they feel close to. Of this group, they were asked to choose the one friend they feel closest to, defined as, "the one friend (nonrelative) with whom you feel the most at ease, can talk about private matters and/or to whom you usually turn first when you need some help." The 24-item Social Provisions Scale (SPS; Cutrona & Russell, 1987), based on Weiss’s (1974) theory of social provisions, was used as a multidimensional measure of perceived support quality from respondents' closest friends. In addition to the work of the scale authors, this theoretically validated scale has been empirically validated by other researchers (e.g., Mancini & Bliedzner, 1992). While the SPS is commonly used to assess the perceived quality of support the individual receives from his or her support network, without identification of network members, the SPS has also been used as a source-specific assessment of support components (Cutrona, 1989; Felton & Berry, 1992). The SPS assesses six support components, including two assistance-related components: reliable alliance (termed "instrumental assistance" hereafter; e.g., "I can count on this person to help me if I really need it") and guidance (advice/information; e.g., "I can talk to this person about important decisions in my life"), and four non-assistance-related components. The latter include attachment (e.g., "I feel a strong emotional bond with this person"), reassurance of worth (acknowledgment of competence; e.g., "This person admires my talents and abilities"), social integration (group belonging, shared interests; e.g., "This person enjoys the same social activities I do") and nurturance (feeling that one is needed by others; e.g., "I feel that this person relies on me for his/her well-being"). Items are scored on a four-point Likert scale (strongly agree to
strongly disagree). Possible component scale scores range from 4–16. The scale also yields an overall measure of support (sample $\alpha = .88$; component scale scores are summed) as well as six subscale scores. Possible scores for total support quality range from 24–96 with high scores indicating high support quality.

**Family support quality.** — The closest family member was chosen the same way as the closest friend. Respondents answered the same series of questions described above for their closest family member (sample $\alpha = .89$ for total support quality). The order of these two sections of the questionnaire was counterbalanced across participants.

**Descriptive characteristics of closest friend and closest family member.** — Descriptive information was obtained for respondents’ closest friend and closest family member including age, the relationship type of the closest family member, the gender of the closest friend, and the number of years respondents have maintained a relationship with their closest friend.

**Adaptation.** — Two indicators of global adaptation were used. The 18-item version (Adams, 1969) of the Life Satisfaction Index-A (LSI-A) was used as a measure of psychological well-being (Neugarten, Havighurst, & Tobin, 1961; sample $\alpha = .82$). The LSI-A has a possible score range of 0 to 18 with high scores indicating more positive well-being. The 20-item Center for Epidemiological Studies Depression Scale (CES-D) was used as a measure of depressive symptomatology (Radloff, 1977; sample $\alpha = .90$). The CES-D has a possible score range of 0 to 60 with high scores indicating high depressive symptoms. For the CES-D, elders reported the frequency with which they experienced depressive symptoms during the previous week.

One indicator of domain-specific adjustment, the 24-item Adaptation to Age-Related Vision Loss Scale (AVL; Horowitz & Reinhardt, 1993), was used to assess adaptation to vision loss. The AVL scale is a unidimensional scale with items assessing three general content areas: the extent to which the person accepts vision loss in a realistic manner; whether the person has a positive and optimistic attitude toward the importance and potential for learning new skills that compensate for vision loss; and whether the person has a positive outlook toward continuing relationships with sighted family and friends, neither rejecting assistance when needed nor becoming excessively dependent upon others. Respondents are asked whether they agree or disagree with each item. Sample items include, “Because of my vision loss, I feel like I can never really do things for myself; I do not want to be around my sighted friends anymore because they will feel sorry for me; There are worse things that can happen to a person than losing vision; I feel comfortable asking my family and friends for help with things I can no longer do because of my vision loss.” Psychometric analyses of the AVL scale indicate high internal consistency (sample $\alpha = .87$) and evidence of convergent validity through significant correlations of the AVL scale with measures of life satisfaction and depression (Horowitz & Reinhardt, 1993). Possible scores range from 0 to 24, with high scores indicating more successful adaptation to age-related vision loss.

**Procedures**

Participants were first contacted by letter, and then follow-up telephone calls were made to schedule appointments with interested persons. A 60% response rate was obtained. Elders were interviewed in their homes with a structured questionnaire ($M = 93.12$ minutes; $SD = 25.21$) by trained interviewers. Respondents gave written, informed consent for participation after the study procedures were explained, and they received $50 for participating in the research.

