

The Role of Cognitive Status in the Use of Inhome Services: Implications for Nursing Assessment

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Le lien entre l'état cognitif et l'utilisation des services de soins à domicile par les aînés et par leurs soignantes naturelles a reçu peu d'attention sur le plan de la recherche. L'objectif de cette étude était de déterminer s'il existe une association entre l'état cognitif et l'utilisation des services de soins à domicile par les aînés et par leurs soignantes naturelles identifiées ($N = 380$). Une version modifiée du modèle d'utilisation des soins de services conçu par Andersen-Newman a été élaborée dans le but de faciliter l'analyse des données et leur comparaison aux résultats d'autres recherches. Des données provenant du Manitoba Study on Health and Aging-1 (MSHA-1) ont été analysées, en utilisant la modélisation hiérarchique de régression logistique. Des aînés appartenant à trois catégories d'états cognitifs — un état de démence, une perte cognitive sans troubles de démence, et un état libre de troubles cognitifs — ont fait l'objet d'une étude. Quatre types de services à domicile ont également été examinés, soit des services d'entretien ménager, de soins infirmiers, de soins personnels et de repas à domicile. L'étude a démontré qu'il existait peu de lien entre l'état cognitif et l'utilisation de soins à domicile. Les résultats soulèvent des implications en ce qui a trait à l'évaluation menée par les infirmières quant à l'admissibilité, telle qu'établie par les politiques de soins à domicile.

The link between cognitive status and use of home-care services by elders and their informal caregivers has received limited research attention. The purpose of this study was to determine whether an association exists between cognitive status and inhome service utilization by elders and their identified informal caregiver ($N = 380$). A modification of the Andersen-Newman health service utilization model was constructed to facilitate analysis and comparison with other studies. Data from the Manitoba Study on Health and Aging-1 (MSHA-1) were analyzed using hierarchical logistic regression modelling. Elders of 3 types of cognitive status — dementia, cognitive loss without dementia, and no cognitive impairment — were studied; 4 different inhome services — homemaking, inhome nursing, personal care, and home-delivered meals — were examined. The study revealed a weak association between cognitive status and use of inhome services. The findings raise implications for eligibility assessment by nurses and home-care policy.

Research suggests that the problems experienced by caregivers of an elder with cognitive impairment are unique to the memory-impaired and cannot be generalized to caregivers of an elder with no cognitive

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impairment (George & Gwyther, 1986; Issacs, Livingston, & Neville 1972). The behavioural manifestations, the unpredictability of the behaviour, and the progressive global deterioration can affect the caregiver-elder relationship and increase several forms of caregiver strain, including psychological distress and physiological problems (Clipp & George, 1990; Collins, Stommel, Wang, & Given, 1994; Diemling & Bass, 1986; Kiecolt-Glaser et al., 1987; Moritz, Kasl, & Berkman, 1989; Vitaliano, Scanlan, Krenz, Schwartz, & Marcovina, 1996).

In spite of the apparent psychological and physiological strain many experience when caring for an elder with cognitive impairment, relatively little is known about whether cognitively impaired elderly persons and their caregivers use formal services differently from those who are not cognitively impaired and their caregivers. Several studies comparing elders with dementia and elders with no cognitive impairment have found that those with dementia are likely to use a greater number of services (Bass & Noelker, 1987; Beattie, Tuokko, & Hertzman, 1994; CSHA, 1994; Penning, 1995). However, these studies do not differentiate dementia from cognitive loss without dementia.

There is a paucity of literature on the association of use/non-use of inhome services and cognitive status, particularly as influenced by dementia. The findings of this present study raise questions pertaining to the targeting of services, the nature of assessment, and family needs.

Review of the Literature

Studies examining the association of cognitive status with use of home-care services are limited in number, and their findings do not provide direction for policy-makers and nurses. Results are inconsistent. Nonprobability sampling techniques of people presently enrolled in a health or social program, differing measurements of community services, and the variation in measuring "use" are some of the issues limiting adequate comparisons across studies (Collins et al., 1994; McAuley & Arling, 1984; Wan & Arling, 1983). Furthermore, there are challenges to the standardization of cognitive impairment, such as lack of consensus on the signs of age-associated memory changes and those of mild or early cognitive impairment, the diagnostic criteria used, and the discrepant views of dementia across clinicians and researchers (Biegel, Bass, Schulz, & Morycz, 1993; Branch et al., 1988; Jeans, Helmes, Merskey, Robertson, & Rand, 1987; Plugge, Verhey, vanEverdingen, & Jolles, 1991).

