Factors Predicting Mothers' Self-efficacy in Providing Home Care for Children with Pneumonia in Yangon, Myanmar*

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Abstract

Purpose: To examine the predictability of maternal age, maternal education, family income, maternal knowledge, and social support on mothers' self-efficacy in providing home care for children with pneumonia.

Design: A predictive correlational study.

Methods: A convenience sampling was used to recruit 124 mothers of children under five years old with pneumonia from two Children Hospitals in Yangon, Myanmar. Data were collected using 1) Socio-Demographic Questionnaire, 2) Mothers' Knowledge Questionnaire, 3) the Multidimensional Scale of Perceived Social Support Questionnaire, and 4) the Perceived Self-efficacy of Caregivers in Caring for Children with Pneumonia at Home Questionnaire. Descriptive statistics, Pearson product-moment correlation coefficient, and multiple linear regression were used for data analysis.

Main findings: The study results showed that all factors could account for 72.9% of the variance explained in the mothers' self-efficacy for home care (R^2 = .73). The three predictive factors of mothers' self-efficacy were maternal education (β = .64, p < .001), maternal age (β = .25, p < .001), and maternal knowledge (β = .13, p = .034).

Conclusion and recommendations: The mothers' self-efficacy in providing home care for children with pneumonia could be predicted by maternal age, maternal education, and maternal knowledge. Therefore, health care professionals should pay more attention to younger and low educated mothers, and provide knowledge about pneumonia and caring for children with pneumonia for promoting mothers' self-efficacy in providing home care to enhance the quality of care for the children with pneumonia.

Keywords: children, mothers, Myanmar, pneumonia, self-efficacy

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ปัจจัยทำนายสมรรถนะของตนเองของมารดาในการให้การดูแลที่บ้านแก่เด็กโรคปอดอักเสบในเมืองย่างกุ้ง ประเทศพม่า*

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บทคัดย่อ

วัตถุประสงค์: เพื่อศึกษาอำนาจทำนายของอายุของมารดา การศึกษาของมารดา รายได้ของครอบครัว ความรู้ของมารดา และการสนับสนุนทางสังคม ต่อสมรรถนะของตนเองของมารดาในการให้การดูแลที่บ้านแก่เด็กโรคปอดอักเสบ

รูปแบบการวิจัย: การศึกษาความสัมพันธ์เชิงทำนาย

วิธีดำเนินการวิจัย: คัดเลือกตัวอย่างแบบสะดวก ได้กลุ่มตัวอย่างเป็นมารดาจำนวน 124 คนที่มีบุตรโรคปอดอักเสบอายุน้อยกว่า 5 ปี และได้รับการรักษาที่โรงพยาบาลเด็ก 2 แห่งในเมืองย่างกุ้ง ประเทศพม่า เครื่องมือที่ใช้ในการเก็บข้อมูลได้แก่ 1) แบบสอบถามข้อมูลทั่วไป 2) แบบสอบถามความรู้ของมารดา 3) แบบสอบถามการรับรู้การสนับสนุนทางสังคม และ 4) แบบวัดการรับรู้สมรรถนะของตนเองของผู้ดูแลในการให้การดูแลที่บ้านแก่เด็กโรคปอดอักเสบ วิเคราะห์ข้อมูลด้วยสถิติพรรณนา สัมประสิทธิ์สหสัมพันธ์แบบเพียร์สัน และวิเคราะห์ถดถอยเชิงเส้นพหุคูณ

ผลการวิจัย: ผลการศึกษาพบว่า ปัจจัยทั้งหมดสามารถร่วมกันอธิบายความแปรปรวนของสมรรถนะของตนเองของมารดาในการให้การดูแลที่บ้านแก่เด็กโรคปอดอักเสบได้ร้อยละ 72.9 (R^2 = .73) โดยพบว่า 3 ปัจจัยที่มีอิทธิพลทำนายสมรรถนะของตนเองของมารดา ได้แก่ ระดับการศึกษาของมารดา (β = 64, p < .001), อายุของมารดา (β = .25, p < .001), และความรู้ของมารดา (β = 13, p = .034)

