



A Case Study Of Respiratory Disease Prevention And Hygienic Behaviour Among High School Students In Pathum Thani Province, Thailand

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Abstract

At present, there is a road epidemic that has affected many people. One factor in the outbreak is a symptomatic outbreak caused by aerosols that carry the carrier of the disease. until the infection enters the body therefore causing infection which cause harm to the body assess the level of knowledge and preventive behaviours for respiratory infections in schools of high school students this research This is a descriptive research by collecting data from students in grades 4-6, Valaya Alongkorn Rajabhat University Demonstration School under the Royal Patronage (Secondary Division) of 136 people from Dec.15, 2021 to Feb 2, 2022. The tools used for data collection were: Knowledge test on factors affecting the prevention behavior of respiratory infections in schools of high school students Pathum Thani Province Data were analyzed by using descriptive statistic and generalized linear model. The results showed that there were 136 respondents. The respiratory rate was good and the behavior score was moderate. The female respondents had higher cognition and breathing behavior than the males by the respondents in Grade 5 have the highest knowledge and understanding and grade 6 have the highest defensive behaviours. The respondents had a better understanding of the prevention of respiratory infections. There was a positive correlation with preventive behaviours for respiratory infections. [r=0.324,p<0.01] was significant statistically from analysis. The multiple regression analysis revealed that gender ($\beta=0.283$, $p<.01$) and cognition of respiratory infectious prevention ($\beta=0.257$, $p<.01$) were variables that can predict preventive behaviours for respiratory infections significant statistically.

Keywords: Respiratory diseases, prevention, adolescents

Background and Problem Importance:

At present, there is a road epidemic that has affected many people. One factor in the outbreak is a symptomatic outbreak caused by aerosols that carry the carrier of the disease when we accidentally touch or inhale until the infection enters the body. For some people, they may have enough immunity to get rid of the infection. But some people are physically weak or in a weak stage. therefore causing infection This can cause bodily harm, interfere with the normal functioning of the body, or even more serious, even death or if it is an emerging infection that makes it impossible to know what it is caused by how serious At the same time, the airways are another way for the infection to enter the body via the skin and the excretion of waste.

The disease that infects the respiratory tract. Caused by infections of the respiratory system from

the nose, throat, trachea to the lungs. Infections that are mainly caused by viruses are heart disease, influenza, avian influenza and SARS, etc. Bacterial infections include pneumonia and tuberculosis, etc. Respiratory infections that occurs frequently in both children and adults can heal by itself by taking proper care of one's health The infection can be transmitted in many ways, namely coughing, sneezing, breathing, and contact with secretions or touching the patient's appliances When patients with respiratory infections Be able to take care of yourself first by wearing a hygienic mask every time when sick to prevent the spread of germs to others And if there is a serious illness, you should see a doctor for treatment promptly [1].

Respiratory infections are an example of a disease such as influenza. It is an acute respiratory viral infection. The important clinical features are sudden high fever, headache, muscle

aches, and fatigue. Influenza is one of the most important diseases in emerging and re-emerging infectious diseases. Due to outbreaks around the world (pandemic) many times. Each of them occurred widely on almost every continent. It has resulted in millions of cases and deaths [2] and the now epidemic of COVID-19 is a contagious disease caused by the latest discovered type of coronavirus. The virus and emerging disease were unknown prior to the December 2019 outbreak. The COVID-19 pandemic is now a widespread pandemic affecting many countries around the world. The most common symptoms of COVID-19 are fever, cough, tasteless tongue, odorless nose, and fatigue. Less common symptoms but may affect some patients are aches, headaches, stuffy nose, runny nose, and sore throats, diarrhea, red eyes, or skin rash or skin color changes according to the fingers and toes. These symptoms are usually mild and begin gradually. Some were infected but had just a bit symptoms. Most patients (80%) recover without hospitalization. About 1 in 5 people with COVID-19 has severe symptoms and difficulty breathing. Elderly people with chronic diseases such as High blood pressure, heart disease, diabetes, or cancer are more likely to have a more serious illness. However, anyone can infect COVID-19 and can get severely ill. People of all ages with symptoms of fever and/or coughing with difficulty breathing, chest pain, loss of voice, or loss of movement should consult a doctor immediately [3]

Therefore, to protect yourself from respiratory infections is to cover your mouth and nose around with a mask. Keeping the body clean at all times not being in crowded areas or where germs accumulate and having knowledge and understanding about respiratory infections in order to be able to take care of and protect themselves.

