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Features of Care Burden among Caregivers of Patients with Lymphoma: A Latent Class Analysis

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BACKGROUND

With the advances in medical technology, hospitalization period of cancer patients has decreased considerably and patients spend more time with their family caregivers. Cancer patients' caregivers possibly experience many changes in various aspects of their life including physical, emotional, social, financial, and spiritual aspects which are considered as a care burden[1]. Cancer patients' caregivers show a marked heterogeneity, as they may have various combinations of symptoms.

OBJECTIVE

To explore the features of care burden among caregivers of patients with lymphoma using latent class analysis and provide a basis for giving targeted intervention according to different features.

METHODS

Totally 234 caregivers of patients with lymphoma were investigated with Caregiver Burden Inventory (CBI)[2], and latent class analysis (LCA)[3] was used to identify multimorbidity classes that may conform to clinically meaningful subgroups.

RESULTS

Latent class analysis models of best fit yielded three latent classes: "low burden group"(59%), "time burden group"(31%) and "high burden group"(10%). The first class showed a low probability of prominent care burden. Time burden group characterized by time-related burden. Caregivers in high burden group reported significantly higher scores on Caregiver Burden Inventory (CBI) than caregivers in other two subgroups.

Table 1 Latent class analysis: model fit indices comparing different cluster solutions

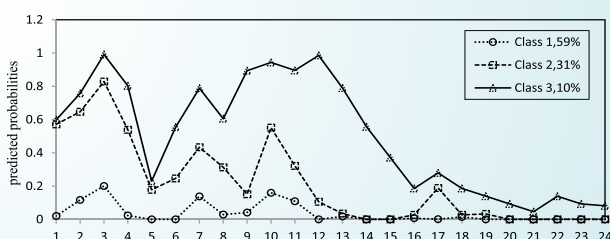| Model	AIC	BIC	aBIC	Entropy	LMR	BLRT	Class Probability
1	3820.06	3737.13	3743.99				
2	3265.82	3096.50	3110.51	0.93	<0.001	<0.001	0.67/0.33
3	3180.69	2924.99	2946.14	0.91	0.01	<0.001	0.59/0.31/0.10
4	3194.92	2852.84	2881.13	0.89	0.13	<0.001	0.63/0.14/0.14/0.09

Fig. 1 Mean item scores of 24-item CBI in the three latent classes

CONCLUSIONS

Results indicate the presence of three subgroups of care burden among caregivers of patients with lymphoma. Our findings suggest that psychological interventions could be tailored to respond to the specific subgroups of care burden experienced by each individual.

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