



Predictors of Life Satisfaction in Stroke Survivors and Spousal Caregivers After Inpatient Rehabilitation

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KEY WORDS

caregiver
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A global measure of life satisfaction has become increasingly important as an adjunctive outcome of healthcare interventions for people with disabilities, including those caused by stroke. Life satisfaction of stroke survivors may affect caregiving spouses, as well. The purpose of this study was to identify, among many physical and psychosocial variables, specific variables that were associated with life satisfaction at 12 months after discharge from inpatient rehabilitation, and variables that were predictive of life satisfaction 1 year later (at 24 months). Between 12 and 24 months, life satisfaction decreased for stroke survivors, while it increased for caregiving spouses. The relationship between the couple (mutuality) was the only variable that was a significant predictor of life satisfaction for both stroke survivors and their spouses.

Almost 6 million stroke survivors are alive today in the United States; most of them live at home with family (American Heart Association, 2008). Increases in survivorship often are accompanied by physical, psychosocial, affective, and cognitive disabilities that affect life satisfaction of people who have had a stroke and their family, especially their spouses. A 2006 National Stroke Association survey of long-term stroke survivors found that 87% of subjects had ongoing motor problems, 54% had difficulty walking, 52% had difficulty with hand movements, and 58% experienced spasticity (Jones, 2006). Continuing disabilities significantly decrease survivors' life satisfaction and the life satisfaction of their spouses.

As a result of new rehabilitation techniques and a change in our understanding of brain plasticity, nurses now care for stroke survivors who receive therapy not only immediately after their stroke, but also during subsequent hospitalizations for months and even years after the initial event. Consequently, a more complete understanding of the factors that influence a couple's life satisfaction after stroke is necessary. The purpose of this article is to report predictors of life satisfaction in stroke survivors and their spousal caregivers 12–24 months after discharge from inpatient rehabilitation.

Literature Review

Considerable literature exists on the meaning of terms such as life satisfaction, well-being, and quality of life (QOL). Ostwald provided an extended discussion of this literature (2008). There is general agreement that QOL is a complex, multidimensional concept that includes both objective and subjective elements (Lau & McKenna, 2001; Low, Payne, & Roderick, 1999). In this article, life satisfaction is defined as a global measure

of QOL that represents a general subjective appraisal of one's life and does not necessarily mean satisfaction with all aspects of life (Campbell, 1981; Diener, 1984; Musschenga, 1997). A person's subjective appraisal of life may be different from objective appraisals made by others (Veenhoven, 2000). Life satisfaction can only be understood from an individual perspective (Campbell). Although life satisfaction generally is considered to be stable (Schimmack, Diener, & Oishi, 2002), changes in health, relationships, and work have been shown to significantly decrease life satisfaction (Lucas, Clark, Gerogellis, & Diener, 2003).

A recent narrative review found that most studies report lower life satisfaction in stroke survivors and their spousal caregivers than in the general population (Ostwald, 2008). However, variations in instruments, settings, and time in recovery have led to inconsistent conclusions. Only a few studies have followed stroke survivors for longer than 12 months, and even fewer have looked at life satisfaction in their caregiving spouses. In general, decreased life satisfaction in stroke survivors most often has been reported as related to motor impairments, limitations in daily activities, persistent aphasia (Bays, 2001), and poststroke depression (King, 1996). Viitanen and colleagues (1988) reported that 61% of stroke survivors were dissatisfied with their lives 4–6 years after their strokes. Long-term stroke survivors (longer than 5 years) report stagnation in recovery of function, which is associated with decreased life satisfaction (Teasdale & Engberg, 2005).

Depression and poor life satisfaction in stroke survivors have been shown to be positively related to depression and burden in caregivers (Anderson, Linto, & Stewart-Wynne, 1995). Decreased spousal life satisfaction has been shown to be associated with a stroke survivor's

physical and cognitive impairments (Forsberg-Warleby, Moller, & Blomstrand, 2004) and a couple's lack of reintegration into normal patterns of living (White, Poissant, Cote-LeBlanc, & Wood-Dauphinee, 2006). Only 50% of spousal caregivers were satisfied with their lives "as a whole" 1 year after the stroke (Visser-Meily, Post, Schepers, & Lindeman, 2005). Spouses experienced more strain, worry, and disruption in their daily lives than adult children caregivers. For at least 1 year post-stroke, spouses of stroke survivors are at greater risk for poorer health, restricted social contacts, and poorer life satisfaction (Franzen-Dahlin, Larson, Murray, Wredling, & Billing, 2007).

