HEALTH RISK BEHAVIORS OF PERSONNEL AND LOCAL RESIDENTS INVOLVED IN SOLID WASTE DISPOSAL SITE OF NONTHABURI PROVINCE

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HEALTH RISK BEHAVIORS OF PERSONNEL AND LOCAL RESIDENTS INVOLVED IN SOLID WASTE DISPOSAL SITE OF NONTHABURI PROVINCE

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ABSTRACT

This study aimed to survey health risk behaviors and their relation to infection, injury and disability among local residents and staff working at a solid waste disposal site of Nonthaburi and to study the relationship between these behavior and information received from various media sources about the dangers of solid waste. 270 people were chosen as the sample group. Questionnaires were used for data collection.

The results showed that 27.4% of samples did not wash their hands after collecting solid waste, 29.6% did not bandage their wound, 70.0% of did not clean wounds immediately, 45.6% did not separate the dangerous solid waste, and 53.3% touched their eyes while collecting waste. The level of health risk behaviors, in general, was at a high level.

People received significant information about infection and disability through media and government sources but not through personal contacts. Information about injury was received through newspaper and magazines but not to a significant extent through other newspapers and magazines but not to a significant extent through other media sources.

Research should be undertaken about media promotion of correct behaviors in solid waste collection. This should be targeted to that it can be used for self-study and for knowledge of tools and equipment necessary for prevent the dangers of toxic waste.

KEY WORDS: HEALTH RISK BEHAVIOR/ PERSONNEL AND LOCAL RESIDENTS INVOLVED / SOLID WASTE DISPOSAL SITE / NONTHABURI PROVINCE

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พฤติกรรมเสี่ยงต่อสุขภาพของบุคลากรและประชาชนที่เกี่ยวข้องกับสถานที่กำจัดมูลฝอยนนทบุรี (HEALTH RISK BEHAVIORS OF PERSONNEL AND LOCAL RESIDENTS INVOLVED IN SOLID WASTE DISPOSAL SITE OF NONTHABURI PROVINCE)

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บทคัดย่อ

การวิจัยครั้งนี้มีวัตถุประสงค์เพื่อศึกษาพฤติกรรมเสี่ยงต่อสุขภาพและศึกษาตัวแปรที่มีความสัมพันธ์กับพฤติกรรมเสี่ยงต่อสุขภาพทางด้านการติดเชื้อ การได้รับการบาดเจ็บ และต่อการพิการของบุคลากรและประชาชนที่เกี่ยวข้องกับสถานที่กำจัดขยะมูลฝอยของจังหวัดนนทบุรี โดยใช้ประชากรกลุ่มตัวอย่าง จำนวน 270 คน ทำการเก็บข้อมูลโดยใช้แบบสอบถาม

ผลการวิจัย พบว่า ส่วนใหญ่กลุ่มตัวอย่างมีพฤติกรรมที่เสี่ยงต่อสุขภาพต่อการติดเชื้อโดยไม่ล้างมือทุกครั้งหลังเก็บมูลฝอย ถึงร้อยละ 27.4 และเมื่อมีบาดแผลเกิดขึ้นตามร่างกายทุกครั้งไม่ได้ใช้ผ้าปิดบาดแผลร้อยละ 29.6 ด้านพฤติกรรมเสี่ยงสุขภาพต่อการบาดเจ็บจากมูลฝอย พบว่า เมื่อได้รับบาดแผลจากการเก็บมูลฝอยไม่ทำความสะอาดบาดแผลทันทีการปฏิบัติบ่อยร้อยละ 70.0 รวมทั้งไม่ปฏิบัติที่จะคัดแยกมูลฝอยที่เป็นอันตรายมาเก็บเพื่อป้องกันอันตรายจากมูลฝอยร้อยละ 45.6 พฤติกรรมเสี่ยงต่อสุขภาพต่อการติดเชื้อโรคจากมูลฝอย พบว่า ส่วนใหญ่กลุ่มตัวอย่างมีพฤติกรรมใช้มือสัมผัสดวงตาระหว่างเก็บมูลฝอยบ่อยถึงร้อยละ 53.3 สำหรับตัวแปรที่มีความสัมพันธ์กับพฤติกรรมเสี่ยงต่อสุขภาพของกลุ่มตัวอย่าง นั้นคือในด้านพฤติกรรมเสี่ยงต่อสุขภาพต่อการติดเชื้อ และต่อการพิการ มี 5 สื่อคือ วิทยุ โทรทัศน์ หนังสือพิมพ์ นิตยสาร/วารสาร และสื่อข่าวสารทางราชการอย่างมีนัยสำคัญทางสถิติที่ระดับ .05 มีสื่อบุคคลเท่านั้นที่ไม่มีความสัมพันธ์ ส่วนพฤติกรรมเสี่ยงต่อสุขภาพต่อการบาดเจ็บมีความสัมพันธ์กับการได้รับข่าวสารเกี่ยวกับมูลฝอย สองสื่อคือสื่อหนังสือพิมพ์ และนิตยสาร/วารสารที่มีความสัมพันธ์อย่างมีนัยสำคัญทางสถิติที่ระดับ .05 นอกนั้นพบว่าไม่มีความสัมพันธ์ประสบการณ์ที่ได้รับอันตรายจากมูลฝอยพบมีความสัมพันธ์กับพฤติกรรมเสี่ยงต่อสุขภาพ สองด้านคือ การติดเชื้อ และการบาดเจ็บอย่างมีนัยสำคัญทางสถิติที่ระดับ .05 และความรู้เกี่ยวกับอันตรายจากมูลฝอยมีความสัมพันธ์กับพฤติกรรมที่เสี่ยงต่อสุขภาพทั้งสามด้านอย่างมีนัยสำคัญทางสถิติที่ระดับ .05

ข้อเสนอแนะควรมีการศึกษาเกี่ยวกับการสร้างสื่อเพื่อเผยแพร่เกี่ยวกับวิธีการจัดเก็บมูลฝอยแก่กลุ่มตัวอย่างโดยตรงเพื่อที่กลุ่มตัวอย่างสามารถศึกษาได้ด้วยตนเอง รวมทั้งควรศึกษาเรื่องการส่งเสริมให้กลุ่มตัวอย่างใช้เครื่องมือ และอุปกรณ์ในการป้องกันอันตรายจากขยะมีพิษ

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CHAPTER 1
INTRODUCTION

1.1 Rationale and Justification

The economic development of the nation led industrial, trades and services, transportation, and tourism expansions. It generated economic and social changes. Countless migrants moved from rural areas to work in Bangkok. Advance technology, economy and industry also never ceded to expand leading to the excessive exploitation of resources which affected to people lifestyles and environments.

Environmental problems; air pollution, water pollution, sound pollution, solid and hazardous wastes, and traffic, were critical problems and interested by various countries around the world. Solid waste was critically affected to health, environment, economy, society, and lifestyles of people and communities as well as affected the detrimental resources and quality environment of communities. Currently, the Thai society was encountering surplus solid waste over cities or communities (Thais produced waste at 37,000 tons per day or 13.5 million tons per year and rate of waste was increasing 4.4% per year). There were only 70% of solid waste had been collected and the rest had been discarded at other communities which risky to health of people and environments (The Provincial Administration Authority, Nonthaburi, 2001).

Further, the left waste originated countless problems to both physical and mental health. (Prakai Jirojjanakul, 1995:26), i.e. (1) The disposal sites became food sources and breeding for disease carriers, e.g. mice, flies, and cockroaches, which carried diseases to the neighbor. (2) They generated impurity to soil and water by misplacing and waste untreated, the rain would carry the impurities to be absorbed in to soil to underground water and water sources nearby, which caused water pollution. If people used for consumption, it was risky to sickness such as gastroenteropathy and

skin diseases. (3) Disposal sites released bad scent irritating respiratory organs, crating irritation, destroying beauty of the location, harming mental health of residents nearby and passers-by. (4) Infected disposal such as injection devices, blades, glasses, battery, bulbs, contaminated waste from hospitals and hazardous chemicals and other waste could be harmful to employees and those garbage collectors who were collecting, transporting and disposing them. (5) Unscientific waste management, e.g. open-air burning created smoke spread into the air irritating respiratory organs and annoying or even fire. Heaping waste on soil or filling the lower land generated breeding sources, insects, disease carriers, microbes particularly bacteria, which deformed organic essence in waste and released bad smells.

Problems of waste were the critical problems of environments for communities and had relationship with its density. Cities with increasing population, industries and activities, litters left from activities and consumption of human also increased as witnessed in different communities. When waste surpluses the ability of the responsible persons in the locality and being destroyed, it heaped waste and created impurities and disorganization of the country. (Damrongsak Chaisanit et al, (1994:8).

Besides the rapid growth of waste, their structure would change their complexity matching the urban lifestyles and consumption and they directly affected people health.

In respect to health problems particularly in those who were waste collectors, and from the data of social security officer, Office of Compensation Fund, Department of Labor Welfare and Protection, it was found that in 1995 there were 3,572 diseased. There were 3,398 persons intoxicated by pesticide, 30 persons by lead, 36 persons by heavy metal (manganese, mercury and arsenic), 65 persons by petroleum and oil products, 32 persons by gas and evaporates, and 11 persons by silicosis. Besides this, there were some people who had unsign symptom and many patients who rejected treatment.(Siam Post, July 4, 1997:23)

Preeya Kullawanich, M.D., the director of Institute of Dermatology disclosed the problems of skin diseases caused by occupation that workers who worked with chemical substances would have irritations on skin at all time and risk to be infected by allergy type of chronic toxic skin with the symptoms of pemphigus erythemomatosus. Prolong chronic may face fluffy sloughing skin and cracking with itching and pains. There were about 40 patients found in the institute every year. She said that waste collectors were risk occupation to chronic skin disease in Thailand. They used bared hands to transfer wastage and few used gloves or some used only torn gloves, which could not prevent dangers from touching. Further, Thailand lacked strict preventive measures about physical hygiene sciences. The director further commented that waste huddled countless diseases which fresh water and soap cleaning were insufficient in cleaning. Impurities especially germs were left at skin, between fingers or if there were slight cuts, it would be infected or inflated. Some unknowingly picked food to the mouth, which meant taking also germs. Such occupation should clan themselves with clean water and germicide substance such as Hexachlorophile or Hibitane as well as brush the skin and nails. For convenience, it was better to put on gloves during working to prevent the causes. (Matichol Raiwon Newspaper, March 5, 1993; referred in Subdivision of Toxic Substance and Remnant Treatment, Pollution Control Department, 1993:15)

Nonthaburi was a province located in Bangkok premises having it area joined Bangkok. Tendency of waste was critical caused by the increasing of population and consumption of people. There were about 600 tons waste per day (the Provincial Administration, Nonthaburi, 2001). Even the local administration in Nonthaburi was capable to collect waste from communities but there was inadequate places to eliminate them. People who live in Nonthaburi needed to bring waste to be eliminated by heaping for natural dissolving for almost 10 years. It overflowed the area and created disposal sites. Such treatment was unhygienic affecting environments e.g. smell, dust, smoke, and contaminated water particularly in Sai Noi district, Nonthaburi.

Currently, Tambol Klong Kwang, Sai Yoi district were allocated to be disposal sites of the Provincial Administration, Nonthaburi. There were 58 rais of disposal site and 10 rais for vehicle maintenance and street. This area had been used since 1986. There were 600 tons of waste per day. Treatments were heaping in an openaired space. It had no covering by soil and compressing and lacks of prevention in different aspects. The eater rained waste to neighboring areas and the underground water since the bed of the pit was not covered with percolated materials. There was also no ventilation of gas caused by disposal ferments. Consequences of prolong using this place at Sai Noi district had following problems:

1. Smell and flies, which were critical problem, especially in the winter, there were strong smells dispersed widely to 5 kilometers.
2. Impurified water from waste draining to houses, paddy fields and water sources.
3. Infected waste management from hospitals in Nonthaburi had not been separated before disposal.
4. Remnants from industrial factories such as dregs of water treatments had also been dumped with waste causing high contamination on soil and water
5. Excrement had also been dumped in disposal site causing epidemic and spread of diseases to communities of Sai Noi district.
6. Fire on waste during summer – it was difficult to extinguish. In 1999, it took 11 days to control the fire and also brought acute air pollution when people were needed evacuation. (the Provincial Administration, Nonthaburi, 2001).

Therefore, the employees who collected waste were risk group to endanger by waste. The research determined to study health risk behavior of those persons and variables related to health risk behavior of personnel and local residents involved in solid waste disposal site in Nonthaburi. This study expected that it would be guidelines to prevent themselves and disposal management in order for better safety.

1.2 Objectives of the Research

1.2.1 To study health risk behavior of personnel and local residents involved in solid waste disposal site of Nonthaburi Province.

1.2.2 To study variables associated to health risk behavior of personnel and local residents involved in solid waste disposal site of Nonthaburi Province.

1.3 Scope of the Study

This study was to investigate health risk behavior of personnel and local residents involved in solid waste disposal site of Nonthaburi Province. Samples were residents at solid disposal sites and employees of collecting solid waste in Nonthaburi.

The variables in this study as the following:

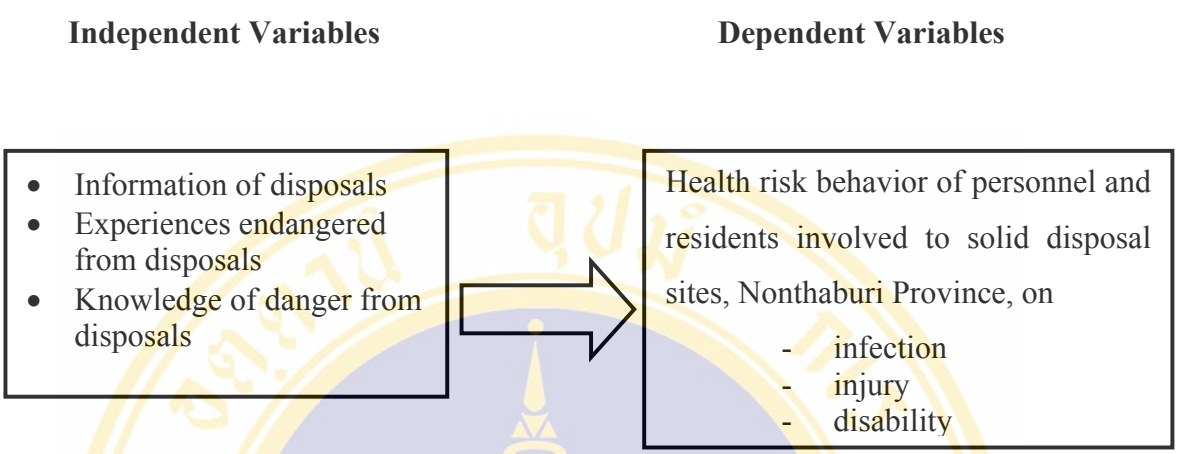
Independent variables

- Acceptance of information on waste
- Experiences endangered from waste
- Knowledge of danger from waste

Dependent variables

Health risk behavior of personnel and residents involved to solid disposal sites, Nonthaburi, on infection, injury and disability.

1.4 Conceptual Framework



1.5 Research Hypothesis

1.5.1 Health risk behavior of personnel and local residents involved in solid waste disposal site of Nonthaburi Province relating to infection had relationship with information of waste, experiences endangered from waste, knowledge of danger from waste

1.5.2 Health risk behavior of personnel and local residents involved in solid waste disposal site of Nonthaburi Province relating to injury had relationship with information of waste, experiences endangered from waste, knowledge of danger from waste.

1.5.3 Health risk behavior of waste collectors and disposal municipality employees who were endangered from waste in Nonthaburi Province relating to disability had relationship with information of waste, experiences endangered from waste, knowledge of danger from waste.

1.6 Definitions of Terms used in this Study

1.6.1 Personnel was referred waste collectors, waste truck driver of Provincial Administrative Organization, Municipality, and Subdistrict Administrative Organization of Nonthaburi Province.

1.6.2 Local Resident was referred people who lived nearby the solid waste disposal site and had the waste collection occupation.

1.6.3 Health Risk Behavior was referred to behaving of disposal collectors and disposal municipality employees, which would lead to danger of health relating to waste, infection, injury, and disability.

