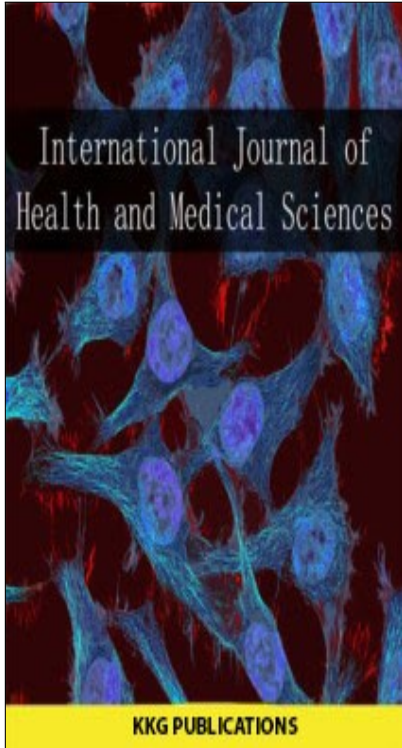


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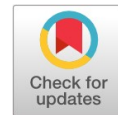


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The Study of Common Respiratory Problems, Symptom Experiences, Symptom Management and Outcomes of Pre-School Children via their Caregivers



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Published online: 16 March 2016

To cite this article: K. Kajornkittiya, W. Sivadumrongpong and K. Munhruk, “The study of common respiratory problems, symptom experiences, symptom management and outcomes of pre-school children via their caregivers,” *International Journal of Health and Medical Sciences*, vol. 2, no. 1, pp. 13-19, 2016.

DOI: <https://dx.doi.org/10.20469/ijhms.2.30003-1>

To link to this article: <http://kkgpublications.com/wp-content/uploads/2016/2/Volume2/IJHMS-30003-1.pdf>

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THE STUDY OF COMMON RESPIRATORY PROBLEMS, SYMPTOM EXPERIENCES, SYMPTOM MANAGEMENT AND OUTCOMES OF PRE-SCHOOL CHILDREN VIA THEIR CAREGIVERS

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Keywords:

Care Experience
Symptom Management
Respiratory Disease
Pre-school Children Caregivers

Received: 01 January 2016

Accepted: 12 February 2016

Published: 16 March 2016

Abstract. This research aimed to investigate 1) To study the symptom experience, symptom management, and the outcomes of the common respiratory problems in pre-school children via their caregivers 2) To study the relationship between the symptom experience, symptoms management, the outcomes with personal and health data. Caregivers caring for three to six-year-old pre-school children were recruited by simple random sampling from Tumbol Satengnok. One hundred ninety-two were selected to complete a set of questionnaires and another eight to be informants for semi-structured interviews. Descriptive statistics were applied for quantitative data analysis frequency, percentage, mean, and standard deviation. Pearson product-moment was also used to determine the hypotheses. Qualitative data were classified to be categories using content analysis. The findings showed that the caregivers are general mothers who have experiences in taking care of the children having common respiratory symptoms. They knew the symptoms by assessing the changes in playing behaviors and physical happiness. The caregivers reported that most problems are caused by some of the childrens overplaying activities. Therefore, they tried to manage the symptoms showed by reducing some activities, using traditional herbs, and making more caressing touch their children. For the outcomes of symptom management, 50 percent could be recovered without seeking other treatments. Symptom experience, symptom management, and the outcomes of pre-school children caregivers were statistically significant differences, $p < 0.01$. Age was statistically significant difference in Symptom experience and symptom management, $p < 0.01$, whereas it was no significant difference in age and the outcomes correlation, $p < 0.05$.