**RESULTS**

**Gender Differences in Major Variables**

Before conducting primary analyses, major variables were examined by gender for descriptive purposes. Analysis of demographic variables by gender revealed that compared to male respondents ($M$ age = 77.27; $SD = 7.11$), females ($M$ age = 79.73; $SD = 7.00$) were significantly older ($t_{[239]} = 2.70, p < .01$), and less likely to live with a spouse (25.4%) than males (62.2%; $\chi^2[1, N = 241] = 33.18, p < .001$). Similarly, females (50.8%) were more likely to live alone than males (27.0%; $\chi^2[1, N = 241] = 14.08, p < .001$). Finally, females had less education than males ($\chi^2[6, N = 241] = 31.60, p < .001$), and lower socioeconomic status ($\chi^2[4, N = 240] = 13.97, p < .001$).

Data on social network structure indicated that respondents had an average of 3.45 ($SD = 3.06$) persons in their close friend network and 5.49 ($SD = 4.07$) persons in their family network. Gender differences were found for friend network size, with males ($M = 3.94, SD = 3.57$) reporting a slightly higher number of close friends than females ($M = 3.03, SD = 2.48, t[1, 239] = 4.28, p < .05$). Size of family network was not significantly different by gender. Scores for family network contact ranged from 0 to 30 with an average score of 12.86 ($SD = 5.82$) and scores for close friend network contact ranged from 0 to 10 with an average score of 6.91 ($SD = 2.63$). There were no significant gender differences in either of these two indicators of network contact.

Descriptive information for the total sample and by gender for major study variables, including vision status, health status, functional disability, total friendship support, total family support, life satisfaction, depressive symptoms, and adaptation to vision loss is provided in Table 1. Gender differences were found for four of these variables. Compared to males, females had significantly greater vision loss severity ($t_{[239]} = 2.73, p < .01$), poorer self-rated health ($t_{[237]} = 2.81, p < .01$), lower life satisfaction ($t_{[239]} = -2.56, p < .01$), and more depressive symptoms ($t_{[237]} = 2.81, p < .01$).

**Correlational Analyses**

Intercorrelations of all major variables were initially computed separately by gender and transformed to Fisher’s $z$’s to test for significant differences. Results demonstrated that the
intercorrelations among major variables were not significantly different for females and males (results not shown). As described earlier, three outcome variables were assessed, including life satisfaction, depressive symptoms, and a domain-specific indicator of adaptation to vision loss. Variables representing each of five major conceptual categories of predictor variables (sociodemographic characteristics, vision status, health status, functional disability, and social support) were assessed for their correlation with each of the three outcome variables. Individual variables examined include gender, age, marital status, living arrangement (alone/with others), education, socioeconomic status, relationship type of closest family member (spouse/nonspouse), functional vision loss, self-rated health, functional disability, family network size, friend network size, family network contact frequency, friend network contact frequency, total perceived support quality from closest family member, and total perceived support quality from closest friend. The criterion for including a variable in a regression equation was that it had a significant \( p < .05 \) bivariate correlation with the outcome measure of interest. The intercorrelation of predictor variables was also examined. A correlation matrix of the variables that are significantly associated with outcome variables is presented in Table 2. A listwise correlation matrix is utilized so that the cases correspond to those used in the regression analyses.

It is important to point out that the more qualitative index of social support, total perceived support quality from family members and friends, was significantly related to adaptation outcome variables, whereas the quantitative indices of family and friend network size and contact frequency were not. Being male, younger, having better self-rated health, fewer functional vision problems, less functional disability, higher perceived support from one’s closest family member and from one’s closest friend were associated with greater life satisfaction and fewer depressive symptoms. Having a higher educational status was also associated with fewer depressive symptoms. Having a higher educational status, better self-rated health, fewer functional vision problems, less functional disability, higher perceived support from one’s closest family member and from one’s closest friend were associated with more positive adaptation to vision loss.

Hierarchical Regression Analyses

Three 3-step hierarchical regression analyses were conducted, one for each of the outcome variables to test the

![Table 1. Descriptive Statistics for Major Study Variables (N = 241)](image)

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<th>SD</th>
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<th>SD</th>
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*Higher scores indicate more negative status.
*Higher scores indicate more positive status.

