Factors Influencing Readiness for Hospital Discharge Among Thai Older Persons with Chronic Obstructive Pulmonary Disease

Natthawan Suwan, Sirirat Panuthai*, Duangruedee Lasuka, Totsaporn Khampolsiri

Abstract: Readiness for hospital discharge is an indicator of successful health and illness transition. Identification of factors predicting readiness for hospital discharge is essential to the provision of effective nursing intervention. This cross-sectional study aimed to determine the predictive power of factors on readiness for hospital discharge among older persons with chronic obstructive pulmonary disease. These selected factors included age, gender, family income, educational level, living arrangements, a sense of coherence, uncertainty in illness, previous admissions, the length of the hospital stay, care coordination for discharge, and quality of discharge teaching. The sample consisted of 207 older patients hospitalized with an exacerbation of chronic obstructive pulmonary disease at 15 community hospitals in the northern provinces of Thailand. Six instruments were used in data collection: Demographic Data Form, Sense of Coherence Scale, Mishel Uncertainty in Illness Scale, Patient Continuity of Care Questionnaire, Quality of Discharge Teaching Scale, and Readiness for Hospital Discharge Scale. Data were analyzed using descriptive statistics and hierarchical multiple regression analysis.

Findings indicated that all the predictive factors jointly explained 74.2% of the variances in readiness for hospital discharge in which living arrangements, sense of coherence, uncertainty in illness, previous admissions, care coordination for discharge, and the quality of discharge teaching were significant predictors of readiness for hospital discharge. Thus, nurses, including advanced practice nurses, should work together to develop better discharge planning to support and educate older patients with chronic obstructive pulmonary disease, and their family caregivers, to ensure they are ready for discharge and to improve their self-management.

Introduction

Chronic obstructive pulmonary disease (COPD) is a complex disease representing an important and increasing health care burden worldwide.[1] In Thailand, as in other countries, both prevalence and incidence of COPD are highest among older people.[2] The clinical course of this disease process is frequently and recurrently punctuated by episodes of exacerbations, which account for significant morbidity and mortality.[3]

In accordance with Meleis' theory of transitions, hospitalizations and hospital discharge are consistent

Natthawan Suwan, RN, PhD (Candidate) Faculty of Nursing, Chiang Mai University. 110 Inthawaroros Road, Sriphum Sub-district, Mueang District, Chiang Mai 50200, Thailand. *E-mail:* natthawan_suwan@hotmail.com
Correspondence to: Sirirat Panuthai*, RN, PhD. Assistant Professor, Faculty of Nursing, Chiang Mai University. 110 Inthawaroros Road, Sriphum Sub-district, Mueang District, Chiang Mai 50200, Thailand.
E-mail: siriratpanuthai@hotmail.com
Duangruedee Lasuka, RN, DN. Associate Professor, Faculty of Nursing, Chiang Mai University. 110 Inthawaroros Road, Sriphum Sub-district, Mueang District, Chiang Mai 50200, Thailand. *E-mail:* dlasuka16@gmail.com
Totsaporn Khampolsiri, RN, PhD. Assistant Professor, Faculty of Nursing, Chiang Mai University. 110 Inthawaroros Road, Sriphum Sub-district, Mueang District, Chiang Mai 50200, Thailand.
E-mail: totsaporn.khampolsir@cmu.ac.th

with health and illness transitions. People with COPD live through transitions from a stable state of COPD to the onset of the severe exacerbations requiring hospitalization, having a life-threatening illness, a change in health status, role changes, and changes in expectations.[4-5] Readiness assessment and preparation for transition are an essential responsibility for nurses to facilitate a healthy transition from hospital to home.[5-6]

There is a growing body of research focused on testing the relationship between the concepts of the specific transition situation of hospital discharge. In a number of studies[7-11] Meleis' middle-range theory of transitions[5] was selected as a guiding framework for identifying factors influencing the perception of readiness for hospital discharge (RHD) among different population groups in both Thailand and other countries. The discharge transition that has a lack of RHD produces negative consequences such as post-discharge coping difficulties[7] and readmission.[7, 12] In turn, feeling ready for discharge is associated with positive outcomes related to functional status.[13] Identification of factors predicting readiness and understanding a patient's perception of readiness is essential for determining appropriate timing of discharge, and subsequent post-discharge follow-up needs and outcomes, as well as providing effective nursing interventions.[7,12,14]