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INTRODUCTION

Background

Although medical technologies and the effectiveness of modern medicines are highly advanced, there are a considerable number of pre-school children admitted to hospitals due to respiratory problems. This group of children are physically disadvantaged because their airway systems are still underdeveloped (short and narrow). Their immune systems are not yet effective. The illness will affect them physically and mentally if they are not well and correctly cared for. They are likely to have more complexities i.e. infected inner ears, pneumonia, collapsed lungs and oxygen deficiency which can lead to mortality. The children have to rely on their caregivers to respond to their needs (physical, mental, emotional and societal). The parents play a paramount part in their well-being. If they do not receive proper care from their parents, they will be unhealthy, slow-learning and emotionally affected.

The main objective of assessing the caregiving for young children is to differentiate between normal and abnormal conditions as well as being able to manage basic health problems.

[1] studied the effectiveness of the prevention of acute lower respiratory infections in children under 5 years

old. She found that the environment and the caregivers' behavior are significant risk factors in children's pneumonia. The disease can occur due to their mothers having insufficient preventative knowledge. The result supports the study of [2]. They conducted research into the school age children's breathing difficulties; the symptom experiences, symptom management strategies and the outcomes via the caregivers. They found that the caregivers managed better in caring for asthmatic children than in preventing the illness. This research suggested that the preventive knowledge dissemination needed to be better developed. More specifically, they suggested that; children need to see health care personnel regularly even when there are no symptoms; children need to be dressed warmly when the temperature is low and changeable; children need to be observed after giving them bronchodilators; bedding needs to be cleaned. All these suggestions focus on home care prevention.

There is more research related to the home care preven-

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tion for children who have respiratory problems. The project involved the conference and experience sharing of the caregivers in community. The research found that the caregivers often used local traditional medicines in caring for their sick children, for instance, to treat coughing, they would apply red lime stone paste mixed with crushed fresh basil leaves on the children's chests. Some made a tonic drink by mixing basil leaves and honey [3], [4]. For blocked noses, they would put a crushed shallot under the pillows. If their children have runny noses they would bathe them with warm water, mixing it shallots and tamarind leaves, the properties of which, they believe, would clear the airways. Some may use limestone powder and lime juice or fresh turmeric and vegetable oil for better respiration. All in all, the mother's quality of care is the main factor related to the children's well-being. Moreover, environmental factors as well as their way of life also played a major role in health and well-being.

The aforementioned research demonstrated that the common respiratory problems in children, especially preschoolers, is significant for the health care system and requires careful attention from parents, health care personnel and so forth. The parents are the most important people in preventing and managing these illnesses. Awareness of the signs and symptoms as well as the decision to seek treatment are also necessary. In order to solve these problems holistically and to find out a new and sustainable solution, I am interested in studying the symptom experience, symptom management and the outcomes of the common respiratory problems in Pre-school children via the caregivers. I hope that the results of the studies will assist

relevant parties to conduct effective planning, provide useful information to promote good health for all the children and a healthier nation.

Research Objectives

- 1) To study the symptom experience, symptom management and the outcomes of the common respiratory problems in pre-school children via their caregivers.
- 2) To study the relation between the symptom experience, symptoms management, the outcomes with personal and health data.

Hypothesis

The symptom experience, symptom management, the outcomes and the personal and health data are related.

FRAMEWORK

I applied the Framework of [5] coupled with the knowledge of the primary care of the respiratory problems. The framework consists of 3 concepts 1) symptom experiences 2) symptom management strategies 3) the outcomes. These 3 concepts are related. Moreover I took nursing concepts i.e. personal, health and sickness which have influence on the symptom management into account. In this study, I chose to look at pre-school children and studied especially common respiratory problems. However the target group is very young, so I chose to conduct the study mainly via their caregivers.