สรุปและข้อเสนอแนะ: สมรรถนะของตนเองของมารดาต่อในการให้การดูแลที่บ้านแก่เด็กโรคปอดอักเสบ สามารถทำนายด้วยอายุของมารดา ระดับการศึกษาของมารดา และความรู้ของมารดา ดังนั้นบุคลากรทางการแพทย์ควรให้ความสำคัญกับมารดาที่อายุน้อย มีระดับการศึกษาน้อย และให้ความรู้เกี่ยวกับโรคปอดอักเสบและการดูแลเด็กโรคปอดอักเสบ เพื่อส่งเสริมสมรรถนะของตนเองแก่มารดาในการดูแลเด็กที่บ้าน เพื่อเพิ่มคุณภาพในการดูแลเด็กโรคปอดอักเสบต่อไป

คำสำคัญ: เด็ก มารดา ประเทศเมียนมาร์ โรคปอดอักเสบ สมรรถนะของตนเอง

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Background and Significance

Pneumonia is a common childhood respiratory disease associated with mortality in children around the world, especially in children under the age of five.[1] Annually, the new cases of childhood pneumonia in the South East Asia region were nearly 61 million.[2] In Myanmar, pneumonia is included in the top five leading causes of mortality for children under the age of five years around the country;[3] and 15% of the mortality among children under five years were due to pneumonia in 2017.[1] Additionally, pneumonia is one of the major causes of hospitalization in the two tertiary children hospitals in Yangon, Myanmar. Based on those hospitals' statistics, more than 2,500 Myanmar children with pneumonia were admitted to the hospitals, and out of these, 83 children died in the year 2017.[4-5]

Children with pneumonia are commonly treated in hospital for three to five days. While the children are hospitalized with pneumonia, they are generally treated with oxygen therapy, medication, suction, and provided with supportive care at the children hospitals in Yangon. The health care providers provide both medical treatments to reduce the severity of the disease and health care to the children to obtain the optimal health. Nurses are responsible for caring children with pneumonia, and providing health education of continuing care for children to the mothers during the children's hospitalization. The preparation for hospital discharge and home care begins during admission phase and it is also concerned with treatments that children are expected to continue at home.[6] All Myanmar health care personnel also carry out appropriate teaching of home care for children with pneumonia to the mothers before discharge; such as the mothers' observation about care behaviors, participation of the mothers in caring procedures with assistance, performing care activities for the children with or without help, and returning demonstration of caring practice for children with pneumonia. Moreover, the nurses provide detailed written instructions about home care to the mothers before they leave the hospitals. If the children's conditions are found to be better, they will be discharged for continuing care at home. Afterwards, the mothers need to take care of their children at home. Home care and antibiotics therapy at home are essential components for treating pneumonia in children which must be provided effectively in order to recover from complications, and inhibit recurrent pneumonia.[7] Children with respiratory tract infections are generally irritable and difficult to comfort, and thus, home care is required for all of these children. Home care for children with pneumonia particularly includes providing comfort measures, administrating the medication, providing a proper and healthy diet, preventing infections, and healthy diet, preventing infections, and observing the children's conditions.[8]

In Myanmar, the mothers tend to be primary caregivers of the children as they usually spend more time and have responsibility for their child's care in the family; thus, mothers play a vital role in caring for children with pneumonia at home. However, not all mothers have equally competence of the child's care; some may be under emotional stress and others may feel anxious in giving care activities to the children.[6] Moreover, a study of acute respiratory infections in children found that Myanmar mothers had less skill of practice in providing home care for children under five years with acute respiratory infections.[9]