Based on this theory of transition, in this study patient characteristic factors including demographic characteristics, a sense of coherence (SOC), and uncertainty in illness all represented a transition conditions concept, and were adopted for testing their relationship with RHD. A review of the available evidence revealed the relationships between demographic characteristic factors and RHD.[7-8,10,12,14] Furthermore, the association between SOC[15,16] or uncertainty in illness[17,18] and health are well supported in the literature. These factors are significant enough to justify further investigation regarding the perception of RHD among people with COPD. Hospitalization factors, depicting the nature of transitions concept that were selected to be examined in this study, are composed of previous

admissions and length of hospital stay. Antecedent research findings provide evidence regarding the positive correlation between these two factors and self-management/discharge readiness.[11,16] These two factors may be significant factors influencing RHD among Thai older persons with COPD, and need to be further investigated.

The quality of discharge teaching and care coordination for discharge are proposed as significant factors influencing RHD and for establishing nursing therapeutic factors recognized in the concept of the transitions theory. Available evidence supports positive associations of quality of discharge teaching and care coordination with RHD, and they are also the significant predictors of RHD.[7-9,11] Studies relevant to patients' perceptions of RHD were conducted among culturally diverse populations, different types of diseases, and a wide range of age groups. However, we could find no existing report about factors predicting RHD in older Thais with COPD. Thus, this study attempted to determine to what extent all these factors could predict RHD among older people with COPD. Knowledge obtained from this study will be helpful for nurses in planning effective nursing intervention to promote greater RHD that leads ultimately to many positive consequences in this patient group.

Conceptual Framework and Review of Literature

As mentioned, the conceptual framework of this study was based on Meleis' transitions theory,[5-6] which includes four major concepts: nature of transitions, transition conditions, pattern of response, and nursing therapeutics. The transition conditions are conceptualized as personal, community, and societal factors, and these may facilitate or inhibit the processes and outcomes of healthy transitions. Recognized personal factors incorporate meanings, cultural beliefs and attitudes, socioeconomic status, and preparation and knowledge.[5] In this study, patient demographic characteristics

represented socioeconomic status of personal transition conditions, in which the meanings, cultural beliefs, and attitudes of personal conditions were represented by the concepts, sense of coherence (SOC) and uncertainty in illness.

Within the nature of transitions illuminating the types, patterns, and properties of the transition experiences, previous admissions and length of hospital stay, expressing an engagement in dealing with health–illness transitions were selected to reflect the nature of transitions concepts. Schumacher and Meleis[6] proposed therapeutic nursing interventions during transitions: assessment of readiness, preparation for transition, and role supplementation. Therefore, the quality of discharge teaching and care coordination for discharge involving transitional preparation were adopted as factors to investigate in this study.

Readiness for hospital discharge is defined as a judgment or perception regarding the patient's immediate state and perceived abilities that relate to managing care needs in the home environment. The patient will need to acquire such readiness in four components: their physical and emotional status, knowledge, coping ability, and expected support.[19] In light of patterns of response incorporating process and outcome indicators of transitions, RHD is postulated as the intermediate outcome of hospital to home transitions,[7-8] and as well as manifests the process indicator in terms of developing confidence and coping.[20]

A sense of coherence (SOC) refers to a person's ability to comprehend a whole situation, to find a meaning, and the capacity to use the resources available to maintain and improve the movement in the health direction.[21] Strong SOC is proposed to explicate successful coping with stressors[22] and some studies provide evidence to support the relationship between SOC and positive health outcomes,[15-16] as well as RHD.[9] Uncertainty in illness is defined as the inability to determine the meaning of illness–related events[23] that is speculated as having a negative effect on RHD. Uncertainty in illness has been associated with

impairment in health status,[17] depression and anxiety, worse quality of life, greater dyspnea,[18] and a decline in functional status[24] among persons with COPD.

Evidence from previous research studies reveals the relationships between patient characteristic factors, hospitalization factors, therapeutic nursing factors, and RHD. In an Irish study that investigated the relationship between demographic factors (age, gender, living circumstances) and RHD among patients following hip fracture surgery, results revealed that the overall perception of RHD in those living alone and with increasing age was low.[14] In two USA studies, the first revealed that living status (single and/or living alone) was correlated with a lesser score in the expected support subscale of RHD, and the knowledge subscale was higher for patients with adequate health literacy.[25] The second study found that living alone, discharge teaching of both content received and its delivery, and care coordination explained 51% of the RHD score variance in which the quality of the delivery of discharge teaching was the strongest predictor of discharge readiness.[7]