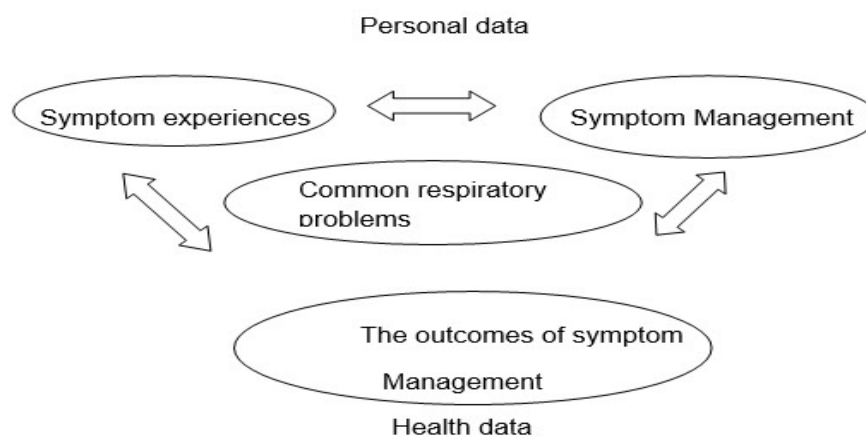


Fig. 1 . Framework

Research Execution

This is a descriptive research project aiming to study the symptom experiences, symptom management and the outcomes

of the symptom management of the common respiratory problems in Pre-school children via their caregivers. Moreover, I intended to study the relation between the symptom experiences,

symptom management, the outcomes with personal and health data. The target groups are pre-school children aged between 3-6 years at the Sateng Nog community. The target group requirements are as follows 1) 3-6 years of age; 2) They have no other sickness, e.g. T.B., Heart disease. The data was derived from a 30% sample of a target population of 542, i.e. 180 people. In order to generate a sufficient sample response after distributing the questionnaires, I sent out 220 questionnaire sets and received 192 sets in return. The method of study is simple random sampling.

Research Tools

1 The Caregivers' questionnaires were developed and adapted from the work of [5] to find out the general information about the caregivers and children as well as the symptom experiences, symptom management, and outcomes. It consists of 5 parts.

Part 1. General information about the caregivers.

Part 2. Information regarding children's general information and health condition.

Part 3. Symptom experiences questionnaires.

Part 4. Symptom management questionnaires.

Part 5. The outcomes of symptom management questionnaires.

Score meanings:

1.0- 1.49 score = low in symptom experiences, symptom management, outcomes

1.50- 2.49 score = medium

2.50- 3.49 score = good

3.50- 4.00 score = very good

Research Tools Quality Inspection

1. I have developed my own research tools based on text books, research papers, articles and related research.

2. The tools were presented to 3 specialists to check the validity of the content questions, and the accuracy and comprehension of the language used. The calculation for the relevant index used IOC theory (Index of Objective Congruency). A questionnaire with an IOC more than 0.5 is generally acceptable by the specialists. After that procedure, I revised and improved the questionnaire texts to make them more precise.

3. After improving the research tools, I piloted them using 30 people who had the same criteria of my main target group. I applied the Cronbach's alpha coefficient to determine the reliability of the questionnaire. The result was 0.77.

4. Finally I improved the tools by focusing on the questions. I rearranged them in order to get the most efficient tools for my data gathering.

DATA ANALYSIS

Quantitative Analysis

1. The Personal data has been analyzed in terms of percentage frequencies.

2. The symptoms experience, the symptom manage-

ment strategies and the outcomes of the symptom management along with the personal and health data have all been analyzed in terms of the frequency, means, percentages, and standard deviation.

3. The relation between the symptom experience, the symptom management, the outcomes and the Personal and health data was analyzed by using the correlation Pearson product moment and chi square.

Qualitative Analysis

I used content analysis and double-checked the accuracy with the group sample.

Data Collection

1. I went through the research questionnaires with research assistants. I also explained the objectives and the research procedures before we conducted the research. The introductory procedures are as follows: The research assistants introduced themselves to the samplers, requesting their cooperation. They were then asked to give their consent. The sample group had right to choose whether they want to take part in the research or not. In cases where that the sample group could not read, the research assistants would read for them. The respondents would then choose their own answers.

