

REFERENCES

- Anulak, Y. *Process on Study of Hygiene and Development of Health Behavior "Step into 2000 Age"*. 1st Edition. Bangkok: Signa Design Graphic Ltd., 2000.
- Bec, M.H. *"The Health Belief Model and Sick Behavior Role"*. *Heath Education Monographs*. New York. 1974, 34 pp.
- Boonkuson, T., et al. *Comparisons of Behavior on Protection of Health Problems caused by Rock Dust of the Population with Difference on Personal Factors and Social and Economic Factors in the Rock Crusher Plants, Saraburi Province*. Thesis of Master's Degree. Project Joint Research of Nursing College attached to Institute of Development of Public Health Personnel, 1994.
- Bowornkitti, S., et al. *Occupational Medicine*. First edition. Bangkok: Project Technical Welfare Phra Barom Chanok Institute, 1999.
- Buaphan, W. *Acceptance of Noise Protection During Working of Workers in Textile Plants in Samut Sakhon Province*, Thesis of Master's Degree, Mahidol University; Bangkok, 1992.
- Chacuttprakas, R. *Medical Diagnosis and Surveillance of Occupational Diseases: Occupational Health Division, Department of Health, Ministry of Public Health*, 1995.
- Changke, W. *Relationship between the Health Belief Factor and Behavior on the Use of Dust Mask of Employees of Chon Prathan Cement Plant, Cha-um Phetchaburi Province*. Thesis of Master's Degree, Mahidol University: Bangkok, 1996.
- Green, L.W., and Kreuter, M.W. *Health Promotion Today and a Framwork for Planning*. Health Promoting Planning and Educational and Environment Approach . California : 1991 , 769 pp.

- Inprasit, N. *Relations between Belief on Health and Health Behavior on Prevention of Silicosis of Workers in Rock Crusher Plants in Saraburi Province*. Thesis of Master's Degree, Mahidol University: Bangkok, 1983.
- Kadkankrai, Y. *Situations on Health and Environmental Health from Past to the Present*. 1st Edition. Nonthaburi: Project Textbooks. Department of Health, 1999.
- Lohsunthorn, P. *Epidemic Science*. 2nd Edition. Bangkok: Chulalongkorn University printing press, 1995.
- Mainman, L.A. and Becker, M.H. *The Health Belief of Model : Original and Correlates in Psychological Theory*. Health Education Monograph . New York , 1974 : 24 pp.
- Nichanon, K. *Factors with Impact on the Behavior of Protection against Cotton Dust of Textile Plants in Samut Prakan Province Area*. Thesis for Master's Degree, Physical Education Department, Mahidol University: Bangkok, 2001.
- Nucharoen, S., et al. *Promotion of Health: Concept, Theory and Practice of Nursing*. 1st Edition. Nakhon Si Thammarat Province: Walailak University, 2000.
- Prachayworawet, S. *Factors Influence the Behavior of Using Ear Protection of the Textile Workers in Samut Prakan Province*. Thesis of Master's Degree, Mahidol University: Bangkok, 1992.
- Occupational Public Health Division. *Guidelines on Monitoring Cotton Pneumoconiosis*. Bangkok: Veterans Printing Press Veteran Welfare, 1998.
- Praphansilp, M. *Building of Health of Workers in the Workplace*. 1st Edition. Nonthaburi: Project Textbooks, Department of Health, 1999.
- Rakphao, S., and Duangsawat, S. *Process on Health Operations for Development of Health Behavior*. 1st Edition. Bangkok: Project Academic Welfare, Phra Barom Chanok Institute, 1997.
- Ramkul, C. *Situations of Silicosis in Thailand Newsletter*. (January-February 1998): Page 6-7.