The role of impaired cognition in the use of community services is unclear. Cognitive status has been a predictor of use of community services when the outcome variable is operationalized as "volume" — for example, in the number of services used or the number of service hours used once formal care has been instituted (Bass & Noelker, 1987; Bass, Looman, & Ehrlich, 1992; Hanley & Wiener, 1991; McAuley & Arling, 1984). Cognitive impairment is significantly associated with increased likelihood of using more types of service (McAuley & Arling) or using a greater number of services (Bass & Noelker; Hanley & Wiener). Bass et al. found that cognitive status did not have a direct effect on the number of hours of health-service use during a 2-month period, but that it exhibited a modifying effect by interacting with five variables: living arrangement, secondary helpers, depression, emotional strain, and task burden.

Clearly, the findings are inconsistent regarding the influence of cognitive status when service use is defined as use/non-use. Several studies found that cognitive impairment was significantly associated with use of services (Branch et al., 1988; Ganguli, Seaberg, Belle, Fischer, & Kuller, 1993; Penning, 1995; Soldo, 1985). Branch et al. found that the greater the number of errors on the mental-status instrument, the greater the likelihood of home-care use. In their study, home care included the services of nurses, social workers, physicians, therapists, and homemakers/home-health aids.

In contrast, Penning (1995), using data from the national component of the Canadian Study of Health and Aging-1 (CSHA-1), studied use of specific services among cognitively impaired elder respondents. Those with higher levels of impairment (a score of 77 or less on the Modified Mini-Mental Status Examination [3MS] [Teng & Chiu, 1987]) were less likely to use homemaking than those with lower levels of impairment. Penning speculates that cognitive impairment may act as a barrier (due to the behaviour manifestations) and consequently the elder or their family may not seek help.

A number of other community service studies found no significant association between cognitive status and use of services (Coulton & Frost, 1982; Grabbe et al., 1995; Hanley & Wiener, 1991; Wan & Arling, 1983). All of these studies aggregated a number of different services into one outcome variable. All of the studies measured cognitive status differently, but each utilized one question or a single tool to determine the presence of cognitive impairment. Penning (1995), who utilized CSHA-1 data from the screening phase, constructed separate logistic

models for four services. Use of three of the services — nursing, personal care, and therapy — was not significantly associated with cognitive status. Cognitive status was determined by the score on the 3MS.

The physical needs of the elder are included as independent variables in most of the studies. Functional status, often measured as limitations in basic or instrumental activities of daily living (ADLs or IADLs), has been identified as a strong determinant of service use even when cognitive status is one of the independent variables (Branch et al., 1988; Coulton & Frost, 1982; Crowell et al., 1996; Penning, 1995; Wan & Arling, 1983).