![Table 2. Intercorrelations of Study Variables*](image)

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<tr>
<td>5. Functional vision loss*</td>
<td>-17**</td>
<td>.01</td>
<td>-.11</td>
<td>.05</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>6. Functional disability*</td>
<td>-.14*</td>
<td>.11</td>
<td>-.21**</td>
<td>.29***</td>
<td>.46***</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>7. Total family support*</td>
<td>.14*</td>
<td>-.14*</td>
<td>.12</td>
<td>-.21**</td>
<td>-.11</td>
<td>-.23**</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>8. Total friend support*</td>
<td>-.03</td>
<td>-.24***</td>
<td>.08</td>
<td>-.16*</td>
<td>-.07</td>
<td>-.24***</td>
<td>.27***</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>9. Life satisfaction*</td>
<td>.15*</td>
<td>-.16*</td>
<td>.08</td>
<td>-.34***</td>
<td>-.31***</td>
<td>-.41***</td>
<td>.39***</td>
<td>.31***</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>10. Depressive symptoms*</td>
<td>-17**</td>
<td>.15*</td>
<td>-.22***</td>
<td>.33***</td>
<td>.28***</td>
<td>.42***</td>
<td>-.31***</td>
<td>-.28***</td>
<td>-.72**</td>
<td>-</td>
</tr>
<tr>
<td>11. Adaptation to vision loss*</td>
<td>.06</td>
<td>-.12</td>
<td>.32***</td>
<td>-.24***</td>
<td>-.20**</td>
<td>-.52***</td>
<td>.26***</td>
<td>.32***</td>
<td>.40***</td>
<td>-.54***</td>
</tr>
</tbody>
</table>

*Listwise correlations, \( n = 227 \).
*Female (1), male (2).
*Higher scores indicate more negative status.
*Higher scores indicate more positive status.
*\( p < .05 \); **\( p < .01 \); ***\( p < .001 \).
hypothesis that friendship support adds unique variance to adaptation after accounting for family support. For each of these analyses, variables relevant to adaptation were entered in step 1, including sociodemographic factors, vision and health status, and functional disability. Total perceived family support quality was entered in step 2, and total perceived friendship support quality was entered in step 3. Regression results, presented in Table 3, display the standardized Beta coefficients from the final step of each analysis, and the change in $R^2$ and corresponding significance level from each step.

Results for life satisfaction demonstrated that the block of sociodemographic, health, and functional ability variables entered in step 1 significantly accounted for 28% of the variance. In step 2, family support quality added a significant 5% to the total variance accounted for. Finally, friendship support quality, entered in step 3, added a significant 2% to the total variance in life satisfaction. Thus, the eight predictor variables significantly accounted for a total of 35% of the variance in life satisfaction. At the final step, five individual variables accounted for statistically unique variance in life satisfaction. Participants who had better self-rated health, better functional vision, less functional disability, higher total perceived support quality from closest family member, and higher total perceived support quality from closest friend had greater life satisfaction.

For the regression analysis of depressive symptoms on predictor variables, the block of variables entered in step 1 accounted for 27% of the total variance. Family support quality, entered in step 2, predicted an additional 2% of the variance in depressive symptoms, and friendship support quality, entered in step 3, accounted for an additional 1% of variance. Thus, 30% of the variability in depressive symptoms was accounted for by these variables. At the final step, the five variables accounted for unique variance in depressive symptoms (reverse relationship) as in the previous analysis.

Results for the regression analysis of adaptation to vision loss on predictor variables demonstrated that the block of variables entered in step 1 significantly accounted for 32% of the variance. In step 2, family support quality added a significant 2% to the total variance accounted for. Finally, friendship support quality, entered in step 3, added a significant 3% to the total variance in adaptation to vision loss. Thus, the six predictor variables significantly accounted for a total of 37% of the variance in adaptation to vision loss. At the final step, three individual variables accounted for unique variance in adaptation to vision loss. Respondents with higher education, less functional disability, and higher perceived friendship support had higher adaptation to vision loss scores. While family support was significant in step 2, it did not retain significance in the final step of the analysis.

**Examination of Support Components by Relationship Type and Gender**

While the focus of this study is on the effect of the total perceived support received from the closest friend and the closest family member, individual support components were examined to describe the nature of the perceived support from these two providers in more detail. Because it is likely that the multiple support components received from a respondent's closest family and friend are associated, a correlation matrix of the 12 support components was examined (see Table 4). Correlations ranged from .01 to .72 with the highest associations found between guidance and attachment and between guidance and instrumental assistance for both family and friends. While similar intercorrelations have been reported by the authors of the social provision scales, empirical validation of subscales has also been provided (e.g., Cutrona & Russell, 1987). The goal of these analyses is to demonstrate how the groups defined by gender and relationship type (treated as a within-groups factor) differed in perceived support components. A multivariate two-way analysis of variance (MANOVA) was used to evaluate this question as it considers the multiple interrelated dependent variables simultaneously, without losing information concerning their joint relationships. In order to interpret the MANOVA results,
Guidance
Reassurance of worth
Attachment
Instrumental assistance
Nurturance

Univariate M-tests and F-ratios and canonical structure coefficients revealed that the significant multivariate effect for relationship type is due to the higher support components of attachment, instrumental assistance, guidance, nurturance, and reassurance of worth for family members compared to friends.