1.6.4 Solid Wastes were referred to unwanted things and excrement both organic and non-organic including dung, dusts, remnant discarded from residences, places and industrial factories.

1.6.5 Knowledge of Danger from Waste was referred to facts or criteria received about danger of waste risky to health of disposal collectors and disposal municipality employees, Nonthaburi Province.

1.7 Benefits Expected from this Study

1.7.1 To know what extent were the disposal collectors and disposal municipality employees at risk.

1.7.2 To realize variables related to health risk behavior of the disposal collectors and disposal municipality employees at risk, Nonthaburi Province.

1.7.3 To gain database recommended to workplaces involved to improve related to campaign for the disposal collectors and disposal municipality employees preventing danger yielded from waste affecting health and to plan in order to address environments in the area.

CHAPTER 2
LITERATURE REVIEWS

A study of Health Risk Behavior of Personnel and Residents Involved to Solid Waste Disposal Site; Nonthaburi Province, concepts, theories, documents and related researches were as follows;

2.1 Concepts of Behavior
2.2 Concepts of Health Risk Behavior
2.3 Concepts of Knowledge
2.4 Knowledge about Solid Waste
2.5 Related Researches

2.1 Concepts of Behavior

2.1.1 Theories of Human Behavior

A study of behavior emphasized motivated factors or drives leading to behaving. Among many factors, motivation was the leading influence over behavior during being conscious and realization. Motivation theories were presented as guide in this study. They were theory of A.H. Maslow, Rational Choice theory, McCleland, Murray's theory.

2.1.1.1 Theory of A.H. Maslow

- Human existed by needs, i.e. It was motivated by needs to responds to arousal. What had been satisfied would not have again been motivated. On the contrary, what had not yet been responded would have been influencing behaviors.
- Human needs were in hierarchy from base to top

- When the basic needs had been gratified the following hierarchy would follow. The Five Hierarchy of Needs included Physiological Needs, Safety Needs, Belonging and Love Needs, Esteem Needs, and Self –actualization.

2.1.1.2 Rational Choice Theory

The Rational Behavior of human could be explained that human selected means to their best to meet the end. With conceptualized normative rational, Barry (1998:11) could anticipated rationality of an individual for the Explanation, Prediction, and Description on selective behaviors of human. Harsanyi (1986: 60-107) stated that rational choice of an individual was based on relationship between choice and expression, which were 2 compositions, i.e. Rational which was called the Behavioral Rationality and the Mental State or attributes of the individual. Macdonald and Pettit (1981, referred in Hindess 1988: 42) referred the rational choice was bound with 2 predictions, i.e. First, the future consequences yielded from one's own present action. Meaning an individual ha imagined what would happen in future reflecting consequences of its existing actions. Second, the consequence value, which would be received in future. (March 1986: 144; Heibroner 1974). Therefore, before deciding to do something needed to invest for its future or family, one was likely rationalize the Maximizing Benefits before investing. (Sehnerider 1974: 9-10 ;Easton and Fass 1989: 177, Hindess 1988: 44)

By the perspective of sociologists, Michael Hechter (referred in Ritzer 1988: 376) explained about the connection between the Rational Choice Theory in social phenomenon in the Macro and Micro perspectives. In general, the Macro Rational Choice Theory affirmed normative a structural of social but he latter restricted the choice of individuals. However, Hechter saw that the normative or the restricted structural was not the limitations to the determination in choices of individuals but the limitations under the conditions of behaving. It was not meant that personality of individuals would be more vital than any social structures. In Micro Rational Choice Theory, individuals had chosen the satisfactorily final alternative. Actor needed to choose between choice to reach destination and action with better consequences. Hardind (Barry 1988: 11, Hardirnd.) cited that the rational choice was actions of each individual yielded from motivation of self-interest.

Harsanyi (1986-107) an economist defined that the rational choice had many alternatives but individuals chose by Preference and Opportunities, i.e. individuals might chose to follow destination but changed their mind to reach another goal even satisfying with the previous goal. It was explained that individuals learned the Opportunity Cost of the goal. Both were different, or in other meaning the existing data of opportunity cost help them to attentively act. For example, an individual was intended for higher education and worked later but changed not to study because of fees or expenditures were expensive or the courses were too difficult and so on. Such explanation was t compare with basic hypothesis in that moment. However, satisfaction to study was still the same only situations (opportunity cost) or information related to situation made one changed one's mind. Essence of economic theory related to the rational choice was individuals had chosen what they were satisfied and kept their satisfaction and behaviors chosen till when this satisfaction would returned in terms of Utility Maximization

2.1.1.3 McCleland

It indicated that each had competency to arouse different behaviors along the courses of each behaving. It depended on motivations and opportunities based on existing situations. In other words, arousal, which drove human behavior to behave something in particular, depended on their motivations, and 2 perceptions related to situation, i.e. expectation related to goal-oriented and values of motivation tied with existing goal.

2.1.1.4 Murray's theory

Human motivations had been fabricated and affected individual ehaviors. His principles could be summarizes a s follows: (Murray)

- Needs to win expressed by aggressiveness
- Needs to win over different obstacles
- Needs to surrender
- Needs to protect oneself
- Needs to be free
- Needs to be successful

- Needs to build friendship with others
- Needs to enjoy
- Needs to get helps from others
- Needs to help others
- Needs to separate from others
- Needs to impress oneself and others
- Needs to influence others
- Needs to accept seniors
- Needs to avoid failures
- Needs to avoid risk
- Needs to avoid blames or punishment
- Needs to have orderliness
- Needs to secure fame
- Needs to differentiate others

These needs, Murray suggested that sometimes they grew because of drive from inside but sometimes because of society or it was said that needs happened because of physical and psychological state.

2.1.2 Definition of Behavior

Many people had defined behavior but some were briefly referred here.

Sopha Choophikulchai (1986: 5) defined that it was the expression or action of a living thing perceivable and observable such as walking, sleeping, playing, studying, and so on. In case of unseen or unobservable, it might be tested or experimented.

Siddhichok Waranoossanti (1986: 9-11) defined that it was every reaction expressed by human being. The internal behavior could be both tangible and intangible such as reaction of internal organs, sensation, and motive, which were behaviors but could not be obviously seen. Th external behaviors were reactions

expressed all the time of lifestyle. They were expression seen by others both in wording and in actions.

Praphaphen Suwan (1983:15) defined that it was reaction or every activity acted by human ether perceivable or not such as functioning of the heart, and muscles, walking, speaking, sensation, likeness, interest and so on.

Suda Jitphitak (1982:6) defined that it was actions of an individual not only externally expressed but also included in the mind, which could not directly observed such as price, motive, ideas, belief, values and so on.

Goldenson. (1984: 90) defined that it was an action or psychological response of each individual and it was the interaction reacting to the internal and external arousal including different action observable conscientiously or unconscientiously realizable.

With the above definition, it might be referred that behavior was intended actions or behaving or different activities conscientiously or unconscientiously realizable.

2.1.3 Compositions of Behavior

Suda Jitphitak (1982: 15-17) believed that behavior was the consequences of human reactions to environments. Benjamin S. Bloom, said there were 3 parts, i.e.

2.1.3.1 Cognitive Domain – this behavior continued capacity of knowledge, thinking and intellectual development, which divided into 6 steps, i.e. knowledge, comprehension, application, analysis, synthesis, and evaluation.

2.1.3.2 Affective Domain – it referred to interest, gestures, like, dislike, value, reception of changes or improving values adhered. They were internal behavior yielded within human being, which were difficult to explain. Such behavior contained 5 steps, i.e. receiving or attending, responding, valuing, organizing, and characterization by a value.

2.1.3.3 Psychomotor Domain – behaviors needed physically expressed including conducting or observable expressions within a situation or it might be slow behavior. Meaning, an individual did not immediately act but predictable to act in the following chances. These expressions were the final behavior targeted for study which needed different levels of behavior as stated to be compositions (cognitive and attitudes). Such expression could easily be evaluated but the process forming behavior required time and many steps of decision.

2.1.4 Changing Behavior

Human behavior was changeable to it development, which was lasting lifelong beginning from being in the womb till delivery, and growing through ages. Some behaviors were sable but some had been changing. There were 3 natures, i.e. (Waree Rakiti, 1984:98-101).

2.1.4.1 Changing by force, e.g. the society used enforcement as control and rejection would be punished.

2.1.4.2 Changing by imitation having person as role model e.g. imitating parents, teachers, lecturers, and movie stars.

2.1.4.3 Changing by accepting as good, which was relevant to one's own ideas and values and adopted as course of behaving finding that it could solve one's own problem.

2.1.5 Factors Affecting Changing Behavior

2.1.5.1 Genes were ones of the key factors likely affecting changing of individual behavior on account of changing of ideas or expression needed intellectual yielded by gene received from father and mother or ancestors. Individual intelligence was the consequence of genes.

2.1.5.2 Environment – it was counted as influence to the changing of behavior. Meaning, an individual was addicted would be influenced from environment in the family, persuaded by friends to test, and narcotics could also change an individual behavior, bewilderness mind and could not control speaking, and explicability. Narcotics could change both internal and external behavior.

2.1.5.3 Maturity – it was the natural development of human being influencing an individual behavior. A changing maturity led to also changing of behavior.

2.1.5.4 Learning was key in an individual behavior changing. It was enormously containing many sub-factors. Significantly, they were physical drives, reward, and punishment, repetition, motive, values, individual group, information, incentive and so on.

It was fund that many factors affecting behavior changed. They shared this study except the genes.

2.1.6 Determiners of Behavior

From different human's definition of behavior and its compositions, there should be something manipulating those behaviors. Accessing its determiners should allow understanding of human behavior. These determiners could be divided into 2 major types, (Narong Sinsawad, 1985:20), i.e.

2.1.6.1 Personal Habits, i.e.

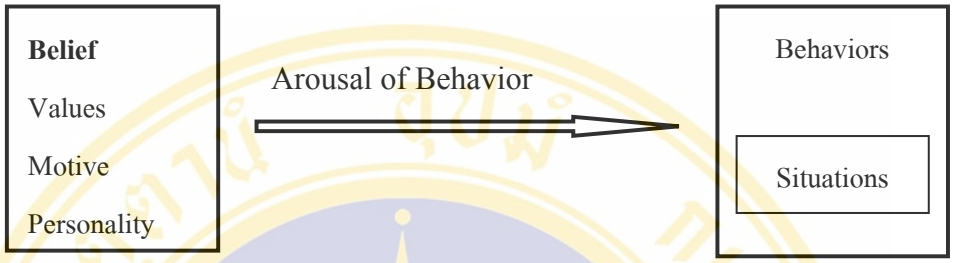
- Belief: any thinking of fact regardless right or wrong, which could be acquired from seeing, narrating, reading and personal thinking.
- Values: a belief that a social member accepting seeing that it is valuable and beneficial to society.
- Attitudes or motive: they related to an individual behavior, Meaning, motive was a tendency or a preparatory stage of behavior and it was counted vital to determine behaviors in society.
- Personality: it determined what a human being needed to do if one was in a situation. It denoted what personality should address a situation.

2.1.6.2 Other Social Process, i.e.

- An arousal of behavior and intensity of the arousal were thing demanding us to express and it was viable, e.g. hunger.
- Situation was referred to environment whether an individual or not stay during the behavioral state.

Determiners of human behavior could be concluded by a chart as follows:

Chart 1 Determiners of Human Behaviors



Sources: Narong Sinsawad: Curriculum Development and New Dimension of Teaching. Bangkok. 1985: 20

Pat Sujamnong (1979: 80-82) referred to compositions influencing human behaviors, i.e.

1. Social group –i.e. neighbor groups, schoolmate groups, institutional mate group and so on.

2. Identification Figure – i.e. father, mother, elder sibling, younger sibling, teacher, renowned persons in society and so on.

3. Status – it might be determined by society, i.e. gender, age, religion and so on or it might oneself acquire status, e.g. rank, positions and so on. Different status differed behaviors.

4. Technological Advancement, e.g. currently human preferred devices to replace working as before. They changed human beings from the past.

5. Laws – some human behaviors needed to be controlled by law, e.g. smoking in the bus in Bangkok was counted against the laws. Therefore, smoking in the bus was decreasing.

6. Religion – each religion housed their own different criteria and prohibitions. Therefore, in the similar situation, different belief differently behaved on account of the religious influence.

7. Customs, traditions and belief- all influenced individual behaving e.g. tradition in nurturing children in each society was differed to beliefs and so fort.

8. Environment – staying in different environment differed behaving, e.g. rural person and urban person.

9. Attitudes – it influenced human expression, e.g. students had negative attitudes toward teachers, they likely extrovertly expressed, e.g. inattentiveness or absence to this period and so on.

10. Learning – psychologically, it was counted most human behavior mandated by learning. It was the nonstop process beginning from young till growth, e,g, children learned how to behave by observing adults, and so on.

It was found that, human behaviors were divisible into 2 types, i.e. habits and social process, which determined expressions. Therefore, in this study, the researcher selected behavioral determiners with knowledge, attitudes or motive and preventive behavior against disposals, only.

2.1.7 Studying Behavior

Nuansiri Paolohit (1990: 17-20) proposed methods to study behaviors as follows:

2.1.7.1 Field Study

It was from reality by natural observations discarding to control the independent variables. Meaning, not allowing the observees to realize. Therefore, this study was only the behavior observation or relationship among variables only. Benefits of this type were to really know the natural data. Actually, natures had many variables and not controlling variables could lead the researcher to summarize in many patterns and could countlessly recommended for further studies. At the meantime, flaws in studying that the phenomenon, and relationship were observable which could not know the cause of behavior, which it could not conclude the phenomenon.

2.1.7.2 Field Experiment

It was a fact-oriented study similar to fieldwork but during study, some variables would be controlled, e.g. role play for drivers breaking the truck at the intersection and their behaviors would be observed controlling variables of gender,

age and so on. In this study there might be some problems, i.e. it was likely controlling other independent variables as needed such as accident and the participation of police and so on.

2.1.7.3 Laboratory Experiment

It was study by controlling many independent variables in the laboratory and surveyed the consequences of the controls. This method, the researcher could conveniently originate phenomenon for study but flaws were inadequacy of actually natural environments.

2.1.7.4 Sampling Survey

It was a proper method to Saturday opinion or individual attitudes to any things in the past, present and future. Data would be collected for analysis and usually large groups were studied where the entire population could not be used. It needed to survey from samples who represented the entire population. Cautions had to be made during sampling, i.e. if the selected group could not represent the actual population, the data would be unreliable and wasting of time without causes.

Somjit Suphannatas (1983:131-136) concluded the study of behavior into 2 ways, i.e. 1) Direct Observation and 2) Naturalistic Observation

1. Direct Observation, e.g. teachers observed behaviors of students telling them. This observation might not identify the real behaviors of students on account of students realized the observations.

2. Naturalistic Observation – an unrealizable observation however it naturally occurred. This method would allow knowing the real behavior but there were some restrictions, it required times to find the needed behaviors.

3. Indirect Behavioral Studies were divisible into man methods

3.1 Interviews – a method to inquire individuals or groups by face-to-face inquiries or by middleman e.g. interpreters. It could be divided into 2 methods, i.e. the direct interviews, which the interviewer asked by notes and goals. Another one was an indirect interview. The interviewees would not realize what the interviewer needed. Such method had some restrictions with some data those could not be disclosed.

3.2 Questionnaire – it was proper to study behavior of large number of people and for those who were literate or to ask who stay in remote areas. Besides, it could draw behavior from the past, and from future. Another advantages were the respondents could provide secret information if they were certain to be at confidential level. Questionnaire was useable at any time.

3.3 Experiment was a study of behavior by the objects were under control as wanted. It had some restrictions of unable to be used in actual situation. However, this method was likely beneficial in studying behavior among medical personnel.

3.4 Records – this method led to know behavior of oneself, which might be daily recorded or different types of behaviors such as consumption behavior, working, environmental behavior, and so on.

Suchart Prasitsindhu (1989:194-219) collected data in his studies as follows:

Interviewing – it was the data collection using questionnaire in interviewing respondents. It was popularly used among social sciences. Conducting this type required many factors related and influenced reliability and validity of the data, which the researcher needed to be aware of those factors ad to preplan to solve the problems.

