Patterns of the way to understand the disease status among Chinese residents: A latent class analysis

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Introduction: The patient's understanding of the disease status after illness can help patients recover better. This study was to explore a new classification about the way to understand the disease status based on the National Resident Health Service Utilization Behavior Monitoring in 2016 using latent class analysis, moreover, finding out the factors associated with different latent classes.

Methods: Data were from the National Resident Health Service Utilization Behavior Monitoring in 2016, using multi-stage stratified random sampling method. Two monitoring stations were rural and urban in Hubei province, ten communities (villages) of each monitoring station, each community (village) extracts 33 families. Latent class analysis was used to classify the way to understand the disease status after illness; Single factor analysis and multinomial logistic regression were used to find out factors associated with different latent classes.

Result: The 3-class model was the best fit for the data (AIC = 5688.138, BIC = 5870.449, Entropy = 0.823). The size of class 3 was the biggest (n = 1159, 62.5%), followed by class 2 (n = 398, 21.5%) and class 1 (n = 296 16.0%). In the single factor analysis, the domicile, education, age and whether suffering from chronic disease were associated with different classes (p < 0.001). In the multinomial logistic regression comparison in class 3, class 1 were urban residents, younger, the higher educational level residents; class 2 were more chronic residents.

Discussions: The class 3 uses face-to-face consultation to understand the disease status. Most of them are rural, low educated and older residents. Class 1 use face-to-face counseling, experience judgment and ask friends and family. Most of them are urban, high educated residents. Class 2 use various ways to understand disease status in addition to telephone consultation. Most of them are chronic patients. They have a good sense of health to use a variety of ways to understand their disease status due to their disease and primary health education. Studies have shown that chronic patients can receive better health education, they can pay more attention to disease status understanding the disease status from different ways. Though class 2 were high educated to comprehensive experience to understand the disease status, they didn’t use various ways to understand their disease status as chronic.
patients because of lacking of attention and health education. The primary health education should not only focus on the chronic patient, but for all residents.

**Conclusions:** Face-to-face consultation is the main way for residents to understand the disease status, and the use of new media such as the Internet are still a minority. Residents with chronic diseases can understand the disease status in a variety of ways.

**Lessons learned:** Health education and promotion strategies should be designed according to their characteristic of treatment-seeking behaviors, rather than "one-fit-all"models.

**Limitation:** This study didn’t associate the recover status with different patterns of residents and failed to confirm different classes of residents disease recover exist significant difference.

**Suggestions for further research:** To find out different patterns of residents’ recover have significant difference.

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**Keywords:** disease status; latent class analysis; chronic; health education promotion