2. For the caregiver interview section, the research team conducted group interviews after using the questionnaires in order to collect more information.

CONCLUSION

The majority of the caregivers were females, aged between 31-40 years of age. They are the children's mothers. Their religion is Islam. They are employed, healthy and married. They are secondary school educated. The incomes are enough to get by but without savings. The majority of them consult the health care officers when their children have respiratory problems. They would seek some advice from family and community members i.e. grandparents, volunteers and neighbors in that order. The children under their care are mainly girls. They have no congenital deceases. The previous year, the children under their care had respiratory problems 3-4 times and the majority of them did not need to be admitted to hospital. The environmental condition around their houses is more likely to affect the children; for instance, houses near dusty roads, houses near the rubbish dumping ground. Pets (cats, birds),

agro chemicals used on fruit and vegetables in that order. There are some other factors too, for example, a wet and windy environment. Caring levels for children with respiratory problems;

care experience, symptom management and outcomes.

TABLE 1
MEANS FOR CARE EXPERIENCE, SYMPTOM MANAGEMENT AND OUTCOMES OF THE COMMON RESPIRATORY PROBLEMS IN PRE-SCHOOL CHILDREN VIA THEIR CAREGIVERS

Topics	X	SD	Interpretation
1. Care experiences	2.85	1.06	good
2. Symptom management	2.21	0.75	moderate
3. outcomes	2.91	1.13	good
total	2.45	0.76	moderate

The study found that the 3 research topics are moderate level ($x=2.45, sd=0.67$) whereas the care experience and the outcomes are in good level ($x=2.91, sd=1.13$), the next is care experience ($x=2.85, sd=0.106$) the symptoms management came last ($x=2.21, sd=0.75$).

Symptom Experience Study of Pre-School via Care Givers

We found that the most obvious symptoms of respiratory problems are; children with runny noses, puffiness, and fever; children not breathing easily; sobbing and a lack of appetite. In some serious cases they are out of breath, physically inactive and the chests are concave. Some cannot sleep at night because of a blocked nose. The additional interviews found that the children who have problems will breathe more quickly than normal. The chests are moving up and down. When they go to bed at night, they would breathe heavily and producing wheezing sounds. Their appetite is decreased. The care givers have to be with them all night. They do not dare to go to bed for fear that the children may die. They are worried that the children's condition will worsen. The caregivers noted that if the conditions become worse, the children refuse to have any kind of food; on the contrary, when they are better the children will be happy, hungry and sleepy.

Symptom Management Strategies

If the children are exhausted, the care givers would raise the children's heads up. They would help them with bronchodilators which they got from the local district hospital. They would suck the phlegm out by using red rubber suction (62%, 55.20% and 31.80% in that order). They would take the young children to get some medicine straight away when they realized that children were panting. They won't leave it until the children are puffing severely as the caregivers were aware that it was a serious condition.

Some caregivers would use local herbal medicine, for ex-

ample, putting crushed young tamarind leaves and shallots into warm water for bathing. Some would put the aforementioned herbal medicines under the children's pillows (they claimed that runny noses would stop within 2 days). By putting fresh crushed garlic under pillows, the children would reportedly sleep well all night because of clearer airways. By applying crushed fresh turmeric and vegetable oil on children's noses, the children would reportedly be able to breathe easily so that they would not be agitated. By putting crushed hibiscus and jasmine flowers on towels and then placing them on the children's foreheads for 10-15 minutes it was claimed that they would recover from a fever.

The caregivers would manage runny nose symptoms by observing the color of the mucus, providing them with mucus-reducing medicine and raising the children's heads higher while they are sleeping (70.30%, 55.70% and 43.80% respectively). Moreover, they would stop them swimming, ban them from eating ice, and stop taking them out of the house, limit bathing to only once a day. They reported that sucking out mucus by using the red rubber suction was painful for the children. They would cry after that. They would also use the traditional, herbal medicine, for instance, applying juice of crushed hibiscus flowers onto the body, applying turmeric and vegetable oil on the noses or inhaling fresh chopped garlic and shallots.