In the chronic disease literature, the relationship between caregiver and care recipients (Archbold, Stewart, Greenlick, & Harvath, 1990), the meaningfulness and manageability of caregiving (Haley, LaMonde, Han, Burton, & Schonwetter, 2003), and family functioning (Palmer & Glass, 2003) have been associated with life satisfaction. Spouses of stroke survivors who had cognitive and emotional impairments were the most likely to be dissatisfied with their relationship (Forsberg-Warleby et al., 2004). In a study of stroke survivors and spouses at 12 months poststroke, Carlsson and colleagues (2007) reported that satisfaction with life as a whole and the domains of leisure and sexual functioning were most affected for both stroke survivors and spouses after a stroke. Relationship with a partner was the only domain in which stroke survivors reported greater satisfaction than their spouses.

Methods

Study Design and Sample Population

The sample for this study included 131 stroke survivors and their spousal caregivers who completed 12 months of the Committed to Assisting with Recovery after Stroke (CAREs) Study (NR005316). CAREs was a prospective longitudinal intervention study that randomized stroke survivors and their spousal caregivers into either a mild or intensive intervention upon discharge from inpatient rehabilitation. (For more information about the intervention, see Ostwald, Davis, Hersch, Kelley, & Godwin, 2008.)

CAREs participants had to be cohabitating, English-speaking couples with one member hospitalized with a diagnosis of stroke. The stroke survivor had to be at least 50 years of age, without global aphasia, with no additional major physical or psychiatric conditions (such as severe Parkinson's disease or dementia), and not on hospice. The sample was recruited between November 2001 and December 2005 from five hospitals within the Texas Medical Center, a large medical complex located in Houston. They were followed for 24 months. (For more information on recruitment and retention of the CAREs sample, see Schulz, Wasserman, & Ostwald,

2006.) CAREs was approved by the university institutional review board (IRB) and by the IRB committees of the hospitals from which patients were recruited.

Data Collection

A trained research nurse collected data from stroke survivors and spousal caregivers in their homes 12 months after discharge from inpatient rehabilitation. Caregivers completed the paper-and-pencil instruments while data were gathered from stroke survivors by interview. Data on life satisfaction were collected by telephone from stroke survivors and their spouses at 18 and 24 months postdischarge. All data were collected using standardized instruments that have proved valid and reliable. Sociodemographic data (age, gender, race/ethnicity, occupation, and educational level) were collected, and the four-factor Hollingshead scale was used to calculate socioeconomic status (SES) based on the couple's occupation and educational level (Hollingshead, 1979).

Instruments

The variables shown in **Table 1** have been demonstrated in previous studies to be related to life satisfaction in patients with chronic illnesses (Anderson et al., 1995; Archbold et al., 1990; Bays, 2001; Forsberg-Warleby et al., 2004; Haley et al., 2003; King, 1996). Only instruments measuring variables shown to be significant predictors of life satisfaction for stroke survivors or their spouses in the final models (**Table 2** and **Table 3**) are discussed below.

The Satisfaction with Life Scale (SWLS) is a 5-item scale measuring global life satisfaction and has been shown to have high internal consistency and temporal reliability (Diener, Emmons, Larsen, & Griffen, 1985). Participants respond on a 7-point scale with 1 being *strongly disagree* and 7 being *strongly agree*. All items are summed to give a total score. Higher scores indicate greater satisfaction.

The Self-Rated Health Status is a single-question subjective measure of a person's perceived health status; it has been shown to be a valid health status indicator (Idler & Benyamini, 1997; Miilunpalo, Vuori, Oja, Pasanen, & Urponen, 1997). Participants respond to the question, "In general, would you say your health is..." on a 5-point scale (1 = *excellent* to 5 = *poor*). Lower scores indicate better perceived health status.

Mutuality, a 15-item scale assessing the strength of the relationship between the caregiver and the care recipient, is measured on a 4-point scale (Archbold et al., 1990). Total mutuality scores range from 1 to 4 after averaging responses to the 15 items. High scores indicate the relationship between the caregiver and care recipient is characterized by love, shared pleasurable activities, common values, and reciprocity.