In-dept Interviewing – it was the data collection without determining structure of data needed to specifically collected. However, it required special skills to interview the details to gain data as required. This method was typically used and the population was small in numbers, e.g. leaders, leaders of academics, and top management. However, in collecting, the interviewer needed to determine issues in advance to cover all needed. Problems were appointments and collaboration of the interviewees.

Focus Group – another method popularly used in social sciences by appointing respondents for assembly to interview what required. Respondents should be relevant or played related roles. Interviews took forms of conversation and the respondents had free opinion without ill effects in future for the respondents. The focus group gained quality rather than quantity.

Observation – a method relied on phenomenon and recording to lead to quantitative and qualitative data. Observations were the scientific method for social sciences when, 1) responding the research objectives, 2) well systematically planned,

3) well systematically recording, and 4) significantly, testable and controllable on its reliability and validity. However, it had some drawbacks of unable to preplanning in some phenomenon or with the focus group where scope was to broad and unable to cover all phenomenon.

In this study, it was the interviewing method would be the instrument for studying and measuring the behaviors.

2.2 Concepts of Health Risk Behavior

Behavior was referred to reactions or every activity of living tings. Human behaviors was referred to reactions internally and externally expressed of an individual bot observable and unobservable. They differed according to social and cultural situations and likely influenced by expectation s of the surrounding people, current situations, and the past experience. (Twaddle 1981 : 11), Human behaviors were divisible into 2 types, i.e. the internal behaviors was referred to activity or reaction within an individual where the brain collected and accumulated and demanded both tangibly and intangibly, e.g. blood flows, ideas, and sensation. The internal behaviors were unlikely measurable by others but some devices could. The external behaviors were referred to activity or reaction of an individual expressed for other to see or observable, e.g. standing, sitting, walking, driving and so on (Praphaphen Suwan, 1984:363). Human behaviors were learning understandable.

Health was referred to the state of perfectness of body and mind including lifestyles in the society. IT was not only free from sickness or disabilities (Steele and McBroom 1972: 363) but also the response to the environmental arousal of an individual, which was observable or reporting on health of an individual, perception and ideas as targeted by behavior to respond an individual's needs. (Jintana Uniphan, 1989: 43).

Health behavior was an activity of an individual with perfect health to prevent sickness and enhancing health to maintain state of health in daily living for 24 hours. Harris & Guten (1979 cited by Kulbok, et al 1988: 23) cited the preventive

behavior for health was action to gain good health and prevent disease could be divided into 5 behaving, i.e. individual hygienic practices, security behaving, taking care and prevention of health, avoidance of endangered environment, and avoidance of toxic substances. Kulbok (1985: 68) divided health in to 5 groups, i.e. dental health, annual medical examination, consumption of endangered substances, (drinking, and smoking), health prevention (restricted eating meat, vitamin, safety belt) and health promotion (exercises, adequate sleeping). They were corresponded with ides of Pender (1987: 13), who explained that human behaviors were foundations of prevention and promotion of health. Similarly, Gochman (1988: 4) cited behaviors of prevention and promotion of health were referred to dong activities of a healthy person with never sick before in order to maintain healthiness, promoting it and accident –free. Palank (1991: 816) stated that healthiness exercises only during existing to keep health an d pride of oneself. The preventive behavior against disease helped disease-free while promotion leveraged levels of health state.

The health risk behavior was the contradictory practices to health behavior which cited to maintain good health and sickness-free. The objectives were to take care to have strong health always, e.g. hygienic eating wit h viable quantity, exercise, weight control, avoidance of drinking, and smoking. (Palank 1991: 816). Further it covered preventive behaviors in daily living, safety helmet for motorcycle drivers, safety belt for motor drivers, following traffic rules, following safety rules and regulations. Therefore the contrary to health behavior was risk health behavior. Mallika Mattiko, 1991: 21)

Langlie (1979: 216–225) divided behavior of preventing disease into 2 groups, i.e. .the direct – risk behavior, which were using roads, personal hygiene, smoking and the in direct – risk behavior, which were using safety belt, medical check-up and immune, eating, and exercise. Center of Disease Control, USA (CDC 1990) stated that the health risk behaviors were daily behaving endangering health or risk to diseases. It was corresponded to Jantita Prueksanont (1994: 141) defined risk as behaving risky to life, disability, limps and directly and indirectly affect health, which might occurred both in short-term and in long-term.

Therefore, the health risk behavior was referred to actions or behaving of an individual in daily living likely affecting health risky to get disease or endangering to life or disability, limp which likely directly and indirectly happened.

In this study, the researcher defined it as behaving of people endangering health from solid disposals, risky to infection, injury and disability.

2.3 Concepts of Knowledge

2.3.1 Definition of Knowledge

By Dictionary of Education, it defined that it was fact, truth, standards, information human received and accumulated. (Good, 1973: 325)

Bloom, (1971: 271) defined that it related to recollection specifically or unspecifically and recognized by method, process or situations by emphasizing memory.

Thawatchai Chaijirachayakul (1984:45) summarized that it was learning emphasizing necessity and recollection to ideas, objects and phenomenon. It was necessary to start from simple things of independence to necessary things complicated and related.

Chawal Paeratkul (1983:201) defined that it was expression of competency of the brain and memory using recollection as principles.

It could be concluded from above that knowledge was referred to facts human received related to places, situations, objects, and individuals derived from experiences and observations or experiment by collecting and accumulating and to express what had been remembered to appear, observable, and measurable. In this study, the researcher defined knowledge as fact, information or standards received related to self-protection from solid disposals f residents, in Sai Noi district, Nonthaburi and gained from studies, direct and indirect experience .

2.3.2 Levels of Knowledge

Bloom, et al , (1956: 10-24) divided Cognitive Domain into 6 levels from simple to difficult, i.e.

Knowledge – the capacity of brain to maintain stories perceived by human. Measuring the capacity of memory could be observed from how much an individual selected what one's remembered.

Comprehension- a capacity to communicate that other would know one's motive and realizing definition and other s' aspiration.

Application – a capacity to implement knowledge, memory ,and understanding to efficiently solve new problems. Applicability was not meant learning how to imitate but implementation to solve problem of new ones and to implement hat was learnt to be address situations.

Analysis – a capacity to examine and segment affairs

Synthesis – a capacity to collect segments to be story. It was the capacity to examine stories in different natures and re-systematizing their structure to create new better efficient things.

Evaluation – a capacity to pricing using Criteria and Standard

2.3.3 Kinds of Knowledge

Bloom et al divided knowledge into 3 steps ordering from least to most complicated.

2.3.3.1 Knowledge of Specifics i.e. Specific and detail information independent to each other and could be segmented.

- Specific word i.e. definition or wording used in each subjects and its symbols.
- Knowledge of specific fact, i.e. information, incidents, persons, places and resources .

2.3.3.2 Knowledge of Way and means of Dealing with Specifics i.e. methods of examining system, critics of ideas or phenomenon, , which could be segmented into

- Knowledge of traditions, i.e. proceedings, proposing ideas and phenomenon.

- Knowledge of tendency and consequences, i.e. process, direction, movements of phenomenon and time

- Knowledge of classification and categorization, i.e. kinds, types and useful arrangement

- Knowledge of standards, i.e. measures used in judging fact, principles, opinion, and practices

- Knowledge of method, i.e. methods of searching knowledge, techniques, and scientific methods

2.3.3.3 Knowledge of the Universals and Abstraction in a Field, i.e. ideas, ways, significnat patterns used in addressing phenomenon and ideas. It could be classified into

- Principles and summary, i.e. specific summarization of mocked phenomenon, and summary with explanation, description, prediction, and imitations.

- Theory and structure, i.e. principles, systematic summary, in this study, the researcher focused on knowledge related to danger of disposals risky to health of residents near the solid disposal site in Nonthaburi.

2.3.4 Knowledge Assessment

Boontham Kijpreedaborrisuddhi (1994: 84-88) cited that there were many devices used in assessing knowledge. Each matched with different nature of each knowledge. IN this study, "Test" was popularly used.

2.3.5 Definition and Nature of Test

Cornbach, (1967: 21) defined that Test was a systematic method used ion comparing human behavior of more than 2 persons at a period time or of a single or many persons at different time.

(Brown , 1976: 7) similarly defied that Test was a systematic method used in measuring samples of behavior according to prediction. There are 3 main natures of the Test, i.e.

1. Systematic Procedure was referred to the test had certain criteria related to structure of management and scoring.

2. Behaviors, which were specifically measured what could be measured only where the respondents responded each specific question. It was not the direct measurement.

3. Sample of all Possible Items, actually, there was no test to contain the entire needed questions of behavior. Therefore, there was an agreement that questions in the test represented the entire questions to measure behaviors. If respondents select the right answer, it should get the equal score.

2.3.6 Types of Test

Boontham Kijpreedaborrisuddhi (1994: 84-88) cited that test had drastically different nature both in application patterns and goal in formulation. Its types were classified with criteria used.

1. Psychological nature – there were 3 types, i.e.

1.1 Achievement Test was used in testing the Cognitive Domain, which was divided into 2 kinds, i.e.

1.1.1 Teacher-Made Test - a common test, it was made when wanted and ignored. If it was reused, it should be improved because it was not yet analyzed test.

1.1.2 Standard Test - a test developed by statistical analyses reaching perfection with validity, possibility, frequency, closed ended, and norm for comparison with standards in both process and interpretation of results

1.2 Aptitude Test – test for intelligence on knowledge, competency and giftedness. This test was divided into 2 kinds, i.e.

1.2.1 Scholastic Aptitude Test – an academic test of discipline, which showed the aptitude of the subject and how much was progressed.

1.2.2 Specific Aptitude Test – a test used to assess the gift of a person, i.e. music, medical doctor, engineers, arts and so on for academic guidance and profession selection.

1.3 Personal-Social Test –a test used to measure personality and adjustment to society of an individual.

2. Classified by Question-Answer Pattern, there were 2 kinds, i.e.

2.1 Essay Test – answer in writing

2.2 Short Answer and Multiple Choice Test- questions with short answer to choose. IT was classified into 4 kinds

2.2.1 Short Answer Item

2.2.2 True – False Item

2.2.3 Matching Item

2.2.4 Multiple Choice Item

3. Classified by nature of answer – there were 3 types, i.e.

3.1 Performance Test – real practice, i.e. plays, handicraft, and typing etc.

3.2 Paper-Pencil Test – a common test provided with pencil and paper and respondents answered all.

3.3 Oral Test – answer by speaking replacing writing. It was likely conversation between inquirer and respondent.

4. Classified by fixed time for answering – there were 2 types, i.e.

4.1 Speed Test – with specific time to fulfill containing many questions but few minutes to answer

4.2 Power Test – no specific time to full range till completion.

5. Classified by criteria of measurement- there were2 types

5.1 Criterion-Reference Test – to test objectives of learning or external criteria used in core courses.

5.2 Norm-Reference Test – to compare results between groups.

There were many different devices for test. In this study the Criterion-Reference Test was used.

2.4 Knowledge of Solid Waste

The Royal Institute Dictionary (1983) defined “solid waste” that waste and refuse which were replaceable to each other.

Public Health Act, 1992 defined that they were wastes of paper, cloth, food, goods, metals, plastics, food trays, ash, animal wastes, road wastes, market and domestic animals and others.

Jamroon Yasamut (1984: 137) defined that they were Solid Wastes rotten and unrotten, i.e. garbage and rubbish, ash, isolate waste, wastes from establishments, markets, and factories and so on excluded excrement.

Jamroon Yasamut (1984:136) defined that they were the unwanted things rather than solid wastes, which might be organic materials, and non-organic ones including ash, isolate wastes, dust, wastes from houses, residences, places including from public places, markets factories excluded excrement of human.

From the institute of Praya Dammrong Rajanubhab (1997:12) defined that they were wastes of paper, cloth, food, goods, plastic bags, food trays, ash, animal wastes, animal isolate, and contaminated or endangered materials such as battery, fluorescent lights, insecticide container, and son swept from roads, market and parties.

2.4.1 Classification of Solid Waste

They were classified by nature, sources and type as follows:

Classified by nature –there were 2 kinds, i.e.

1. Chemical Characteristics- essential compositions were quantity of water, burnable quantity and quantity of ash.

2. Physical Characteristics, their compositions were burnable compositions such as paper, cloth, leaves, rubber planks and plastics and unburnable substance, e.g. metal, glass, stone, brick, gravel, tiles and others (Ussanee Uyasatian, 1989: 27).

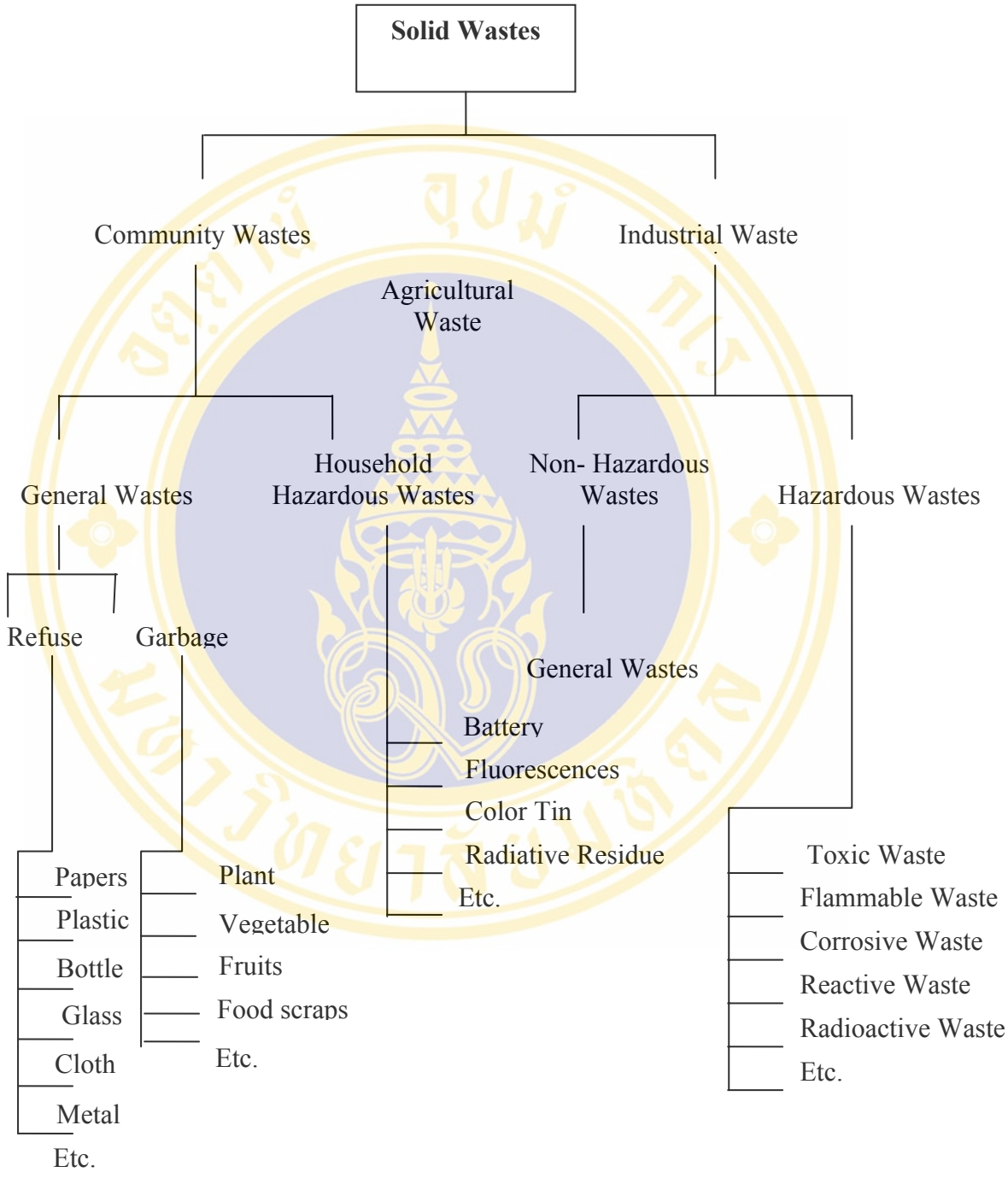
Wastes classified by source of origin – thee were 3 types, i.e. Community Wastes, Agricultural Wastes, Industrial Wastes.