In Thailand, Sriprasong et al.[10] found that women with myocardial infarction are less likely than men to perceive a RHD, and both educational level and age together explained 13.2% of the variance in perceptions of discharge readiness. In addition, Kunthakhu et al.[9] found that the meaning and expectation of illness and quality of discharge teaching together explained 29.5% of the variance in RHD among persons hospitalized with acute myocardial infarction. A correlational study among adult persons with closed leg fracture undergoing internal fixation surgery in Thailand found that the length of stay and the discharge teaching were significantly positively related to discharge readiness.[11] Also, therapeutic nursing factors including discharge teaching and care coordination before discharge, had a positive correlation with RHD among Thai older persons who had undergone coronary artery bypass grafting.[26] This is consistent with findings from Poncharoen et al.[27] which indicated that the discharge teaching and perceived social support

were positively correlated with RHD among Thai persons with congestive heart failure.

A number of studies in Thailand have explored the relationship and predictive ability of factors on RHD. Niraso[28] found that among older people with acute myocardial infarction, there was evidence that all predictive factors together explained 34.3% of the variance in RHD, in which the quality of delivery in discharge teaching emerged as the only significant predicting factor. Among surgical hospitalized patients, teaching delivery was also identified as a significant predictor when the regression model explained 39% of the variance in RHD.[29] Another study found the quality of discharge teaching appeared to be the only significant predictor in the resulting models, accounting for 19.3% of the variance in RHD among hospitalized patients with cancer receiving chemotherapy.[30] Moreover, care coordination before discharge has been found to have a significant positive correlation with RHD in at least three studies.[28-30]

Study Aim: To examine the predictive ability of age, gender, family income, educational level, living arrangements, a sense of coherence, uncertainty in illness, previous admissions, the length of the hospital stay, care coordination for discharge, and quality of discharge teaching for RHD among Thai older persons with COPD.

Methods

Design: A cross-sectional, correlational research design.

Sample and Setting: Potential participants were purposively selected from older patients hospitalized with an exacerbation of COPD at 15 community hospitals in four provinces of northern Thailand. Inclusion criteria were: ≥60 years; able to understand and communicate in Thai; no cognitive impairment as determined by the 10-item Short Portable Mental Status Questionnaire [SPMSQ], developed by Pfeiffer (1975);[31] and no signs and symptoms or disease

complications that interfered with their ability to respond to questionnaires, such as the presence of dyspnea, coughing, chest pain, or weakness. The formulae for multiple regression analysis[32] was calculated to determine a sufficient sample size using an alpha of .05, a power of .80, and a small effect size (R^2 = .08). Thus, the required sample size was determined as 207.

Ethical Considerations: This study was approved by the Research Ethics Committee of the Faculty of Nursing, Chiang Mai University (approval number EXP-100-2557). All potential participants were provided with written and verbal information regarding the study purposes and processes, protection of their confidentiality and anonymity, any potential discomfort the study may entail, potential risks and anticipated benefits, and their rights to refuse to participate or to withdraw from the study at any time. Written informed consent was obtained from all participants prior to entering the study. For those who could not write, their thumbprints were used instead of a written signature.

Instruments:

A total of six instruments were used for data collection, described below:

A *Demographic Data Form*, developed by the principal investigator (PI), was used to collect information such as age, gender, educational level, family income, living arrangements, medical history, stages of COPD, the number of previous hospital admissions, and length of hospital stay(s).

The *Thai version of Readiness for Hospital Discharge Scale—Adult Form* (Thai RHDS—Adult Form) was used to determine participants' perceptions of RHD. The original English version of the RHDS was developed by Weiss and Piacentine (2006)[19] and Weiss et al. (2007)[7] and was translated into Thai by Sriprasong et al. in 2009.[13] The instrument comprises 23 items in two parts. The first item is a dichotomous yes/no question to determine whether a patient perceives being ready for discharge. The remaining 22 items are divided into four subscales: personal status (7 items), knowledge (8 items), coping ability (3 items), and

expected support (4 items). These items have an 11-point numerical rating scale ranging from 0 to 10, (e.g. "not ready"—"totally ready"; "know nothing at all"—"know all"; "not at all"—"extremely well"; "none"—"a great deal"). An example of an item from the knowledge subscale is "How much do you know about problems to watch for after you go home?". Total scores range from 0 to 220, obtained by summing the scores of the 22-items. The total RHDS score is categorized into three levels: low (0-73), moderate (74-147), and high (148-220).[9]