Conceptual Framework

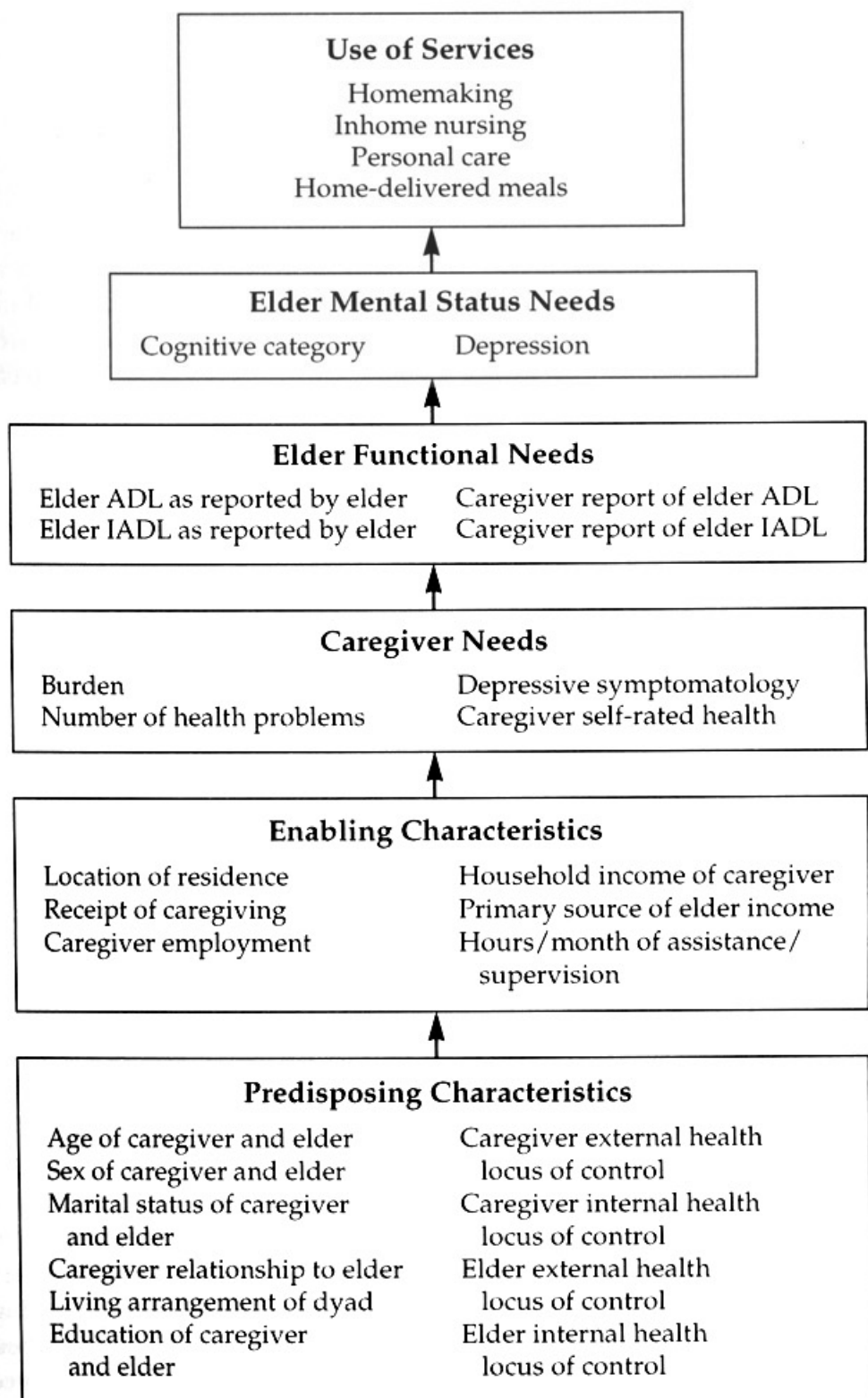
The Andersen-Newman model (Andersen, 1968; Andersen & Newman, 1973) for health-service utilization was adapted for this study in order to provide a structure for the organization of the variables and analysis of the data. The Andersen-Newman model is the most frequently applied utilization framework. It theorizes that health-service use is dependent on: (a) the predisposition of the family to use services (predisposing factors), such as age, sex, education, or health beliefs; (b) the family's ability to secure services (enabling factors), such as income or geographic location; and (c) the family's illness level (need factors), such as self-rated health or objective means; for example, diagnostic test results or functional assessments.

For this study, several adaptations were made to the Andersen-Newman model as a result of limitations cited in the literature (Figure 1). These comprised: (a) the addition of variables measuring aspects of social support, including characteristics of the elder's informal caregiver; (b) the formation of three needs categories — elder mental-status needs, elder functional-status needs, and caregiver physical and psychological needs; and (c) a focus on both the elder and the caregiver.

Research Questions

1. What categories and variables within each category of the adapted Andersen-Newman model are significantly associated with the use of each inhome service — homemaking, inhome nursing, personal care, and home-delivered meals?
2. Is cognitive status significantly associated with the use of each of the four inhome services?

Figure 1 *Adapted Andersen-Newman Model*



Adapted from: Andersen & Newman (1973).

Homemaking included assistance with cleaning, laundry, or meal preparation. Nursing included care provided by a professional nurse such as changing dressings and monitoring blood pressure. Personal care included assistance with bathing, dressing, grooming, toileting, and other personal functions. Home-delivered meals were meals delivered to the person's home such as provided by Meals-on-Wheels. The definition of the elder's "identified informal caregiver" was based upon the definition used by the CSHA-1 and the Manitoba Study of Health and Aging-1 (MSHA-1): an unpaid person, either a family member or a friend, who "was perceived by the subject (elder) or his/her family as ordinarily being the most responsible for day-to-day decision-making and provision of care to the subject" (MSHA-1 screening questionnaire), though not necessarily providing care or supervision on a daily basis currently.

