Impact of Environmental Health and Quality of Life Indicators for Klongnoi Community, Pak Panang District, Southern Thailand

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Abstract

Purpose: The purpose of this descriptive analytical study is to identify the factors that affect environmental health and health outcomes in relation to the standard of living in the Klongnoi Community Pak Panang district of Nakhon Si Thammarat.

Study Design: : 433 samples in total were questioned using questionnaires. Village Health Volunteers ("VHV") representatives performed a fecal examination and focus group advancement as part of an environmental health assessment to determine the prevalence of parasitic disease.

Results: 38% of them had an illness, and 44% of them had a chronic disease. The most common diseases that these individuals had were; Diabetes Mellitus (DM) and Hypertension (HT). They didn't receive annual medical checkups, and 57% obtained government services for their illnesses for their right to medical attentionThe environmental health obstacles in the area were waste, rodents, insects, water supply and chemical pesticide being used. Most of them had an excellent quality of life, at 54%. From the sample group, 291 of them had a stool examination with a direct wet smear for parasite prevalence of disease. The data showed 1.72% of prevalence with *Ascaris lumbricoid egg, strongyloides stercoralis rhabitiform* lava; of which the same person was found in the equilibrium of parasites at a percentage of 2.41.

Conclusion: This study demonstrated that community involvement in environmental issues, particularly waste management, water supply, and flooding, were the primary problems that the community needed to address.

Key words: Environmental Health, Impact Factors, Quality of life

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Introduction

Thailand has undergone decades of economic and social upheaval, moving from an agriculturally based rural economy to one characterized by growing urban communities. The community's lifestyle has evolved over time, and the population's self-care practices have demonstrated how advances in public health and medical technology have affected people. It was unable to lessen the likelihood of negative health effects among them.

Communities and society have evolved and been impacted by social and economic development. However, as a result of overall advancement, environmental pollution is also brought about by the degradation of natural resources and the environment. Furthermore, it is crucial to directly and indirectly impact people's physical, mental, social, and intellectual well-being. Since 1975, Thailand has had a state mechanism in place to enforce regulations pertaining to the environment, health, and natural resources. Furthermore, according to the National Health Act of 2007, people have the right to request assessments, to take part in health impact assessments resulting from public policy, to get prior informed consent from government agencies, and to carry out projects or activities involving public policy that may have an impact on health by evaluating the health effects [1]. Depending on how many community members participate, the health effects could differ.

Previous reports on the Pak Panang watershed raised concerns about the environment, particularly with regard to environmental sanitation and its potential to negatively impact the community's environment and public health. It was suggested that waste management and garbage collection were lacking. Vegetable consumption may cause the body to accumulate harmful chemicals. This is in line with the diabetes and hypertension health report. Locals in the Khlong Noi Pak Panang District became more aware of these issues. They asked the nearby university for assistance in assessing the conditions and effects on the environment and public health. Thus, the purpose of this preliminary assessment was to evaluate the quality of life, environmental health, and impacts in Khlong Noi Pak Panang District, Nakhon Si Thammarat. [8] [9] [10]

Methodology

Study area and sample

In Khlong Noi,Pak Sub-District,Panang District, Nakhon Si Thammarat had a population of 10,829 (men = 5,384 women= 5,445) in 2,712 households. The main crops are rice, palm oil, coconut, pomelo, and lime. [4] [5] [6] [7] . This study was conducted in rural community of Klong Noi Sub- District, Pak Panang District, Nakhon Si Thammarat Province in Southern of Thailand. We interviewed 433 household representatives from 1 9 villages using health socioeconomic status questionnaires. We also assessed environmental sanitation as a tool to determine the quality of life (QoL) from parasitic disease infections. In addition, we conducted a focus group for in-depth interviews.

Instruments for data collection

The questionnaire interviews were conducted. The questionnaires were determined by experts and teste for the validity and reliability. The study questionnaires were tried out in another similar area. Discrimination power was set at more than 0. 2 and alpha coefficient was calculated by using Kuder- Richardson Formula 20 (KR- 20). The overall reliability of all items was 0.82.