Evidences revealed that mother's self-efficacy was an important factor in providing home care for children with pneumonia.[10-12] Self-efficacy is an individual's belief in his/her ability to organize the behaviors required for task accomplishment.[13] Moreover, a strong self-efficacy can lead to effective behaviors,[13] and the mothers who had confidence in their abilities were more active in providing health care and positive care behaviors for their children.[14] Previous studies in Thailand and Vietnam found that the mothers' self-efficacy in caring for children with pneumonia was high,[10-11] while those in Indonesia had a moderated level of self-efficacy.[12] In Myanmar, according to the researcher's experience, most mothers did not have enough confidence in providing home care for the children with pneumonia due to a short duration in hospitals to gain the skills of caring for children with pneumonia, anxious feelings, and a great need to supervise their child's care. Moreover, the mothers may have difficulty in accessing care services. It is not convenient for health care professionals to provide education or observe the mothers' care behaviors for children with pneumonia at their home. Hence, health care professionals in hospitals should identify the problem of care behaviors by measuring the mothers' self-efficacy before the children are discharged. It is important for health care professionals to know whether the mothers have sufficient self-efficacy to provide home care for the children or not, and which factors can predict the mothers' self-efficacy. If the factors predict the mothers' self-efficacy are known, health care professionals can plan to help the mothers and make sure they have good care behaviors for their children with pneumonia at home.

From the literature review of the mothers' self-efficacy, factors that are significantly influencing and related to the mothers' self-efficacy in providing care to the children included maternal socio-demographic characteristics (maternal age, maternal education, and family income), maternal knowledge, and social support.[11-12,15-19] Evidently, numerous studies of the mothers' self-efficacy have been conducted in many countries, except Myanmar where there is a paucity of evidence investigating the mothers' self-efficacy in caring

for children with pneumonia. To fill such gap the aim of this study was to examine if the selected factors found from the literature could predict the mothers' self-efficacy in providing home care for children with pneumonia in Myanmar context.

In this study, the conceptual framework was based on Bandura's Social Cognitive Theory (SCT)[13] of which a basic concept is self-efficacy. According to SCT, human performance is the outcome of the dynamic interplay of three determinants; personal factors, behavior, and environmental events that influence each other. It means personal factors may influence human behavior and the environment, and the external environment affects the behaviors. As self-efficacy is a major basis of behavior action, personal factors can have an effect on the self-efficacy which leads to human behaviors. Accordingly, the personal factors of mothers (such as age, education, family income, and maternal knowledge) can affect the mothers' self-efficacy which is important for care behaviors. In addition, the environmental factors also influence on mothers' self-efficacy which is required for care behavior action. The social support factor in the study is considered as the environmental influence on the mothers' self-efficacy in caring for children with pneumonia. Bandura also described social persuasive aids or social influences as one of the major sources that affected the self-efficacy of the person.

Objective

To examine the predictability of maternal socio-demographic characteristics (maternal age, maternal education, and family income), maternal knowledge, and social support on Myanmar mothers' self-efficacy in home care for children under five years with pneumonia.

Hypothesis

Maternal age, maternal education, family income, maternal knowledge, and social support could predict the mothers' self-efficacy in home care for children under five years with pneumonia.

Methodology

Study Design and Participants

The study was a predictive correlational study conducted at medical units of two children's hospitals, Yangon Children Hospital and Yankin Children Hospital, in Yangon. These two children's hospitals are the only tertiary public children hospitals located in Yangon City, Myanmar. The study population included mothers of children under five years of age with pneumonia admitted at these children hospitals. Hospital statistics in 2017 reported that 1,186 children with pneumonia were hospitalized in Yangon Children Hospital[4] and 1,353 in Yakin Children Hospital.[5] Convenience sampling was applied to recruit the mothers on the day that their children got permission for hospital discharge. The inclusion criteria were: aged 18 years or older, being a primary caregiver of the child and living with the child in the same house, and being able to communicate, read, and write in Myanmar language.

