The quality of discharge in the perception of anxiety disorders patients

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Abstract: Aim to explore the patients-reported quality of discharge teaching in the anxiety disorders patients and the difference between patient-received knowledge and patient-needing knowledge. Design: A cross-sectional study. Method: Anxiety disorder inpatients (N=373) was invested by questionnaires about demographics, and quality of discharge teaching from June 2015 to January 2016. Results: We obtained the average total score of Quality for Discharge Teaching Scale (124.61±32.93). Each content-needed item score was lower than relative content-received item score (P<0.01). Patients employed, at 35—49 years old, with per capita monthly income over 4000,or length of stay over 10 days got a significantly higher QTDS(P<0.05). Conclusion: Anxiety disorders patients didn't own a good quality of discharge teaching in China. Nurse didn't meet the discharge needs of patients enough, which indicated nurses should focus on patients' needs. Age, work status, per monthly income and length of stay made a difference on QDTS patients reported.

1. Background

Anxiety disorders, the most prevalent mental disorders, can cause a lot of burden. A recent study reported the global prevalence of anxiety disorders is 7.3(95% CI, 4.8-10.9%) from 87 studies across 44 countries(Baxter, Scott, Vos, & Whiteford, 2013). Up to 33.7% of the population are affected by an anxiety disorder during their lifetime (Bandelow & Michaelis, 2015).The burden contains economic costs, disability of patient, working impairment and so on. Anxiety disorders accounted for 14.6%(95% CI,11.2-18.4%) disability-adjusted life years as a second reason in mental and substance use disorders(Whiteford et al., 2013). Data from WHO's Mental Health Atlas 2014 survey(WHO, 2015) suggest that most low-income and middle-income countries spend less than US$2 per year per person on the treatment and prevention of mental disorders compared with an average of more than $50 in high-income countries.

In anxiety disorders patients, unplanned post-hospital utilization (readmission, emergency department use and unplanned clinical visit) can led heavier burden. Jencks.etl had revealed that 19.6% Medicare patients were rehospitalized within 30 days with 90% of these readmissions unplanned , which cost $17.4 billion in 2004 (Jencks, Williams, & Coleman, 2009). Within 30 days of discharge, patients may be confronted with many problems resulted in poor transition from hospital to home(Mittler et al., 2013). A substantial proportion of both parents and physicians thought the readmission was preventable (Amin, Ford, Ghazarian, Love, & Cheng, 2016).A good quality of discharge teaching is associated with a good readiness which contributes to the successful transition from hospital to home.

Discharge teaching is dominated by nurse, which provided necessary knowledge and skills patients needing. The quality of discharge teaching were significant predictors of readiness for hospital discharge(Suwan, Panuthai, Lasuka, & Khampolsiri, 2018). By surveying parents of sick children, Weiss found parent-reported discharge readiness was negatively associated with post-discharge coping difficulty and nurse assessment of discharge readiness was negatively associated with readmission (M. E. Weiss et al., 2017). During the era, hospital administrators shorted hospital length of stay to improve comprehensive efficiency of health resource (Coffey & McCarthy, 2013), which may resulted in inadequate preparation of discharge (Balaban, Weissman, Samuel, & Woolhandler, 2008; Marianne E. Weiss, Piacentine, & Lokken, 2007). In an era

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consideration to where costs can be saved is an important issue, but needs to be carefully balanced with the safety of patients. (Bradford, 2017). Therefore, assessing the quality of discharge teaching is significant to ensure patient discharge with enough skills and knowledge.

There are many studies about discharge teaching methods but there are few studies about the quality of discharge teaching patients-reported. Therefore, we conducted a cross-sectional study to explore the quality of discharge teaching patients-reported and to evaluate the difference between patient-reported knowledge and patient-needing knowledge.

2. Methouds

2.1. Aim

The study was designed by exploring the outcome of the quality of discharge teaching and the different of between patient-received knowledge and patient-needing knowledge.

2.2. Design

A cross-sectional study was performed at the psychiatric department of two tertiary comprehensive hospitals in Sichuan Province of China between June 2015 and January 2016.

2.3. Participants

In total, 373 participants diagnosed as anxiety disorders according the diagnostic criteria of ICD-10 and would go back home after at least 48h hospitalization, with clear consciousness, normal cognitive function, normal communication ability, voluntary participation with informed consents. Moreover, there were two exclusion criteria: suffering from other severe mental illnesses（schizophrenia and so on）; discharging automatic without psychiatrist's advices.

2.4. Data collection

Professor Li, a postgraduate nursing student and four psychiatric nurses comprised the research group. The postgraduate student and clinical nursed were trained by Professor Li to serve as research assistants to obtain informed consent, collect and record data. Within 48h of discharge admission, research assistants provided patients the self-administered questionnaire including patients' demographics QDTS, SAS and GSEF data.

2.5. Ethical considerations

The study was accepted by ethics committee. Informed consent was obtained from all voluntary participates. To ensure the anonymity of participants, researchers report the data in aggregate and don't report the patents' identities.