Method:

This research is a descriptive research studying students in grades 4-6 at the Demonstration School of Valaya Alongkorn Rajabhat University under the Royal Patronage (Secondary Department) Pathum Thani during the month of Dec.15, 2021 to Feb. 2, 2022. The research population was students in grades 4-6 at the Demonstration School of Valaya Alongkorn Rajabhat University under the Royal Patronage (Secondary Division) in the academic year 2021, a total of 680 people, 136 people volunteered

to participate in this research project, representing 20%.

Research Tools:

Research instruments are questionnaires created by researchers based on concepts, theories and related research. The research tool was reviewed for content by 3 infectious prevention and control specialists using the Prevention Knowledge Quiz Respiratory Infections the Respiratory Infection Prevention Behavior Test had Cronbach's alphas values of 0.80, and 1.0, respectively. The instruments used in this study consisted of 3 parts:

Part 1 General Information, with 6 multiple choice questions (gender, level, family income per month, parent's occupation, congenital disease, or used to have or had a respiratory infection)

Part 2 is a knowledge test on the prevention of respiratory infections (Basic knowledge of respiratory infectious diseases, disease group, symptoms, practice and prevention). Questions were multiple choice, 7 items, level, correct answer got 1 score, incorrect answer got 0 score that each respondent has all will be brought together by the criteria for assessing knowledge about Knowledge of Respiratory Infections at good if the score is from 80% to moderate for scores of 60-79 % and low for scores of scores below 60%.

Part 3 is a behavioral test for preventing respiratory infections. The questionnaire was a multiple choice, 8 items on a level, correct answers got 1 point, incorrect answers got 0 points, total scores got by each respondent will be brought together by the criteria for assessing knowledge about Preventive behaviours for respiratory infections Good if the score is from 80% to moderate for scores of 60-79 % and low for scores if scores below 60%.

Data Analysis:

1. Analysis of general information, knowledge about the knowledge of respiratory infections and preventive behaviours for respiratory infections by using descriptive statistics such as frequency, %age, mean, standard deviation.

2. Analyze the factors affecting the knowledge of respiratory infections and preventive behaviours for respiratory infections including inferential statistic

such as Pearson's correlation and Multiple Regression Analysis.

Protecting the rights of the sample group:

This research was a research that collected data from high school students of Valaya Alongkorn Rajabhat University Demonstration School under the Royal Patronage (Secondary Division) by collecting data anonymously via a Google Form questionnaire sent to high school students of Valaya Alongkorn Rajabhat University Demonstration School under Royal Patronage (Secondary Division). Before participation in the research, everyone was informed the research objectives, data collection process and the benefits to be gained from research go through the text specified in the questionnaire before starting the inquiry and the participants gave their consent voluntarily to provide research data If the participant wishes to withdraw the research information, it can be done at any time. All information is kept confidential by researchers.

Result:

The study consisted of 136 participants. Most of them were female (n=85, 62%). Most of the class group was High School Student M. 5 (n=71, 52.2%), followed by Most of the grade groups were at the M. 4 level (n = 42, 30.9%), and the last group was the High School Student 6 group (23,16.9). Most of the respondents had parents with an average income of 50,001-100,000 baht (n=61, 44.9%), followed by income less than 50,000 baht (n=60, 44.1%), and finally with income greater than 100,000 baht (n=15, 11%). Most of parents are in the management profession, company employees, civil servants and state enterprises (n=53, 39%) and parents in the business-to-business group (n=33, 24.3%). Most of the respondents were non-communicable (n=112, 82.4%) and Most of the respondents had never or had a respiratory infection (n=131, 96.3%).