The caregiver would reduce the children's temperature by using wet towels (either hot or cold water) or giving fever-reducing medicine obtained from the local community hospital, and they would check the children's body temperature at home (81.30%, 55.70% and 41.70% respectively). Furthermore, the caregivers would dress the children light. For the traditional herbal medicine, they would use "ya kheaw" (green medicine) mixed with water for bathing and hair washing to treat the fever. The fever symptoms would occur at various stages of the children's growth, from months-old to years, from crawling to walking and from teething.

The caregivers would observe the phlegm color and then give them cough medicine which they obtained from the local community hospital and also raise the children's heads up while they were sleeping (60.90%, 45.30% and 47.90% respectively). Additional remedies mentioned also include drinking warm water and avoiding fried/oily food and icy drinks; letting them sleep on their sides and patting them lightly on their backs; using traditional herbal medicine. For example, they would apply crushed Thai gooseberry leaves mixed with white limestone paste to the children's noses 3 times a day which would relieve the cough but was messy to use. Some parents might also make honey and lime tonic drinks for the children.

The caregivers reported giving the children smaller amounts of food for each meal but they would feed them more often. They would substitute boiled rice for steamed rice. They would feed the children more milk (62%, 69.80% and 41.10% respectively). The additional methods mentioned are as follows; making the children eat at least 3-5 bites at time of feeding; cooking different nutritious foods instead of the usual meals; feeding them some soft food, sweet drinks, fruit juice or hot drinks. In some cases, they would also feed the children with oranges. Additional interviews found that if parents were worried about their children losing weight, they would buy them some vitamin tablets. They would sit with them and tell them stories while the children were having their meal.

The caregivers would hold the children until they managed to sleep, cover them with blankets and use herbal medicines (71.40%, 62% and 6.80% respectively). Additional methods included hugging, singing songs or walking about. From the additional interview, the parents reported taking turns hold the children, putting them in the cradle or using herbal medicine.

The outcomes of the symptom management

The study of the relation between the symptom experience, the symptom management and the outcomes.

The study found out that Age exhibited a statistically significant relation in symptom experience and symptom management $p=0.05$ ($r=.125$). The symptom experience and symptoms management was also showed a significant relation $p=.001$ ($r=.501$). The symptom experience and the outcomes of the symptom management also exhibit a significant statistically relation $p=.001$ ($r=.649$). The symptom management and the outcome of the symptom management likewise shows a statistically significant relation at $p=.001$ ($r=.408$).

DISCUSSION

The respiratory infection in pre-school children is a more problematic health care issue than any other sickness. If

the infected children do not receive proper treatment, it would lead to complications with the potential result that they may die. From the study of the symptom experience, symptom management and the outcome of symptom management of the pre- school children via the caregivers, it was found that the three aspects exhibit a significant relation of moderate strength. The outcomes of the management, which received the highest scores, is ranked at a high level. The next is the symptoms experiences, ranked also at a high level. Last but not least, the symptoms management is ranked at the moderate level. This results reflect that the caregivers' abilities in managing common respiratory problems in pre-school children is still inefficient. They don't have enough knowledge and skills in caring. Moreover, the symptom experience strategies and the outcomes of the management are significantly related ($p=.001$). If the caregivers have proper knowledge, the problems will be decreased. The number of children who need to seek other treatment from the hospital will also decrease. In the personal data factor section, we found that age, symptom experiences and symptom management have statistically significant relation ($p=.05$). The result pointed out that the age of the caregivers will positively affect the symptom experience and symptom management. However, the outcomes of the management will rely on other factors.