2.6. MEASURE and Validity, reliability

2.6.1. Sociodemographic variables

Here a self-administered questionnaire was used to invested gender, age, highest educational level, marital status, ethnicity, work status, per capita monthly income, domicile, insurance, living status, accessible hospital, length of stay, duration.

2.6.2. Self-Rating Anxiety Scale

The Self-Rating anxiety scale (SAS) developed by Zung in 1971 is widely used to assess the subjective feelings of anxiety, with a good validity and reliability (Liao, Zhu, & Li, 2018; Zung, 1971). It contains 20 items each of which is scored on a scale from 1 to 4. Summing up all items scores is the original total score multiplied by 1.25 to get a standard scale of 4-100. In accordance with the Chinese norms, SAS ≥50 represent diagnosable anxiety. The Cronbach's alpha reliability of SAS in our study was 0.771.

2.6.3. The quality of discharge teaching scale (QDTS).

Discharge teaching was measured by the QDTS, a 18-item scale, identified 2-factor structure (content and delivery). The “content” subscale (1-6 items) reflects the needed and received content during teaching in preparation for discharge. The “delivery” subscale (7-18 items) represents the skill of the nurses as educators. The total scale score is calculated by adding the content received and the delivery subscale scores. For the adult sample, the Cronbach’s alpha reliability coefficients for the total scale was 0.92 and for the content received and delivery subscales were 0.85 and 0.93, respectively(Marianne E. Weiss et al., 2007). The Cronbach’s alpha reliability of GSES in our study was 0.917.

2.7. Data analysis

Incomplete responses (blank more than 20%) on study questionnaires were abandoned. Statistical Package for the Social Sciences (SPSS) version 22 was adopted as the analysis device. Quantitative date obeying normal distribution are descripted by means and standard deviations, if not by medians and interquartile range (P75-P25). Qualitative date descriptive statistics include frequency and proportions. The difference of knowledge between patient-needing and patient-received was analyzed by t-test. The QDTS scores was analyzed by variance analysis. Statistical inference was used to measure the relationship among QDTS, SAS, GSEF. Statistical significance level was set at $P < 0.05$.

3. Result

A total of 373 participants were enrolled in the study. Finally, outcomes of QDTS, SAS and GSES was presented by Table 1.

Table 1

Variables	Mean±SD
QDTS	124.61±32.93
QDTS-received	35.23±15.02
QDTS-needed	48.59±10.84
QDTS-delivery	89.38±21.41
SAS	41.09±8.81
GSES	22.13±7.62

Table 2 showed the difference between items of QDTS-needed and QDTS-received. QTDS-needed scores were lower than QTDS-received in all items. Patients needs more information about self-care, self-emotion control, self-medical information than information nurses provided.

Table 2:The different between items of QDTS-needed and QDTS-received

Items	Needed	Received	T	p
1.self-care	8.36±2.45	5.50±3.51	14.56	<0.01
2.self-emotion control	8.50±2.27	5.68±3.27	15.04	<0.01
3.self-medical information	8.56±2.26	6.04±3.10	13.91	<0.01
4.self-medical practice	7.87±2.72	7.12±2.82	4.78	<0.01
5.contaction information	7.55±2.96	5.21±3.43	12.51	<0.01
6.family-care information	7.72±2.73	5.76±3.17	11.63	<0.01

Patients at 35—49 years old got a higher QTDS than patients over 50 by further LSD-test. There was no significant difference among other age groups. Patients with no job got lower scores of QDTS than the patients employed. Patients per capita monthly income over 4000 got a higher QDTS than the patients’ per capita monthly income between 1000 and 3000. Patients with length of stay at 10 days and below 10 days got lower QDTS than patients with length of stay over 10 days by LSD-test. There was no significant difference in patents’ length of stay between 11-20 days and

over 20 days. Table 3 showed the association about QDTS and patients‘characteristics in detail.