- Resentock , I.M. *The Health Belief Model and Preventive Behavior*. Health Education Monographs . New York , 1974 : 24 pp.
- Saenghiranwattan, S. *A Lung Diseases from Working*. 1st Edition. Bangkok: Holistic Publication Co., Ltd., 1994.
- Safety and Hygiene Working Association. *All Laws on Working Safety and the Environment*. 1st Edition. Bangkok. Department of Health 1993.
- Sattayabul, T. *Public Health Laws*. 1st Edition. Bangkok: Project Academic Welfare, 1999.
- Silapasuwan, P. *Concept, Principle, Nursing of Occupational Health: Theory and Practice*. 1st Edition. Bangkok: Charoen Printing Press, 2001.
- Suphachutikul, A. *Indicator on International Health Promotion*. 1st Edition. Nonthaburi Province, Project Printing Press, Public Health System Research Institute, 1998.
- Suwan, P., and Suwan, S. *Behavioral Science, Behavioral Health and Hygiene*. first edition, Bangkok: Chao Phaya Printing, 1991.
- Suwan, P. *Measuring Health*. 1st Edition. Bangkok: Pap Pim Printing Press, 1994.
- Suwan, P. *Study of Behaviors and Conditions on the Environment for Promotion of Health of People in the Groups of Youths, Housewives and Workers in Factories*, Bangkok: Public Health System Research Institute, 1997.
- Tangtaeng, T. *Study on the Fitness of the Full-Faced and Half-Faced Masks Used for Protection Against Respiratory System from Chlorine*. Thesis for Master's Degree, Mahidol University, Bangkok, 1988.
- Thamthitiwat, S., and Suchamnong, P. *Environmental Health*. First edition. Bangkok: Project Medicine Faculty, Chiang Mai University, 1996.
- Traimongkolkul, P., and Chattraporn, S. *Design of Research Work*, Liberal Art Department, Kasetsart University, Bangkok: 1991.

Viewing People, Viewing News. *Labor Risks Can be Addressed by Conscience* (9 March 2003): Page 6.

Wongthim, S., and Srimad, W. *Textbook Environmental Lung Diseases*. 1st Edition. Nakhon Si Thammarat Province, Walailak University, 1999.

Yimwassana, N. *Knowledge and Opinions on the Practice for Personal Protection of Female Employees in Textile Plants*. Thesis of Master's Degree, Mahidol University: Bangkok, 1983.

Yongchaiyuth, P., et al. *Respiratory System Diseases 1*. 1st Edition. Bangkok: Agka International, 1989.

APPENDICES

Appendix A

Questionnaire No.....

Questionnaire for Workers

**Project Research on Preventive Behaviors from Dust among Workers in
Lime Factories and Stone Crushing Mills ,
Nakhon Si Thammarat Province**

Explanations on Answering the Questionnaire

The people who answer to the questionnaire mean the workers work in the lime factories and stone crushing mills in Nakhon Si Thammarat Province

This questionnaire is divided into 5 sections are:

- | | |
|-----------|----------------------------------------------------|
| Section 1 | Socio – demographic Data |
| Section 2 | Preventive behaviors Data |
| Section 3 | Perceived susceptibility Data |
| Section 4 | Perceived severity Data |
| Section 5 | Perceived benefits and barriers of performing Data |

The data derived shall be kept confidential for the researchers only. No impact on the persons who answer the questionnaire, please answer the questionnaire in truth so the data can be useful on health promotion for the plant workers later.

Section 3 Perceived susceptibility Data

Explanation: Each question has five answers, please choose the answers corresponding to your feelings most in one answer by putting a checkmark / in the box

No.	Perceived susceptibility	Level of Opinion				
		Strongly agree	Agree	Not Sure	Disagree	Strongly disagree
1.	The job you work is at risk of developing pneumoconiosis					
2.	You have strong body, so there must be no pneumoconiosis.					
3.	Dust in the factory has adverse effects only for the children and elderly.					
4.	You have worked in the factory for so long until you are used to dust, you cannot develop pneumoconiosis					
5.	Your job has not much dust, so it is not necessary to use dust protective device					
6.	You are at risk to have pneumoconiosis because you have worked for a long time.					
7.	Taking care of your health regularly will make it harder to for the lungs to trap the dust.					
8.	Working in a lime factory / stone crushing mill is dangerous to your health.					
9.	If you can choose, will you change your job to other type?					
10.	You have made annual check-up, so should be no dust on the lungs.					