The *Thai version 29-item Sense of Coherence Scale* (SOC-29) measures sense of coherence. Antonovsky (1993)[22] developed the original 29-item SOC Scale (SOC-29) and 13-item short-form version (SOC-13). The SOC-29 was translated into Thai by Hanucharurnkul in 1989[33] and adapted by Sucamvang in 1997[34] by modifying the statements in which the respondent is asked to select a number on a 7-point Likert response format (7 = strongly agree to 1 = strongly disagree) with the statement. The scale contains 15 positive items and 14 negative items. A positive item example is "Until now your life has had very clear goals and purpose", and a negative item example is "When you face a difficult problem, the choice of a solution is always confusing and hard to find." The SOC score is between 29 and 203 with higher scores indicating a stronger SOC. The total SOC-29 score was classified into three levels including low (29-86), moderate (87-144), and high (145-203).[34]

The *Thai version 33-item Mishel Uncertainty in Illness Scale* (MUIS-33), developed by Mishel (1997),[35] and translated into Thai by Pochanart et al. (2013),[36] was used to measure uncertainty in illness. The scale consists of 33 items with each item scored on a 5-point Likert scale, where 1 = strongly disagree and 5 = strongly agree. It includes 21-verbalization of uncertainty items and 12-nonverbalization of uncertainty items, for example, "The course of my illness keeps changing. I have good and bad days." and "The treatment I am receiving has a known

probability of success." The overall score, which ranges from 33 to 165, is obtained by summing the responses to all items. Higher scores indicate greater uncertainty. The total MUIS score was categorized by the PI into three levels interpreted as low (33-77), moderate (78-121), and high (122-165) by employing a range between the minimum and maximum scores of the MUIS, divided by three.

The *Thai version of Quality of Discharge Teaching Scale—Adult Form* (Thai QDTS—Adult Form) was used to determine participants' perceptions of quality of discharge teaching. The original English version of the QDTS was developed by Weiss and Piacentine (2006)[19] and Weiss et al. (2007);[7] and was translated into Thai by Kunthakhu et al. (2009).[9] It consists of 18 items in content and delivery subscales. The content subscale contains six paired items (a total of 12 items) using a parallel format to request information about the amount of content needed and received; the delivery subscale is composed of 12 items. All items are scored on an 11-point Likert scale, with responses ranging from 0 (None-Not at all) to 10 (A great deal-Always). An example of the content subscale is "How much information did you receive from your nurses about your medical needs or treatments after you go home?" An example of the delivery subscale is: "Was the information your nurses provided about caring for yourself presented to you in a way you could understand?" The total score is calculated as the sum of scores for the content received (score range: 0-60) and the content delivery (score range: 0-120). Higher scores indicate a high quality of discharge teaching. The score interpretation of QDTS was classified into three levels according to Kunthakhu et al.'s 2009 study[9], namely low (0-60), moderate (61-120), and good (121-180).

The *Thai version of Patient Continuity of Care Questionnaire* (PCCQ) was used to measure patients' perspectives whether care is well-coordinated in terms of the relationships, information, and management. Hadjistavropoulos et al. (2008)[37] developed the original English version PCCQ with good psychometric properties.

The full version of PCCQ consists of 41 items that are separated into two sections to evaluate patient experiences of care received prior to discharge (27 items) and following discharge (14 items). Each item in the PCCQ is scored on a Likert-type response from 1 = strongly disagree to 5 = strongly agree. The before-discharge section of the instrument was selected to assess the perception of care coordination in this study. The 27-item prior-to-discharge PCCQ was translated into Thai by the back-translation procedure[38] by the PI and major advisor, with permission from the developer of the PCCQ. An item example is "I was provided with information on recommendations and restrictions in activities, exercises and aids?" The possible range of PCCQ scores is 27-135, computed by summing all the responses. The total score was categorized by the PI into three levels as low (27-62), moderate (63-99), and good (100-135).

All instruments were pilot-tested with 10-13 participants, and were found to have acceptable internal consistency reliability with Cronbach's alpha coefficients of: 1) .90 for Thai RHDS—Adult Form; 2) .93 for the SOC-29; 3) .89 for MUIS-33; 4) .92 for Thai QDTS—Adult Form; and 5) .92 for the Thai version of PCCQ.