For the mothers, those who had a child diagnosed with congenital heart disease, Autism, Cerebral Palsy, and Down syndrome were excluded from the study. The sample size was calculated by G*Power software with an effect size of .14 in which the effect size was computed based on the r-value of the relationship between maternal age and maternal self-efficacy in providing home care (r = .35) from a previous study,[12] α value of .05, a statistical power (1-β) of .90, and five independent variables. The study sample consisted of 124 mothers of children under five years of age with pneumonia.

Research Instruments

Four instruments were used for data collection in this study. The researchers asked permission to use three instruments from the owners, and one instrument was developed by the researchers. All instruments were translated into the Myanmar language by using back-translation to verify the accuracy of translation. For the reliability of research instruments, a pilot study was conducted with 30 mothers who had characteristics similar to the study subjects' eligibility. Cronbach's alpha coefficients were calculated. The four research instruments were as follows;

1. Socio-Demographic Questionnaire; The researchers developed this questionnaire to collect the demographic characteristics of the mothers and children, which consisted of three parts: mother's socio-demographic characteristics, children's socio-demographic characteristics, and general information for caring children with pneumonia which includes antibiotics preparation, cleansing the house and care for the child's daily activities.

2 . Mothers' Knowledge Questionnaire; was developed by Parvez, Wiroonpanich and Naphapunsakul,[20] for assessing the mothers' knowledge concerning the various aspects of pneumonia in children. The original questionnaire had 44 items. In this study, the researchers modified one item and deleted one item according to the pneumonia classification guideline which is currently used in Myanmar. The modified questionnaire included 43 items covering maternal knowledge about the definition of pneumonia, causes, risk factors, classification, signs and symptoms of pneumonia, management and care of children with pneumonia, and prevention of pneumonia in children. It was a true-false type questionnaire, and the scoring was 1 for a correct answer and 0 for an incorrect answer. The total score ranged from 0 to 43, and maternal knowledge was classified into low, moderate, and high levels. The Cronbach's alpha coefficient in this study was .74.

3. The Multidimensional Scale of Perceived Social Support (MSPSS) Questionnaire; a 12-item instrument developed by Zimet, et al[21] was used to measure the social support variable in this study. It consisted of three subscales of social support: family, friends, and significant other. A seven Likert Scale ranging from 1 (very strongly disagree) to 7 (very strongly agree) was used, and the total

score range was 12-84. The social support was categorized and interpreted as low, moderate, and high support. Cronbach's alpha coefficient of MSPSS in the current study was .85.

4. The Perceived Self-efficacy of Caregivers in Caring for Children with Pneumonia at Home Questionnaire was developed by Khoomkrathoke[10] to measure the caregivers' confidence in caring for children with pneumonia at home. It consisted of 15 items with six dimensions: medication, environment, treatment, health, outpatient referral, and diet. Each item asked a respondent how many percentages of confidence in doing the designated task, where 0 percent referring to 'definitely not confident' and 100 percent to 'definitely confident'. To ease the interpretation, the score of all items was summed and divided by the total number of items yielding a total score ranging from 0 to 100. The self-efficacy score was categorized and interpreted as low, moderate, and high self-efficacy. In this study, Cronbach's alpha coefficient was .90.

Ethical Considerations

The study was approved by the Institutional Review Board, Faculty of Nursing, Mahidol University, Bangkok, Thailand (COA No.IRB-NS2019/157.3110), and the Institutional Review Board, University of Public Health, Yangon, Myanmar (UPH-IRB 2019/Research/48). The mothers were informed about the details of the study and the rights to refuse, stop and withdraw from participating in the study. Informed consent forms were obtained from the mothers who participated in the study. The code number system was used in the questionnaires, the collected data were kept strictly as confidential, and the findings were reported in summary, not interpreted as the individual data.