Classified by type – there were 2 types, i.e.

1. General Wastes – they were from Living Activities, and Business Activities e.g. From residence, shops, food shops, markets, commercial buildings, hospital and etc. They were usually the remains form consumption, i.e. food, papers, plastics, cloths, leaves, glass, metals and so on.

2. Hazardous Wastes – released from communities, industries, agriculture, services and other activities. They were wastes containing endangered substances of burnable, erosion, reactive, toxic, radio active, and/ or disease-mixed endangering hygienic health and life of human and living things such as battery, chemical wastes, fluorescent lights, cotton, wound badge, or infected wastes from hospital and so on (Adisak Thongkhaimook, 1991: 1-2). It could be concluded as chart follows.

Chart 2 Nature of Solid Disposals from Different Activities



Source : Adisak Thongkhaimook, 1991: 3

Sources of solid wastes classified by utility of lands (Pattana Moolpruek, 1996:239-243).

1. Residential Wastes – they were from activities of living resided in houses and residences, i.e. garbage of food preparation, or wastes from uses, papers, vegetables, plastic bags, plastic bottles, leaves, grasses, broken or disqualified trays or devices, old furniture, and broken things, e.g. bulbs, dry cell, and battery.

2. Commercial Wastes were referred to disposals form wholesalers, retailers or trading services, which depended on each kind, i.e. office building, market, food shops, grocery, agricultural product shops, hotels, theatres, and warehouses, where wastes were kept, which might be wastes of food, glass, plastics, material wastes, and building remains or mixed with contaminated things.

3. Agricultural Waste – they were critical and from plantations and animals raised for food. Wastes from these sources were animal dung, grasses, vegetation, pesticide containers and so on. In the past, most wastes from agriculture (excepted the pesticide containers) were tilled in the areas for plantations. It was counted as recycle for advantageous reuses. Currently, there were accelerations for more products to meet increasing number of population , it was replaced by more chemical fertilizer rather than agricultural wastes

4. Recreational Wastes – they were from leisure resorts or tourist natural sites, i.e. beaches, dams, reservoirs, lakes, ponds, and so on. Or they might be from tourist sites of arts, i.e. ancient places, such as museums, temples/ wats and so on. Retreat activities involved with meals. Taking food and breaks created wastes and they were depending on those who took retreats. Most were wastes of food, containers such as paper or plastic boxes, metal cartels, glass or plastic bottles, etc.

5. Hospital Waste – they were classified endangered wastes since they might damage environment in many ways, e.g. empidemologizing or harmful. They were counted critical to separately collect from common wastes in the solid disposal process.

The hospital wastes had also been classified by WHO in to 8 types, i.e.

1. General Waste- food, papers, and plastics, etc.
2. Pathological Waste – blood and lymph from patients, etc.

3. Infectious Waste – refuses with diseases, tissues or organic parts with diseases, containers contacting infectious patients etc.

4. Radiological Waste- X-ray films, radioactive substance for treatments and diagnoses, etc.

5. Chemical Waste – different chemical substances used for medical treatments, from laboratories in disease diagnoses, and laboratory for researches, etc.

6. Sharp Waste – injection needles, scissors, operation blades, and razors, etc.

7. Medicine Waste- dequalified medicine, medicine wastes from treatments, and from laboratories, etc.

8. Pressurized container – treatment cans, germicide cans, pesticide cans, etc.

US EPA (Environmental Protection Agency) classified hospital wastes into 7 types, i.e. (Pattana Mool pruel, 1996: 241) as follows:

1. Culture and Stocks was referred to breeding germs and stored from test in laboratories or germs for researches and from industrial laboratories including isolate wastes from living things after experiments, dequalified vaccines, containers to breed and to mix germs.

2. Pathological Waste was referred to infectious wastes of human organs, e.g. tissues, organs, parts of body, flows from body when operated, corpse operation, or other medical practices and flow samples and containers.

3. Human Blood and Blood Products were referred to things dropped or soaked with human blood but dried including lymph, plasma, and other blood compositions with containers used for treating patients or experiments or analyses or pharmaceutical developments and glucose bags.

4. Sharp was referred to viable to cut in the medical treatments and in animal hospitals, from research or industrial laboratories including injection needles, syringes (with/without needles), blades for operations, razors, blood tubes, and container to breed germs, broken or unbroken containers contacting patients, e.g. glass, covers.

5. Animal Wastes were referred to infectious carcasses, animal tissues for researches (including animal hospitals) and living parts or pharmaceutical experiments.

6. Isolation Wastes was referred to rotten from living thins and unused thing dirtied by blood, excrements, and fluids from patients and intensively treated to prevent some acute epidemic or from animals in the similar case.

7. Unused Sharps was referred to knifelike things unused e.g. wastes cutters, injection needles, sewing needles, syringes, and operation blades, etc.

8. Industrial Waste – was different by production process or types of industry, i.e. wastes of food, hard papers, boxes, ash and endangered refuses.

2.4.2 Composition of Solid Wastes

Wastes Management was not only realizing their sources, quantity and types but critically their compositions. It was to estimate feasibility of devices needed in planning disposals e.g. collections, transferring, transpiration, and further proper disposal process with efficiency, and problem- free for environments, and finally affected hygienic health.

Generally, there were 2 compositions of wastes, i.e.

1. Physical composition

It was potent to be reconsidered the feasibility in recycle or an energy resources. It also helped designing devices for collections and proper disposal.

Their critical composition were

1.1 Individual components of Solid Wastes, which were wastes of food, papers, hard pares, plastics, cloths, leathers, metal, glasses, dust, ash and etc., which were separable by eyes. More or less composition depended on many means, e.g. their sources, season, and economic situations, etc.

1.2 Moisture Content of Solid Wastes were referred to weights loss in drying at 100-105 C°. It usually used percentages of weight composed in the wastes or the loss weight comparing to its original weight before drying (Pattanan Moolpruek, 1996: 250). Factors related to moisture were their compositions, e.g. food wastes or seasonal relation such as rainy season, when the wastes had high moisture.

1.3 Density of Solid Wastes- it could help estimate the elapse of the wastes caused by compression during collections and transportation and disposed by ditching. Water volumes would be calculated by density of wastes

2. Chemical Composition of Solid Wastes

Significantly, they were (Pattana Moolpruek, 1996: 250)

2.1 Volatile Solids was referred to the loss of waste weight in oven at 600-800 C° by two hours.

2.2 Ash was referred to remains after perfectly combustion and never combustible again containing non-organic volatile solid the previous substances before combustion.

2.3 Heating or Calorific Values was referred to needs for gas ignition and oxygen based on Dulong' s Formula, as follows:

BTU/lb = 145.4 Carbon + 620 (Hydrogen – 1/8 Oxygen) + 41 Sulfur

2.4 Uultimate Analysis was referred to final chemical analyses i.e. finding percentages of carbon Hydrogen Oxygen Nitrogen Sulfur and ash composing in the wastes.

2.4.3 Types of Wastes

Wastes could be classified in many ways either by origins, or by nature or by compositions as details below:

1. Garbage was referred to high moisture wastes dissolved by biological methods such as wastes of food, vegetables, meat, fruits and from food preparation. These wastes would easily be dissolved and rotten and had high moisture. Normally, one cubic yard wastes weighted 800-1500 lbs. (Nantiya Jaikowna, 1996:3). Garbage was from residence, food shops, markets, shops and workplaces, and so on.

2. Rubbish was referred to low moisture wastes and were classified into Combustible solid wastes e.g. papers, cloth, rubber, shoes, broken containers, leaves, tree branches, and so on. The Noncombustible solid wastes were glasses, metal, metal cans, and so on. They were slow in dissolving and a cubic yard weighed100-700Lbs. (Nantiya Jaikowna, 1996: 3). Their origins were similar to the garbage including industrial factories.

3. Ash was referred to wastes after combustion such as from cooking stove, from charcoal , coal, combustible materials, such as wood, charcoal, and coal. They were highly inertia or never again dissolved.

4. Street refuse was referred to remnants from road, street, lane sweeping and others such as dust, leaves, bricks, gravel, and sands and so on.

5. Dead Animals was referred to carcasses such as cat, dog, rats which might be naturally dead or by sickness or by accidents and discarded along the public places, farms, and residences. They were fast rotten and smelling.

6. Abandoned Vehicles was referred to unused and disqualified vehicles including parts such as rubber, wheels, and battery, etc. They were left in public places or government offices. A study showed that a truck weighed 3,574 Lbs. contained steel weighed 2,531 Lbs., 511 Lbs of cast steel, 31 Lbs of copper, 54 Lbs of manganese, 50 Lbs of aluminum, 20 Lbs. of lead, 145 Lbs of rubber, 87 Lbs of glass, and 1127 Lbs combustible and other substance 15 Lbas noncombustible. (Pattana Moolpruek, 1996: 244)

7. Industrial refuse was referred to wastes from production or process of industrial factories. Volumes were different to type of industries.

8. Construction and Demolition Wastes were referred to remnants of construction and leveling sites such as woods, bricks, stones, sands, and tiles and so on.

9. Bulky Wastes were referred to large pieces of wastes. Mostly were equipment and devices unable to repair such as refrigerators, television, fans, furniture and so on.

10. Sewage Treatment Residues were referred to remnants of water treatments such as garbage from screen before treatments, residues, gravel and sands from block, and so on.

11. Animal and Agricultural Wastes were referred to remnants form agricultural products i.e. plantations, gardening, paddy farming, fishery, forestry, or animal raising and so on. They were leaves, tree branches, grass, dung, remnants of pesticide containers, or fertilizers r hormones and so on.

12. Special Wastes were remnants needed special treatments otherwise they were risky to health of human and living things and also affecting environments. Sometimes they were classified into Hazardous Wastes, i.e. bomb wastes, fast for combustion, toxic wastes, radioactive wastes, erosion wastes and infectious wastes and so on.

2.4.4 Effect of Solid Wastes

2.4.4.1 Health Effect

It was both directly and indirectly affected. The direct effect was eating, inhaling or contacting germs or toxin from wastes affecting health, which caused acute sickness or injury or deadly. Prolong infected by toxin would be accumulating and led to chronic and many diseases, such as cancer, Tuberculosis and so on particularly employees collecting wastes. They directly contact common wastes, endanger ones and infectious from hospital specified by Infectious Diseases Board of Bangkok as infectious diseases (Promprow Sakhonchaiphitak, 1993: 15).16 Infectious diseases from hospital through wastes, i.e.

1. AIDS
2. Cholera
3. Hepatitis A , B and Hepatitis non A , B
4. Tetanus
5. Tuberculosis
6. Typhoid fever
7. Shigellosis
8. Chancroid
9. Salmonellosis
10. Diptherial
11. Gonorrhea
12. Gas gangrene
13. Haemophilus influenza – type infection invasive
14. Meliodosis
15. Meningococcal infections
16. Leptospirosis

The indirect effect were wastes having environment as carriers and contaminated in the air, water, soil and entered food chain or entering disease carrier animals such as rats, insects and emidemicized to cause risk to health.

2.4.4.2 Environmental Effect

Wastes either in general, or endangered ones, or contaminated ones when being heaped would affect environment and polluted the air by toxic gas from the waste sties., Dust from dried wastes, and smells. Besides, they impurified surface water in the canals, and underground waters and soil bedding them were contaminated, which turned environments toxic to living things.

2.4.4.3 Economic Effect

Miss-collection of wastes created Economic Loss and its sites generated Visual Pollution. Communities heaped with wastes had to face smells, smokes and dust turning the surrounded land lowered price and might also affect tourism. It was directly affected economy. The indirect ones were such as sickness, work-hours loss, medical expenditures, and extra workload for medical personnel. Besides pollution of natural water resources and unusable of water but also decreased water species or extinction, which was also the economic loss.

From the above, it was observed that the eco-system not only affecting health of people but also living things. Finally, they affected the national economy and social stability, as in Chart 3.

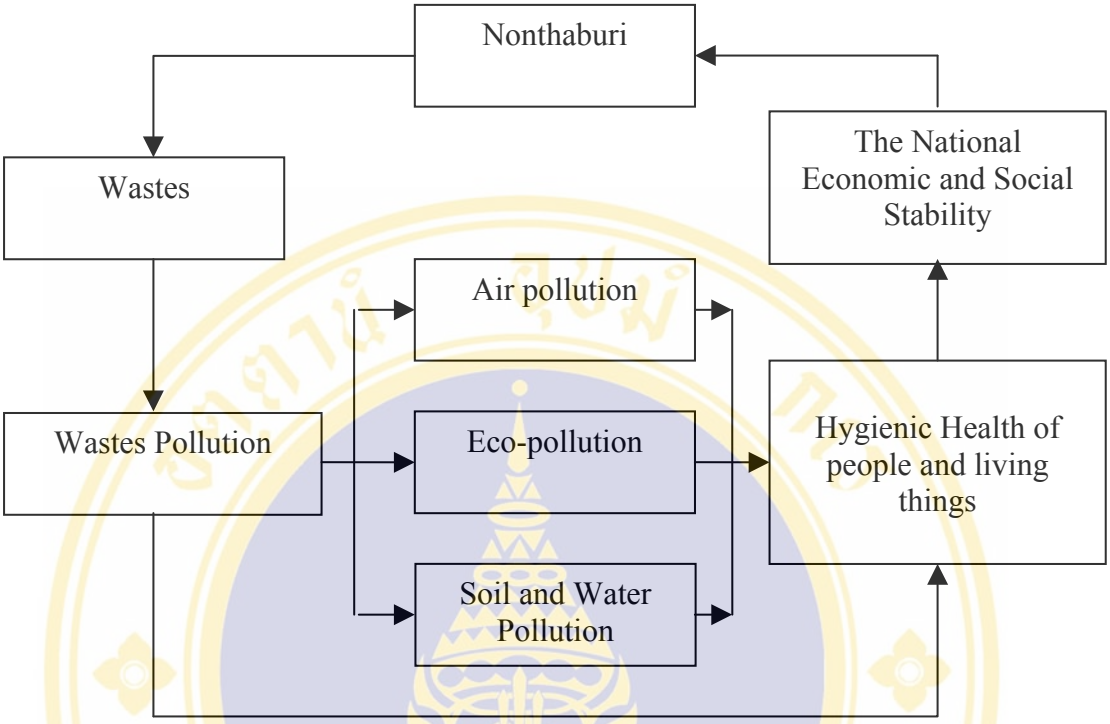


Chart 3 Relationship of Effects from Wastes

2.4.4.4 Causes of Wastes Pollution

1. Rapid increasing volumes of wastes following the expansion of cities and population that the municipality and the local administration could not collect and dispose the smells with the existing budget and personnel allocation.

2. The municipality lacked workforce and budget to efficiently dispose wastes since the government did not prioritize the matter or set policy for emergent solutions. Even , it was generally accepted that wastes disposals were the major duty of the local administration but the structures of administration and budget of Thailand the municipality and the local administration needed sufficiently supports from the central administration

3. Inadequacy of viable technology to collect wastes in communities and even in Bangkok, it faced the criticality of wastes and them leading ones was there was no technology t address them properly.

- Inefficient and proper collection of wastes to each place

- Proper methods, technology, economy and social had been unused, Environment and public health indisposing wastes could do only left in heaps afar communities.

- Exploitation form wastes had not efficiently been applied such as separation of some composition in the wastes for reuses or to produce energy, and so on.

4. Carelessness and selfishness of some people groups made irresponsibility to the environment in general.

2.4.4.5 Waste Deposals

Current disposals were many but each method had different appropriateness. Contemplating disposal methods for any communities needed involved elements such as type and volumes of wastes, devices for collection and disposals, pattern of local administration, budget, restricted lands, people collaborations in communities. Methods were (Phicit Sakulbhram, 1982: 210-228).

1. Dumping on Land – a way of disposals the wastes filled the marsh lands. Generally, dumping on land method was proper to some type so wastes such as wastes from roads, the construction wastes, ash, residues, incombustible wastes and if they were fast dissolved wastes they might irritated by smells. Besides, they were the sources of flies breeding. Significantly, it needed to examine that lands for dumping should not allow water to flow to water resources.