In regard to symptom experiences, the majority of the targeted children are living with their parents. The mothers are the main caregivers in the family. The parents are of working age. Age is related to the children's symptom experiences. Nowadays, the care givers can easily gain access to the health care information, due to the low cost of the treatment thanks to the government subsidies especially for pre-school children. There are primary health care institutions nearby; for instance, the sub district hospital where the doctors would be available some of the days. The caregivers received the information and education from the health care staff.

The study found that firstly, the caregivers who have the symptom experience will recognize that the children under care are having respiratory problems. Secondly, they will observe the degree of symptom severity and how the respiratory symptom affect the children. This study's findings align with other research into the efficiency of the prevention of the acute lower respiratory infection in children lower than 5 years old [1]. Their recommendations are as follows:

- 1) Avoiding the risk factors which lead to the acute respiratory infections by supporting the caregivers to have efficacy, social support, participatory learning and advisory services [6].
- 2) Providing the target children and the care givers with food which help to support the immune system.

However, the study of respiratory symptoms which af-

fect children has different findings from the study of [7]. They studied the needs of the children's caregivers and found out that they needed to know how the severe respiratory sickness affects the children's growth, development, intellect, mentality and behavior.

The parents were worried about what the effect would be on their children after being admitted to hospital, whereas in the case of lesser severe symptom, these effect are not considered a priority.

The children's target group is too young to look after themselves. Bringing them up well depends on their caregivers. If the caregivers have knowledge, it will reflect on the symptom management and outcomes. This is supported by the work of [8]. She studied coaching for parents looking after the children aged between 1 month- 5 years who were admitted at the Vajira Phuket Hospital. She found that the mothers who had been coached would take better care of their children than the parents who been simply informed about how to take care of the sickness (statistically significance $p = .01$). Later, once the control group had been coached, the statistically significant difference rate was $p = .01$ comparing with thenone coaching. This result reflect how important the hands-on skill of the parents is.

[9], [10] conducted experimental research on the efficiency of asthmatic patients in self- prevention and management in Ranord District, Songkha province. They found that after the patients have been organized and trained in self-prevention and management programs, they could care for themselves and manage to control the symptoms.

The outcomes of symptom management. The results showed that the caregivers were manage the symptom well. The signs that motivate the caregivers to take the children to see doctors and nurses are: concave chest, puffing, and nose expansion while breathing (60.90%, 59.90% and 53.10% respectively). The signs telling the caregiver that they can no longer look after the children by themselves are the children not getting better after taking medicine for 3-4 days. They gauge increasing sickness levels by observing if the children are pale, moody, sobbing, unconscious, vomiting, feverish, exhausted, out of breath or coughing all the time. It was estimated that

if the children had respiratory problems 10 times, the parents themselves would manage to look after the children without taking them to see health care staff 5 times. But in order to have the good symptom management result, the parents need to have knowledge. [11] studied the improvements in parents' behavior to reduce respiratory infections in primary school children at a day care center. She found out that the education of parents has a relation to the rate of infections and that parents' behavior was similarly related to respiratory infections and diarrhoea in children. To sum up the caregivers need to have knowledge and skills in order to be able to look after the children effectively.

The Cost and Fee Factor

The research also found that the medical costs and fees are free of charge for visits to the local community health care establishment. This factor therefore has no direct effect on children.

SUGGESTIONS FOR FUTURE RESEARCH

Nursing practitioners can assist the primary health care staff to understand and realize that the adaptation of the information is essential.

For the purposes of education, this can be a guideline for developing the nursing curriculum by focusing on knowledge adaptation, using a holistic approach and focusing on family as the focal point of child care.

For the research aspect, the results can be applied in planning to improve the efficiency of the caregivers. The ultimate goal is to enable them to care for the children at home.

More qualitative research into knowledge and practice for improving of the family's efficiency. This should be developed in conjunction with local traditional knowledge in child care in regard to symptom experience, the symptom management and outcomes of symptom management for the common respiratory problems.

The result of these research findings can be used a basic information for future research.

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