Manitoba Home Care Program

Manitoba Home Care is a province-wide, no-cost-to-consumer program initiated by the provincial government in 1974 (Havens, 1996). Eligibility is based on assessment by a nurse or social worker to determine if home care is the most appropriate form of care or whether placement in a facility is indicated. No charges are levied for homemaking, personal care, or inhome nursing provided by Manitoba Health. A small user fee is charged for home-delivered meals. The four inhome services under examination were provided largely by public rather than private sources.

Data and Methodology

This study utilizes data from the MSHA-1 (MSHA Aging Research Group, 1995). This was an expansion of the CSHA-1, a national study of Canadians 65 years and older that focused on the prevalence, causes, and patterns of caregiving associated with dementia; 18 study centres in 10 Canadian provinces, including Manitoba, collaborated. The Manitoba sample used by the CSHA-1 was expanded for the MSHA-1, both to increase the sample size and to collect additional data on a number of other variables for subanalysis on the Manitoba population. The MSHA-1 sample consisted of a random sample of people 65 years and older, stratified by health region and age group with over-sampling in the older age groups. The sample was selected from those registered with Manitoba Health, which administers a provincial health-insurance program for all permanent residents of the province.

The data-collection process in the MSHA-1 consisted of four steps: a screening interview with the elderly person, a clinical assessment, a community-caregiver phase, and a risk-factor study phase. Data for this study were drawn from the first three steps.

The data of the caregiver were linked with those of their elder, as follows: (1) those who had completed the screening interview and scored 78 or greater on the 3MS examination (considered noncognitively impaired, $n = 255$); (2) those who had been categorized in the clinical assessment as having dementia ($n = 50$); and (3) those who had been categorized in the clinical assessment as having cognitive loss without dementia ($n = 75$). Dementia included Alzheimer's disease, vascular dementias, and other dementias. Cognitive loss without dementia included depression, delirium, age-associated memory loss, and other forms of cognitive loss.

Measurement and Data Analysis

Independent variables for this study were selected based on the utilization literature. The operationalization of the variables reflected forms of measurement used in previous research. Table 1 illustrates the scoring for all of the independent variables that were considered for the four dependent variables.

Descriptive statistics of all variables were obtained to provide a profile of the elders and caregivers. Multivariable analysis included a logistic regression modelling process to analyze the relationships between the independent variables and the outcome variables. Variables were considered for inclusion in the model-building based on two criteria: (a) a significance level of ≤ 0.25 from the t tests, chi-square, or Mann-Whitney U tests when the independent variables were compared with each of the outcome variables, or (b) a theoretical significance of the variables as indicated in the literature.

Separate bivariate comparisons were conducted between each of the independent variables and each of the four outcome variables. It was assumed that each type of service would have different predictors. It was necessary to perform separate tests for each outcome variable, since each dependent variable represented a different configuration of services comprising different activities intended to support specific needs. The significance level of ≤ 0.25 was based upon Hosmer and Lemeshow's (1989) suggestion that such a p value may be appropriate when models containing more variables are required to provide a more complete picture of possible models. Mickey and Greenland's (1989)

work on logistic regression indicates that 0.05 is too low and can exclude important variables from the model. They suggest that a larger level may include variables that individually have a weak association with the outcome variable but that could, when the influences of other variables are controlled for, become important predictors of the outcome.

Table 1 <i>Operationalization of Variables for Hierarchical Logistic Regression Modelling</i>	
Variables	Scoring
<i>Elder Mental Status Needs</i>	
Cognitive category	
no cognitive impairment	0 = no cognitive impairment
dementia	1 = dementia
cognitive loss	2 = cognitive loss
<i>Elder Depressive Symptoms</i>	1 = high depressive symptomatology
<i>Elder Functional Needs</i>	
ADL limitations as reported by elder	1 = 1 or more ADL limitations
IADL limitations as reported by elder	1 = 1 or more IADL limitations
ADL limitations of elder as reported by caregiver	1 = 1 or more ADL limitations
IADL limitations of elder as reported by caregiver	1 = 1 or more IADL limitations
<i>Caregiver Needs</i>	
Burden	Zarit burden scale (0 to 55)
Number of health problems	actual number (0 to 10)
Depression	1 = high depressive symptomatology
Self-rated health	1 = not too good, poor, very poor
<i>Enabling Characteristics</i>	
Location of elder residence	1 = urban
Source of caregiving	1 = assistance received from caregivers or others
Caregiver employment	1 = works for pay
Household income of caregiver	1 = medium (\$1,500–2,599) 2 = high (\$2,600–9,996) 3 = missing/don't know
Primary source of elder income	1 = other than Old Age Security & supplement
Number of hours/month of ADL/IADL supervision by caregiver	0 to 720