2. Dumping at Sea – another way similar to the first approach. Some locality was near the sea and disposable. These wastes should be undissolved materials or slow of dissolving. Areas should be farther to the coast and the tide and the current should be unable to blow to the beach. Therefore some places built the dam to block dispersion of wastes, e.g. some disposal areas in Japan, where dams were constructed between islands to be the disposal pits. Finally, such places would be turned for other useable areas.

3. Hop Feeding – some wastes were useful to animal feeds particularly garbage, i.e. food, and vegetables from household, food shops, and restaurants. They were usually fed pigs and fish. Disposals of such wastes needed scheduling, with good covers and insect and animal free. They should be kept rotten or dissolving. Before feeding, they needed 30 minutes pasteurizing to kill germs. Food wastes left every time needed to be securely disposed and should not use them to feed animal again. Glass and metal mixed in the garbage should be taken in concerned, they might harm domestic animal. Infected meat was prohibited to be disposed by this method.

4. Incineration was referred to burnt in disposal oven with high heat to completely burn them. Usually, it required 760 – 1,1000 C° of complete incineration and smell free. Therefore, open burning was unhealthy by hygienic sciences because the imperfect one created smoke and smells with the toxic CO. Disposal by incineration fit some wastes such as rubbish or infectious wastes from hospitals. The remnants such as ash, bottles, metal, bricks and etc, should be redisposed by dumping into marsh lands

5. Sanitary Landfill was currently very popular especially in Europe and USA because they could be immediately disposed in a spot needless to separate. It was similar to dumping in land and covered by soil with tractors. It began from evacuation for landfill and compression the wastes, covered the surface and again compressed by soil. Later, they were left for dissolving to be humus, which might take 3-5 years for completion. The areas would sink and useable to be grassfields or playgrounds or construction sites.

6. Composting Method – garbage from residence usually contained mixtures of organic waste. They would dissolve and rotten the wastes with the reactive of some natural microbes. After completion of the process, the residues would be useful to plants because the there were sufficient volumes of N,P, K to be organic fertilizers. Reactive of some microbes yields biogas used as fuel. It depended on the fermenting and needed for side-products. Most wastes to ferment bio-gas were from farming and livestock raising. i.e., dung and other organic materials such as grass from the field and Java waster plants.

7. Grinding System was another way of disposals using Garbage grinder to grind food wastes and other plant wastes. They will be drained to public waste ditch

for disposal with waste water. Such method saves expenses in collection because garbage needed to collect everyday.

2.4.4.6 People Participating in Protection and Depollution of Rubbish and Endangered Wastes.

Rubbish and endangered wastes not only dirtied and generated germs and carriers but also being another caused to toxically pollute environments. People were therefore needed to participate in disposing wastes. (Referred in Santhira Saichue, 1997: 108-109).

1. Before disposing wastes into the litters, stop for awhile whether one can reduce waste volumes and recycle or not. There were 5 concepts or 5 R, i.e.

R1-Reuse – a repetitive use of wastes such as coffee bottles to fill water and to fill sugar or candy and so on.

R2-Repair - the broken devices could be maintain and to dispose was only after many times reuses such as radio, wheel repairs and so on

R3-Recycle – restructuring such as broken glass to be melt for new glass.

R4-Reject – avoid to use toxic wastes and misuses such as pesticide cans or bottle used for drinking or for food container or avoid using plastic bag to fill hot substances and so on.

R5-Reduce - garbage of food, and leaves could be ditched to be natural fertilizer for trees.

2. Litter for every home rather than disposing in public such as roads, grassfields, rivers, canals, etc, and they should be separated by types before disposing in many litters, i.e.

Litter 1 paper
Litter 2 plastics
Litter 3 glasses and bottles
Litter 4 aluminum and cans
Litter 5 garbage, foods, plants, vegetables, fruits
Litter 6 contaminated wastes, e.g. cells, pesticide cans

3. Suggest friend to keep houses, school, office clean not to dispose wastes in other home areas.

4. If our home was not in community and no municipality authority to collect wastes, we would do it ourselves rather than dumping and discarded them or left them in open space along the road but ditched in our home area.

2.4.4.7 Advantages of Reusing Wastes

They were (referred in Santhira Saichue, 1997: 109-110)

1. Depolluting environment – reuses of wastes to replace material in industrial production helped solving problems of environment. It reduced waster, air pollution and refuse such as in the study of USEPA in 1973, the glass production were i5% mixed with waste release 13.9% tons of air pollution and 104tons of refuse comparing to using raw material at 60% disseminated 10.9% of air pollution and 99 tons of refuses.

2. Reducing the use of natural resources – using wastes in production helped economize the natural resources, such as steel production using steel replacing ore would save energy to 74% and producing glass form used glass could reduce water and energy uses.

3. Advantageous to solve economic and social problems – it saved cost. From the study of Lohani (1983), it was found that the Benefit/Cost-Ratio by using 100% wastes as raw material for production gained B/C Ratio = 1.96. But using 100% pure raw materials gained B/C Ratio = 1.57. Therefore B/C Ratio with higher score give better benefits than expenses.

Reuses of wastes from communities were to promote career of buying second handed materials. The buyers would buy wastes from communities or factories and sell them to the middleman or to some industrial factories using wastes as raw material for production, such as paper tissue factories, glass factories, plastic factories, and metal melting factories and so on. Secondhand buyer career helped reduce unemployment and address endangered and refuses substance. The Pollution Control Department found that waste paper was priced at 0.5-3 Baht a kilogram, the

glass were 0.35 Bath a kilogram, plastics were 3Baaaht a kilogram, and wasted steel was 0.5-2 Baht a kilogram.

2.5 Related Researches

Chatchai Oncharoen (1990: Abstrct) studied on "Knowledge and Opinions of Mathayomsuksa Six Students in Samutprakan Province Regarding Environmental Pollution", the findings revealed that students'scores on knowledge of environmental pollution was at a moderate level. Female students' scores were higher than male students' scores but there was no statistical significance at .05 level. Students' opinion on environmental pollution depended on their sex, study program, and school locations at level of statistical significance of .05.

Wipapen Jiasakul studied that (1993: Abstract) studied on the topic of "Solid Waste Management Behavior of Population in Middle Zones of Bangkok Metropolis", the results showed that the practices of solid waste management, the population with high education level and income, being in governmental service, living in the single house, having high perception on the situation of solid waste problems tended to have better behavior on solid waste management than orhet groups at level of statistical significance of .001, .001, .05,.01 and .01 respectively. The difference in knowledge on solid waste caused no statistical different in the solid waste management behavior. Population with high education level had a better behavior solid waste littering than those of low education level at level of statistical significance of .05. The popupation who had different income, occupation, types of accommodation, knowledge on solid waste and perception on situation of solid waste problems had no different behavior with statistical significance.

Wanlee Kanchanakitsakul (1996: Abstract) studied about "Knowledge and Attitudes of the First year Nursing Students of Mahidol University towards Solid Waste Disposals" with the purposes to investigate knowledge and attitude of the First yesar Nursing Students of Mahidol University towards solid waste disposals and whether their knowledge and attitude depend on such variables as grade point

average, occupation of the father and mother, income of the father and mother family size, place of birth, membership of the environment group, experience in solid waste disposals, behaviors on the receiving of environmental information, theirs in solid waste issues. The finding showed that the knowledge on solid waste disposals of the First yesar Nursing Students was at moderate level, and most of the nursing students had positive attitudes towards solid waste disposals. The relationships of these students's knowledge and attitudes did not depend on grade point average, occupation of the father and mother, income of the father and mother family size, place of birth membership of the environmental group, experience in solid waste disposals at the 0.05 level of significant. While the nursing students's knowledge depend on behaviors on the receiving of environmenta;l information but did not depend on their interests in solid waste issues at the 0.05 level of significance. In the other way, the nursing students attitudes did not depend on behaviors on the receiving of environmenta;l information but depend on their interests in solid waste issues at the 0.05 level of significance.

Anan Sukchareon (1997: Abstract) researched on "A Study of Police Officers in Traffic Police Division: Knowledge of the effects of air pollution and the Measures They Use to Protect Themselves", the research findings were as follows: (1) Most police officers in the survey sample have a moderatw level of knowledge about air pollution. Analysis of variance found significant difference according to rank, education level, information reception at the level of statistical significance of .001, age, marital status, duration of work at the level of statistical significance of .01, participation in air pollution programs and attitude towards air pollution the level of statistical significance of .05. The rest variables were duration of being traffic police until present, time of work each day, they were not different according to knowledge at the level of statistical significance of .05. (2) Most of police officers had behavior regarding protecting themselves against air pollution at moderate level. The findings revealed that the behavior regarding protecting themselves against air pollution was different according to the different perception, participation in air pollution programs, attitude towards air pollution at level of statistical significance of .001, marital status at level of statistical significance of .01, time of work each day at level of statistical

significance of .05. The rest independent variables as age, rank, education, work experience as government officer, duration of work was not differ according to the different behavior of regarding protecting themselves against air pollution at level of statistical significance of .05. (3) The study found that there were a postitive correlation between level of knowledge about air pollution and protective behavior at the statistically significant level of .001.

Thongchai Pansawat, (1986: 94) studied The Impact of solid waste toward envoronmenetal quality, the results revealed that every city studied, the wast from the household did not be collected wholly in every areas such as Bangkok Metropolis, the waste was collected only 80.0% of households.

Thanaporn Panakupt (1995: Abstract) researched on the topic of "The behavior of Household Solid Waste Management of Residents in Pattani Municipality", the finding revealed that the correct behaviors of household solid waste management were in the high level concerning the behavior of solid waste management was in the high level concerning the behavior of solid waste collection, sorting and disposal, the correct behavior of solid waste decreasing and recycling were in the moderate level. About the problems and the recommendations, the majority of sample group suggested that the municipal office should increase the number and size of the waste collection bins to be proper for the size of community. The urgent problems must be solved were providing the proper size of bin and the adequate number of bins, including taking care of waste accumulated in the drainage channels and canals, and supplying the waste collectors to collect the waste everyday.

Kringkaew Laoboonsatien (1994: Abstrct) studied on "The Attitude and Practices of the Residents in Klongtoey Urban Slum towards Beverage Packing Wastes, the fing revealed that the majority of the residents in the studied slum areas was still habitually disposing off their packing waste unhygienically. The waste such as milk pack, can, plastic bottles, glass bottles etc. were discarded uneasthetically in the slum areas. The reuse of packing waste among the slum residents was found only in a small fraction of them. The stepwise multiple regression analysis revealed that the

practices concerning packing waste disposal associated their purchasing behavior, while the practices in the reuse of the packing waste related to the knowledge of packing-waste disposal and the number of years living in the community. Moreover, the majority of resident in Klongtoey slum was not realized the need to keep their community environment cleaness as well as to dispose off the packing waste in a sanitary manner.

Viruch Chomcuen (1994: Abstract) studied on the toptic “Garbage Disposal Behaviors of the People in Nakhon Pathom Municipal Zones” with the purposes to investigate the garbage disposal behaviors; to find out the related factors; and to linaeate the problems and obstacles on garbage disposal of the people in Nakhon Pathom Municipal Zones. The results of the study revealed that the garbage disposal behaviors of the people in Nakhon Pathom Municipal Zones were found to be at a middle level; the samples who were female, single, 24 years of ages or younger, student or other occupations with primary education were the groups that had more correct behaviors on garbage disposal than did any other sample groups; the related factors were the size of household, imcomes, receiving information and knowledge on garbage disposal behaviors showed a positive relation behavior on garbage disposal. On the contrary, the lenghth of residency had a negative correlation to the behaviors; and the biggest problems garbage disposal of the studied zones were the accessive food leftover, vegetable and fruit peels. The minor ones were on disposal of bottles, glass, and cans. The obstacles were revealed as the accumulation of the unsorted wastes; everything was put and piled in one container.

Plengpin Mun-U (2540: Abstract) studied “Knowledge and practices about environmental problems or SAO committee in Payao Province” and it was found that SAO committee have knowledge about environmental problems at moderate level. It was also found that knowledge in environmental problems or SAO committee depended on the following variables: education level, time reside in the vicinity, and information receiving at statistically significant at level 0.05. SAO committee are practicing on environmental problems at good level and it was found that the practice

on environmental problems depended on information receiving with statistically significant at level 0.05P.

Phiree Chaicha, (2002: 80-90) studied on information reception and environmentally friendly products consumption among women in Bangkok Metropolis area. The results was found that most of sample group received the information through television media, followed by radio, newspaper, and journal/magazine orderly. It was illustrated that different age, occupation, marital status, education level, and income of sample group had different information reception, and different behavior. Knowledge and behavior regarding the green products had no correlation statistically significant at 0.05 level.

Roger and Shoemaker (1971: 208-209) stated the effectiveness of mass communication that mass media were able to access to receiver therefore, it should impact to receiver directly so it increased knowledge and distributed the information, including changing people attitude effectively.

Richmond (1977: 37) studied the knowledge and attitude of high school students in their 5th year in England. Results showed that students felt lowly about their environment. However, if they were responsible for a duty, their attitude will become negative. Males had more knowledge about environmental issues than females; their attitudes did not differ, in a statistically significant way.

Zacher, (1977: 5016) studied on the factors toward the knowledge on environment aspect of student grad 11in the State of Montana, the research results found that sex, size of family, newspaper reading, environmental knowledge studying in the school, and demographic attribute of student when comparing of different factors it showed that the male student had mean scores, higher that the femal mean scores, the child from small family had higher mean scores than the big family, the child who read the newspaper more than copies had the mean score higher than the child who read lesser than 3 copies.

CHAPTER 3
RESEARCH METHODOLOGY

This study was a survey research to study health risk behavior of personnel and local residents involved in solid waste disposal site of Nonthaburi Province and to study variables related to health risk behavior of personnel and local residents involved in solid waste disposal site of Nonthaburi Province. This chapter focused on the following topics:

3.1 Population and Sample
3.2 Research Tools
3.3 Construction and development of Tool Quality
3.4 Data Collection
3.5 Data Analysis

3.1 Population and Sample

3.1.1 Population

The population in this research were 690 personnel and 760 local residents involved to solid waste disposal site of Nonthaburi Province. The personnel were waste collectors of Provincial Administrative Organization (PAO), Municipalities, and Subdistrict Administrative Organization (SAO).

3.1.2 Sample

The sample size was determined by calculating from 760 persons of target population with Taro Yamane Formula (Taro Yamane, 1973: 729 cited in (Boontam Kijpreedaborisut, 1993: 68) as follows:

$$n = \frac{N}{1 + Ne^2}$$

When n = Sample size was randomized

N = Number of population

e = Confident interval = .05

3.1.3 Sampling method

The sample size was defined by proportional sampling to size according to work unit. Then, the simple random sampling was used for each work unit as following in table 1.

Table 1 Number of Populations Classified by Work Unit

Work Unit	Number of Population	Number of Sample
- Local Residents at solid waste disposal site	70	25
- Nonthburi Provincial Administrative Organization	45	16
- Nonth City Municipality	195	70
- Pak Kred City Municipality	184	65
- Bang Kruay Town Municipality	52	19
- Bang Bua Thong Town Municipality	28	10
- Bang Sri Muang Subdistrict Municipality	40	15
- Bang Muang Subdistrict Municipality	8	3
- Bang Yai Subdistrict Municipality	8	3
- Palai Bang Subdistrict Municipality	15	5
- Sai Noi Subdistrict Municipality	4	1
- Bang Lane Subdistrict Administrative Organization	4	1
- Bang Muang Subdistrict Administrative Organization	7	2
- Sao Thong Hin Subdistrict Administrative Organization	36	13
- Bang Khanun Subdistrict Administrative Organization	4	1
- Bang Khun Krong Subdistrict Administrative Organization	4	1
- Sai Noi Subdistrict Administrative Organization	10	4
- Khun Sri Subdistrict Administrative Organization	3	1
- Bang Bua Thong Administrative Organization	15	5
- Bang Ruk Noi Administrative Organization	8	3
- Tha It Administrative Organization	8	3
- Sai Ma Administrative Organization	12	4
Total	**760**	**270**

3.2 Research Tool

The questionnaire was used as a tool for data collection. It was constructed by the researcher by basing on the study of texts, documents, and thesis advisory committee recommendations, including studying the related researches. All these knowledge was composed to construct the questionnaire. The questionnaire contains the following information:

Section 1: General information of respondents: sex, age, education level, occupation, and experience of danger received from toxic waste.