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Table 1. Variables Assessed in Linear Mixed Models for Association with Life Satisfaction (SWLS)

Model	Block	Variables
Caregiver	12-month demographic and contextual variables	Age, gender, ethnicity, socioeconomic status, caregiver self-rated health, stroke survivor function, caregiver depression, caregiver-perceived stress, caregiver burden, caregiver mutuality
	12-month mediating variables	Coping strategies, social support, caregiver preparedness
Stroke survivor	12-month demographic and contextual variables	Age, gender, ethnicity, socioeconomic status, stroke survivor self-rated health, stroke survivor function, stroke survivor depression, stroke survivor-perceived stress, stroke survivor mutuality
	12-month mediating variables	Overall perceived recovery, perceived physical ability, perceived emotional ability, perceived memory ability, perceived communication ability, perceived social participation

Table 2. Predictors of Stroke Survivor Satisfaction with Life Scores 12–24 Months After Discharge from Inpatient Rehabilitation

Variable	Estimate	df	f	p Value
Time (days)	-0.004	1, 89.9	4.43	0.04
12-month age (years)	0.09	1, 117	4.98	0.03
12-month geriatric depression scale	-0.52	1, 123	7.61	0.01
12-month mutuality score	1.71	1, 114	8.22	0.01
12-month stroke impact (emotion subscale)	0.11	1, 118	15.16	<0.01

Table 3. Predictors of Caregiver Satisfaction with Life Scores 12–24 Months After Discharge from Inpatient Rehabilitation

Variable	Estimate	df	f	p Value
Time (days)	0.002	1, 98.6	1.74	0.19
12-month self-rated health status	-1.13	1, 117	9.27	<0.01
12-month perceived stress scale	-0.27	1, 115	20.46	<0.01
12-month mutuality score	2.49	1, 112	22.62	<0.01
12-month preparedness scale	1.23	1, 127	4.48	0.04
Time x 12-month perceived stress scale	0.0005	1, 97.9	6.24	0.01

High internal consistency has been reported with Cronbach's alpha ranging from .91 to .95 (Archbold et al.; Carter et al., 1998).

The Perceived Stress Scale (PSS; Cohen & Wills, 1985) is a widely used instrument for measuring the degree to which participants perceive life to be stressful (in terms of being unpredictable, uncontrollable, and overloading) during the past month (Gallagher-Thompson, Brooks, Bliwise, Leader, & Yesavage, 1992; Gottlieb, Golander, Bar-Tal, & Gottlieb, 2001; Fredman & Daly, 1997; Keir et al., 2006; McCallum, Sorocco, & Fritsch, 2006). Participants make their ratings on a 5-point scale (0 = *never* to 4 = *very often*), with total scores ranging from 0 to 40. The scale has high internal consistency (.78) and has demonstrated moderate correlations with other measures of appraised stress.

The Geriatric Depression Scale (GDS-15) is a brief scale designed to assess depression in older adults (Sheikh & Yesavage, 1986). Items are summed for a total score; the scale has a cutoff of 4/5 for significant depressive symptomatology. The GDS-15 has a high level of internal consistency (Cronbach's alpha = 0.80), and all of the individual items are significantly associated ($p < .01$) with the total score (D'Ath, Katona, Mullan, Evans, & Katona, 1994).

The Stroke Impact Scale (SIS), Version 2, is a stroke-specific QOL instrument measuring the physical, mental, and emotional impact of stroke (Duncan et al., 1999). The SIS includes 59 questions in eight domains: strength, hand function, mobility, activities of daily living, emotion, memory, communication, and social participation. Higher scores indicate a higher QOL. The first four domains can be combined into

the SIS physical domain score. The 1-week test-retest reliability correlation coefficients for the eight SIS domains ranged from .70 to .92, with the exception of the emotion domain, which was .57 (Duncan et al.). Cronbach's alpha for the SIS emotion domain in the CARES study was .81, however.

Caregiver Preparedness is an eight-item scale measuring general, physical, social, and emotional preparedness for caregiving. Participants answer questions on a 5-point Likert scale (0 = *not at all prepared* to 4 = *very well prepared*). The responses to the eight items are averaged with scores ranging from 1 to 4. Higher scores indicate greater caregiver preparedness (Archbold et al., 1990).