Respondents had a good score on their knowledge about respiratory infection prevention (M=5.62, SD=1.00). Female respondents had a higher mean score on their knowledge about respiratory infections. (M=5.66, 0.87) , the male respondents (M=5.55, SD=1.19), the High School M. 5 respondents (M=5.75, SD=0.98) had a mean score of knowledge about infectious diseases. Breathing was higher (M=5.75, SD=0.98), Year 6 respondents

(M=5.74, SD =0.75) and Year 4 respondents (M=5.33, SD=1.10). Family income is 50,001-100,000. They had higher mean scores of knowledge about respiratory infectious diseases (M=5.70, SD=1.01) for those with family income less than 50,000 (M=5.57, SD=1.05) and those with a family income of less than 50,000 (M=5.57, SD=1.05) and those with family income greater than 100,000 (M=5.47, SD=0.74). Respondents whose parents were in the business/business category had higher mean scores on their knowledge of respiratory infectious diseases (M=5.91, SD=). 0.80) Respondents whose parents were in the medical / nursing / pharmacy / dentistry / veterinary / medical technician / teacher / teacher / student group (M=5.64, SD=0.67).The mean scores of knowledge about respiratory infectious diseases were higher (M=5.65, SD=0.93) respondents with congenital disease (M=5.46, SD=1.28). Respiratory tract knowledge scores were higher (M=6.00, SD=0.71), respondents who had never or had a respiratory infection (M=5.60, SD=1.00).

Respondents had a moderate score on respiratory infectious disease prevention behavior (M=5.42, SD=1.09). Female respondents had a higher mean score on their knowledge about respiratory infections (M= 5.72, SD=0.89) Male respondents (M=5.02, SD=1.26) Secondary 6 respondents The mean scores of knowledge about respiratory infectious diseases were higher (M=5.83, SD=0.58), the M. 5 survey respondents (M=5.52, SD=1.11) and the M. 4 survey respondents (M=5.14, SD=1.22) Respondents with family incomes of 50,001-100,000. They had higher mean scores of knowledge about respiratory infectious diseases (M=5.62, SD=0.97) for those with family income less than 50,000 (M=5.33, SD=1.24) and those with Family income greater than 100,000 (M=5.27, SD=0.88). Respondents whose parents were in the employed/self-employed had higher mean scores on their knowledge of respiratory infectious diseases (M=5.75, SD. =1.14) Respondents with parents in management / company employees/civil servants/ state enterprises (M=5.58, SD=0.97) Respondents with chronic illnesses had a high average score of knowledge about respiratory infections. Than (M=5.58, SD=0.97), the respondents without any underlying disease (M=5.43, SD=1.12), the respondents who used to have or had a respiratory infection had a mean score on their knowledge about

respiratory infections. Breathing was higher (M=6.40, SD=0.89), respondents who had never had a respiratory infection (M=5.42, SD=1.09).

Table 1 Population Factor and knowledge about the prevention of infectious tract infections and preventive behavior for respiratory infection

Sociodemographic characteristics	N (%)	Understanding of Respiratory Infection (Range 0-7) M (SD)	Preventive behaviours for respiratory infection (Range 0-8) M (SD)
Gender			
Male	51 (37.5)	5.55 (1.19)	5.02 (1.26)
Female	85 (62.5)	5.66 (0.87)	5.72 (0.89)
Grade			
Senior High School M. 4	42 (30.9)	5.33 (1.10)	5.14 (1.22)
Senior High School M. 5	71 (52.2)	5.75 (0.98)	5.52 (1.11)
Senior High School M. 6	23 (16.9)	5.74 (0.75)	5.83 (0.58)
Family Income			
<50,000	60 (44.1)	5.57 (1.05)	5.33 (1.24)
50,001-100,000	61 (44.9)	5.70 (1.01)	5.62 (0.97)
>100,000	15 (11)	5.47 (0.74)	5.27 (0.88)
Parent's Occupation			
Doctor / Nurse / Pharmacist/Dentist / Veterinary / Technical Medical	11 (8.1)	5.64 (0.67)	5.10 (0.83)