Section 2: Information receiving about collection, disposal and danger of solid waste. The information receiving consisted of sources of media, and frequency of receiving with 6 point rating scales by setting the scores as follows:

Frequency of Information Receiving	**Scores**	
Daily	5	points
3 – 4 times / week	4	points
1 – 2 times / week	3	points
1-2 times / month	2	points
Rarely	1	point
Never	0	point

Section 3: The question about knowledge on danger from solid waste, it was 4 choices selection. There were 20 questions, with the following grading criteria.

The wrong answer would be given	0	point
The right answer would be given	1	point

To arrange the scores of knowledge was used the Norm-Reference by using the mean score and standard deviation as criteria for dividing and it was considered on the number and distribution of data as important point so the scores were divided into 3 ranges as follows:

Low level of knowledge = < $\bar{x}$ – 0.5 S.D.

Moderate level of knowledge = $\bar{x}$ + 0.5 S.D. – $\bar{x}$ – 0.5 S.D.

High level of knowledge = > $\bar{x}$ + 0.5 S.D.

Section 4: The question about health risk behaviors of personnel and local residents at solid waste disposal site of Nonthaburi Province toward the infection from solid waste. The question feature was three choices selection with the positive and negative question mix together. There were 9 questions, with the following grading criteria.

The Likert Scale was employed with the following 3 levels of choices that practicing behavior: Often Performance, Rare Performance, and Never Performance. The scoring was as follows:

Practicing behavior Level	**Scores**
Frequent Performance	2
Sometimes Performance	1
Never Performance	0

To arrange the scores of roles, was used the Norm-Reference by using the mean score and standard deviation as criteria for dividing and it was considered on the number and distribution of data as important point so the scores
were divided into 3 ranges as follows:

Low level of practicing behavior = < $\bar{x}$ – 0.5 S.D.

Moderate level of practicing behavior = $\bar{x}$ + 0.5 S.D. – $\bar{x}$ – 0.5 S.D.

High level of practicing behavior = > $\bar{x}$ + 0.5 S.D.

Section 5: The question about health risk behaviors of personnel and local residents at solid waste disposal site of Nonthaburi Province toward the injury from solid waste. The question feature was three choices selection with the positive and

negative question mix together. There were 9 questions, with the following grading criteria.

The Likert Scale was employed with the following 3 levels of choices that practicing behavior: Often Performance, Rare Performance, and Never Performance. The scoring was as follows:

Practicing behavior Level	**Scores**
Frequent Performance	2
Sometimes Performance	1
Never Performance	0

To arrange the scores of roles, was used the Norm-Reference by using the mean score and standard deviation as criteria for dividing and it was considered on the number and distribution of data as important point so the scores
were divided into 3 ranges as follows:

Low level of practicing behavior $= < \bar{x} - 0.5$ S.D.

Moderate level of practicing behavior $= \bar{x} + 0.5$ S.D. $- \bar{x} - 0.5$ S.D.

High level of practicing behavior $= > \bar{x} + 0.5$ S.D.

Section 6: The question about health risk behaviors of personnel and local residents at solid waste disposal site of Nonthaburi Province toward the disability from solid waste. The question feature was three choices selection with the positive and negative question mix together. There were 9 questions, with the following grading criteria.

The Likert Scale was employed with the following 3 levels of choices that practicing behavior: frequent performance, sometimes performance, and never Performance. The scoring was as follows:

Practicing behavior Level	**Scores**
Frequent Performance	2
Sometimes Performance	1
Never Performance	0

To arrange the scores of roles, was used the Norm-Reference by using the mean score and standard deviation as criteria for dividing and it was considered on the number and distribution of data as important point so the scores were divided into 3 ranges as follows:

Low level of practicing behavior = $< \bar{x} - 0.5$ S.D.

Moderate level of practicing behavior = $\bar{x} + 0.5$ S.D. – $\bar{x} - 0.5$ S.D.

High level of practicing behavior = $> \bar{x} + 0.5$ S.D.

3.3 Construction and development of Tool Quality

The questionnaires was constructed and tried out with the following steps:

Step 1: The researcher studied the concepts and results of related study and it was complemented with studying the content from text books, theses, and other documents about the solid waste. After the tool was constructed then the researcher asked the recommendations from thesis advisory committee and experts to consider and examine the clearness and correctness of language scope of the content, and the content validity including the comments and recommendations. It was improved and corrected to be complete to be framework and concepts for research tools construction.

Step 2: The questionnaire was constructed and proposed to thesis advisory committee and experts to give the opinions to determine the validity, then it was improved again.

Step 3: The constructed questionnaire was tried out with 30 waste collectors of Bangkok Metropolis in order to correct and improve before collecting actual data from sample group. The questionnaires were checked for scoring and analyzing for knowledge aspects with analysis of difficulty level, discrimination power and reliability by the following formulas.

The content analysis of difficulty level and discrimination the 25% high group-low group technique was used, the formula (Supachai Sukarawan, 1997: 255-256) as follows:

$$\text{Difficulty level (P)} = \frac{N_H + N_L}{N}$$

$$\text{Discrimination power (D)} = \frac{N_H - N_L}{N/2}$$

Where P = Difficulty level

D = Discrimination power

N_H = Number of respondents with right answer in the 25% high group

N_L = Number of respondents with right answer in the low group

n = Total number of respondents in both groups

For the criteria in choosing questions with a difficulty level between 0.2 – 0.8 and a discrimination power value of at least 0.2 for the real test.

Once the questions for the knowledge assessment are selected according to the difficulty and discrimination power values, the researcher must then analyze the questionnaire for reliability by the Kuder-Richardson 20 (KR-20), with the formula as follows (Supachai Sukarawan, 1997: 252):

$$r_a = \left\{\frac{n}{n-1}\right\}\left\{1-\frac{\sum pq}{s_t^2}\right\}$$

Where r_{tt} = Reliability value

n = Number of questions

p = Proportion of respondents who answered the question correctly

q = Proportion of respondents who answered the question incorrectly (1-p)

s^2_t = Variance of the total score

For the behavior to prevent oneself from the risk solid waste danger, the reliability of question in this section was determined by using the Alpha Coefficient formula of Cronbach, as follows:

$$\alpha = \frac{n}{n-1}\left[1-\frac{\sum s^2_i}{s^2_t}\right]$$

Where α = Reliability value of questionnaire

n = Total number of questions

s^2_i = Variance of single item

s^2_t = Variance of total items

For this study, reliability value of danger received from the toxic solid waste was .7952, reliability value of information receiving was .7228, and reliability value of knowledge was .7050, health risk behavior toward infection from solid waste was .7021, health risk behavior toward injury from solid waste was .7112, and health risk behavior toward disability from solid waste was .6851.

3.4 Data Collection

Data was collected with following steps:

3.4.1 The tried out and developed questionnaire was given to local residents at solid waste disposal site at Nonthburi Province by distributing and explaining by researcher to respondents to understand the questionnaire.

3.4.2 The questionnaires were collected and then examined for completeness, subsequently, the completed questionnaires were further analyzed to determine the statistical value.

3.5 Data Analysis

The completed questionnaires were transferred to coding sheet and analyzed with social science program (SPSS: statistical package for social science for Windows) by defining the significant level at 0.05. The general information were analyzed using the percentage, mean and standard deviation. Chi-Square test was used to calculate the association between health risk behavior of personnel and local residents involved to solid waste disposal site of Nonthaburi Province (dependent variable) and independent variables (experience of danger received from toxic waste, knowledge on danger from solid waste, and information receiving). The formula was as follows:

$$\chi^2 = \sum \frac{[f_o - f_e]^2}{f_o}$$

where f_o = Frequency of performance

f_e = Frequency of Expectation

CHAPTER 4
RESULTS

This research was study on the "Health Risk Behaviors of Personnel and Local Residents Involved to Solid Waste Disposal Site of Nonthaburi Province". The researcher selected the survey research method and the questionnaires were used for data collection with the sample of population 690 personnel and 70 local residents at solid waste disposal site of Nonthaburi Province. From the calculation 270 people would be sample group by sampling with the proportional sampling to size according to the dividing of work unit, then the simple random sampling was used for each work unit used. The research collected 280 copies of questionnaires and 270 complete copies (96.4%) were selected to analyze to determine the statistic values. The results can be concluded by dividing into 8 parts as follows:

4.1 General Information of Sample Group
4.2 Experience of danger received from toxic waste
4.3 Information Receiving about collection, disposal and danger of solid waste
4.4 Knowledge on solid waste and danger from solid waste
4.5 Health Risk Behavior toward Infection from Solid Waste
4.6 Health Risk Behavior toward Injury from Solid Waste
4.7 Health Risk Behavior toward from Solid Waste
4.8 Association between Health Risk Behavior of Sample Group and Independent Variables

4.1 General Information of Sample Group

The general information of sample group was classified by sex, age, education level and occupation in term of number and percentage of personnel and local residents involved to solid waste disposal site as showed in table 2.

The results were revealed that most of sample group that most of sample group was 92.6% males and the rest was female 7.4%. Age, were revealed that most of sample group was 46.6% in age group between 31-40 years followed by 36.3% in age group between 41-50 years, 9.7% in age group between 21-30 years, 4.4% in age group lesser than or equivalence to 20 year, 3.0% in age group older than 50 years respectively. Education level, were revealed that most of sample group was 63.3% in education level of primary school level 4-6, followed by 21.9% in education level of secondary school, 24.4%, 12.2% in education level of illiteracy and Lower than primary school level 4, 2.2% in education level of high school/vocational school, and 0.4 % in education level high vocational school/diploma respectively. The main occupation was revealed that most of sample group was 56.3% of waste collectors, followed by 34.4% of waste truck driver, and 9.3% of local waste collected residents respectively.

Table 2 Numbers and Percentage of Sample Group Classified by Demographic Characteristics

Characteristics	Sample Group	
	Number	Percentage
1. Sex		
Male	250	92.6
Female	20	7.4
Total	270	100.0
2. Age (Years)		
< = 20	12	4.4
21-30	26	9.7
31-40	126	46.6
41-50	98	36.3
>50	8	3.0
Total	270	100.0
3. Education level		
Illiteracy and Lower than Primary School Level 4	33	12.2
Primary school Level 4-6	171	63.3
Secondary School	59	21.9
High school/vocational school	6	2.2
High vocational school/diploma	1	0.4
Total	270	100.0
Occupation		
Local Residents	25	9.3
Waste Collector	152	56.3
Waste Truck Driver	93	34.4
Total	270	100.0

4.2 Experience of Danger Received from Toxic Waste

The results of experience of danger received from toxic waste of sample group could be explained into parts as the classification of experience of danger received from toxic waste in term of frequency and percentage, and level of experience as following details.

4.2.1 Numbers and Percentage of Sample Group Classified by Experience of Danger Received from Toxic Waste

The results of data analysis about experience of danger received from toxic waste of sample group on 10 items, the results were as follows:

1) The sample group ever received danger of scratches from pointed objects 85.9% and never received 14.1%.

2) The sample group ever received danger of cuts from sharp objects 87.0% and never received 13.0%.

3) The sample group ever received danger of allergic to chemicals 30.4% and never received 69.6%.

4) The sample group ever received danger of allergic to dust particles 46.3% and never received 53.7%.

5) The sample group ever received danger of fungus infection 39.6% and never received 60.4%.

6) The sample group ever received danger of rashes come up on hands and arms 74.8% and never received 25.2%.

7) The sample group ever received danger of headache 72.6% and never received 27.4%.

8) The sample group ever received danger of feel weak / tired 80.0% and never received 20.0%.

9) The sample group ever received danger of uncomfortable / cannot breathe 63.0% and never received 37.0%.

10) The sample group ever received danger of itchiness on the body 78.5% and never received 21.5%.

The results of data analysis about experience of danger received from toxic waste of sample group on 10 items, the results were as follows:

Table 3 Numbers and Percentage of Sample Group Classified by Experience of Danger Received from Toxic Waste

Experience of Danger Received from Toxic Waste	Sample Group	
	Number	Percentage
1. Scratches from pointed objects		
Ever	232	85.9
Never	30	14.1
Total	270	100.0
2. Cuts from sharp objects		
Ever	235	87.0
Never	35	13.0
Total	270	100.0
3. Allergic to chemicals		
Ever	82	30.4
Never	188	69.6
Total	270	100.0
4. Allergic to dust particles		
Ever	125	46.3
Never	145	53.7
Total	**270**	**100.0**
5. Fungus infection		
Ever	107	39.6
Never	163	60.4
Total	270	100.0

Table 3 Numbers and Percentage of Sample Group Classified by Experience of Danger Received from Toxic Waste (cont.)

Experience of Danger Received from Toxic Waste	Sample Group	
	Number	**Percentage**
6. Rashes come up on hands and arms		
Ever	202	74.8
Never	68	25.2
Total	**270**	**100.0**
7. Headache		
Ever	196	72.6
Never	74	27.4
Total	270	100.0
8. Feel weak / tired		
Ever	216	80.0
Never	54	20.0
Total	270	100.0
9. Uncomfortable / cannot breathe		
Ever	170	63.0
Never	100	37.0
Total	270	100.0
10. Itchiness on the body		
Ever	212	78.5
Never	58	21.5
Total	270	100.0

4.2.2 Experience of Danger Received from Toxic Waste of Sample Group

The finding of this research indicated that most of sample group had experience in danger received from toxic waste at moderate level. The questions were choice-types, with the respondent asked to choose whether the statement is ever or never by selecting according their actual experience. The experience in danger

received from toxic waste scores were arranged with the Norm-Reference by using the mean score and standard deviation as criteria for dividing. There were 3 ranges of scores as follows:

More than 8 scores	meant	High level of Experience
5-8 scores	meant	Moderate level of Experience
Lower than 12 scores	meant	Low level of Experience

The details showed in table 4.

Table 4 Numbers and Percentage of Sample Group Classified by Experience of Danger Received from Toxic Waste of Sample Group

Experience of Danger Received from Toxic Waste of Sample Group	Number	Percentage
High level (More than 8 scores)	64	23.70
Moderate level (5-8 scores)	147	54.44
Low level (Lower than 5 scores)	59	21.85
Maximum= 10, minimum =0, Mean= 6.58 S.D.=2.58		
Total	**270**	**100.00**

Table 4 showed that the level of experience in danger received from toxic waste scores into three range, including high level, moderate level, and low level of experience. The scores were arranged with the Norm-Reference by using the mean score ($\bar{x}$ =6.58) and standard deviation S.D.=2.58 as criteria for dividing. It was found that most of sample had experience in danger received from toxic waste at moderate level (54.44%) followed by high level (23.706%) and low level (21.85%) respectively.

4.3 Information Receiving about Collection, Disposal and Danger of Solid Waste

Analysis of frequency and percentage of information receiving about collection, disposal and danger of solid waste, it was considered on sources of media. The finding of frequency and percentage of each medium receiving showed in table 5.

4.3.1 Radio Media (Frequency of Media Receiving)

Table 5 showed that the frequency and percentage of information receiving from radio media about collection, disposal and danger of solid waste, most of sample group was 34.1 % of never received, followed by 29.6% of seldom received, 18.5% received 3-4 times/ week, 9.3% received everyday, 5.9 % received 1-2 times/ week, 2.6% received 1-2 times/month respectively.

4.3.2 Television Media (Frequency of Media Receiving)

Table 5 showed that the frequency and percentage of information receiving from television media about collection, disposal and danger of solid waste, most of sample group was 27.0 % of never received, followed by 24.4% of seldom received, 17.0% received everyday, 15.2% received 1-2 times/ week, 8.5 % received 3-4 times/ week, 7.8% received 1-2 times/month respectively.

4.3.3 Newspaper Media (Frequency of Media Receiving)

Table 5 showed that the frequency and percentage of information receiving from newspaper media about collection, disposal and danger of solid waste, most of sample group was 37.0 % of never received, followed by 26.7% of seldom received, 12.6% received everyday, 11.1% received 3-4 times/ week, 7.8% received 1-2 times/month, 4.8 % received 1-2 times/ week, respectively.

