TRAJECTORIES OF RESILIENCE AND ASSOCIATED FACTORS IN CAREGIVERS OF PATIENTS WITH ADVANCED ORAL CAVITY CANCER

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Purpose

- Advanced oral cavity cancer patients received anti-cancer treatments lead to physical and psychological distress and depend on caregivers, and caregiving burden affect caregivers' resilience.

- The purposes of the study were to identify trajectories of resilience and related factors over six months in primary caregivers of patients with advanced oral cavity cancer during the survival period.

Methods

- A longitudinal prospective design.

- Study was conducted to recruited subjects from radiation outpatients department and cancer center in a medical center in northern Taiwan.

- Caregivers' caregiving burden and resilience were assessed at four time points: end of treatment, 1, 3, and 6-months after completing treatment.

- The generalized estimating equation was used to determine predictive factors of resilience.

Results

Table 1. Changes of Resilience, Caregiving Burden, Social Support, Distress, and Quality of Life (N=51)

Variable	T0[a] $\overline{X}$ (SD)	T1 (1 M) $\overline{X}$ (SD)	T2 (3M) $\overline{X}$ (SD)	T3 (6M) $\overline{X}$ (SD)	Within subject effect	
Resilience (RS)[b]	4.74(0.49)	4.75(0.51)	4.78(0.58)	4.71(0.43)	$F_{(3, 49.000)}=0.775$, p>0.05	
Caregiving Burden(CRA)[c]	3.12(0.31)	3.07(0.28)	3.05(0.32)	3.00(0.26)	$F_{(3, 49.000)}=7.903$, p<0.001	T0>T1, T2, T3
Social Support (MOS)[d]	66.17(16.01)	64.98(17.15)	65.06(16.15)	65.76(15.12)	$F_{(3, 49.000)}=0.588$, p>0.05	
Distress(DT)[e]	3.06(2.78)	2.73(2.34)	2.81(2.13)	2.85(2.10)	$F_{(3, 49.000)}=0.481$, p>0.05	
Physical-QOL[f]	48.31(7.43)	49.79(7.15)	49.84(5.93)	50.09(5.02)	$F_{(3, 49.000)}=1.602$, p>0.05	
Mental-QOL[f]	46.15(11.47)	45.93(10.90)	46.73(9.78)	47.70(9.82)	$F_{(3, 49.000)}=0.413$, p>0.05	

[a] Patients were followed from end-treatment through the first six months of completing treatment (end-treatment, 1, 3, and 6 month from completing treatment), T0=end treatment; T1=1-month after completing treatment; T2=3-month after completing treatment; T3=6-month after completing treatment; reference group was T0.
[b] RS = Resilience Scale.
[c] CRA = Caregiving Reaction Scale.
[d] MOS = Medical Social Support.
[e] DT = Distress Thermometer
[f] Physical-QOL, Mental-QOL = Medical Outcomes Study Short Form SF-12.

Results

Table 2. The GEE[a] for predicting the Overall Changes of Oral Health Impact (N=51)

Variable	Coefficient.	Std. Err.	Wald chi-square	p	[95% Conf.	Interval]
Patients' physical performance	0.011	0.0051	4.885	0.027	0.001	0.021
Patients' ADL	0.024	0.0083	8.669	0.003	0.008	0.041
Patients' IADL	- 0.024	0.0212	1.332	0.248	- 0.066	0.017
Caregivers' caregiving burden	0.228	0.1888	1.461	0.227	- 4.920	3.150
Caregivers' social support	0.009	0.0040	4.900	0.027	0.001	0.017
Caregivers' distress	0.010	0.0208	0.863	0.353	- 0.058	0.021
Caregivers' physical-QOL	0.012	0.0075	2.746	0.098	- 0.002	0.027
Caregivers' mental-QOL	0.019	0.0058	10.129	0.001	0.007	0.030
Time	- 0.007	0.0227	0.107	0.743	- 0.052	0.037
Intercept	- 0.885	2.0586	0.185	0.667	- 4.920	3.150

[a]GEE, generalized estimating equation, was based on unstructured working correlation matrix.

Results

- Resilience was slight increase from T1 to T2 and peaked at T3, and declined at T4, and the level at T3 was lower than that at T0.

- Caregiving burden declined significantly from T0 to T3.

- Primary caregiver' resilience was associated with patient' higher level of physical performance, patient' greater activity daily living, caregiver' greater social support, and caregiver' better mental-quality of life.

Conclusion

- Patient' physical performance, patient' activity daily living and caregiver' social support were associated with caregiver' resilience.

- Survivorship care plan are recommended to help cope with caregiving burden and enhance their resilience.

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