

Background

- The proportion of individuals who survive breast cancer (22%) is higher than that compared to other cancers, and breast cancer patients constitute the largest group of cancer patients who will require future care.
- Some health care professionals have recommended to use the concept of “personalized medicine” to develop cancer survivorship care plans and suggested screening patients’ needs continuously and regularly after all active cancer treatments.
- The development and validation of a simple and short version of a tool to screen breast cancer women’s needs quickly in a clinical setting are critical. This will help health care professionals to understand these women’s individualized needs and provide more appropriate care or service to them.

Objective

The aims of the study were to modify the Cancer Survivor’s Unmet Need (CaSUN) Scale to be a short form (CaSUN-SF) and then test its psychometric properties of the scale specific for breast cancer survivor in Taiwan.

Methods

By conveniences sampling, recruited breast cancer survivors were separated into 2 samples (sample 1, n=150, and sample 2, n=162).

- First, we translated and modified the CaSUN to take care of the cultural adaptation.
- Second, we used statistical methods to eliminate some items, and conducted an exploratory factor analysis using sample 1 to explore the factor structure of CaSUN-SF.
- Finally, we conducted a confirmatory factor analysis using sample 2 to confirm the structure suggested by EFA, and tested the concurrent validity and known-group validity of CaSUN-SF.

Results

Characteristics	Total (%) n=312	Sample 1 (%) n=150	Sample 2 (%) n=162	χ^2/t	p
Age Mean/SD		56.37/9.50	57.01/10.73	-0.564	0.573
Partner					
Yes	235 (75.3%)	115 (76.7%)	120 (74.1%)	0.159	0.690
No	77 (24.7%)	35 (23.3%)	42 (25.9%)		
Educational level					
Less than 9 years	113 (36.2%)	47 (31.3%)	66 (40.7%)	5.168	0.075
9~12 years	102 (32.7%)	58 (38.7%)	44 (27.2%)		
More than 12 years	97 (31.1%)	45 (30.0%)	52 (32.1%)		
Employment status					
Employed full time	102 (32.7%)	54 (36%)	48 (29.6)	4.183	0.123
Employed part time	21 (6.7%)	6 (4%)	15 (9.63%)		
No (Retired/ Home duties)	189 (60.6%)	90 (60%)	99 (61.1%)		
Monthly Household Income (USD)					
Lower (<1,000)	97 (31.1%)	42 (28.0%)	55 (34.0%)	2.176	0.537
Middle (1,001- 1,666)	75 (24.0%)	35 (23.3%)	40 (24.7%)		
Middle high (1,667 - 3,333)	91 (29.2%)	49 (32.7%)	42 (25.9%)		
Upper (>3,334)	49 (15.7%)	24 (16.6%)	25 (15.4%)		
Time since Breast Cancer Diagnosis					
Mean/SD		86.82/44.18	79.54/41.43	1.502	0.134
2-5 years	120 (38.5%)	52 (34.7%)	68 (42.0%)	1.463	0.227
>5 years	192 (61.5%)	98 (65.3%)	94 (58.0%)		
Surgical Treatment					
Mastectomy	230 (74.0%)	110 (73.8%)	120 (74.1%)	0.000	1.00
BCS	81(26%)	39 (26.2%)	42 (25.9%)		
Missing Value	1				
Breast Pathology Stage					
0-I	133 (43.5%)	65 (44.5%)	68 (42.5%)	0.058	0.810
II-III	173 (56.5%)	81 (55.5%)	92 (57.5%)		
Missing Value	6				
Adjuvant therapy					
Chemotherapy					
Yes	194 (62.2%)	86 (57.3%)	108 (66.7%)	2.502	0.114
No	118 (37.8%)	64 (42.7%)	54 (33.3%)		
Radiotherapy					
Yes	142 (45.5%)	66 (44.0%)	76 (46.9%)	0.162	0.687
No	170 (54.5%)	84 (66.0%)	86 (53.1%)		
Hormone therapy					
Yes	203 (65.1%)	105 (70.0%)	98 (60.5%)	2.692	0.101
No	109 (34.9%)	45 (30.0%)	64 (39.5%)		
Fear of recurrence (FOR) Mean/SD		4.26 / 2.96	4.20 / 2.95	0.187	0.852
Depression (CES-D) Mean/SD		4.50 / 6.19	4.38 / 6.23	0.176	0.861
Sample 1: low response rate, corrected item-total correlation, and exploratory factor analysis					
Sample 2: confirmatory factor analysis, concurrent validity, and known group validity					

	Factor Loadings				Reliability of sub-dimension in Sample 1%	Explained variance (%)
	F1	F2	F3	F4		
F1: Information					0.79/0.79	23.91%
Sign and symptom of cancer recurrence	.718					
Information related to health promotion	.690					
Information related to hereditary of disease	.655					
Information for others	.565					
Up to date information	.557					
Information resources	.535					
F2: Late/ Long-term effect					0.71/0.82	10.58%
Emotional support for me		.791				
Support partner/family		.658				
Changes to quality of life		.558				
Concerns about the cancer coming back		.525				
Changes to my body		.515				
Changes to beliefs		.466				
Manage side effects		.391				
Reduce stress in my life		.367				
F3: Communication					0.75/0.74	7.51%
Spent time for listening to feelings			.812			
Spent time for discussing disease			.725			
Ongoing case manager			.575			
F4: Medical Care					0.65/0.61	8.23%
Manage health with team				.732		
Coordinated with my medical care				.673		
Complimentary therapy				.570		

		Total Unmet	Information	Side effect	Communication	Cancer care
Fear of Recurrence	r	.543***	.330***	.542***	.239**	.398***
Depression (CES-D)	r	.364***	.183*	.427***	.112	.256**
Time since Breast Cancer Diagnosis (month)	r	-.118	-.060	-.234**	.131	-.064
	t	1.69	1.41	3.48**	-1.53	-1.05
2-5 years Mean(SD)		7.62(3.99)	3.37 (1.65)	2.47(2.22)	1.32(1.03)	0.46(0.76)
>5 years Mean(SD)		6.48(4.39)	2.97(1.87)	1.33(1.83)	1.59(1.14)	0.06(0.88)
Age	r	-.246**	-.122	-.359**	.070	-.192*
	t	1.705	.170	3.838***	-1.410	.062
<50 years Mean(SD)		7.98(5.15)	3.17(1.88)	2.98(2.72)	1.28(1.11)	.54(.89)
≥50 years Mean(SD)		6.55(3.79)	3.12(1.76)	1.34(1.53)	1.55(1.09)	.53(.82)
* Values p<0.05 ; **Values p<0.01 ; ***Values p<0.001						
CaSUN-SF: Short-Form Cancer Survivor’s Supportive Care Needs (CaSUN-SF)						
CES-D: Center for Epidemiologic Studies Depression Scale						
Concurrent validity was examined using Pearson correlation (r); known-group validity using independent t test (t).						

Discussion & Conclusion

- This finding was consistent with a previous systematic review article that psychological and information needs were prevalent among breast cancer survivors.
- The extracted factor related to physician-patient communication reinforced the notion that the communication issue was an important concern among breast cancer survivors.
- Even though we considered the original structure and confirmed the structure of the CaSUN-SF by CFA, increasing sample size to be validated in the future would be suggested.