Data Collection:

The PI trained five research assistants (RAs, and qualified nurses) to collect data. The day before discharge, the PI or RAs identified potential participants according to the inclusion criteria, and administered the SPMSQ to screen for cognitive functioning. Participants with scores ≥ 8 on the SPMSQ met the inclusion criteria. On discharge, the instruments were read to the participants and responses recorded.

Data Analysis:

Descriptive statistics were used to describe the demographics of the participants, as well as the study variables. Hierarchical multiple regression analysis was used to examine the influences of selected factors on RHD. All assumptions underlying multiple regression analysis were examined. Dummy coding was labeled for nominal or ordinal level variables.

Results

Participant characteristics:

The 207 participants included 90 (43.5%) women and 117 (56.5%) men, and 53.1% were in the young-old group (60-69 years). Most (84.5%) had completed elementary school or higher. And just over one-third (37.2%) had a monthly family income >10,000 Baht (around $US301.59). Over 80% of participants had family caregivers. Most (89.4%) had previous hospitalization experience(s) due to a COPD exacerbation and almost three-quarters (77.3%) had had a hospital stay of 1-6 days (**Table 1**).

Table 1 Participant Characteristics

Characteristics	n	%
Gender		
Male	117	56.5
Female	90	43.5
Age (years) Range = 60-83, Median = 69.00		
60-69	110	53.1
70-79	85	41.1
≥80	12	5.8
Educational level		
No education	32	15.5
Elementary education	170	82.1
Junior secondary education	5	2.4

Table 1 Participant Characteristics (Continued)

Characteristics	n	%
Family income (Baht per month)		
< 5,000 (around $US150.80)	59	28.5
5,000–10,000 (around $US150.80–301.59)	71	34.3
> 10,000 (around $US301.59)	77	37.2
Having family caregivers		
Yes	182	87.9
No	25	12.1
History of hospitalization		
First hospitalization	22	10.6
Previous hospitalizations	185	89.4
Length of hospital stays (in days) Range = 1–31, Median = 4.00		
1–6	160	77.3
7–31	47	22.7

The results demonstrated that the participants reported high levels of SOC, but had a low level of uncertainty in illness. They also perceived moderate levels of care coordination and quality of discharge teaching, and a high level of their RHD, as shown in **Table 2**.

Table 2 Characteristics of Study Variables

Variables	Possible score	Actual score	Mean or Median	SD or IQR	Interpretation
– Sense of Coherence	29–203	81–198	*Mdn* = 168.00	*IQR* = 29.00	High
– Uncertainty in Illness	33–165	50–111	*M* = 75.20	*SD* = 12.94	Low
– Care Coordination	27–135	63–135	*M* = 99.83	*SD* = 16.60	Moderate
– Quality of Discharge Teaching	0–180	35–180	*M* = 104.28	*SD* = 41.13	Moderate
– Readiness for Hospital Discharge	0–220	75–220	*M* =157.56	*SD* = 29.30	High

Factors influencing readiness for hospital discharge:

Results revealed that at step 1, family income (β = .288, .235), living arrangements (β = .245), and uncertainty in illness (β = −.328) contributed significantly to the regression model and accounted for 25.8% of the variance in RHD. In step 2, the resulting regression model explained 26.5% of the variance in RHD. Family income (β = .298, .224), living arrangements (β = .242), and uncertainty in illness (β = −.336) still emerged as significant predictors of RHD. On adding both variables of hospitalization characteristics, neither previous admissions nor length of hospital stay were significant predictors of RHD. When all 11 predictive variables were included in step 3 of the regression model, 6 variables of living arrangements (β = .139), sense of coherence (β = .247), uncertainty in illness (β = −.148), previous admissions (β = .092), care coordination (β = .327), and quality of discharge teaching (β = .491) were significant predictors of participants' perceptions of RHD. Together, these variables accounted for 74.2% of the variance in RHD (**Table 3**).

