ปัจจัยที่มีผลต่อความรู้และความเข้าใจโรคตาแดงในผู้ประกอบการแผงลอยอาหาร ชายหาดบางแสน ประเทศไทย

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บทคัดย่อ

บริบท โรคตาแดง เป็นโรคระบาด เกิดที่เยื่อบุตาจากเชื้ออะดิโนไวรัส

วัตถุประสงค์ เพื่อประเมินปัจจัยที่มีผลต่อความรู้และความเข้าใจโรคตาแดงจากสื่อที่ผลิตขึ้นใช้ในผู้ประกอบการแผงลอยอาหารหาดบางแสน ประเทศไทย

วิธีการ การศึกษาวิเคราะห์นี้เป็นแบบตัดขวาง ผู้เข้าร่วมการวิจัยเป็นผู้ประกอบการแผงขายอาหาร 111 แห่งที่หาดบางแสน โดยตอบแบบสอบถาม ได้แก่ ข้อมูลทั่วไป ทัศนคติการเรียนรู้โรคตาแดง ความรู้และความเข้าใจก่อนและหลังการเรียนรู้โรคตาแดงจากสื่อที่ผลิต ใช้เกณฑ์ผ่านร้อยละ 70 และความพึงพอใจต่อสื่อที่ผลิตขึ้นใช้มาตรวัดของลิเคิร์ท การผลิตสื่อใช้ทฤษฎีช่องว่างความรู้ ประกอบด้วย สาเหตุ อาการ การรักษา และการป้องกัน ในรูปแบบโบชัวร์ การกระจายเสียงตามสาย และ LCD compact disc นำข้อมูลที่ได้มาวิเคราะห์หาความสัมพันธ์ระหว่างปัจจัยกับความรู้และความเข้าใจหลังจากเรียนรู้จากสื่อที่ผลิต ใช้สถิติที่ไม่ใช่พารามิเตอร์ (ไคสแควร์)

ผลการวิจัย ผู้เข้าร่วมส่วนใหญ่เป็นหญิงไทย (ร้อยละ 83.8) อายุระหว่าง 41 ถึง 60 ปี (ร้อยละ 42.3) ส่วนใหญ่ได้รับการศึกษาระดับประถมศึกษา (ร้อยละ 38.7) ความรู้และความเข้าใจโรคตาแดงของกลุ่มตัวอย่างก่อนเรียนรู้สื่อผ่านเกณฑ์ร้อยละ 70 มีจำนวนร้อยละ 13.6 หลังการเรียนรู้สื่อผ่านเกณฑ์มีจำนวนร้อยละ 93.1 ส่วนระดับความพึงพอใจต่อความรู้ที่ได้รับจากสื่ออยู่ในระดับมากที่สุด (ร้อยละ 55.9) ระดับการศึกษาเป็นปัจจัยเดียวที่มีอิทธิพลต่อความรู้และความเข้าใจในโรคตาแดง ($\chi 2 = 39.64$, *p-value* = .00)

สรุป จากงานวิจัยนี้พบว่า ปัจจัยที่มีผลต่อความรู้และความเข้าใจในโรคตาแดงของผู้ประกอบการแผงลอยอาหารที่หาดบางแสน ประเทศไทย คือ ระดับการศึกษา

คำสำคัญ ปัจจัย ความรู้ โรคตาแดง ผู้ประกอบการแผงลอยอาหาร

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Factors affecting the knowledge and understanding of epidemic keratoconjunctivitis among food stall traders at Bangsaen Beach, Thailand

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Abstract

Context Epidemic keratoconjunctivitis (EKC) is conjunctivitis caused by a group of adenoviruses.

Objective To assess factors that influence food stall traders' knowledge and understanding EKC form education media at Bangsaen Beach, Chonburi, Thailand.

Methods This was a cross-sectional analysis study including 111 food stall traders at Bangsaen Beach. The participants answered a set of questionnaires: general data, attitudes toward learning EKC (using 5-point Likert scale), knowledge and understanding the EKC before and after learning EKC through education media (using 70% as passing level) and participants' gratification toward the media (using 5-point Likert scale). The knowledge gap theory was used to construct education media consisted of etiology, symptoms, management and prevention through brochure, public address system, and LCD compact disc. The nonparametric chi square was used to analyze the data.