Section 4 Perceived severity Data

Explanation: In each question there are five answers, please choose the answers corresponding to your feelings most in one answer by putting a checkmark / in the box

No.	Perceived severity	Level of Opinion				
		Strongly Agree	Agree	Not Sure	Disagree	Strongly disagree
1.	Pneumoconiosis is easy to be treated.					
2.	Dust in the factory is as dangerous as the general dust.					
3.	You will lose your job if you develop pneumoconiosis.					
4.	Having pneumoconiosis then you can no longer work.					
5.	People who have pneumoconiosis can develop other diseases easily.					
6.	Pneumoconiosis has the symptom like the common cold, so it is not a scary story.					
7.	Constricted chest is normal for people working in the factory					
8.	People with pneumoconiosis will die in a short time.					
9.	Treatment of pneumoconiosis takes a long time.					
10.	Treatment of pneumoconiosis cost is very high.					

Section 5 Perceived benefits and barriers of performing Data of the diseases.

Explanation: In each question there are five answers, please choose the answers corresponding to your feelings most in one answer by putting a checkmark / in the box

No.	Perceived benefits and barriers of performing	Level of Opinion				
		Strongly Agree	Agree	Not Sure	Disagree	Strongly disagree
1.	If the body is strong wearing the dust protective device in the factory is not so necessary.					
2.	Even use the dust protective device you still have a chance to develop respiratory diseases from dust.					
3.	Using dust protective device while working is necessary.					
4.	Using dust protective device while working annoys you.					
5.	Using dust protective device makes contacts with others difficult.					
6.	You would rather suffer from pneumoconiosis than using dust protective device					
7.	Using dust protective device while working is simple not complicated.					
8.	Even you feel uncomfortable to use the dust protective device you have to do for safety.					
9.	If you have to buy dust protective device you think you will rather not use it.					
10.	Taking care of the dust protective device after use is difficult and time consuming.					

Thank you for your cooperation on answering the questionnaire

Questionnaire No.....

Questionnaire for owners
Project Research on Preventive Behaviors from Dust among Workers in
Lime Factories and Stone Crushing Mills ,
Nakhon Si Thammarat Province

Explanation on answering the questionnaire

The answering persons means the management/owner of lime factories and stone crushing mills in Nakhon Si Thammarat Province

This questionnaire is divided into 2 sections are:

Section 1 Socio – demographic Data

Section 2 Supportive environment and health policy Data

The data received will be treated with confidential. No impact to you on answering persons of this questionnaire please answer in truth so the data received can be processed to benefit promotion of good health of the workers later.

6. Does your factory provide dust protective device to the workers or not?

1. Yes (Please show it) 2. No (Go to No. 7)

6.1 What kind of equipment does the factory have?

.....

7. Does your factory provide advice on the dangers from working and the preventive measures for the workers before going to work or not?

1. Yes 2. No (Go to No. 8)

7.1 If there is an advice, who gives the advice?

.....

7.2 Who does give the advice?

.....

7.3 How much often does he do it?

.....

8. Does your factory have a nurse to take care of the health of the factory workers?

.....

9. Should there be a sick work to be referred for treatment, can you describe the details?

.....

10. How do you want the public health to give support?

.....

11. Have you got in touch with the public health in the past?

.....

12. Do you think how the health of the workers is important on the work in your factory?

1. Very Important 2. Important 3. Not Sure
4. Not Important 5. Not at all

Thank you for giving cooperation on answering the questionnaire

**Observation Form on the preventive behavior and
the environment condition inside the factories
Project Research on Preventive Behaviors from Dust among Workers in
Lime Factories and Stone Crushing Mills ,
Nakhon Si Thammarat Province**

Scope of Observation

1. Have dust protective equipment worn by the workers while working (if you have, can we take a look).
2. General conditions in the factory.