Descriptive statistics for support components are presented in Table 5 and results for the MANOVA and follow-up analyses are reported in Table 6. Results demonstrated a significant multivariate effect for gender, relationship type, and the interaction of gender and relationship type. An examination of the univariate F-ratios and the canonical structure coefficients revealed that the significant multivariate effect for relationship type is due to the higher support components of attachment, instrumental assistance, guidance, nurturance, and reassurance of worth for family members compared to friends.
close friends. The effect of attachment was especially strong. Only social integration failed to show a significant effect. The canonical structure coefficients and univariate results for gender reveal that the significant multivariate effect is largely attributable to the higher support components of attachment for females, and social integration and instrumental assistance for males. The interaction between relationship type and gender compared four groups: perceived friendship support for females (n = 111), perceived family support for females (n = 111), perceived friendship support for males (n = 100), and perceived family support for males (n = 100). Results demonstrated that the multivariate effect for the interaction between gender and relationship type is associated with the two support components of attachment and nurturance. For attachment, the greatest mean differences were found for friend support by gender. Females had higher scores than males for attachment from friends. For nurturance, the most prominent mean differences were found for family support by gender. Males had higher scores than females for nurturance from family members.

DISCUSSION

Study results demonstrated that the majority (70%) of the initial sample of elderly, visually impaired women and men had both a close friend and a close family member. While the results of the analyses presented can only be generalized to similar elders, comparisons of support providers can only be made if multiple providers exist. Examination of the characteristics of close friends and family members revealed that while the relationship type of the closest family member was variable, males were more likely than females to choose a spouse. This finding is not unexpected, given that not only are males more likely than females to be living with a spouse, but also, previous research indicates that men are more likely than women to view their spouse as their closest confidant (Hess & Soldo, 1985). Regarding friendship, males were not more likely than females to be lacking a close friend, but males did have more cross-gender friendships than women. This finding is similar to that reported in prior research (e.g., Wright, 1989). The majority of each group did, however, have same-gender friendships. In addition, the friendships described were generally long-term relationships (average = 28 years) with age peers.

Results for hierarchical multiple regression analyses examining the effect of kin and non-kin support on adaptation demonstrated that similar portions of total variance were accounted for in each outcome variable. After accounting for family support, friendship support predicted unique variance in all three outcome variables. Visually impaired elders who maintain supportive later-life friendships in addition to family relationships have higher life satisfaction, fewer depressive symptoms, and better adaptation to vision loss. This finding is especially significant even though the portion of variance accounted for by support variables is not large. As in prior research examining the predictors of late-life adaptation (e.g., Kennedy, Kelman, & Thomas, 1990), the largest portions of variance were accounted for by health and functional ability variables. While support variables are important for adaptation, it is not likely that they would account for equally large portions of variance. Regarding health variables, it is important to point out that both vision status and comorbid health status, in addition to functional disability, contributed unique variance to life satisfaction and depressive symptoms. Thus, it is important to examine the effect of both specific impairments (i.e., vision loss) and general health status in addition to functional disability on later life adaptation.

Overall, a similar pattern of results was found for the two global adaptation variables, life satisfaction and depressive symptoms. Thus, family and friendship support did not have differential effects on more positive versus more negative indicators of adjustment. Results varied, however, for adaptation to vision loss. Fewer variables accounted for unique variance in this outcome variable. Better adaptation to vision loss was associated with less functional disability, higher education, and higher friendship support quality. This outcome variable was also the only one of the three that was significantly predicted by a sociodemographic variable. It is important for practitioners who work with visually impaired elders to know that low educational status is a significant risk factor for poor adaptation to vision loss. It is interesting to note the importance of friendship support quality for adaptation to vision loss as friendship, but not family support quality, predicted unique variance in this outcome variable in the final step of the analysis. Finally, it is noted that while functional disability predicted unique variance in adaptation to vision loss, vision and comorbid health status did not. Thus, the effect of chronic impairment on elders’ functional ability is most important for domain-specific adaptation. This underscores the importance of rehabilitative interventions for specific chronic impairments that focus on the restoration or maintenance of some level of elders’ functional abilities.