Results Eighty-three point eight percent of the participants was Thai women, with 42.3% between 41 and 60 years of age. Most had received primary school education (38.7%). The majority of the participants had little knowledge of the disease before receiving information through the media. Only 13.6% passed a pre-test while 93.1% passed the post-test. Furthermore, most of the participants expressed a high level of satisfaction with the knowledge they received through the media (55.9%). The level of education was the only factor that influenced on the knowledge and understanding of epidemic keratoconjunctivitis ($\chi 2 = 39.64$, p-value = .00).

Conclusions The level of education was only factor affecting the knowledge and understanding of Epidemic Keratoconjunctivitis among food stall traders at Bangsaen Beach, Thailand. The knowledge can be bridged by providing the knowledge gap between what they know and what they have to know.

Keywords Knowledge, Understanding, Epidemic Keratoconjunctivitis, Food Stall Traders

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อ้างอิง

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Introduction

In 2007, the Bureau of Epidemiology of Thailand noted the incidence of conjunctivitis in Thailand from 1998 to 2007. The highest number of cases was 842.58 per 100,000 people in 2002, followed by 611.87 per 100,000 people, and 417.53 per 100,000 people in 1998, and 2006, respectively. The lowest rate of the illness in 10 years was recorded in 2005 with 143.42 per 100,000 people in which 99.28% (103,617 cases) was Thai and 0.72% (747 cases) was foreigners. The highest rate of the sickness occurred in age range from 10–14 years with 202.95 per 100,000 people. The ratio of male to female patients was 1: 1.1. Most patients received treatment at health centers (43.85%), followed by community hospitals (37.92%), and regional hospitals and general hospitals (14.76%). In 2014, 98.80% of those infected used outpatient facilities, while, only 9% used these facilities in 2013. Furthermore, more than 160,906 people suffered from epidemic keratoconjunctivitis (EKC) in 2014. The disease is triggered by adenovirus and spread by direct contact. People living together have a greater chance of getting infected if one has the disease. At times, there are epidemics among crowded communities. Outbreaks usually occur during the rainy season as a result of the humidity. Though, EKC is a benign disease and can be healed between one and three weeks, the disease has an impact on the quality of their life. The sufferers are unable to work effectively, and even absence from work[1, 2]. Due to Bangsaen is a primary tourist area in Thailand, during an outbreak of EKC, tourists could be infected from any food stall traders who prepares meals for them. Consequently, the researcher examined factors that influence knowledge and understanding of EKC and further evaluated the relationship between these factors and knowledge and understanding of EKC among food stall traders at Bangsaen, Chonburi. If these factors can be resolved, organizations would benefit from management planning to increase knowledge of food stall traders around Bangsaen Beach in Chonburi Province.

Methods

Participants

This was a cross-sectional analysis study. The author used Taro Yamane formula to calculate the sample size. The numbers of the sample were 111 persons from a total of 154 food stall traders in Bangsaen, Chonburi Province.

Inclusion Criteria

All participants had to be food stall traders at Bangsaen Beach in Chonburi, and comprehend Thai**.** Furthermore, they had to possess complete awareness through critical judgment evaluation and be willing to engage in the research program**.**

Exclusion Criteria

Participants were excluded if they refused to engage in the research program, or were unable to participate throughout the entire program**.**

Research Tools

The research tools consisted of two parts: a set of questionnaires and education media.

1. A set of questionnaires comprised of four sections.

Section 1 - General characteristics contained gender, age, educational level, ethnics, and history of EKC.

Section 2 - Attitudes toward learning EKC.

Section 3 - Knowledge and understanding of the EKC before and after learning EKC through education media.

Section 4 - Participants' gratification from the knowledge on EKC that they learned through the media.

2. Education Media - The framework of media information and instructions constructed from the knowledge gap theory between what they know and what they have to know.

Figure 1 Knowledge gap theory

The author used 5-likert scales to evaluate the satisfaction of participants on the information and instructions of education media as the following: 5 points - very satisfied; 4 points - satisfied; 3 points - moderately satisfied; 2 points - dissatisfied; 1 point - very dissatisfied.

The validity and reliability of the research tools were assessed. The index of congruency

(IOC) was employed to assess the content validity (≥ 0.5). The Cronbach's alpha was performed to evaluate the reliability (≥ 0.7) of the questionnaires.

The mean pass score for evaluating knowledge and understanding of EKC was 70 points and above.

Data Analysis

1. General characteristics were analyzed by using descriptive statistics.

2. Factor analysis was performed to evaluate the relationship between the factors and knowledge and understanding of EKC. The statistics used was chi-square.

Results

Demographic Data

The majority of the participants were females (83.8%) of which 42.3% were between the ages of 41 and 60 years. Furthermore, 38.7% of the participants had received only primary schooling and the ethnicity of 91.0% was Thai. Finally, only 20.7% had a history of EKC (Table 1).