Data collection

Data were collected from November, 2019 to March, 2020 by the first author after obtaining approval from the Institutional Review Boards and permission from the corresponding hospitals. The registered nurses from both study children's hospitals asked the potential mothers for permission to meet the researcher and to explain the details of the study by the researcher, before receiving discharge health education. The nurses introduced the researcher to the mothers if the mothers gave permission, and then, the researcher checked the sample according to the study criteria. The details of the study, the participant's rights, and the way to answer the questionnaires were explained to the mothers. After that, the researcher asked the mothers to sign informed consent forms and to complete the questionnaires. All data collection procedures were performed in accordance with the ethical standards of the Institutional Review Boards.

Data Analysis

Data analysis was performed by using Statistical Package for the Social Science (SPSS) license software version 18. Descriptive statistics were used for the characteristics of the sample and

study variables. The relationships of the variables were assessed by the Pearson product-moment correlation coefficient. Upon the test of assumptions for the statistical use, simultaneous multiple regression analysis was employed to examine the predictability of study variables on the mothers' self-efficacy. Level of significance was set at .05.

Findings

The sample of this study consisted of 124 mothers of children under five years of age with pneumonia, and the mean age of the mothers was 29.60 year (SD = 5.58) ranging from 18 to 45 years. The mothers' total years of formal education ranged 1-18 years with an average of 9.15 years. (SD = 3.85), and 34.7% had high school education. Over half, or 54.8% of the mothers, were housewives or unemployed, and 45.2% were employed. The mean family monthly income was 358,072.58 Myanmar kyats (SD = 218380.22). and 81.5% of the mothers had family income of more than 150,001 Myanmar kyats as shown in Table 1. Over two-thirds of the children in this study (66.1%) were infant age group (1-12 months) with an average age of 12.07 months (SD = 10.76), 59.7% were male, and nearly all children (89.5 %) had no underlying diseases. The majority of the mothers (96.8%) did not know about antibiotics preparation for children with pneumonia.

Table 1: Descriptive statistics of maternal age, maternal education, and family income (N = 124)

Variables	n	%	$\bar{X}$	SD
Maternal age (Years)			29.60	5.58
18 – 31	82	66.1		
32 – 45	42	33.9		
Maternal Education (Years)			9.15	3.85
1 – 5 years (Primary school education)	32	25.8		
6 – 9 years (Middle school education)	26	21.0		
10 – 11 years (High school education)	43	34.7		
12 – 15 years (Bachelor's degree)	18	14.5		
≥16 years (Master or higher)	5	4.0		
Family Monthly Income (Myanmar Kyats)			358072.58	218380.22
≤150,000	23	18.5		
150,001 – 300,000	55	44.4		
300,001 – 450,000	16	12.9		
450,001 – 600,000	18	14.5		
600,001 – 750,000	4	3.2		
≥750,001	8	6.5		

Regarding maternal knowledge of childhood pneumonia, it was found that the mothers had high knowledge. All mean scores of maternal knowledge were quite high compared to the median of the possible range of each aspect, except the mean of the definition of pneumonia aspect. The social support of the mothers in this study was at a moderate level. Family support was the highest support and friends support was the lowest support among all subscales of social support. Moreover, the overall self-efficacy of mothers in home care for children with pneumonia was at a moderate level. When considering each dimension of the mothers' self-efficacy, it was reported that confidence in outpatient referral had the highest mean score and the lowest mean score was on confidence in medication dimension (Table 2).

Table 2: Mean, standard deviation, and range of maternal knowledge, social support, and self-efficacy