Table 1 (cont'd)

Variables	Scoring
<i>Predisposing Characteristics</i>	
Age of caregiver	years (26–86)
Age of elder	years (64–97)
Sex of caregiver	1 = female
Sex of elder	1 = female
Marital status of caregiver	1 = married
Marital status of elder	1 = married
Years of education of caregiver	actual number (2 to 24)
Years of education of elder	actual number (0 to 20)
Caregiver relationship to elder	1 = spouse
Living arrangement of caregiver and elder	1 = same household
Caregiver health beliefs	
Internal health locus of control	score (10 to 25)
External health locus of control	score (4 to 17)
Elder health beliefs	
Internal health locus of control	score (3 to 19)
External health locus of control	score (2 to 19)
<i>Dependent Variables</i>	
Homemaking services	1 = used
Inhome nursing services	1 = used
Personal-care services	1 = used
Home-delivered meals	1 = used
Note: ADL = activities of daily living; IADL = instrumental activities of daily living	

Hierarchical logistic regression was used to introduce the conceptual sections of the adapted Andersen-Newman framework into the models. According to Stoller (1992), this strategy reflects a decision-making process in which individuals must first perceive a need for service, then possess the ability to use the service (which can be considered enabling factors), and, finally, be predisposed to use the service (the predisposing characteristics).

The independent variables were entered in blocks. Elder Mental Status Needs were entered first, followed by Elder Functional Needs, Caregiver Needs, Enabling Characteristics, and finally Predisposing Characteristics. All variables pertaining to a particular category of the model, such as Elder Mental Status Needs, were entered simultaneously. The model chi-square and *p* values were observed. The fifth stage of the model included all five categories of the adapted Andersen-Newman model. After the fifth stage, tests for two-way interaction terms were conducted. The next stage in the model-building process included reduction of the model, using backwards stepwise

logistic regression, to include only the significant main-effects variables and the significant interaction term(s). The criterion for the removal of a variable from the model was a log likelihood ratio p value of ≤ 0.05 . Variables that did not meet this level of significance were considered to be not significant characteristics of the caregivers and their elders for that particular dependent variable.

The Final Model comprised the significant main effects and interaction terms, using the maximum number of cases for which there were no missing values for the relevant variables. Missing cases for variables that were not significant were added (for example, this still excluded missing cases for significant variables), resulting in an expanded number of cases in the model.

Results

An overview of the use of inhome services by cognitive status is presented in Table 2. A greater proportion of dyads with elders with dementia were users of all four types of services than dyads with no cognitive impairment or cognitive loss without dementia. Of the three categories of cognitive status, dyads with elders with no cognitive impairment used services the least frequently.

Overall, homemaking services were the most frequently used of all inhome services, while home-delivered meals were the least frequently used except for those dyads with an elder with dementia. Inhome nursing was used the least frequently by this latter group. The results of the hierarchical logistic regression analysis are reported in Table 3, with the beta and the log likelihood significance for the final stage for each of the four models.

Table 2 <i>Percentage of Users of Inhome Services by Cognitive Status (N = 380)</i>			
Services	No Cognitive Impairment (n = 255) %	Cognitive Loss (n = 75) %	Dementia (n = 50) %
Homemaking	29.80	45.30	56.00
Inhome Nursing	5.90	14.70	24.00
Personal Care	11.80	17.30	42.00
Home-Delivered Meals	5.10	9.30	28.00

Consistent with the literature, cognitive status emerged as only weakly related to use of services, but it was significantly associated with the use of personal-care services. Dyads with an elder with dementia were more likely to use personal-care services than those with a noncognitively impaired elder. There was no significant difference in the likelihood of using personal-care services between elders with cognitive loss without dementia and those with no cognitive impairment. Cognitive status was not significantly associated with the use of homemaking, inhome nursing, or home-delivered meals.