Finally, it is interesting to note that while bivariate comparisons indicated poorer status for females compared to males (e.g., less education, poorer health status, greater vision loss severity), gender did not predict unique variance in any of the outcome variables. Friendship and family support were significant for adaptation for both older women and men. Overall, future work examining the effect of support on adaptation to chronic impairment may account for more variability by examining additional aspects of support such as an evaluation of support adequacy, and more conflicting components of support such as overprotectiveness. Significant others may not only provide support, but also be a source of conflict and disappointment. Research evidence shows that negative exchanges with providers have an even greater effect on elders’ well-being than positive exchanges (Rook, 1990). As Rook has pointed out, assessment of positive aspects of one’s support network does not necessarily tell us anything about distress or tension also created by the network.

Hypotheses regarding the effect of relationship type and gender on individual support components were largely supported. Significant multivariate effects were found for relationship type, gender, and the interaction of these two variables. Follow-up analyses revealed that regarding effects for relationship type, as expected, scores on instrumental assistance were significantly higher for family members than friends. In addition, all other support components, with the
exception of social integration, were also significantly higher for family members than friends. While scores for social integration were not significantly higher for friends than family members, as expected, mean scores were in the predicted direction. Thus, while some support was received for predictions based on Weiss’s (1974) theory, the primacy of family support — which has been stressed by theorists such as Cantor (1979) — is clear in these findings. It is important to remember that this research specifically directed respondents to describe a close friend and a close family member. While family support scores were significantly higher for all but one support component, component scores for close friends were still relatively high.

Follow-up analyses regarding interaction effects revealed that the hypothesis that friendship attachment scores would be higher for females than males received support. In addition, there was a significant main effect for attachment with females reporting higher scores than males for both family and friend relationships. The hypothesis that males would have higher friendship support scores than females for social integration received partial support as there was a significant main effect for gender for this variable. Males had significantly higher scores than females for social integration in both friend and family relationships. Thus, while females perceived more attachment from their close relationships, males perceived greater social integration from their close relationships. These gender effects coincide with prior research in this area, and demonstrate that these effects are seen in both kin and non-kin relationships.

An additional significant interaction was found with males reporting higher scores than females for nurturance (feel that one is needed by others) from close family members. This is a reasonable finding, since more males than females described their spouse as their closest family member. Finally, an additional main effect for gender was found with males reporting significantly higher scores for instrumental assistance than females for both friend and family support. Males perceived the availability of a greater amount of instrumental assistance from their close relationships. In sum, while overall perceived levels of kin and non-kin support did not vary by gender, examination of individual support components revealed several important differences.

Overall, there has been little empirical work regarding the factors that predict better adaptation among older visually impaired persons. This study has demonstrated the importance of vision loss severity, comorbid health status and functional disability, along with sociodemographic factors such as education for adaptation to vision loss. Importantly, this study highlighted the unique importance of friendship support after accounting for family support in adjusting to vision impairment. Descriptive information on support components showed that participants perceived greater support from close family members than close friends. Yet, perceived friendship support played a significant role in their adaptation to later life impairment.

One limitation of this research is its cross-sectional nature. Due to the dynamic nature of social relationships and the complexity of the process of adaptation, longitudinal research is needed. The latter would be especially important for studying issues of substitution of kin and non-kin providers over time as one’s relationship with particular providers may change or terminate. Future research on adaptation to chronic impairment may gain a broader picture of support utilization by examining the effect of support receipt over time and by examining the support of multiple providers (not just elders’ closest friend and family member). As Cantor (1979) has stressed, having a close relationship with support providers ensures meaningful support both in times of crisis and on an ongoing basis. However, given the increased support needs of chronically impaired elders, better adjustment may be associated with the ability to garner support from multiple network members regardless of whether the person is a confidant.

While a significant portion of variance in adaptation variables was accounted for, future research may focus on the identification and inclusion of additional factors that may affect adaptation to late life chronic impairment. As mentioned previously, support can sometimes be a double-edged sword (e.g., Antonucci, 1990; Rook, 1990); thus, the effect of negative aspects of support on elders’ mental health should also be accounted for. In addition to social resources, future research should also examine the effect of personal resources such as coping strategies (Lazarus & DeLongis, 1983) and perceived control (e.g., Krause, 1987; Schulz & Williamson, 1993) on adaptation outcomes. Also, the examination of rehabilitative interventions on adaptation outcomes is important. For visually impaired elders, vision rehabilitation training can facilitate learning how to utilize remaining vision to recover lost functional abilities (e.g., learn to use the stove safely). Utilization of such services affects life quality and promotes successful adaptation to chronic impairment (Horowitz et al., 1994). Examination of personal and formal resources in addition to multiple social resources received from multiple providers may provide an even fuller picture of adjustment to chronic physical impairment in later life.

ACKNOWLEDGMENTS
This research was supported by National Institute of Mental Health grant R03 MH-46596.

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Received July 5, 1995
Accepted March 18, 1996