Data Analysis

Longitudinal analyses of SWLS scores between 12 and 24 months were conducted with linear mixed models (Brown & Prescott, 2006). Separate models were developed for stroke survivors and their spousal caregivers. A sequential method (Tabachnick & Fidell, 2001) was used to determine factors that are significant predictors of life satisfaction from the list of variables presented in Table 1. For the stroke survivor model, demographic and other 12-month contextual variables were entered as a block to comprise the initial model. A second model was constructed by adding 12-month instrument scores for the SIS. Significant variables resulting from this second model were tested for their interaction with time (in days) to determine if their association with life satisfaction changed between 12 and 24 months. A similar process was used for the caregiver model with demographic and other 12-month contextual variables entered as a block to create the initial model. A second model was constructed by adding 12-month instrument scores for coping, social support, and preparedness to variables that were found to be significant predictors ($p < .05$) of life satisfaction in the first model. The procedure for determining the final model for spousal caregiver life satisfaction was the same, except in the final model the 12-month PSS values were centered to their mean value (13.2). To improve interpretability of the caregiver models, the values for time were centered to the midpoint of follow-up (179.5 days). The final model included only those variables and interactions with $p < .05$. All statistical analyses were performed using SAS for Windows, Version 9.1 (SAS Institute, 2004).

Results

Participant Profile

Among the stroke survivors in this sample, 77% were men. Considerable diversity existed in terms of age, ethnicity, and SES (Table 4). Although the average age of spouses was 63 (ages ranged from 41 to

Key Practice Points

1. Younger stroke survivors may experience more difficulty regarding social issues, including loss of work and child care, that may negatively affect their life satisfaction.
2. Preparing for the caregiving role is not a one-time event; as the needs of the stroke survivor change, spousal caregivers require ongoing information and support.
3. The quality of the relationship is the only predictor of life satisfaction for both stroke survivor and spousal caregiver.
4. Nurses must help couples surviving stroke assess their strengths and challenges in terms of marital relationship, family support, and lifestyle priorities.

86 years), minorities comprised 42% of the sample, with almost equal numbers being African American and Hispanic, which is representative of the Houston area. In addition, participants came from a wide range of socioeconomic backgrounds, with a range on the SES scale of 13–66 and a mean of 43.5.

Life Satisfaction Changes Over Time

Mean scores on the SWLS show changes in the opposite direction for stroke survivors and their spouses (Figure 1). The life satisfaction scores of stroke survivors decreased from a mean of 23.79 ($SD = 6.62$) at 12 months to a mean of 22.42 ($SD = 6.73$) at 24 months, demonstrating a significant decrease over the 12-month follow-up. Life satisfaction scores for caregivers showed a trend in the opposite direction, however, with an increase in satisfaction from 24.25 ($SD = 6.73$) at 12 months to 25.16 ($SD = 5.94$) at 24 months. The difference in scores between spouses widened from being almost identical (0.46 points difference) at 12 months to being almost 3 points different (2.74 points) at 24 months.

Predictors of Life Satisfaction in Stroke Survivors

Linear mixed model analysis of 12–24-month stroke survivor scores on the SWLS can be seen in Table 2. A significant decrease in life satisfaction occurred between 12 and 24 months ($p = .04$). The presence of depression at 12 months was a strong predictor of decreased life satisfaction. However, being older, having high scores on the mutuality scale, and perceiving that they were recovering emotionally from the stroke (higher SIS emotion subscores) were all predictors of higher life satisfaction between 12 and 24 months after inpatient rehabilitation. None of these associations with stroke survivor life satisfaction were found to change significantly over time.

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Table 4. Sociodemographic and Stroke-Related Characteristics of Stroke Survivors and Their Spousal Caregivers 12 Months After Discharge from Inpatient Rehabilitation (N = 131)