Table 3 Hierarchical Regression Analysis for Variables Predicting Readiness for Hospital Discharge

Predictor	b	S.E. (b)	Beta	t	p
Step 1					
Age	.595	1.909	.020	.312	.756
Gender	6.703	3.772	.114	1.777	.077
Family income 1	18.631	4.778	.288	3.899	.000*
Family income 2	14.475	4.307	.235	3.361	.001*
Educational level	−3.290	5.027	−.041	−.654	.514
Living arrangements	22.016	5.724	.245	3.846	.000*
Sense of coherence	4.088	2.298	.139	1.779	.077
Uncertainty in illness	−.743	.167	−.328	−4.453	.000*
Constant	182.759	13.903		13.145	.000

$R^2 = .258$; R^2 change = .258

R = .508; Adjusted R^2 = .228; SEE = 25.737; Overall F = 8.626; p = .000

Predictor	b	S.E. (b)	Beta	t	p
Step 2					
Age	.444	1.917	.015	.232	.817
Gender	6.290	3.787	.107	1.661	.098
Family income 1	19.318	4.809	.298	4.017	.000*
Family income 2	13.803	4.350	.224	3.173	.002*
Educational level	−3.043	5.046	−.038	−.603	.547
Living arrangements	21.740	5.732	.242	3.793	.000*
Sense of coherence	3.886	2.315	.132	1.679	.095
Uncertainty in illness	−.761	.167	−.336	−4.544	.000*
Previous admissions	−.421	5.903	−.004	−.071	.943
Length of hospital stay	−8.364	6.358	−.084	−1.316	.190
Constant	189.800	15.565		12.194	.000

$R^2 = .265$; R^2 change = .007

R = .515;   Adjusted R^2 = .228;   SEE = 25.753;   Overall F = 7.069;   p = .000

Predictor	b	S.E. (b)	Beta	t	p
Step 3					
Age	−2.216	1.151	−.074	−1.926	.056
Gender	2.973	2.262	.050	1.314	.190
Family income 1	3.254	3.051	.050	1.067	.287
Family income 2	−.465	2.755	−.008	−.169	.866
Educational level	.792	3.012	.010	.263	.793
Living arrangements	12.458	3.449	.139	3.612	.000*

Table 3 Hierarchical Regression Analysis for Variables Predicting Readiness for Hospital Discharge (Continued)

Predictor	b	S.E. (b)	Beta	t	p
Sense of coherence	7.279	1.390	.247	5.236	.000*
Uncertainty in illness	−.336	.104	−.148	−3.240	.001*
Previous admissions	8.710	3.562	.092	2.445	.015*
Length of hospital stay	−6.893	3.820	−.069	−1.805	.073
Care coordination	.577	.110	.327	5.228	.000*
Quality of discharge teaching	.350	.047	.491	7.498	.000*
Constant	71.041	13.396		5.303	.000

R^2 = .742; R^2 change = .477

R = .861;   Adjusted R^2 = .726;   SEE = 15.336;   Overall F = 46.505;   p = .000

* p < .05

Note: Gender was coded as 0 for female and 1 for male.

Family income 1 was coded as 0 for income > 10,000 baht per month (around $US301.59) and 1 for income < 5,000 baht per month (around $US150.80).

Family income 2 was coded as 0 for income > 10,000 baht per month (around $US301.59) and 1 for income 5,000–10,000 baht per month (around $US150.80–301.59).

Educational level was coded as 0 for no education and 1 for elementary education or higher.

Living arrangements was coded as 0 for not having family caregivers and 1 for having family caregivers.

Previous admissions was coded as 0 for first hospitalization and 1 for previous hospitalizations due to COPD exacerbation.

Discussion

Patient characteristic factors

The results demonstrated that the three variables of the patient characteristic factors (living arrangements, SOC, and uncertainty in illness) were significant predictors of RHD in all three models. As for living arrangements, determined as living with family caregivers, this appears to be a significant predictor of greater RHD. This finding is consistent with previous studies in which living alone was a significant predictor,[7] and was correlated with a lesser perception of discharge readiness.[14,25] This could be explained by the fact that our participants anticipated the acute period of COPD exacerbation and received many treatments. From these experiences, family members and caregivers of the participants, especially those older patients with

COPD, often play a huge role in helping and supporting them in both activities of daily living and treatment regimens. Therefore, in this study living with family caregivers was an important facilitating factor for a successful transition from hospital to home. Moreover, SOC was the significant predictor of RHD in the final model. A reason for this could be that a participant with a higher level of the SOC is an optimistic person, and may have suffered less from the disease. Moreover, those with a strong SOC have a tendency to choose healthy behaviors and make successful lifestyle changes.[39-40] Therefore, a stronger SOC was correlated with a higher self-care ability and a higher coping ability. Therefore, it can be concluded that the SOC is a facilitating factor for a successful transition.