4.3.4 Magazine/Journal Media (Frequency of Media Receiving)

Table 5 showed that the frequency and percentage of information receiving from television media about collection, disposal and danger of solid waste, most of sample group was 63.3% of never received, followed by 18.1% of seldom received,

7.4% received everyday, 4.8% received 1-2 times/month, 3.7 % received 3-4 times/ week, 7.8% received 1-2 times/week respectively.

4.3.5 Personal Media (Frequency of Media Receiving)

Table 5 showed that the frequency and percentage of information receiving from television media about collection, disposal and danger of solid waste, most of sample group was 36.7% of everyday, followed by 18.1% of seldom received, 16.7% never received, 15.9% received 3-4 times/ week, 8.5% received 1-2 times/month, 4.1% received 1-2 times/week respectively.

4.3.6 Magazine/Journal Media (Frequency of Media Receiving)

Table 5 showed that the frequency and percentage of information receiving from television media about collection, disposal and danger of solid waste, most of sample group was 47.8% of never received, followed by 30.0% of seldom received, 9.3% received everyday, 5.2% received 3-4 times/week, 4.8 % received 1-2 times/ month, 3.0% received 1-2 times/week respectively.

Table 5 Frequency and Percentage Sample Group by their access to Information

Type of Media	Sample Group	
	Number	Percentage
Radio (Frequency)		
Everyday	25	9.3
3-4 times/week	50	18.5
1-2 times/week	16	5.9
1-2 times/month	7	2.6
Seldom	80	29.6
Never	92	34.1
Total	**270**	**100.0**
Television (Frequency)		
Everyday	46	17.0
3-4 times/week	23	8.5
1-2 times/week	41	15.2
1-2 times/month	21	7.8
Seldom	66	24.4
Never	73	27.0
Total	**270**	**100.0**
Newspaper (Frequency)		
Everyday	34	12.6
3-4 times/week	30	11.1
1-2 times/week	13	4.8
1-2 times/month	21	7.8
Seldom	72	26.7
Never	100	37.0
Total	**270**	**100.0**

Table 5 Frequency and Percentage Sample Group by their access to Information (cont.)

Type of Media	Sample Group	
	Number	Percentage
Magazine/Journal (Frequency)		
Everyday	20	7.4
3-4 times/week	10	3.7
1-2 times/week	7	2.6
1-2 times/month	13	4.8
Seldom	49	18.1
Never	171	63.3
Total	**270**	**100.0**
Personal media (Frequency)		
Everyday	99	36.7
3-4 times/week	43	15.9
1-2 times/week	13	4.1
1-2 times/month	23	8.5
Seldom	49	18.1
Never	45	16.7
Total	**270**	**100.0**
Governmental Information (Frequency)		
Everyday	25	9.3
3-4 times/week	14	5.2
1-2 times/week	8	3.0
1-2 times/month	13	4.8
Seldom	81	30.0
Never	129	47.8
Total	**270**	**100.0**

It might be concluded that the sample group of this study, the finding revealed that the information receiving from personal who were friend and relatives everyday 36.7%, and15.9% received 3-4 times/week.

4.4 Knowledge on Solid Waste and Danger from Solid Waste

The results of knowledge on solid waste and danger from solid waste of sample group could be explained into parts as the classification of knowledge in term of frequency and percentage, and level of knowledge as following details.

4.4.1 Numbers and Percentage of Sample Group Classified by Knowledge on Solid Waste and Danger from Solid Waste

The results of knowledge on solid waste and danger from solid waste of sample group could be explained into parts as the classification of knowledge in term of frequency and percentage, and level of knowledge as following details that showed in table 6.

1) 42.2% of sample group was able to give the right answer that solid waste meant what, and 57.8% gave the wrong answer.

2) 71.1% of sample group gave the wrong answer that what could be classified as dry solid waste meant what, and only 28.9% gave the right answer.

3) 78.1% of sample group gave the right answer that what were the step of managing solid waste, and only 21.9% gave the wrong answer.

4) 84.8% of sample group gave the right answer that what were the largest impact resulting from solid waste in communities, and only 15.2% gave the wrong answer.

5) 68.1% of sample group gave the right answer that solid waste could impact your health in the following ways, except:, and only 31.9% gave the wrong answer.

6) 40.4% of sample group gave the wrong answer that which of the following was the correct container for solid waste, and only5.69% gave the right answer.

7) 87.0% of sample group gave the right answer that the container for storing dangerous solid waste is red colored cover, and only 13.0% gave the wrong answer.

8) 63.3% of sample group gave the wrong answer that the problem of solid waste was most related to which of the following, and only 36.7% gave the right answer.

9) 51.9% of sample group gave the wrong answer that an important reason for recycling resources was, and only 48.1% gave the right answer.

10) 56.7% of sample group gave the wrong answer that which of the following was classified as dangerous solid waste, and only 43.3% gave the right answer.

11) 77.8% of sample group gave the right answer that which source of activity creates the least dangerous solid waste, and only 22.2% gave the wrong answer.

12) 77.8% of sample group gave the wrong answer that which of the following solid waste was easily rotted and biodegradable, and only 23.3% gave the right answer.

13) 72.2% of sample group gave the right answer that dangers from solid waste could affect us in many ways except, and only 27.8% gave the wrong answer.

14) 74.4% of sample group gave the right answer that how burning solid waste took place, and only 25.6% gave the wrong answer.

15) 87.4% of sample group gave the right answer that solid waste like aerosol spray cans and pesticides should be disposed of with what method, and only 25.6% gave the wrong answer.

16) 72.2% of sample group gave the right answer that which was the correct way to collect dangerous solid waste from residences, and only 27.8% gave the wrong answer.

17) 42.2% of sample group gave the wrong answer dangerous solid waste from residences include, and only 57.8% gave the right answer.

18) 79.6% of sample group gave the right answer that dangerous solid waste in your understanding means which waste category, and only 27.8% gave the wrong answer.

19) 62.2% of sample group gave the wrong answer that Which of the following is the method of disposing dangerous solid waste that had the least effect on the environment, and only 37.4% gave the right answer.

20) 65.6% of sample group gave the right answer that Solid waste from communities should be disposed of through which method, and only 34.4% gave the wrong answer.

It can be said that the knowledge on solid waste and danger of solid waste of sample group, most of the sample group still lacked of clear knowledge on the meaning of "Solid Waste" with 57.4%, "Dry Waste" with 71.1, what the important cause that it needed to recycle the resource to reuse again with 51.9%, what was the toxic waste with 56.7%, the type of degradable waste wet waste or fresh waste such as Remnants of food with 76.7%, and the waste management with the least impact to environment was feeding the animal with 62.6%.

Table 6 Number and Percentage of Sample Group Classified by Knowledge

Items	Right Answer		Wrong Answers		Total
	n	%	n	%	%
1. Which of the following is true about "solid waste"?	114	42.2	156	57.4	100.0
2. Which of the following is the best answer when talking about "dry solid waste"?	78	28.9	192	71.1	100.0
3. What are the steps in managing solid waste?	211	78.1	59	21.9	100.0
4. What is the largest impact resulting from solid waste in communities?	229	84.8	41	15.2	100.0
5. Solid waste can impact your health in the following ways, except:	184	68.1	86	31.9	100.0
6. Which of the following is the correct container for solid waste?	161	59.6	109	40.4	100.0

Table 6 Number and Percentage of Sample Group Classified by Knowledge (cont.)

Items	Right Answer		Wrong Answers		Total
	n	%	n	%	%
7. The container for storing dangerous solid waste is colored:	235	87.0	35	13.0	100.0
8. The problem of solid waste is most related to which of the following?	99	36.7	171	63.3	100.0
9. An important reason for recycling resources is:	130	48.1	140	51.9	100.0
10. Which of the following is classified as dangerous solid waste?	117	43.3	153	56.7	100.0
11. Which source of activity creates the least dangerous solid waste?	210	77.8	60	22.2	100.0
12. Which of the following solid waste is easily rotted and biodegradable?	63	23.3	207	76.7	100.0
13. Dangers from solid waste can affect us in many ways except:	195	72.2	75	27.8	100.0
14. How does burning solid waste take place?	201	74.4	69	25.6	100.0
15. Solid waste like aerosol spray cans and pesticides should be disposed of with what method?	236	87.4	34	12.6	100.0
16. Which is the correct way to collect dangerous solid waste from residences?	195	72.2	75	27.8	100.0
17. Dangerous solid waste from residences include	156	57.8	114	42.2	100.0

Table 6 Number and Percentage of Sample Group Classified by Knowledge (cont.)

Items	Right Answer		Wrong Answers		Total
	n	%	n	%	%
18. Dangerous solid waste in your understanding means which waste category:	215	79.6	55	20.4	100.0
19. Which of the following is the method of disposing dangerous solid waste that has the least effect on the environment?	101	37.4	169	62.6	100.0
20. Solid waste from communities should be disposed of through which method?	177	65.6	93	36.4	100.0

4.4.2 Knowledge Level of Sample Group

The results indicated that most of the sample group had knowledge on solid waste and danger from solid waste at moderate level. The questions were multiple choice types, with the respondent asked to choose the most correct answer with the positive and negative question mix together. The knowledge on solid waste and danger from solid waste scores were arranged with the Norm-Reference by using the mean score and standard deviation as criteria for dividing. There were 3 ranges of scores as follows:

More than 14 scores	meant	High level of Knowledge
11-14 scores	meant	Moderate level of Knowledge
Lower than 11 scores	meant	Low level of Knowledge

The details showed in table 7.

Table 7 Numbers and Percentage of Sample Group Classified by Knowledge on Solid Waste, and Danger from Solid Waste

Knowledge and Understanding	Number	Percentage
High level (More than 14 scores)	65	24.07
Moderate level (11-14 scores)	159	58.89
Low level (Lower than 11 scores)	46	17.04
Maximum= 20, minimum =2, Mean= 12.25, S.D.=3.13		
Total	**270**	**100.0**

Table 7 showed that the level of knowledge on solid waste and danger from solid waste scores were divided into three levels,, including high level, moderate level, and low level of knowledge. The scores were arranged with the Norm-Reference by using the mean score ($\bar{x}$ = 12.25) and standard deviation S.D.=3.13 as criteria for dividing. It was found that most of sample had knowledge on solid waste and danger from solid waste at moderate level (58.89%) followed by high level (24.07%) and high level (17.04%) respectively.

4.5 Health Risk Behavior toward Infection From Solid Waste

Results of study about the health risk behavior toward infection from solid waste of sample group was explained into 2 parts that were the classification of frequency and percentage according to their answer with degree of behavior and the classification of behavior as following details.

4.5.1 Classification of Frequency and Percentage by Sample Group Behavior

The finding of this study, the sample group was classified in term of frequency and percentage had 9 items presented table 8 as follows:

1) After collecting solid waste, they did other activities without washing their hands, the sample group practiced frequently 27.4%, sometimes 38.5%, and never 34.1%.

2) After collecting solid waste, they wash their clothes every times, the sample group practiced frequently 63.7%, sometimes 31.1%, and never 5.2%.

3) No matter what the pollution from solid waste was, they still work, the sample group practiced frequently 7.8%, sometimes 28.5%, and never 63.7%.

4) They took a bath immediately after collecting solid waste, the sample group practiced frequently 65.6%, sometimes 28.9%, and never 5.6%.

5) They wore gloves each time they collected solid waste, the sample group practiced frequently 62.6%, sometimes 33.0%, and never 4.4%.

6) They cleaned their equipment every time after finishing work, the sample group practiced frequently 63.2%, sometimes 32.2%, and never 4.4%.

7) When a wound appeared on their body they did not put a bandage on it, the sample group practiced frequently 29.6%, sometimes 36.3%, and never 34.1%.

8) They placed a cloth over their nose and mouth during collection of solid waste, the sample group practiced frequently 43.0%, sometimes 39.2%, and never 63.7%.

9) In collecting solid waste, they did not care where the solid waste comes from, the sample group practiced frequently 13.7%, sometimes 27.4%, and never 58.9%.

Table 8 Health Risk Behavior toward Infection from Solid Waste

Health Risk Behavior toward Infection from Solid Waste	Behavior					
	Frequently		Sometimes		Never	
	n	%	n	%	n	%
1. After collecting solid waste, you do other activities without washing your hands.	74	27.4	104	38.5	92	34.1
2. After collecting solid waste, you wash your clothes every time.	172	63.7	84	31.1	14	5.2

Table 8 Health Risk Behavior toward Infection from Solid Waste (cont.)

Health Risk Behavior toward Infection from Solid Waste	Behavior					
	Frequently		Sometimes		Never	
	n	%	n	%	n	%
3. No matter what the pollution from solid waste is, you still work.	21	7.8	77	28.5	172	63.7
4.You take a bath immediately after collecting solid waste.	177	65.6	78	28.9	15	5.6
5. You wear gloves each time you collect solid waste.	169	62.6	89	33.0	12	4.4
6. You clean your equipment every time after finishing work.	171	63.3	87	32.2	12	4.4
7. When a wound appears on your body you do not put a bandage on it.	80	29.6	98	36.3	92	34.1
8. You place a cloth over your nose and mouth during collection of solid waste.	116	43.0	106	39.2	48	17.8
9. In collecting solid waste, you do not care where the solid waste comes from.	37	13.7	74	27.4	159	58.9

It can be said that the health risk behavior toward of sample group, most of the sample group did other activity without washing hands after collecting solid waste 27.4 %, they still worked, no matter what the pollution from solid waste was, in collecting solid waste, and they did not put a bandage on wound when it appears on your body 29.6%.

4.5.2 Health Risk Behavior Level toward Infection of Sample Group

The results indicated that most of the sample group, the level of their health risk behavior toward infection was dividing into 3 levels by Likert Scale. That were frequently, sometimes, and never. The their health risk behavior toward infection

scores were arranged with the Norm-Reference by using the mean score and standard deviation as criteria for dividing. There were 3 ranges of scores as follows:

More than 12 scores	meant	High level of practicing behavior
9-12 scores	meant	Moderate level of practicing behavior
Lower than 9 scores	meant	Low level of practicing behavior

The details showed in table 9.

Table 9 Numbers and Percentage of Sample Group Classified by Health Risk Behavior Level toward Infection

Health Risk Behavior Level toward Infection	Number	Percentage
High level (More than 12 scores)	50	18.52
Moderate level (9-12 scores)	157	58.15
Low level (Lower than 9 scores)	63	23.33
Maximum= 17, minimum =5, Mean= 10.49, S.D.=2.55		
Total	**270**	**100.0**

Table 9, showed that the level of health risk behavior toward infection were divided into three levels, including high level, moderate level, and low level of knowledge. The scores were arranged with the Norm-Reference by using the mean score ($\overline{x}$ = 10.49) and standard deviation S.D.=2.55 as criteria for dividing. It was found that most of sample performed their behavior solid waste at moderate level (58.15%) followed by low level (23.33%) and high level (18.52%) respectively.

4.6 Health Risk Behavior toward Injury From Solid Waste

Results of study about the health risk behavior toward injury from solid waste of sample group was explained into 2 parts that were the classification of frequency and percentage according to their answer with degree of behavior and the classification of behavior as following details.

4.6.1 Classification of Frequency and Percentage by Sample Group Behavior

The finding of this study, the sample group was classified in term of frequency and percentage had 9 items presented table 10 as follows:

1) They used their bare hands in collecting solid waste without the use of other equipment, which was a normal thing to do, the sample group practiced frequently 27.8%, sometimes 38.1%, and never 34.1%.

2) They avoided collecting infectious solid waste from hospitals to avoid poison the sample group practiced frequently 41.5%, sometimes 46.7%, and never 11.9%.

3) They wore boots every time they collected solid waste, the sample group practiced frequently 70.4%, sometimes 24.8%, and never 4.8%.

4) When they received a wound during collection of solid waste, they cleaned the wound immediately, the sample group practiced frequently 3.3%, sometimes 26.7%, and never 70.0%.

5) They inspected the equipment each time before going to work, the sample group practiced frequently 62.6%, sometimes 34.4%, and never 3.0%.