Data analysis

The descriptive data were analyzed using frequency, percentage, mean, standard deviation, and Chi- square coefficient. The statistical significance level was 0.05.

Ethical approval and concerns

This study has been approval for conducting the study by the ethical research committee of Walailak University (No.061/2014)

Results

In 433 subjects, there were 88 men (20.3%) and 345 women (79.7%), aged between 15-96 years. The average age was 54 years. The proportion of married couples was 79%. There were 63% had primary level with averaged income of 10,190.99 baht / month. The average of family member was two persons (Table 1).

Table 1: Descriptive characteristics of Khlong Noi,Pak Panang District, Nakhon Si Thammarat

	No (n = 433)	%
Sex		
Male	88	20.3
Female	345	79.7
Age (Year)		
0-15	1	0.2
16-30	37	8.5
31-45	99	22.9
46-60	137	31.7
> 60	159	36.7
Mean = 54.17, S.D = 15.85, Min = 15, Max = 96		
Religion		
Buddhism	411	94.9
Christianity	1	0.2
Muslim	21	4.9
Marital Status		
Single	44	10.2
Married	344	79.4
Widowed	38	8.8
Divorce/Separation	7	1.6
Education		
Uneducated	38	8.8
Primary School	274	63.3
Middle School	28	6.5
High School	44	10.2
Bachelor's Degree	42	9.6
Other	7	1.6
Income (Baht/month)		
<.3500	81	18.7
3,500-5,000	73	16.9
5,001-10,000	175	40.4
>10,000	104	24
Mean = 10,190.99, S.D = 9,718.49, Min = 800, Max = 80,000		
Expenditures (Baht/month)		
<.3500	100	23.1
3,500-5,000	85	19.6
5,001-10,000	161	37.2
>10,000	87	20.1
Mean = 8,717, S.D = 8943.62, Min = 300, Max = 90,000		

Table 1: Descriptive characteristics of Khlong Noi,Pak Panang District, Nakhon Si Thammarat

	No (n = 433)	%
Sufficiency of Income and Expenditures		
Sufficient	119	27.5
Insufficient	314	72.5
Dwelling		
Household	400	92.4
Leased House	12	2.8
Family/Friends	6	1.4
Passing Accommodation	14	3.2
Other	1	0.2

Health and access to services had shown that 38% of illness had occurred in the last 3 months. Chronic disease must be treated continuously 44%, by the disease. Heart disease, 5%, hypertension and diabetes, 32% self-care when were sick. Most of them went to public hospitals, 70% in behavioral information, 15% in smoking behavior and 11% in alcohol. Never exercise, 23%. Eat raw food cooked 16.7%. Eat salty (salted fish) 60%. Water Drinking source of rain water. 81.3 bought 13.4% water, pond water or 2.5 % water, most of which were excreted in 98% of the economy. Family income, showed that the majority 75% of the occupations. Family income had an average of 10,322 baht per month, at 73% of income. The debt burden was 43%, mostly debt was 24% of the problem of environmental problems. Solid waste 96% waste water problem, and odor 15 % waste problem. Roads damaged 22% of the problem of animal and insect disease, 88% of the problem of chemical use, 34% of the problem of dust, smoke, burning 6.2% of drinking water, 68% of water problems, 70% of problems with the accident. Life and property safety incidents, traffic accident 4% other 1.2% Physical problems, 0.7% Natural disasters, 49% Drug problems 19%, gambling problems 17.3% other social problems 4.6% quality of life (Table 2).