As expected, uncertainty in illness exhibits a significant negative predictive power of RHD in all

three models. This finding sheds light on participants' perceived high illness uncertainty that presents as lower RHD. Participants experience often unpredictable exacerbations events, and may confront the uncertainty about their illness trajectory, prognosis, and treatment when hospitalized. Therefore, it contributes to poor adherence to treatment,[24,41] and lower levels of RHD; and uncertainty in illness is identified as a factor hindering successful transition.

Hospitalization factors

In this study, previous admission was the significant predictor of RHD in the final model. It can be assumed from this that participants gained more experience, knowledge and skills from previous health education in previous hospital discharge preparation. This is congruent with a prior study, where previous hospitalizations were correlated with better self-management.[16] Therefore, previous admissions contribute to higher levels of RHD.

Therapeutic nursing factors

The findings revealed that care coordination for discharge and quality of discharge teaching were significant predictors of the perceptions of RHD. These findings are supported by several previous studies.[7,26,28-30] One explanation is that the participants received treatment and nursing care by a multidisciplinary in-hospital team, and the physicians were responsible for assessment and treatment of exacerbations of their COPD. Moreover, participants were informed about the timing of the follow-up visits within 1-4 weeks after discharge. Ward nurses play a crucial role in health education and take a role in coordinating the educational services provided by other healthcare professionals. Nurses are also involved in providing instrumental support (such as oxygen tanks and regulators), coordinate with sub-district health promoting hospitals, and provide information about community support resources for people dealing with their illness. Home visit nurses and home visit teams also play vital roles in promoting the successful transition from hospital to home. These collaborative arrangements exhibit the informational, management, and relational continuity.[37]

The quality of discharge teaching was the strongest predictor of the perceptions of RHD in this present study, and was aligned with previous studies.[7,9,11,26-30] High quality of discharge teaching was correlated with the feeling of receiving adequate preparation for discharge, and having felt greatly prepared for the post-discharge transition period, resulting in a more favorable perception of RHD. Regarding discharge teaching content, nurses play a major role in providing comprehensive and effective patient education, so that self-management knowledge and skills during both exacerbations and clinically stable periods were included. Furthermore, information on the availability of services in the community, including ways to make contact when confronted with an emergency situation or problems at home, and instruction for family members or caregivers to assist participants with ongoing care, were also combined in discharge teaching content.

Discharge instruction delivery, one of the components of quality of discharge teaching, is a more powerful prediction of readiness for hospital discharge than discharge instruction content in many previous studies.[28-29] The interpretation of these findings would be that nurses provided specific instruction delivery modalities that encompassed paying attention to listening and answering any concerns and questions; having respect and sensitivity for personal beliefs and values; making participant education efforts by providing clarification in content; providing consistent information and instruction at a convenient time; and arranging an appropriate time for the family members or caregivers to attend. Therefore, it can be concluded that the discharge instruction delivery manifests truly the quality of discharge teaching.

Limitations

Generalizability of this finding is limited since, the participants consisted of only older persons with COPD from community hospitals in the upper northern region of Thailand.

Conclusions and Implications for Nursing Practice

Our findings provide evidence that discharge instructions and care coordination for discharge can promote successful transition among Thai older patients with COPD. Thus, advanced practice nurses should develop discharge planning with other nurses to support and educate family caregivers in helping older persons with COPD to improve self-management and meet ongoing self-care needs, as well as coordination to ensure implementation and evaluation the outcomes.

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ปัจจัยที่มีอิทธิพลต่อความพร้อมในการจำหน่ายออกจากโรงพยาบาลใน ผู้สูงอายุไทยโรคปอดอุดกั้นเรื้อรัง