The category of the modified Andersen-Newman model that demonstrated the most powerful effect on use of services was Elder Functional Needs. This finding confirms results of previous studies that found functional status of the elder to strongly influence use of community services (Chappell & Blandford, 1987; Coulton & Frost, 1982; Crowell et al., 1996; Shapiro, 1986). At least one of the functional-status variables was significant for each of the outcome variables. The greater the number of ADL or IADL limitations in the elder, as reported by the elder or the caregiver, the greater the likelihood of using the specific service.

The Caregiver Needs category was significantly associated with the likelihood of using homemaking, inhome nursing, and personal care. However, overall it was a less powerful indicator of inhome service use than the Elder Functional Needs category. Each of the caregiver-need variables was significantly associated with only one of the outcome variables.

Enabling characteristics refers to the resources of the dyad, which can inhibit or promote service use. Employment status of the caregiver, availability of assistance for the elder, and number of hours of care provided by the identified caregiver to the elder were each significantly associated with only one of the inhome services. Three Predisposing characteristics were significantly associated with the use of the four inhome services: elder age, living arrangement of the elder, and caregiver health beliefs, specifically internal locus of control. These three categories of variables did not emerge as powerful determinants of inhome service use.

One interaction term was significantly associated with use of personal-care services: elder self-report of one or more ADL limitations and caregiver level of burden. The impact of the level of caregiver burden on the likelihood of use of personal-care services was influenced by the elder's self-report of ADL limitations. The level of burden affected the likelihood of this service being used less when the elder reported one or more ADL limitations than when the elder reported no ADL limitations.

Table 3 *Logistic Regression of Use of Each Inhome Service by Significant Variables in Final Models*

Variables	Homemaking			Inhome Nursing			Personal Care			Home-Delivered Meals		
	B	Log LR sig.		B	Log LR sig.		B	Log LR sig.		B	Log LR sig.	
<i>Elder Mental Status</i>												
Cognitive status		ns			ns			.01			ns	
Dementia vs. no cognitive impairment							1.44					
Cognitive loss vs. no cognitive impairment							-.04					
Depression		ns			ns			ns			ns	
<i>Elder Functional Status</i>												
ADL limitations according to elder	1.23	.00		1.86	.00		4.03	.00			ns	
IADL limitations according to elder	.86	.01			ns			ns			ns	
ADL limitations according to caregiver		ns			ns			ns		1.50	.00	
IADL limitations according to caregiver		ns		7.38	.00			ns		6.93	.01	
<i>Caregiver Needs</i>												
Burden		ns			ns		.10	.00			ns	
Number of health problems	.20	.00			*			ns			ns	
Depression		ns		1.07	.01			ns			ns	
Self-rated health		*			*		-2.26	.01			ns	
<i>Enabling Characteristics</i>												
Urban or rural		*			ns			*			ns	
Source of assistance/supervision	1.75	.00			ns			ns			ns	
Number of hours of assistance/supervision by caregiver	-.01	.02			*			ns			*	
Caregiver household income		ns			ns			*			ns	
Elder primary source of income		*			*			*			ns	
Caregiver employment		ns			ns		-1.10	.01			ns	

Table 3 (cont'd)

Variables	Homemaking		Inhome Nursing		Personal Care		Home-Delivered Meals	
	B	Log LR sig.	B	Log LR sig.	B	Log LR sig.	B	Log LR sig.
<i>Predisposing Characteristics</i>								
Caregiver age	ns		ns		ns		*	
Elder age	.06	.00	ns		ns		.10	.00
Caregiver sex	*		*		*		*	
Elder sex	ns		ns		ns		ns	
Caregiver marital status	ns		*		ns		ns	
Elder marital status	ns		ns		ns		ns	
Caregiver years of education	*		ns		ns		ns	
Elder years of education	*		*		ns		*	
Living arrangement of elder					ns			
Caregiver external health locus of control	-.85	.01	-1.23	.01	-2.54	.00	-1.02	.03
Caregiver internal health locus of control	*		*		*		*	
Elder external health locus of control	*		ns		.17	.01	.22	.00
Elder internal health locus of control	*		ns		ns		ns	
Elder internal health locus of control	*		*		ns		*	
<i>Interaction Terms</i>								
Source of assistance/supervision by living arrangement of elder	none sig.		none sig.		-.08	.01	none sig.	
<i>Model Chi-square</i>	133.98		64.12		153.45		58.53	
<i>d.f.</i>	7		4		9		5	
<i>p value</i>	<.001		<.001		<.001		<.001	
<i>n</i>	378		377		378		377	

Note: "ns" refers to those variables that were not significant after the stepwise backwards logistic regression was conducted to reduce the model to its significant main effects and interactions; * refers to those variables that did not meet the inclusion criteria for the logistic modelling process.