Table 2: Descriptive of environmental issues

Demographic attributes	(n = 433)	%
Environmental Obstacles		
Noise Pollution	14	3.2
Sound from the TV	7	1.6
Unnecessary Waste	414	95.6
Sewage and Odor	64	14.8
Waste Issues	7	1.6
Hometown Roadway broken	96	22.2
Rodents, and Insects	380	87.8
Pesticide Use	145	33.5
Burning, Smoke, and Dust	27	6.2
Drinking Water	296	68.4
Water Use	303	70
Sanitation of Food	28	6.5
Growing Vegetables, with fences	237	54.7
Livestock	110	25.4

Most of the respondents were satisfied with their health. 54.5% satisfied with safety, 61% satisfied with quality of life, 44.8% The quality of life was at 54.7% (Table 3). Collection of 390

stool specimens, and 300 specimens were examined at 76.92%. Fecal samples were collected in *300* samples. Seventy eight parasites were found in *6* males, accounting for *75%* and found in *2* females. *25%* have a prevalence rate, 2.67. In the age group of 46-60, 62.50%, aged 60 years and over, were found to be 37.50%. In other age groups, only one Hookworm was detected. Six cases were found in 75% of cases. Two 25% of the eggs were detected and 25% were found in the same intestine. Relationship, sex, age, education, income, sex, education, income and illness; with there being no correlation. However, with illness the correlation with knowledge was statistically significant $(p <0.05)$. The correlation was statistically significant at 0.014 $(p <0.05)$. There was no correlation, but solid waste and drinking water was found. It was found that the correlation between illness and other ailments were statistically significant at 0.025 and 0.042 $(p <0.05$ (Table 3-4).

Table 3: Quality of life

Demographic attributes	Figure (n = 433)	Proportion
Substandard Quality of Life	-	-
Satisfactory Quality of Life	198	45.7
Excellent Quality of Life	235	54.3

Table 4: Relationship between personal data and health status.

Variables	r	χ^2	df	p-value
Sex	-	0.658	2	0.417
Male				
Female				
Age	-	18.938	1	0.000*
0-15				
16-30				
31-45				
46-60				
61+				
Education	-	1.162	1	0.281
Uneducated				
Primary School				
Middle School				
High School				
Bachelor's degree				
Other				
Income	-	0.633	1	0.426
<.3500				
3,500-5,000				
>5,000-10,000				
>10,000				

a = Fisher's Exact test, * p < 0.05

From the environmental problems of the area, the use of chemicals was implemented to eliminate the pests of farmers. Tambon Klong Noi had a total area of 125 rai of pomelo, Siam, with a total of ninety-two grapefruit farmers. Of the 82 households surveyed, 50% were male. 64 and females accounted for 36%. Most of the samples were 41-50 years old. Pesticide use data showed that most of the samples used pesticide chemicals for 6 months to 1 year, accounting for 54%. Knowledge of pesticide use is well known, and 85% of the samples had good behavior with Concentrated Choline essence. The subjects were randomly assigned to receive blood to determine the level of choline esterase, which was divided into 4 levels: normal, safe, unsafe, and found that most subjects had choline levels. The risk was 42.85%, followed by the risk of 37.14%. The relationship between demographic factors showed that age, knowledge and behavior correlated significantly with level of cholinesterase (p <0.05).

Discussion

Numerous initiatives need to be put into action. The realization that every action is made by a community leader or through an organization should be the primary motivator for people to get together. Change must be led by the organization or by leaders in the community. The process of encouraging people and communities to take charge of their own health and enhance their general well-being is known as health promotion. This appropriately covers lifestyle and mental health. Ecosystems, social context, economics, culture, traditions, and values are some of the variables that affect one's health. To take care of themselves, they need to be capable and knowledgeable.

People's overall quality of life is excellent, falling between good and medium. There are known environmental health issues that could have an impact on health. 96% of waste is in bulk. the issue of local dengue-causing rodents and insects, particularly mosquitoes. 70% of people have drinking water problems. Pesticide use is a 34% problem. There are paths that are broken, rancid waterways, and domesticated animals. Concerns include the issues of dust, noise, and food hygiene. Solving health and environmental issues involves actively listening to troubling information and coming up with creative solutions while enticing delegates to the meeting. Solutions should be developed and ideas exchanged. Some villages have issues with garbage management from the outset.

Acknowledgements

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