Table 1 General characteristics (n = 111)

Characteristics	n (%)
Gender	
Male	18 (16.2)
Female	93 (83.8)
Age, (yrs.)	
≤ 20	10 (9.0)
21-40	41 (37.0)
41-60	47 (42.3)
≥61	13 (11.7)
Education level	
Uneducated	26 (23.4)
Primary education	43 (38.7)
Secondary education	31 (27.9)
Tertiary education	11 (10.0)
Ethnicity	
Thai	101 (91.0)
Other	10 (9.0)
History of EKC	
Yes	23 (20.7)
No	88 (79.3

EKC= Epidemic Keratoconjunctivitis

Attitude

The majority of the participants (95.5%) had a positive attitude toward learning EKC (Figure 2).

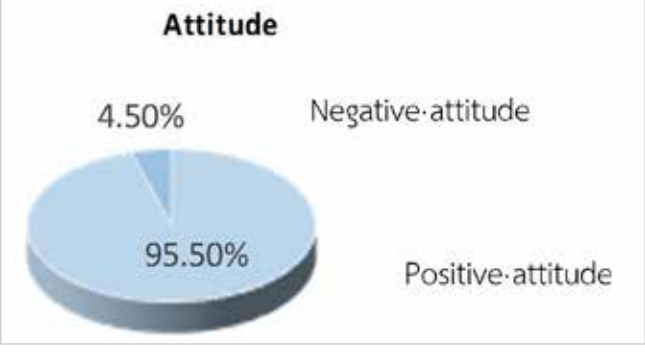

Figure 2 Attitude toward learning EKC

Knowledge gap

Knowledge Gap form pre-test; positive (95.5%) and negative (4.5 %) are presented in Table 2.

Table 2 Knowledge Gap (n = 111)

Knowledge gap	n (%)
Positive	106 (95.5)
Negative	5 (4.5)

Educational Media

Information media produced by knowledge assessment in the absence of knowledge gap theory include background, symptom, treatment and prevention of EKC. Three types of media understanding were developed and evaluated: Brochure, P.A. System, and LCD compact disc. The results (Table 3) revealed that satisfaction with educational media was at a high level (55.9%).

Table 3 Satisfaction with educational media (n = 111)

Satisfaction level	n (%)
Very Satisfied	33 (29.7)
Satisfied	62 (55.9)
Moderately Satisfied	16 (14.4)
Dissatisfied	0 (0.0)
Very Dissatisfied	0 (0.0)

Test Results Before and After Providing Knowledge

The pre-test pass rate and post-test pass rate were 13.6% and 93.1% respectively (Figure 3).

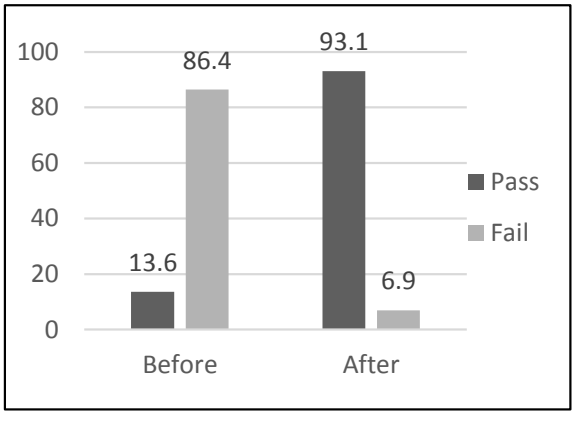

Figure 3 Test results before and after providing knowledge

The Relationship between Various Factors after Providing Knowledge

The results revealed that there were no significant differences in relation to gender, age, ethnicity, attitude toward learning, and satisfaction with educational media after providing knowledge. Specific factors in education levels were significantly different (p <.05) (Table 4).

Table 4 The relationship between various factors after providing knowledge

Factors	χ^2	*p-value*
Gender	0.00	.96
Age	0.09	.99
Ethnicity	2.27	.13
Education Level	39.64	.00 *
History of EKC	0.00	.97
Attitude	1.08	.29
Satisfaction Level	0.10	.95

Test Results for Each Level of Education

Table 5 re vealed that ≤ 10% of those with an education lower than tertiary education level passed the pre-test in comparison to 83.07% in the post-test. There was no difference in tertiary education in pre-test and post-test.