Table 3 The different QDTS varied by participants‘characteristics

Characteristics	N(%)	**Mean±SD**	F	P
Gender			0.79	0.375
Male	123(32.9%)	126.77±34.11		
Female	250(67.1%)	123.55±32.35		
Age			2.83	0.038
<=34	85(22.8%)	127.60±27.02		
35—49	116(31.1%)	129.97±32.52		
50—64	125(33.5%)	120.62±36.37		
>=65	47(12.6%)	116.62±32.12		
Highest educational level			1.35	0.250
Elementary school	77(20.6%)	119.29±30.95		
Seventh-ninth grade	91(24.4%)	128.32±37.55		
High school	79(21.2%)	121.78±30.31		
Junior College	64(17.2%)	124.08±32.27		
College or above	62(16.6%)	129.94±31.55		
Marital status			0.85	0.428
Unmarried	53(14.2%)	125.11±26.98		
Married	284(76.1%)	125.38±33.65		
Divorced or widowed	36(9.7%)	117.81±35.18		
Ethnicity			0.14	0.705
Han	319(85.5%)	124.34±33.79		
Others	50(14.5%)	126.19±27.55		
Work status			3.90	0.049
Employed	231(61.9%)	127.24±32.96		
Unemployed	142(38.1%)	120.33±32.56		
Per capita monthly income			2.48	0.044
≤1000	65(17.4%)	127.03±30.31		
1001~2000	73(19.6%)	117.18±35.71		
2001~3000	64(17.2%)	120.47±33.47		
3001~4000	78(20.9%)	124.15±31.18		
>4000	93(24.9%)	131.99±32.44		
Domicile			1.10	0.294
Rural	104(27.9%)	121.73±32.85		
Urban	269(72.1%)	125.72±32.96		
Insurance			0.95	0.330
No	37(9.9%)	119.59±27.86		
Yes	336(90.1%)	125.16±33.44		
Living status			4.50	0.035
Live alone	35(9.4%)	113.43±37.24		
Live with others	338(90.6%)	125.77±32.30		
Length of stay			4.68	0.010
<=10	47(12.6%)	138.06±30.46		
11~20	241(64.6%)	122.18±32.94		
>=21	85(22.8%)	124.06±32.82		
Duration			0.12	0.885
<=0.5	124(33.2%)	125.49±35.04		
0.5~2	88(23.6%)	123.23±33.62		
>=2	161(43.2%)	124.69±31.01		

4. Discussion

As we known, this is the first study investigating the quality of discharge teaching in anxiety

disorders. In the long term, daily but important discharge teaching can affect the outcome of patients. A lot of studies focused on effect evaluation of new health program. Few studies paid attention to the quality of discharge teaching patient-reported. From this study anxiety disorders patients didn't got a good quality of discharge teaching as well as enough knowledge related to disease.

Compared with parents of hospitalized children, anxiety disorders patients had a worse QDTS-received and QTDS delivery (M. E. Weiss et al., 2017). Another study about inpatients' QDTS in rehabilitation unit also showed a higher QDTS than this study(Knier, Stichler, Ferber, & Catterall, 2015).Compared with QDTS received subscale and QDTS delivery subscale further, delivery subscale got a higher score. Thus QDTS received subscale scored the lowest subscale score. Nurse should pay more attention to patients' health education. In hospitalization, providing information timely is an essential component of patients preparation when transitioning to home (Aydon, Hauck, Murdoch, Siu, & Sharp, 2018).

Not only health education but also the needed knowledge and skills should be valued. This study revealed patients-needing scores were significantly higher than patients-received which remind nurses to fulfill the patients' needs. Harrison thought planning for discharge from the hospital should begin early in each patient's stay and focus on the patient's needs (Harrison, Greysen, Jacolbia, Nguyen, & Auerbach, 2016).The inadequate knowledge and skills patients needing resulted in bad outcomes. A study showed that patients lacked of awareness of whom to contact after discharge is a negative factor of readmission (Auerbach et al., 2016).Only patients were educated with needed knowledge and skill, can they have a good quality of discharge teaching.

As we all knows, discharge teaching varies from patients'characters. The study also convinced that age, work status, per monthly income and length of stay were associated with QDTS patients reported. Firstly, patients at 35—49 years old got a higher QTDS than patients over 50 may result from the age-related cognition deficits. In the past years, a lot of studies have convinced age-related cognitive deficits including memory problems, executive processing dysfunction and declines in speed of processing that typify normal older adults(Reuter-Lorenz & Park, 2014). Secondly, compared with unemployed patients, employed patient gained more social supported which related to better health outcome (Boscarino et al., 2015). Thirdly, patients with per capita monthly income over 4000 got a higher QDTS than the patients' per capita monthly income between 1000 and 3000. Pre-discharge anxiety was negative association with income(Britton, 2005),which made a bad influence in patients discharge teaching. Finally,the study pointed out the quality of discharge teaching is not simply predicted by the length of stay. There was a significant difference in length of stay between ≤10 days and >10 days. For patients staying ≤ 10 nurses should assess the quality of discharge teaching more carefully. For patients staying > 10 days nurse could provide timely assessment in order to save medical resources and keep patients appropriate discharge. Our findings are consistent with the Halawi who found there were no rehabilitation gains by staying an additional hospital day beyond readiness for discharge (Halawi et al., 2015).

5. Limitation

Several limitations must be considered in interpreting our findings. Our participant sample was modest in size and was drawn from a single geographic area. An across-sectional study only showed the one point of patient-reported quality of discharge teaching. Meantime, our study didn't explore the quality of discharge teaching of various nurses. Consequently, longtime and lager sample exploration is vital to describe the quality of discharge teaching patients reported.

6. Conclusion

The study provides significant evidence on the quality of discharge teaching from patients' perception. Anxiety disorders patients didn't own a good quality of discharge teaching in China. Nurse didn't meet the discharge needs of patients enough, which indicated nurses should focus on patients' needs. Age, work status, per monthly income and length of stay made a difference on

QDTS patients reported. Offering the knowledge and skills that patients need by discharge teaching to guarantee a good readiness for hospital discharge, patients could successfully transport from hospital to home.

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