Discussion

This study sought to examine the relationship between elder cognitive status and the use of inhome services by the elder and their identified informal caregiver. Overall, the cognitive status of the elder was not a predictor of use of homemaking, inhome nursing, and home-delivered meals. It was, however, significantly associated with the use of personal-care services. It is interesting to note that those with dementia were more likely to use personal-care services than those with no cognitive impairment. A number of researchers have acknowledged that the personal-care needs of a cognitively impaired elder are one of the most stressful demands for caregivers. A survey of caregivers providing care to a family member with dementia (Chenoweth & Spencer, 1986) found that assistance with physical care and/or constant supervision was identified the most frequently as a major problem. Particularly troublesome were physical-care problems associated with feeding and eating, incontinence, and sleep disturbances. The literature describes bathing as a confusing event that can precipitate catastrophic reactions (substantive emotional reactions) in dementia patients (Foltz-Gray, 1995; Mace & Rabins, 1981; Namazi & Johnson, 1996; Sloane et al., 1995). Because of the agitated behaviour that can be exhibited by an elder with dementia when receiving personal care, family members may request assistance from people trained to deal with such situations.

No difference in use of personal-care services was identified between dyads with elders with cognitive loss without dementia and dyads with elders with no cognitive impairment. This may be due to the nature of the diagnoses that make up the cognitive-loss-without-dementia category. Cognitive loss may include mild cognitive impairment or forms of cognitive impairment, such as depression, without behavioural manifestations. In such cases, the elder may still be able to carry out personal-care functions.

The lack of significant association of cognitive status with the three remaining outcome variables confirms the findings of several previous community service utilization studies (Bass & Noelker, 1987; McAuley & Arling, 1984; Montgomery, Kosloski, & Borgatta, 1988–89). There are several possible explanations for the lack of association. These relate to methodological issues and previous research citing reasons families have given for not using services.

One explanation for lack of a strong association between cognitive status and use of services may relate to the diagnosis or categorization

of respondents according to a disease state, and the possibility that cognitive test score or diagnosis are not the most accurate methods for measuring cognitive status when studying its impact on use of services. A more appropriate means might be a tool for measuring the behavioural manifestations associated with cognitive status as well as the effects on caregivers such as how they handle the elder's reduced communications skills and the disruption in family routine.

A second explanation may be that the services studied do not respond to the needs of a dyad when the elder has cognitive impairment. The services that have been studied tend to be directed toward physical or functional problems rather than cognition ones. Certainly these services are relevant for a cognitively impaired individual, since these abilities are affected by cognitive status; however, they do not directly address cognitive-impairment needs, such as supervision or diversion from repetitive or harmful activities.

A further consideration is the sensitivity of the cognitive testing used in the MSHA-1. The testing conducted in the CSHA-1/MSHA-1 to arrive at a cognitive categorization can be considered close to the "gold standard." The majority of the studies that have included cognitive status as a factor have not demanded such a rigorous process. However, despite the rigorous testing in the clinical phase for those with cognitive impairment, some false positive cases will exist. False negative scores will also be present for those who underwent the single cognitive test during the screening phase.

Other reasons for non-use of community services have been identified by caregivers or elders themselves. Caserta, Lund, Wright, and Redburn (1987) found that the most frequently offered reason was lack of need at the time. In a descriptive study exploring reasons for non-use of community health services, conducted with informal caregivers of elders with Alzheimer's disease (Hamilton, Braun, Kerber, Thurlow, & Schwieterman, 1996), one of the reasons caregivers gave for not using a home-health agency or Meals-on-Wheels was that they did not require the services.

Researchers and other professionals have reported a reluctance by families to use community services until the elder's health is so severely limited that care can no longer be handled by the informal support system alone (Chappell & Guse, 1989; Soldo & Manton, 1985; Stone, Cafferata, & Sangl, 1987); families view formal services as a last resort (CSHA, 1994). Other reasons cited in the literature include: the family's perception that caregiving is a familial responsibility, the unavailability of trained personnel, the embarrassment of having a cognitively

impaired family member, and lack of knowledge of available services or how to access them. A final speculation of the author is that behaviour related to cognitive impairment is unpredictable, with specific events sometimes acting as stimuli to create a behavioural disturbance. The unpredictability of the symptoms may influence the types of services that are used, and when they are used.