Table 5 The pass rates for each level of education*

Education level	Pre-test	Post-test
	Pass rate (%)	Pass rate (%)
Uneducated	1.80	10.00
Primary education	0.90	36.94
Secondary education	0.90	26.13
Tertiary education	10.00	10.00
Sum	13.60	93.07

*education system in Thailand[3]

Discussions

There are three types of conjunctivitis: bacterial conjunctivitis, viral conjunctivitis, and allergic conjunctivitis[4, 5]. The present study investigated viral conjunctivitis. Adenovirus, enterovirus type 70, and coxsackievirus type 24 are the viruses that cause conjunctivitis. Up to 80%, viral conjunctivitis is caused by adenovirus. It is characterized by pods for 2–14 days, red eyes, and swollen 2- lymph nodes[6]. Contact

and outbreak generally occur in different forms, and usually during summer, when it is wet and humid. Furthermore, people with low immunity and children in densely populated regions are susceptible to the disease. Methods of contact include animals like drosophilae and flies. People who are infected may pass on the disease through contacts such as touching the same objects or clothing[7,8]. No medication is needed. However, the infected should minimize straining their eyes, use eye drops and/or medication to wash their eyes, and follow a doctor's instructions. Hands should be washed with cool down water that has been boiled, before and after touching the infected eye. Before the virus is shed, however, the conjunctive's inflammatory reaction can become so intense that it results in a pseudo membrane and possible continuous formation of symblepharon[9]. Prevention includes not sharing products such as cosmetics and eye drops with others. Furthermore, people with the disease should wear protective glasses and frequently wash their hands.

Knowledge is a acquaintance, awareness, or understanding of someone or something such as facts, information, descriptions, and skills, which are acquired through experience and/or education by perceiving, discovering, or learning. Knowledge can refer to a theoretical or practical understanding of a subject. Understanding is a psychological process related to an abstract or physical object such as a person, situation, or message where one can able to think about it and use concepts to deal adequately with that object. Understanding is a relation between the knower and an object of understanding. Understanding implies abilities and dispositions that are enough to support intelligent behavior concerning to an object of knowledge[10]. Bloom divided the cognitive domain (knowledge-based) into six levels: knowledge comprehension, application, analysis, synthesis, and evaluation[11]. The relationship between various factors after providing knowledge, previous research on the relation between gender and knowledge, it has been discovered that there is no connection between sex and understanding. Hayes discovered males were more worried about the setting than females, whereas others have indicated that women are more concerned but only about a narrow range of risk-related environmental issues, some researchers have found no significant result[12]. Linn, Hyde de - emphasize tiny gender differences in cognitive and psychosocial domains and instead redesign teaching and learning environments to support gender equity[13]. With respect to the relation between age and knowledge, Autio, Sapienza, and Almeida asserted that previous internationalization initiation and increased knowledge intensity were associated with quicker global development[14]. For the relation between ethnicity and knowledge: Pirouznia, and MAHE discovered that "Caucasians" had greater mean ratings of understanding than learners from "other" mixed ethnic groups among 532 students in the sixth, seventh,

and eighth grades in Shawnee Middle School in Lima, Ohio[15]. In this study, the factor that affected knowledge and understanding of EKC in food stall traders at Bangsaen Beach, Chonburi province was the level of education, which was statistically significant (Chi-square = 39.64, *p-value* = .000). Education has been associated with better health results in previous studies: individuals with more education experience less anxiety and depression, have fewer functional constraints and are less likely to have a severe health condition such as diabetes, cardiovascular disease, or asthma [16]. Educated adults tend to have larger social networks. Furthermore, these connections provide access to financial, psychological, and emotional resources that may help reduce hardship and stress and improve health[17]. In conclusion, previous studies have found that gender[13], age[14], ethnicities[15], and education level[16-17] were factors that affected knowledge and understanding. The results of this study revealed that the level of education affected the test outcomes; the level of knowledge and understanding among participants after being provided with information less than 10% of the participants with education below tertiary level passed the pre-test and the participants' test scores increased by 69.4% after acquiring information. The point that makes the assessment score behind the knowledge, that the knowledge that can close the knowledge gap makes the effectiveness good.

Conclusions

Factor affecting EKC knowledge and understanding in food stall traders at Bangsaen Beach, Thailand was education level. However, the gap can be bridged by providing knowledge between what they know and what they need to know with full spectrum of the background, symptoms, treatment and prevention of EKC. These research outcomes would be applied for primary care if caregiver has a low level of education to prevent future outbreak of EKC in community. This data would be used in the future for further studies both local and international beach societies.

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Competing Interests

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