Variable	Stroke Survivors			Variable	Caregivers		
	n	%			n	%	
Male	101	77.1		Male	30	22.9	
African American	23	17.6		African American	22	16.8	
Asian	5	3.8		Asian	5	3.8	
Hispanic	22	16.8		Hispanic	23	17.6	
White, non-Hispanic	76	58.0		White, non-Hispanic	77	58.8	
Other	5	3.8		Other	4	3.1	
	\bar{X}	<i>SD</i>	Range		\bar{X}	<i>SD</i>	Range
Age	66.9	9.1	51.1–88.6	Age	63.0	10.6	41.1–87.1
Socioeconomic status	43.5	12.0	13–66	Socioeconomic status	43.5	12.0	13–66
Health status	2.61	0.89	1–5	Health status	2.9	1.0	1–5
Depression	3.2	2.7	0–15	Depression	2.88	2.86	0–14
Stress	10.5	7.3	0–30	Stress	13.2	7.2	0–35
Mutuality	3.3	0.7	1.3–4	Mutuality	3.0	0.8	0.5–4
SIS physical	69.1	23.1	6–100	Preparedness	2.9	0.7	0–4
SIS emotion	80.9	16.2	11–100				
SIS memory	85.0	16.2	11–100				
SIS communication	88.3	18.6	11–100				
SIS social participation	72.7	21.1	0–100				

Note. SIS = Stroke Impact Scale

Predictors of Life Satisfaction in Spousal Caregivers

Linear mixed model analysis of 12-to-24-month caregiver SWLS scores showed an improvement in caregiver life satisfaction over time (slope estimate for time of .002 per day). This increase was not found to be statistically significant, however. Caregivers who perceived their health was poorer (higher scores on the Self-Rated Health Status Scale) and perceived greater stress (PSS score) at 12 months demonstrated decreased life satisfaction between 12 and 24 months. The negative association of PSS score with life satisfaction was found to change significantly over time ($p = .01$), with the estimate of the slope (.0005) indicating that this association became less negative over time. Increased caregiver life satisfaction was associated with increased 12-month Mutuality and Preparedness scores. Those who had a good relationship with their spouse and felt prepared for the caregiving role reported higher life satisfaction.

Discussion

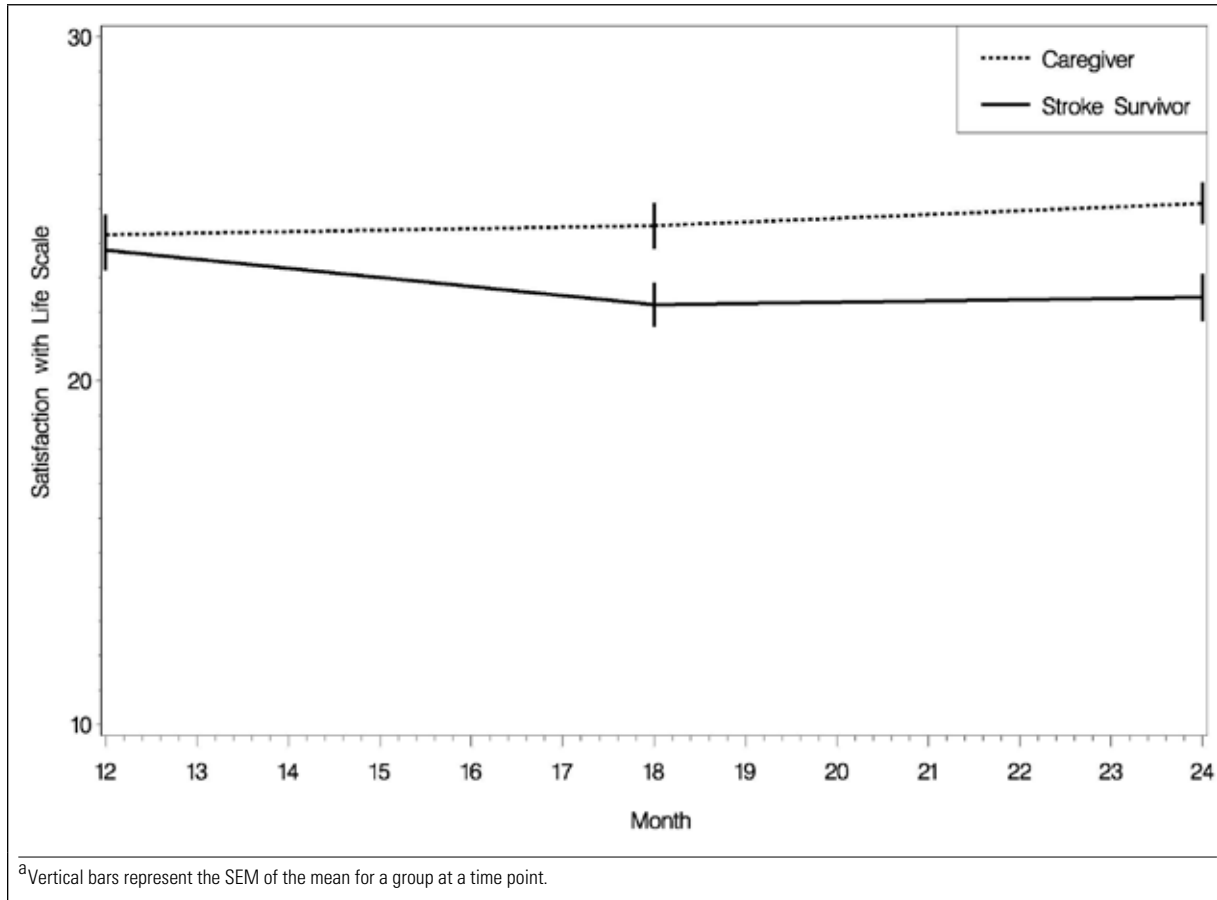
A global measure of QOL has become increasingly important as an adjunctive outcome of healthcare interventions. Satisfaction with health care and resultant satisfaction with living with a disability