Variables	Possible range	Actual range	$\bar{X}$	SD
Maternal knowledge	0-43	18-37	30.01	4.19
Definition of pneumonia	0-1	0-1	.45	0.50
Causes of pneumonia	0-3	0-3	1.92	0.79
Risk factors of pneumonia	0-5	1-5	4.02	0.92
Classification, and signs and symptoms of pneumonia	0-13	4-12	8.01	1.48
Management and care of children with pneumonia	0-17	7-17	12.06	2.20
Prevention of pneumonia in children	0-4	1-4	3.56	0.79
Social support	12-84	18-82	60.19	10.83
Family support	4-28	4-28	22.77	4.34
Friends support	4-28	4-28	16.37	5.32
Significant other support	4-28	4-28	21.06	4.92
Overall self-efficacy	0-100	32.67-90	56.49	14.23
Dimension of self-efficacy				
Medication	0-100	16.67-90	48.98	19.31
Environment	0-100	23.33-86.67	53.12	14.62
Treatment	0-100	26.67-90	56.40	16.52
Health	0-100	33.33-90	60.67	13.13
Outpatient referral	0-100	30-100	64.35	16.74
Diet	0-100	30-100	62.78	14.12

As shown in Table 3, all independent variables: maternal age, maternal education, family income, maternal knowledge, and social support had a significant positive correlation with the mothers' self-efficacy in providing home care for children with pneumonia ($r = .46, r = .81, r = .35, r = .54, r = .41, p < .01$ respectively).

Table 3: Correlations among the study variables (N = 124)

Variables	1	2	3	4	5	6
1. Maternal age	1					
2. Maternal education	.29**	1				
3. Family income	.03	.42**	1			
4. Maternal knowledge	.11	.57**	.38**	1		
5. Social support	.21*	.41**	.26**	.30**	1	
6. Mothers' self-efficacy	.46**	.81**	.35**	.54**	.41**	1

*p < .05, **p < .01

The multiple regression analysis which is shown in Table 4 revealed that all five variables explained 72.9% of the variance in the mothers' self-efficacy for children with pneumonia ($R^2 = .73$). Only three variables: maternal education (β = .64, p < .001), maternal age (β = .25, p < .001), and maternal knowledge (β = .13, p < .05) were the significant predictors of the mothers' self-efficacy in providing home care for the children with pneumonia, whereas family income and social support were not.

Table 4: Multiple regression analysis of maternal age, maternal education, family income, maternal knowledge, and social support on the mothers' self-efficacy in providing home care (N = 124)

Variables	B	SE	β	t	p-value	95% CI	
						Lower	Upper
Constant	-1.37	6.80		- .20	.84	-222.60	181.52
Maternal age	.65	.13	.25	4.98	< .001	5.83	13.51
Maternal education	2.37	.24	.64	9.89	< .001	28.45	42.70
Family income	6.39	.00	.01	.18	.86	.00	.00
Maternal knowledge	.43	.20	.13	2.15	.03*	.50	12.50
Social support	.06	.07	.05	.91	.36	-1.12	3.04

$R = .85$, $R^2 = .73$, adj $R^2 = .72$

Discussion

This study identified the factors that affected the mothers' self-efficacy in caring for children with pneumonia among Myanmar mothers, and maternal age, maternal education, and maternal knowledge significantly predicted the mothers' self-efficacy in providing home care for children under five years with pneumonia. Maternal age had predictive effect on the mothers's self-efficacy, and the mothers who age under 31 years had less

self-efficacy than older group. The prediction of maternal age on the mothers' self-efficacy might be because all Myanmar mothers were in the age of adulthood, with an average age of 29.60 years, which were mature in terms of both physical and psychological aspects. An individual's emotional states are one of the influencing sources of self-efficacy, and people with psychological maturity may have more appropriate emotional states that positively affect their personal self-efficacy.[13] In this study, Myanmar mothers were in the age range of maturity and so probably had proper emotional states, and this might have led to the significant influence of maternal age on the mothers' self-efficacy in caring for children with pneumonia. This finding is consistent with a previous study of Octavia, Thongpat and Khumsean,[12] which reported that the mothers' age was significantly related to maternal self-efficacy in home care for children with pneumonia. Further, it is supported by the results of previous studies on mothers' self-efficacy for the children in different caring conditions.[17-18,22]