Technic / Teacher /Lecturer / Student			
Executives / Company employees / Civil servants / State enterprises	53 (39)	5.62 (0.86)	5.58 (0.97)
Own Business / Merchant	33 (24.3)	5.91 (0.80)	5.52 (0.91)
General Employee / Freelance	28 (20.6)	5.46 (1.29)	5.75 (1.14)
Others	11 (8.1)	5.09 (1.38)	4.27 (1.56)
Have Congenital Disease			
Yes	112 (82.4)	5.65 (0.93)	5.43 (1.12)
No	24 (17.6)	5.46 (1.28)	5.58 (0.97)
Have respiratory infection			
Never	131 (96.3)	5.60 (1.00)	5.42 (1.09)
Ever or infected now	5 (3.7)	6.00 (0.71)	6.40 (0.89)
Total	136 (100)	5.62 (1.00)	5.46 (1.09)

From the analysis of Pearson's correlation coefficient between the variables, it was found that the cognition of the prevention of respiratory infections There was a positive correlation with preventive behaviours for respiratory infections statistically significant ($r=0.304^{**}$, $p<0.01$) (Table 2).

Table 2 Analysis of the relationship between Pearson's correlation coefficient variables

Variables	Understanding of Respiratory Infection	Preventive behaviours for respiratory infection
Understanding of Respiratory Infection	1	
Preventive behaviours for	0.304**	1

respiratory infection		
**Correlation is Significant at the 0.01 *Correlation is Significant at the 0.05		

From analysis the multiple regression analysis revealed that gender ($\beta=0.283$, $p<.01$) and cognition of respiratory infection prevention ($\beta=0.257$, $p<.01$) were variables that can predict preventive behaviours for respiratory infection statistically significant (Table 3)

Table 3 From the Multiple Regression Analysis

	B	SE	EXP (β)	Sig (p)	95% CI	
					Lower	Upper
Gender	.638	.179.	.283	.001	.238	.993
Grade	.189	.130	.117	.149	-.069	.446
Family Income	.029	.135	.018	.829	-.238	.297
Parent’s Occupation	-.059	.081	-.059	.468	-.220	.101
Have Congenital Disease	.180	.232	.063	.440	-.279	.638
Have respiratory infection	.819	.472	.141	.085	-.115	1.752
Understanding of Respiratory Infection	.282	.088	.257	.002	.109	.455

Discussion:

From the results of behavioral and hygiene studies in the prevention of respiratory infections in schools of high school students in Pathum Thani There were 136 respondents, 51 males and 85 females. The respondents had a good score on their knowledge and understanding of respiratory infection prevention (M=5.62, SD=1.00). The study

was collected during the outbreak of COVID-19 [4], which is a type of respiratory infection. There is publicity about COVID-19, including prevention, widespread and continuous, which resulted in the group of respondents receiving news about the prevention of respiratory infections and has a good level of understanding Female respondents had a higher mean score on their knowledge of respiratory infection prevention than males. This may be because

females are more health conscious than males. This is in line with the Regina Ferreira Alves study of COVID-19 prevention knowledge, attitudes, and behaviours: a study among tertiary students in Portugal that found females' COVID-19 prevention knowledge and behaviour higher than males due to increased perception of risk, increased protective behaviour. The increased perception of risk led most students to follow more preventive measures. This shows that students most feared by the virus are the most protective of themselves. [5] Year 5 respondents had a higher mean score on their knowledge of respiratory infectious diseases respondents High School M. Year 4 and High School M. Year 6 respondents may be because during this period of the COVID-19 outbreak, they have to study online at home. Remember that the High School M.5 respondents have free time to receive. Knowing more about prevention than the Middle School respondents 4 and the Middle School respondents 6, consistent with Tawan Petpaiboon's research on knowledge, attitudes and behaviours on prevention of coronavirus infection: In a study of high school students in Bangkok, it was found that the M. 5 respondents had a higher mean score on their knowledge of respiratory infectious diseases. High School M. 4 and High School M. 6 respondents as the study revealed a high level of knowledge about COVID-19. Positive attitude towards preventive behaviours with and without rules. It was also indicated that there was a causal relationship between attitudes towards COVID-19 in the absence of rules and preventive behaviours. However, no causal relationship was found between knowledge and attitude or behaviour. The results were similar in all 3 trials of Fabrigar et al. Attitudes to COVID-19 in the absence of rules were therefore a key factor in predicting preventative behaviours. Therefore, schools should provide accurate knowledge about COVID-19 on a regular basis. To create the same positive attitude in the absence of rules as in this research. Teachers and staff should show a feeling of trust in students as it may causes defensive behaviours in students Communication between students and parents or teachers, such as Kannaiyan and Jaiganesh, needs to be improved in a study assessing social responsibility of medical students [6]. 50,001-100,000 had the highest mean score on knowledge of respiratory infections when compared by other income groups