or chronic disease have become issues of interest to clinicians and researchers.

Scores on the SWLS in this sample of stroke survivors at 12 months were only slightly below the norms for older community-dwelling individuals (24.25; Pavot, Diener, Colvin, & Sandvik, 1991). Although some studies of long-term stroke survivors have found relatively high rates of life satisfaction (Lindmark & Hamrin, 1995), most studies have shown that life satisfaction norms are below those of the general population (Ostwald, 2008). The lack of large differences in this study is consistent with Campbell's (1981) assertion that most people seek to maximize their sense of well-being and perceive their life as positively as possible. Using a technique referred to as a "standard gamble," Hallan and colleagues (1999) concluded that most stroke survivors did not view stroke as an overwhelming catastrophe.

This study, however, found that between 12 and 24 months after inpatient rehabilitation, life satisfaction scores declined in these stroke survivors. Poststroke depression at 12 months was a strong predictor of poor life satisfaction over the ensuing year. This is consistent with other studies that have found a strong relationship between poststroke depression and life satisfaction up to 3 years poststroke (Bays, 2001; Löfgren, Gustafson, & Nyberg, 1999). Physical function was not a significant predictor of life satisfaction in this study, as has been reported in other studies. However, these

Figure 1. Mean Satisfaction with Life Scale (SWLS) Scores over Time for Stroke Survivors and Spousal Caregivers^a



survivors may have experienced stagnation in their physical recovery, leading to depression and decreased life satisfaction, as reported by Teasdale and Engberg (2005) in their 5–15 year follow-up. Being older was associated with a higher level of life satisfaction. Others have reported that younger survivors may have additional social issues, including work and child care, that may negatively affect their life satisfaction (Teasell, McRae, & Finestone, 2000). Rehabilitation nurses need to be alert for signs of continuing poststroke depression and advocate for pharmacological, psychological, and social therapies that may help relieve depression and increase life satisfaction.

Spousal caregivers' mean on the SWLS was identical at 12 months (24.25) to the older community-dwelling population mean, and actually surpassed the population mean at 24 months. This is contrary to other studies that have reported significantly lower life satisfaction among caregivers at 12 months compared to the general population (Forsberg-Warleby et al., 2004). For caregivers, their own health, a perception of their preparedness for the caregiving role, and the stress associated with daily life were significantly related to life satisfaction. These findings suggest that preparation for the caregiving role is not a one-time event that occurs at the time of the stroke. Over time, the needs of stroke survivors change physically and emotionally, and the health

status of caregivers may decline. Nurses encountering spousal caregivers need to continue to assess the caregiver's current knowledge, skills, and resources and provide appropriate learning opportunities and referrals. This education may focus on the caregiver's own health needs, needs of the stroke survivor, or stress-management techniques and community resources.

The only variable that was a significant predictor of life satisfaction for both stroke survivors and their spousal caregivers was their relationship. Couples who expressed a high degree of mutuality (e.g., love, enjoyment of each other) were most satisfied with their lives. This predictor did not change over time and was as strong at 24 months as it was at 12 months. Strokes occur within the context of an existing relationship, which may or may not be mutually rewarding. Although nurses cannot change a long-term marital relationship, they do need to be aware of the stresses that a stroke can place on any relationship. Research has demonstrated that physical and cognitive impairments, family dysfunction, lack of ability to communicate, and lack of ability to function socially or sexually may interfere with a couple's relationship, adjustment to the stroke, and life satisfaction (Clark & Smith, 1999; Eriksson, Tham, & Fugl-Meyer, 2005; Forsberg-Warleby et al., 2004; Korpelainen, Nieminen, & Myllyla, 1999).