Observation	Yes	No
1. There were dust protective device while the workers working		
2. The factory had a sign advising the policies or rules at the visible places.		
3. The factory had fence properly		
4. The factory had a nursing room		
5. The factory had a nurse to take care of the workers		
6. There were workers used dust protective device		
7. There were workers used the dust protective device correctly		

Appendix B

Table 23: Perceived Susceptibility

Perceived susceptibility	Strongly agree	Agree	Not Sure	Disagree	strongly disagree	\bar{X}	S.D.
1.The job you work is at risk of developing pneumoconiosis	20 (10.1)	125 (63.1)	43 (21.7)	10 (5.1)	0 (0)	3.78	.69
2.You have strong body, so there must be no pneumoconiosis.	6 (3.0)	62 (31.3)	86 (43.4)	42 (21.2)	2 (1.0)	3.14	.82
3.Dust in the factory has adverse effects only for the children and elderly.	13 (6.6)	113 (57.1)	24 (12.1)	39 (19.7)	9 (4.5)	3.41	1.02
4.You have worked in the factory for so long until you are used to dust, you cannot develop pneumoconiosis	14 (7.1)	88 (44.4)	38 (19.2)	54 (27.3)	4 (2.0)	3.27	1.01
5.Your job has not much dust, so it is not necessary to use dust protective device	42 (21.2)	89 (44.9)	19 (9.6)	40 (20.2)	8 (4.0)	3.59	1.15
6.You are at risk to have pneumoconiosis because you have worked for a long time.	20 (10.1)	83 (41.9)	58 (29.3)	32 (16.2)	5 (2.5)	3.41	.96
7.Taking care of your health regularly will make it harder to for the lungs to trap the dust.	18 (9.1)	76 (38.4)	44 (22.2)	45 (22.7)	15 (7.6)	3.19	1.12
8.Working in a lime factory / stone crushing mill is dangerous to your health.	67 (33.8)	90 (45.5)	14 (7.1)	22 (11.1)	5 (2.5)	3.97	1.04
9.If you can choose, will you change your job to other type?	60 (30.3)	98 (49.5)	22 (11.1)	14 (7.1)	4 (2.0)	3.99	.94
10.You have made annual check-up, so should be no dust on the lungs.	21 (10.6)	76 (38.4)	62 (31.3)	35 (17.7)	4 (2.0)	3.38	.96

Table 24: Perceived Severity

Perceived severity	Strongly agree	Agree	Not Sure	Disagree	strongly disagree	\bar{X}	S.D.
1.Pneumoconiosis is easy to be treated.	17 (8.6)	103 (52.0)	64 (32.3)	11 (5.6)	3 (1.5)	3.61	.78
2.Dust in the factory is as dangerous as the general dust.	3 (1.5)	51 (25.8)	59 (29.8)	76 (38.4)	9 (4.5)	2.81	.92
3. You will lose your job if you develop pneumoconiosis.	10 (5.1)	125 (63.1)	37 (18.7)	23 (11.6)	3 (1.5)	3.59	.82
4.Having pneumoconiosis then you can no longer work.	8 (4.0)	72 (36.4)	84 (42.4)	33 (16.7)	1 (0.5)	3.27	.80
5.People who have pneumoconiosis can develop other diseases easily.	29 (14.6)	113 (57.1)	32 (16.2)	22 (11.1)	2 (1.0)	3.73	.88
6.Pneumoconiosis has the symptom like the common cold, so it is not a scary story.	12 (6.1)	135 (68.2)	29 (14.6)	16 (8.1)	6 (3.0)	3.66	.83
7.Constricted chest is normal for people working in the factory	52 (26.3)	80 (40.4)	32 (16.2)	32 (16.2)	2 (1.0)	3.75	1.05
8. People with pneumoconiosis will die in a short time.	11 (5.6)	54 (27.3)	101 (51.0)	26 (13.1)	6 (3.0)	3.19	.85
9.Treatment of pneumoconiosis takes a long time.	8 (4.0)	78 (39.4)	94 (47.5)	14 (7.1)	4 (2.0)	3.36	.76
10.Treatment of pneumoconiosis cost is very high.	5 (2.5)	62 (31.3)	111 (56.1)	16 (8.1)	4 (2.0)	3.24	.72