Implications for Nursing

The services under study were functionally oriented, and functional status was a strong predictor of these services. However, they do provide assistance with some of the functions that elders with cognitive impairment may have difficulty with. It is hard to know whether the weak association between cognition and use of inhome services rests primarily with policy or with family concerns.

Do families know the services are available? Silverstein (1984) found that respondents who had learned of the services through formal supports were more likely to use them than respondents who had learned of the services informally. The nurse has an important role to play in informing people about resources, those available through voluntary organizations as well as services available through publicly funded bodies. Health teaching on the benefits of such services should be incorporated into the nurse's initial family assessment.

If services are not being used because of lack of awareness, wider dissemination of information about the services, their purposes, their benefits to the family, and access to them may be warranted. Such strategies tend to raise the anxiety level of policy-makers, who fear that "advertising" the services will transfer responsibilities from the family to the public domain. However, the evidence from Manitoba, the United States, and Europe is that the amount of care provided by the informal system does not decrease with the introduction of a no-cost-to-user home-care service (Havens, 1996).

There is some suggestion in the literature that families believe they do not need these services. Caserta et al. (1987) asked caregivers of elders with dementia to identify their reasons for not using available services. The most frequently given reason was lack of need. Is this because the services were not relevant for them? If so, perhaps nurses should be asking families, "How can I help you most in caring for your spouse (or parent)?" This might inform the nurse of the family's perceived needs and help guide the nurse in planning interventions.

When a family hesitates to obtain formal assistance, or refuses assistance, the nurse should carefully and thoroughly determine whether the caregiver or elder has a realistic perception of their stress level and coping abilities. Does the family understand the progressive nature of the cognitive impairment and the extent to which it can interfere with the caregiver's physical and mental health? Is the family aware of the dependency needs and safety issues that will arise? Discussions with the family about their coping methods should be included in all caregiver and elder assessments. Discussion of possible scenarios, and the strategies the caregiver or elder would use in coping with them, might be helpful to the family in considering the future and helpful to the nurse in determining the family's problem-solving abilities.

In their decisions to enlist clients for home-care services, nurses are influenced by the policies of their employer. If the agency's mandate is to provide a minimal amount of assistance to help the elder remain in the community, the nurse needs to consider the implications of this minimal support for both the caregiver and the elder. The expectation that the family provide most or some of the care could jeopardize the health of the caregiver or elder. The responsibility may place greater stress on the informal support system and create a demand for other family members to assume a caregiving role. Family members may be providing moderate-intensity or high-intensity care. Periodic assessment and ongoing support is crucial. Information about other available services, strategies for dealing with behavioural manifestations, and anticipatory teaching are also important. Nurses could maintain an "at risk" file of families who refuse services or who, in the estimation of the nurse, will have difficulty managing with minimal formal assistance. Such elders would not be formally admitted to a home-care program, but their name would be retained in a file so that the nurse could contact the family in future to see how they are coping. The aim would be to prevent the family from becoming burnt out and entering a crisis, by offering support and reminding them that services are available.

Flexibility may be required to let the system respond to sporadic behavioural disturbances. Rather than having to arrange for respite several days or weeks in advance, families should have access to services on short notice and intermittently, according to need. Services should be based on client need rather than on the planning and structural needs of the organization.

Does the nursing assessment for home-care eligibility include an adequate assessment of cognitive status? The use of a single mental-

status test to determine cognitive impairment is inadequate, according to this author. Questions regarding the behaviour of the elder and the onset and progression of symptoms should be included in the interview. The effects of the behaviour on the elder's ability to perform basic functions should be determined. The effects of the behaviour on the informal caregiver cannot be overlooked.

In conclusion, home-care services must be tailored to the requirements of families of elders with cognitive impairment. The majority of these families do not use formal services. The small number of families that do use them are utilizing one of the cheapest forms of health-care services available. The fear of extensive overuse and abuse of health-care services is not substantiated in the literature. Nursing has an important role to play in promoting the caregiving relationship and reducing the stress and strain that accompany it.

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