Predictors of Life Satisfaction in Stroke Survivors and Spousal Caregivers After Inpatient Rehabilitation

Rehabilitation nurses need to help couples anticipate and cope with changes the stroke will cause in many areas of their lives. Although the rehabilitation team focuses on physical, cognitive, occupational, and speech therapy, nurses must also help couples access their strengths and challenges in terms of family support, their marital relationship, coping strategies, spiritual resources, lifestyle priorities, and financial and environmental challenges. Working with couples to increase long-term life satisfaction will require making realistic plans to meet short- and long-term challenges. Kautz (2007) provides excellent suggestions for ways in which rehabilitation nurses can intervene to effectively enhance intimacy among couples. Interventions to improve relationships often require an interdisciplinary effort that may include social workers, psychologists, clergy, and peer counselors, as well as referrals to community agencies and support groups.

Limitations

This study has two major limitations. First, the couples' satisfaction with life and the quality of their marital relationship were not known before the stroke, so it is not possible to know how much effect the stroke had on either life satisfaction or mutuality scores. Second, because life satisfaction was not measured until 12 months after discharge, it is not known whether life satisfaction changed in a positive or negative direction during the first 12 months after discharge. However, other studies that have looked at life satisfaction during the first 12 months have reported a negative impact of the stroke on life satisfaction of stroke survivors and their caregiving spouses.

Implications for Rehabilitation Nurses

This study has implications for rehabilitation nurses who are responsible for helping stroke survivors and their caregiving spouses experience long-term life satisfaction. Assessing stroke survivors for post-stroke depression during every encounter and providing continuing treatment may be an important strategy to increase life satisfaction. Stroke survivors who perceived that they were doing well emotionally at 12 months had higher levels of life satisfaction at 24 months, a further confirmation of the need to treat depression. Spousal caregivers who had good health felt confident about their caregiving ability, and those who reported less stress at 12 months had higher life satisfaction at 24 months. Nurses have an important role in teaching and supporting spouses in their caregiving roles and encouraging them to care for their own health. Finally, rehabilitation nurses need to be knowledgeable about stroke's effect on marital relationships and help couples identify challenges and develop realistic plans to minimize

the negative effects of the stroke and strengthen their relationship as they face life after a stroke.

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Commentary

Cathy L. Bays, PhD RN

Ostwald, Godwin, and Cron's research on predictors of life satisfaction in stroke survivors and their spousal caregivers is important because of its population and research design (see this issue's Continuing Education article on page 160). As the authors state, the majority of the approximate 6 million stroke survivors in the United States live at home with family. Moreover, strokes are the leading cause of serious, long-term disability in the United States (American Heart Association, 2009), affecting four out of five American families (National Stroke Association, 2009). This study's research design was important because few studies have followed stroke survivors for longer than 12 months, and even fewer have looked at life satisfaction in their caregiving spouses. Plus, this new study's 24-month longitudinal design included both survivors and their caregivers, which yielded a diverse sample and added to the existing body of knowledge on life satisfaction of stroke survivors and caregivers.

Ostwald, Godwin, and Cron's article identified feasible practice implications. Their suggestions for translating research into practice center around mutuality, survivor depression, caregiver preparation, and future research. Because mutuality was the one significant predictor of life satisfaction for both stroke survivors and

caregivers, assessing the quality of relationships before stroke and designing interventions that strengthen relationships are essential practice and research areas of emphasis. The authors also advocate for early intervention with depressive symptoms. The strong correlation between life satisfaction and depression in stroke survivors warrants implementation of intensive primary preventative strategies to maintain and enhance the mental health of stroke survivors before depressive symptoms arise. Expanding on the authors' recommendation, specific intensive attention needs to be given to the initial preparation for and continual refinement of responsibilities in the dynamic caregiving role. Future research that can replicate and expand this study design to begin at stroke onset, continue for 3–5 years poststroke, and include stroke survivors with nonspousal caregivers will further enhance knowledge on life satisfaction in stroke survivors and their caregivers.

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