Table 25: Perceived Perceived benefits and barriers of performing

Perceived benefits and barriers of performing	Strongly agree	Agree	Not Sure	Disagre e	strongly disagree	\bar{X}	S.D.
1. If the body is strong wearing the dust protective device in the factory is not so necessary.	10 (5.1)	133 (67.2)	26 (13.1)	28 (14.1)	1 (0.5)	3.62	.81
2. Even use the dust protective device you still have a chance to develop respiratory diseases from dust.	16 (8.1)	131 (66.2)	38 (19.2)	13 (6.6)	- (0)	3.76	.69
3. Using dust protective device while working is necessary.	67 (33.8)	105 (53.0)	19 (9.6)	7 (3.5)	- (0)	4.17	.74
4. Using dust protective device while working annoys you.	10 (5.1)	88 (44.4)	11 (5.6)	79 (39.9)	10 (5.1)	3.05	1.12
5. Using dust protective device makes contacts with others difficult.	11 (5.6)	74 (37.4)	14 (7.1)	91 (46.0)	8 (4.0)	2.94	1.10
6. You would rather suffer from pneumoconiosis than using dust protective device	53 (26.8)	96 (48.5)	28 (14.1)	16 (8.1)	5 (2.5)	3.89	.98
7. Using dust protective device while working is simple not complicated.	23 (11.6)	116 (58.6)	27 (13.6)	26 (13.1)	6 (3.0)	3.63	.96
8. Even you feel uncomfortable to use the dust protective device you have to do for safety.	66 (33.3)	86 (43.4)	25 (12.6)	16 (8.1)	5 (2.5)	3.87	1.01
9. If you have to buy dust protective device you think you will rather not use it.	56 (28.3)	85 (42.9)	25 (12.6)	27 (13.6)	5 (2.5)	3.81	1.07
10. Taking care of the dust protective device after use is difficult and time consuming.	21 (10.6)	88 (44.4)	25 (12.6)	28 (14.1)	36 (18.2)	3.15	1.31

Appendix C

List of the Lime Factories and Stone Crushing Mills

No.	Name and Location
Lime Factories	
1.	376/3 Om Khai Wachirawuth Road, Village No. 5, Pak Phoon Sub-district, Muang Nakhon Si Thammarat Province.
2.	Satharana Road, Village No. 6, Thong Nien Sub-district, Khanom District, Nakhon Si Thammarat Province
3.	79/7 Khanom-Sichon Road, Village No. 12, Khanom Sub-district, Khanom District, Nakhon Si Thammarat Province.
4.	113 Nakhon Si-Thung Song Road, Village No. 1, Khang Sai Sub-district, Phra Prom District, Nakhon Si Thammarat Province.
5.	443/5 Nakhon Si-Thung Song Road, Village No. 12, Ron Phibun Sub-district, Ron Phibun District, Nakhon Si Thammarat Province.
6.	152/1 Nakhon Si-Thung Song Road, Village No. 9, Ron Phibun Sub-district, Ron Phibun District, Nakhon Si Thammarat Province.
7.	65/3 Mai La-Khok Kham Road, Village No. 4, Hin Tok Sub-district, Ron Phibun District, Nakhon Si Thammarat Province.
8.	300/2 Nakhon Si-Cha Uad Road, Village No. 14, Ron Phibun Sub-district, Ron Phibun District, Nakhon Si Thammarat Province.
9.	204/1 Nakhon Si-Thung Song Road, Village No. 3, Ron Phibun Sub-district, Ron Phibun District, Nakhon Si Thammarat Province.
Stone Crushing Mills	
1.	Sila Sakon, Village No. 1, Thung Pho Sub-district, Chulaporn District, Nakhon Si Thammarat
2.	Por. Silachai, 150 Khao Krai-Tam Yai Road, Village No. 4, Cha Mai Sub-district, Thung Song District, Nakhon Si Thammarat Province.
3.	Wang Sila, Nakhon Si – Thung Song Road, Village No. 6, Hin Tok Sub-district, Ron Phibun District, Nakhon Si Thammarat Province.
4.	Sila Aree, Nakhon Si-Thung Song Road, Village No. 6, Hin Tok Sub-district, Ron Phibun District, Nakhon Si Thammarat Province.

Autobiography

Miss Amornrat Praphant was born in January 9, 1966 at 106 Moo 12 Tampon Ronphibun Amphur Ronphibun Nakhon Si Thammarat Province. I had been to educate in a bachelor's degree from Suratthany Nursing Collage Suratthany Province in 1989 and I started to work in a government official of 3-registation nurse at A pediatric department Maharaj Nakhon Si Thammarat Hospital.

In 2001 I was move to a quality center the responsible about quality service development of the hospital and I has the position of 7-registation nurse to the present.