

Care Needs and its Related Factors of Primary Caregivers of Patients Waiting for Brain Tumor Surgery

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Introduction

- Brain tumors may result in patients with different clinical manifestations, including headaches, mental and memory loss, personality change, blurred vision, unsteady gait, and limb paralysis. Even after receiving treatments, the patient may remain some sequelae, such as: paralysis, incontinence, language barriers, and cognitive function, affecting their daily living skills and may require help from caregivers 24 hours a day.
- Brain tumors not only threaten one's life, but also add burden to the family members. The patient may appear depressed and melancholy, refusing treatment due to disease progression, the fear of death anxiety and psychological reactions. They may also be unable to return to work to the workplace, increasing family burden. We need to invest quite a lot of families' long-term effort to provide proper care for these mental and economic problems.
- The primary caregivers for patients not only to provide the most important care; they are a source of psychological support for the patient.
- The primary caregivers play a very important role on reduced readmissions, medical expenses, and infection prevention and monitor of the patients.
- They often need to learn how to take care of the patient, generating a lot of care needs, but their care needs are often ignored or may not be met.
- It may not lead to effective self-adjustment and the impact of care work, thereby reducing the quality of patient care. Quality of care by primary caregivers will affect the patient's prognosis.
- Therefore, to meet the needs of primary caregivers care will help to enhance the overall quality of care, and to assist in the care of patients with primary caregivers, while maintaining the comfortable status of their physical, psychological, social and spiritual aspects, reduce morbidity.

Purpose

- The purpose of this study was to explore the care needs and its related factors of the primary caregivers for patients with brain tumor.

Method

- A descriptive, correlational study design was used.
- A total of 80 caregivers completed the questionnaires in a neurological unit of a medical center located in Southern Taiwan.
- Instruments included the Karnofsky Performance Scale, Hospital Anxiety and Depression Scales, and Supportive Care Needs Survey-Partners & Caregivers 45 (SCNS-P&C 45).
- Data were collected from March 2013 to May 2014.

Table 1. Caregiver demographic characteristics (n=80)

Variables	Caregiver (n=80)	
	mean ± SD	n(%)
age (years)		
Mean	49.51 ± 14.13	
Range	23-79	
Caregiver gender		
Male	31 (38.80)	
Female	49 (61.30)	
Education		
Primary school	16 (30.00)	
Second school	14(17.50)	
High school	33(41.30)	
Degree school	31(38.80)	
Relationship to patient		
Spouse/partner	41 (51.30)	
Parents	12 (15.00)	
Son/daughter	19 (23.80)	
Brother/sister	3 (3.80)	
others	5 (6.30)	
Chronic disease		
Yes	27 (33.80)	
No	53 (66.30)	

Table 1. Caregiver demographic characteristics (n=80)

Variables	Caregiver (n=80)	
	n(%)	
Working condition (before diagnosis)		
Yes	42 (52.50)	
No	38 (47.50)	
Working condition (after diagnosis)		
Not working	34 (42.40)	
Taking care of the patient family after getting home from work	31 (38.80)	
Resign	3 (3.50)	
Work part-time	6 (7.10)	
On leave without payment	6 (4.70)	
Care type		
Co-care with other family members	48 (60.00)	
Independent care	22 (27.50)	
Care in turn	10 (12.50)	
Length of care, hr		
All day (up 18 hours)	50 (62.50)	
12-18 hrs	12 (15.00)	
12-6 hrs	13 (16.30)	
Below 6 hrs	5 (6.30)	

Results

- The two subscales of the SCNS-P&C 45, Information Needs and Health Care Service Needs received the highest scores among the SCNS-P & C45.
- Pearson correlation analysis showed that higher anxiety ($r = .37, p < .01$) and higher depression ($r = .31, p < .05$) were correlated with greater level of care needs.
- The multiple linear regression analysis revealed that anxiety was the only significant predictor of care needs in primary caregivers of patients with brain tumor ($R^2 = 12.8\%$).

Table 2. Ten highest unmet brain tumor specific supportive care needs among cares (n=80)

Rank	Care Needs	%
1	Managing concerns about the cancer (brain tumor) coming back	92.50
2	Accessing information about the person with brain tumor 's prognosis, or likely outcome	86.30
3	Obtaining the best medical care for the person with brain tumor	81.30
4	Accessing information on what the person with brain tumor's physical needs are likely to be	80.00
5	Accessing information about the benefits and side-effect of treatment	78.80

Table 2. Ten highest unmet brain tumor specific supportive care needs among cares (n=80)

Rank	Care Needs	%
6	Accessing information about the benefits and side-effects of treatment	76.30
7	Accessing information relevant to you needs as a carer / partner	76.30
8	Addressing fears about the person with brain's physical or mental deterioration	75.00
9	Being involved in the person with brain's care, together with the medical team	72.50
10	Reduction stress in the person with brain's life	71.30
10	Accessing information about alternative therapies	71.30
SCNS-P & C domains		mean ± SD
Overall care needs		51.03 ± 16.96
1	Information need	63.80 ± 23.35
2	Psychological and emotional need	56.44 ± 22.14
3	Health-care service need	46.30 ± 17.60
4	Work and social need	46.09 ± 19.18

Table 3. Pearson correlation analysis of Care demands and continuous variable (n=80)

Psychological distress	Overall care needs
Depression ≥ 11	.37**
Anxiety ≥ 11	.31**
Patient KPS	.02
Caregiver age	-.02
Economy	-.00

Note: *** $p < .001$, ** $p < .01$, * $p < .05$

Table 4. Multiple regression analysis of important factors affecting the demands of the caregiver in patients with brain tumors (n = 80)

predictor variable	B	B SE	Beta	F	R ²	Adjust R ²
Constant	37.81	4.13		12.56**	0.139	0.128
Anxiety	1.39	0.39	0.37			

Note: ** $p < .01$, Durbin-Watson statistic : 2.18

Conclusions

- This study findings support that the primary caregivers of patients with brain tumor experience great level of care needs, especially for the information needs and healthcare service needs.
- The prominent anxiety and depression will yield higher level of care needs. Therefore, Healthcare providers should always evaluate the caregivers' care needs and emotional states, so that appropriate and adequate medical information and services could be provided on time, and in turn avoid any events that will cause or exacerbate their anxiety and depression states.
- This study can provide references for healthcare providers to future researches, clinical care, and nursing education regarding this important issue.

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