Respondents whose parents were in business/trade groups were higher than other groups because business groups needed to find information as a guideline for dealing with communicable diseases such as COVID-19 [7]. They have more knowledge about the prevention of respiratory infections than those with underlying diseases. Because in the era of the COVID-19 epidemic, prevention is presented. Self-Care Away from COVID-19 Respondents who had or had respiratory infections had the highest mean scores on their knowledge of respiratory infections when comparing respondents who had never or had the disease respiratory infection This may be due to being aware of the symptoms and how to behave when having an infectious disease [8].

From the analysis of respiratory disease prevention behavior scores Of the respondents were at a moderate level ($M=5.46$, $SD=1.09$) because during the COVID-19 outbreak, respondents had online learning from home [9]. Knowing that the risk of contracting COVID-19 is low, resulting in causing the prevention of COVID-19 behaviours, with female respondents having higher average scores on preventive behaviours for respiratory infections than males. This may be because females are more health conscious than males. This is in line with a Regina Ferreira Alves study of COVID-19 prevention knowledge, attitudes and behaviours: a study among tertiary students in Portugal, which found that females had a high level of knowledge, attitudes and protective behaviours against COVID-19 than males, because the variable analysis revealed gender differences with respect to the main variable with female scores systematically higher than males. This corresponds to the "men's health gap" revealed that global health outcomes are significantly worse than women's because of the social structure of masculinity As a result, men were reluctant and lacking motivation to search for health-related information. Traditional masculinity was also associated with less risky behaviours and less use of preventative health care [5]. The average knowledge of respiratory infections was higher that High School M.4. Respondents and High School M.5 High School M. Respondents This may be because the respondents of High School M. year 6 went to special education due to having to prepare to enter the university therefore need to be more careful And parents urged to be careful to make it affect learning.

on family income Respondents whose family income was at 50,001-100,000 had higher average scores on preventive behaviours for respiratory infections than other income groups. Respondents whose parents were in the freelance/employee group had higher mean scores on their knowledge of respiratory infectious diseases than other income groups. Because it is a career that has to meet with a lot of people. Respondents with underlying disease had higher mean scores on their knowledge of respiratory infectious diseases than those without underlying disease. Because people with underlying diseases experience the disease, it is necessary to have behaviours to protect themselves from the disease. Respondents who had or had respiratory infections had higher average scores on their prevention behaviours for respiratory infections than those who had never had a respiratory infection may have more self-careful behaviours than who had never had an infectious disease [11].

Limitation:

For example, collect data with online forms, respondents may use the Internet to find answers during the survey collecting data during the COVID-19 outbreak, during the lockdown measures, working or studying from home, respondents may not feel at

risk of contracting the disease. Data were collected for the study of High School M. students. The difficulty level of the questionnaire was the level of general knowledge for the people.

Conclusion:

The 136 respondents were male, 51 were female, 85 were female. The respondents had a good score on their knowledge and understanding about the prevention of respiratory infections (M=5.62, SD=1.00). Females have higher knowledge, understanding and behaviours related to prevention of respiratory infections than males. Respondents, Grade 5 have the highest knowledge and understanding Respondents had a moderate score on respiratory infectious disease prevention behaviours of the respondents (M=5.46, SD=1.09) have the highest defensive behaviours The respondents had a better understanding of the prevention of respiratory infections. There was a positive correlation with preventive behaviours for respiratory infections. ($r=0.324, p<0.01$) was significant statistically from analysis The multiple regression analysis revealed that gender ($\beta=0.283, p<.01$) and cognition of respiratory infection prevention ($\beta=0.257, p<.01$) were variables that can predict preventive behaviours for respiratory infections significant statistically.

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