ณัฐวรรณ สุวรรณ ศิริรัตน์ ปานอุทัย* ดวงฤดี ลาศุขะ ทศพร คำผลศิริ

บทคัดย่อ: ความพร้อมในการจำหน่ายออกจากโรงพยาบาลเป็นดัชนีชี้วัดความสำเร็จของการเปลี่ยน
ผ่านด้านภาวะสุขภาพและความเจ็บป่วย การค้นหาปัจจัยทำนายความพร้อมในการจำหน่ายออกจาก
โรงพยาบาลจึงมีความสำคัญ เพื่อที่จะให้การปฏิบัติการพยาบาลอย่างมีประสิทธิภาพ งานวิจัยครั้งนี้
เป็นการศึกษาภาคตัดขวาง มีวัตถุประสงค์เพื่อศึกษาอำนาจการทำนายของปัจจัยต่อความพร้อมใน
การจำหน่ายออกจากโรงพยาบาลในผู้สูงอายุโรคปอดอุดกั้นเรื้อรัง ปัจจัยเลือกสรร ได้แก่ อายุ เพศ รายได้
ของครอบครัว ระดับการศึกษา ลักษณะการอยู่อาศัย ความเข้มแข็งในการมองโลก ความรู้สึกไม่แน่นอน
ในความเจ็บป่วย การเข้ารับการรักษาในโรงพยาบาลมาก่อน ระยะเวลาในการนอนโรงพยาบาล การประสาน
การดูแลก่อนจำหน่าย และคุณภาพการสอนก่อนจำหน่าย กลุ่มตัวอย่างประกอบด้วย ผู้สูงอายุที่มีอาการ
กำเริบของโรคปอดอุดกั้นเรื้อรังที่เข้ารับการรักษาในโรงพยาบาลชุมชน ในจังหวัดภาคเหนือ ประเทศไทย
จำนวน 207 ราย การเก็บข้อมูลใช้แบบสอบถามจำนวน 6 ฉบับ ประกอบด้วย แบบบันทึกข้อมูลส่วนบุคคล
แบบสอบถามความเข้มแข็งในการมองโลก แบบสอบถามความรู้สึกไม่แน่นอนในความเจ็บป่วยของมิเชล
แบบสอบถามการดูแลต่อเนื่องสำหรับผู้ป่วย แบบสอบถามคุณภาพการสอนก่อนออกจากโรงพยาบาล
แบบสอบถามการรับรู้ความพร้อมต่อการออกจากโรงพยาบาล สถิติที่ใช้ในการวิเคราะห์ข้อมูลคือ
สถิติเชิงพรรณนา และการวิเคราะห์การถดถอยพหุคูณแบบเชิงชั้น

ผลการศึกษาพบว่า ปัจจัยทั้งหมดร่วมกันทำนายความพร้อมในการจำหน่ายออกจากโรงพยาบาล
ได้ร้อยละ 74.2 อย่างมีนัยสำคัญทางสถิติ โดยลักษณะการอยู่อาศัย ความเข้มแข็งในการมองโลก
ความรู้สึกไม่แน่นอนในความเจ็บป่วย การเข้ารับการรักษาในโรงพยาบาลมาก่อน การประสานการดูแล
ก่อนจำหน่าย และคุณภาพการสอนก่อนจำหน่าย เป็นปัจจัยทำนายที่สำคัญต่อความพร้อมในการจำหน่าย
ออกจากโรงพยาบาล ดังนั้น พยาบาล รวมถึงพยาบาลผู้ปฏิบัติการพยาบาลขั้นสูง ควรทำงานร่วมกันในการ
พัฒนาการวางแผนจำหน่ายให้ดียิ่งขึ้น โดยการสนับสนุนและสอนผู้สูงอายุโรคปอดอุดกั้นเรื้อรังและผู้ดูแล
ในครอบครัว เพื่อทำให้ผู้ป่วยมีความพร้อมในการจำหน่ายออกจากโรงพยาบาล และมีการจัดการตนเอง
ที่ดีขึ้น

*ณัฐวรรณ สุวรรณ, RN, PhD. (Candidate) คณะพยาบาลศาสตร์ มหาวิทยาลัย
เชียงใหม่ 110 ถ.อินทวโรรส ต.ศรีภูมิ อ.เมือง จ.เชียงใหม่ 50200 ประเทศไทย*
ติดต่อที่: ศิริรัตน์ ปานอุทัย, RN, PhD. ผู้ช่วยศาสตราจารย์ คณะพยาบาลศาสตร์
มหาวิทยาลัยเชียงใหม่ 110 ถ.อินทวโรรส ต.ศรีภูมิ อ.เมือง จ.เชียงใหม่ 50200
ประเทศไทย E-mail: siriratpanuthai@hotmail.com*
*ดวงฤดี ลาศุขะ, RN, DN. รองศาสตราจารย์ คณะพยาบาลศาสตร์ มหาวิทยาลัย
เชียงใหม่ 110 ถ.อินทวโรรส ต.ศรีภูมิ อ.เมือง จ.เชียงใหม่ 50200 ประเทศไทย*
*ทศพร คำผลศิริ, RN, PhD. ผู้ช่วยศาสตราจารย์ คณะพยาบาลศาสตร์ มหาวิทยาลัย
เชียงใหม่ 110 ถ.อินทวโรรส ต.ศรีภูมิ อ.เมือง จ.เชียงใหม่ 50200 ประเทศไทย*