Regarding maternal education, it was the strongest predictor of the mothers' self-efficacy in caring for children with pneumonia, and the mothers with high school education and above had more confidence in providing home care for children with pneumonia in this study. This was similar to previous findings that the education of mothers was a significant personal predictor of maternal self-efficacy and mothers with higher education had a higher self-efficacy score.[19] This finding could be explained by the fact that more than half of Myanmar mothers in this study had high school education and higher degree education, and thus, they could retrieve health information and understand the care performance for children which lead to improving the mothers' confidence in caring for children with pneumonia. Providing the mothers with information about their child illness can be understandable and knowledgeable concerning caring behaviors for the children.[6] A previous study also indicated that receiving information about pneumonia might help the mothers to increase self-efficacy or have more confidence in caring for the children with pneumonia at home.[23]

According to the findings of this study, maternal knowledge had significant predictability on the mothers' self-efficacy in providing care for their children with pneumonia at home. Bandura stated that knowledge greatly enhanced the capabilities of individuals to master the conditions,[13] and mothers who had more knowledgeable about child care felt more confident in their capabilities to provide care for the children.[24] In this study, Myanmar mothers' knowledge about childhood pneumonia was at a high level, and it might be the key reason for the prediction of maternal knowledge on the mothers' self-efficacy in caring for children under five years with pneumonia. A consistent finding

was presented in a previous study from Indonesia, which showed maternal knowledge had a strong influence on the mothers' self-efficacy in home care for children under five years of age with pneumonia.[12] In addition, this previous study indicated that maternal knowledge supported the mothers to be confident in providing care for children with pneumonia at home.

Family income had no predictive effect on the mothers' self-efficacy in caring for children with pneumonia in the present study. This could be because the children with pneumonia received free medical treatment and healthcare services in both children hospitals in Yangon, Myanmar, and the children were also provided some medications to take at home after discharge, which did not make any financial burden for the mothers and their families. Moreover, most Myanmar mothers who participated in the study earned adequate family monthly income which felt financially secure; thus, the income have not significantly impacted on the mothers' self-efficacy. Similar finding was reported in the previous study from Thailand, and it was explained that mothers received and used healthcare coverage cards to have free medical treatments for the children.[10] However, the different result was presented in the previous literature[12] and this inconsistent finding could be that the mothers who gained low family income felt financially insecure and unconfident in providing care for their children. As well, in this study, social support did not predict mother' self-efficacy in providing home care for under five years of children with pneumonia, and this might be due to the fact that Myanmar mothers had only a moderate level of total social support. The finding is in contrast with other previous studies that social support affected the mothers' self-effiicacy,[11,25] in which the mothers in those studies received high social support, so this might explain the discrepancy of the results compared to this study. The findings of the current study partially supported the study hypothesis because three out of five factors predicted the mothers' self-efficacy in providing home care for children under five years with pneumonia.

Conclusions and Recommendations

This study found that maternal age, maternal education, and maternal knowledge were the significant predictors of the mothers' self-efficacy in providing home care for children with pneumonia. The findings highlighted that maternal education had the strongest prediction on the mothers' self-efficacy. Thus, it is important to identify the education status of the mothers, and nurses should provide comprehensive information about caring for children with pneumonia to the mothers who have less education, to promote the mothers' self-efficacy.

Moreover, nurses need to emphasize the mother's age and develop a special program for young mothers. It should also assess the mothers' knowledge regarding childhood pneumonia, and provide health education about pneumonia in children. Additionally, educational program should be designed and introduced to the mothers to improve skills and self-efficacy of mothers in providing home care for children with pneumonia.

Furthermore, the study findings can be shared in the continuing nursing education (CNE) program for all nurses. Further research studies should be conducted after the children are discharged from the hospitals in which is the follow-up period, and should be performed in different settings or multi-settings in Myanmar. It should also explore the differences of self-efficacy on mothers who are first-hand experience on caring for children with pneumonia and mothers who are used to care for children with many episodes of pneumonia. Besides, the intervention program for promoting the mothers' self-efficacy for children with pneumonia should be developed and evaluated for its effectiveness.

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