6) They used defective equipment in collecting solid waste, the sample group practiced frequently 26.7%, sometimes 31.1%, and never 42.2%.

7) They would separate dangerous solid waste in order to prevent dangers from that waste, the sample group practiced frequently 17.8%, sometimes 36.7%, and never 45.6%.

8) In collecting solid waste, they didn’t care whether the solid waste was dangerous, the sample group practiced frequently 22.6%, sometimes 28.9%, and never 48.5%.

9) They wore long-sleeved shirts and long pants when collecting solid waste every time, the sample group practiced frequently 67.4%, sometimes 23.0%, and never 9.6%.

Table 10 Health Risk Behavior toward Injury from Solid Waste

Health Risk Behavior toward Injury from Solid Waste	Behavior					
	Frequently		Sometimes		Never	
	n	%	n	%	n	%
1. You use your bare hands in collecting solid waste without the use of other equipment, which is a normal thing to do.	75	27.8	103	38.1	92	34.1
2. You avoid collecting infectious solid waste from hospitals to avoid poison	112	41.5	126	46.7	32	11.9
3. You wear boots every time you collect solid waste	190	70.4	67	24.8	13	4.8
4. When you receive a wound during Collection of solid waste, you clean the wound immediately.	9	3.3	72	26.7	189	70.0
5. You inspect the equipment each time before going to work.	169	62.6	93	34.4	8	3.0
6. You use defective equipment in collecting solid waste.	72	26.7	84	31.1	114	42.2
7. You will separate dangerous solid waste in order to prevent dangers from that waste.	48	17.8	99	36.7	123	45.6
8. In collecting solid waste, you don't care whether the solid waste is dangerous.	61	22.6	78	28.9	131	48.5
9. You wear long-sleeved shirts and long pants when collecting solid waste every time.	182	67.4	62	23.0	26	9.6

It could be said that the health risk behavior toward injury from solid Waste. The finding revealed that most of sample group when they received a wound during collection of solid waste, they never cleaned the wound immediately 70.0%, and they never separated dangerous solid waste in order to prevent dangers from that waste and 45.6%, and n collecting solid waste.

4.6.2 Health Risk Behavior Level toward Injury of Sample Group

The results indicated that most of the sample group, the level of their health risk behavior toward injury was dividing into 3 levels by Likert Scale. That were frequently, sometimes, and never. The their health risk behavior toward ininjury scores were arranged with the Norm-Reference by using the mean score and standard deviation as criteria for dividing. There were 3 ranges of scores as follows:

More than 11 scores	meant	High level of practicing behavior
9-11 scores	meant	Moderate level of practicing behavior
Lower than 9 scores	meant	Low level of practicing behavior

The details showed in table 11.

Table 11 Numbers and Percentage of Sample Group Classified Health Risk Behavior Level toward Injury

Health Risk Behavior Level toward Injury	Number	Percentage
High level (More than 11 scores)	43	15.93
Moderate level (9-11 scores)	162	60.00
Low level (Lower than 9 scores)	65	24.07
Maximum= 14, minimum =5, Mean= 9.70, S.D.=1.73		
Total	**270**	**100.0**

Table 11, showed that the level of health risk behavior toward infection were divided into three levels, including high level, moderate level, and low level of knowledge. The scores were arranged with the Norm-Reference by using the mean score ($\overline{x}$ = 9.70) and standard deviation S.D.=1.73 as criteria for dividing. It was found that most of sample performed their behavior solid waste at moderate level (60.00%) followed by low level (24.07%) and high level (15.93%) respectively.

4.7 Health Risk Behavior toward Disability from Solid Waste

Results of study about the health risk behavior toward disability from solid waste of sample group was explained into 2 parts that were the classification of frequency and percentage according to their answer with degree of behavior and the classification of behavior as following details.

4.7.1 Classification of Frequency and Percentage by Sample Group Behavior

The finding of this study, the sample group was classified in term of frequency and percentage had 9 items presented table 12 as follows:

1) They used their fingers to touch their eyes while collecting solid waste which was a normal thing to do, the sample group practiced frequently 53.3%, sometimes 29.6%, and never 17.0%.

2) When they felt there was something wrong with their body, they went to see the doctor each time, the sample group practiced frequently 50.7%, sometimes 45.2%, and never 4.1%.

3) They had been short of breath during collection of solid waste, the sample group practiced frequently 28.1%, sometimes 61.1%, and never 10.7%.

4) They usually tried to find more information on how to prevent pollution from solid waste, the sample group practiced frequently 41.1%, sometimes 45.9%, and never 13.0%.

5) They use equipment to help in digging through solid waste, the sample group practiced frequently 60.4%, sometimes 28.1%, and never 11.5%.

6) During waste collection, they had been dizziness and headaches but they still work, the sample group practiced frequently 34.8%, sometimes 52.6%, and never 12.6%.

7) When they received dangers from solid waste, they went see the doctor each time, the sample group practiced frequently 60.4%, sometimes 34.4%, and never 5.2%.

8) They picked up solid waste they didn't recognize, without using any protection, the sample group practiced frequently 25.6%, sometimes 39.3%, and never 35.2%.

9) They went for a health checkup every 6 months, the sample group practiced frequently 31.9 sometimes 45.2%, and never 23.0%.

It could be said that the health risk behavior toward disability from solid waste. The finding revealed that most of sample group frequently used their fingers to touch their eyes while collecting solid waste 53.3%.

Table 12 Health Risk Behavior toward Disability from Solid Waste

Health Risk Behavior Toward Disability from Solid Waste	Behavior					
	Frequently		Sometimes		Never	
	n	%	n	%	n	%
1. You use your fingers to touch your eyes while collecting solid waste	144	53.3	80	29.6	46	17.0
2. When you feel there is something wrong with your body, you go to see the doctor each time.	137	50.7	122	45.2	11	4.1
3. You have been short of breath during collection of solid waste.	76	28.1	165	61.1	29	10.7
4. You usually try to find more information on how to prevent pollution from solid waste.	111	41.1	124	45.9	35	13.0
5. You use equipment to help in digging through solid waste.	163	60.4	76	28.1	31	11.5

Table 12 Health Risk Behavior toward Disability from Solid Waste (cont.)

Health Risk Behavior Toward Disability from Solid Waste	Behavior					
	Frequently		Sometimes		Never	
	n	%	n	%	n	%
6. During waste collection, you have been dizziness and headaches but you still work.	94	34.8	242	52.6	34	12.6
7. When you receive dangers from solid waste, you go see the doctor each time.	163	60.4	98	34.4	14	5.2
8. You pick up solid waste you don't recognize, without using any protection.	69	25.6	106	39.3	95	35.2
9. You go for a health checkup every 6 months	86	31.9	122	45.2	62	23.0

4.7.2 Health Risk Behavior Level toward Disability of Sample Group

The results indicated that most of the sample group, the level of their health risk behavior toward disability was dividing into 3 levels by Likert Scale. That were frequently, sometimes, and never. The their health risk behavior toward disability scores were arranged with the Norm-Reference by using the mean score and standard deviation as criteria for dividing. There were 3 ranges of scores as follows:

More than 13 scores	meant	High level of practicing behavior
10-13 scores	meant	Moderate level of practicing behavior
Lower than 10 scores	meant	Low level of practicing behavior

The details showed in table 13.

Table 13 Numbers and Percentage of Sample Group Classified Health Risk Behavior Level toward Disability

Health Risk Behavior Level toward Disability	Number	Percentage
High level (More than 10 scores)	65	24.07
Moderate level (10-13 scores)	150	55.56
Low level (Lower than 10 scores)	55	20.37
Maximum= 18, minimum =4, Mean= 11.54, S.D.=2.55		
Total	**270**	**100.0**

Table 13, showed that the level of health risk behavior toward infection were divided into three levels, including high level, moderate level, and low level of knowledge. The scores were arranged with the Norm-Reference by using the mean score ($\bar{x}$ = 11.54) and standard deviation S.D.=2.55 as criteria for dividing. It was found that most of sample performed their behavior solid waste at moderate level (55.56%) followed by high level (24.07%) and low level (20.37%) respectively

4.8 Association between Health Risk Behavior and Independent Variables

Analysis the association between health risk behavior and independent variables that were information receiving on solid waste , and experience dangers received from solid waste, and knowledge about solid waste and danger from solid waste. The details were following.

4.8.1 Association between Health Risk Behavior and Information Receiving

Analysis the association between health risk behavior in the aspects of infection, injury, and disability and independent variables that were information receiving on solid waste with different media that were radio, television, newspaper, magazine/journal, personal media through friend/ relative, and information from government.

4.8.1.1 Association between Health Risk Behavior toward Infection and Information Receiving on Solid Waste

Analysis the association between health risk behavior toward infection of personnel and local people involved to solid waste disposal site Nonthaburi Province and independent variables that were information receiving on solid waste with different media that were radio, television, newspaper, magazine/ journal, personal media through friend/ relative, and information from government. The details showed in table 14-19.

1) Association between Health Risk Behavior toward Infection and Information Receiving on Solid Waste through Radio

The analysis of the association between health risk behavior toward infection and information receiving on solid waste through radio media, the results showed in table 14.

Table 14 showed the results of association between health risk behavior toward infection and information receiving on solid waste through radio receiving at moderate level 92 people who had the health risk behavior toward infection at moderate level 63 people (68.5%) had never received the information from radio, when test the association between health risk behavior toward infection. The value of Chi-Square was 27.462, df = 10, and significance = .002. That was the behavior performance of sample group on health risk behavior toward infection was different according to the radio receiving.

Table 14 Association between Health Risk Behavior toward Infection and Radio

Radio Receiving	Health Risk Behavior toward Infection						Total	
	Low		Moderate		High			
	n	%	n	%	n	%	n	%
Never	22	23.9	63	68.5	7	7.6	92	100.0
rarely	17	21.3	35	43.8	28	35.0	80	100.0
1-2 times/month	2	28.6	4	57.1	1	14.3	7	100.0
1-2 times/week	2	12.5	9	56.3	5	31.3	16	100.0
3-4 times/week	13	26.0	32	64.0	5	10.0	50	100.0
daily	7	28.0	14	56.0	4	16.0	25	100.0
Total	**63**	**23.3**	**157**	**58.1**	**50**	**18.5**	**270**	**100.0**
Chi-Square =27.462 df = 10 significance = .002								

*P<.05

2) Association between Health Risk Behavior toward Infection and Information Receiving on Solid Waste through Television

Analysis of the association between health risk behavior toward infection and information receiving on solid waste through television media, the results showed in Table 15.

Table 15 showed the results of association between health risk behavior toward infection and information receiving on solid waste through television receiving at moderate level 73 people who had the health risk behavior toward infection at moderate level 51 people (69.9%) had never received the information from television, when test the association between health risk behavior toward infection. The value of Chi-Square was 7.326, df = 10, and significance = .002. That was the behavior performance of sample group on health risk behavior toward infection was different according to the television receiving.

Table 15 Association between Health Risk Behavior toward Infection and Television

Television Receiving	Health Risk Behavior toward Infection						Total	
	Low		Moderate		High			
	n	%	n	%	n	%	n	%
Never	17	23.3	51	69.9	5	6.8	73	100.0
rarely	13	19.7	35	53.0	18	27.3	66	100.0
1-2 times/month	5	23.8	8	38.1	8	38.1	21	100.0
1-2 times/week	9	22.0	29	70.7	3	7.3	41	100.0
3-4 times/week	7	30.4	14	60.9	2	8.7	23	100.0
daily	12	26.1	20	43.5	14	30.4	46	100.0
Total	**63**	**23.3**	**157**	**58.1**	**50**	**18.5**	**270**	**100.0**
Chi-Square =27.326			**df = 10**		**significance = .002**			

*P<.05

3) Association between Health Risk Behavior toward Infection and Information Receiving on Solid Waste through Newspaper

Analysis of the association between health risk behavior toward infection and information receiving on solid waste through newspaper media, the results showed in Table 16.

Table 16 showed the results of association between health risk behavior toward infection and information receiving on solid waste through newspaper reading at moderate level 100 people who had the health risk behavior toward infection at moderate level 68 people (68.0%) had never received the information from television, when test the association between health risk behavior toward infection. The value of Chi-Square was 29.657, df = 10, and significance = .001. That was the behavior performance of sample group on health risk behavior toward infection was different according to the newspaper reading.

Table 16 Association between Health Risk Behavior toward Infection and Newspaper

Newspaper Reading	Health Risk Behavior toward Infection						Total	
	Low		Moderate		High			
	n	%	n	%	n	%	n	%
Never	23	23.0	68	68.0	9	9.0	100	100.0
rarely	12	16.7	39	54.2	21	29.2	72	100.0
1-2 times/month	5	23.8	8	38.1	8	38.1	21	100.0
1-2 times/week	3	23.1	9	69.2	1	7.7	13	100.0
3-4 times/week	12	40.0	17	56.7	1	3.3	30	100.0
daily	8	23.5	16	47.1	10	29.4	34	100.0
Total	**63**	**23.3**	**157**	**58.1**	**50**	**18.5**	**270**	**100.0**
Chi-Square =29.657 df = 10 significance = .001								

*P<.05

4) Association between Health Risk Behavior toward Infection and Information Receiving on Solid Waste through Magazine/journal

Analysis of the association between health risk behavior toward infection and information receiving on solid waste through magazine/journal media, the results showed in Table 17.

Table 17 showed the results of association between health risk behavior toward infection and information receiving on solid waste through magazine/journal reading at moderate level 171 people who had the health risk behavior toward infection at moderate level 104 people (60.8%) had never received the information from magazine/journal, when test the association between health risk behavior toward infection. The value of Chi-Square was 33.930, df = 10, and significance = .000. That was the behavior performance of sample group on health risk behavior toward infection was different according to the magazine/journal reading.

Table 17 Association between Health Risk Behavior toward Infection and Magazine/journal

Magazine/ journal Reading	Health Risk Behavior toward Infection						Total	
	Low		Moderate		High			
	n	%	n	%	n	%	n	%
Never	45	26.3	104	60.8	22	12.9	171	100.0
rarely	10	20.4	23	46.9	16	32.7	49	100.0
1-2 times/month	1	7.7	4	30.8	8	61.5	13	100.0
1-2 times/week	0	.0	7	100.0	0	.0	7	100.0
3-4 times/week	1	10.0	8	80.0	1	10.0	10	100.0
daily	6	30.0	11	55.0	3	15.0	20	100.0
Total	**63**	**23.3**	**157**	**58.1**	**50**	**18.5**	**270**	**100.0**
Chi-Square =33.930 df = 10 significance = .000								

*P<.05

5) Association between Health Risk Behavior toward Infection and Information Receiving on Solid Waste through Personal Media

Analysis of the association between health risk behavior toward infection and information receiving on solid waste through personal media through friend and relative, the results showed in Table 18.

Table 18 showed the results of association between health risk behavior toward infection and information receiving on solid waste through personal media through friend and relative at moderate level 99 people who had the health risk behavior toward infection at moderate level 50 people (50.5%) had received the information daily from personal , when test the association between health risk behavior toward infection. The value of Chi-Square was 14.968, df = 10, and significance = .133. That was the behavior performance of sample group on health risk behavior toward infection was not different according to the personal media through friend and relative.

Table 18 Association between Health Risk Behavior toward Infection and Personal Media

Personal media	Health Risk Behavior toward Infection						Total	
	Low		Moderate		High			
	n	%	n	%	n	%	n	%
Never	7	15.6	27	60.0	11	11	45	100.0
rarely	8	16.3	31	63.3	10	10	49	100.0
1-2 times/month	2	8.7	16	69.6	5	5	23	100.0
1-2 times/week	3	27.3	6	54.5	2	2	11	100.0
3-4 times/week	8	18.3	27	62.8	8	8	43	100.0
daily	35	35.4	50	50.5	14	14	99	100.0
Total	**63**	**23.3**	**157**	**58.1**	**50**	**18.5**	**270**	**100.0**
Chi-Square =14.968 df = 10 significance = .133								

*P<.05

6) Association between Health Risk Behavior toward Infection and Information Receiving on Solid Waste through Information from government

Analysis of the association between health risk behavior toward infection and information receiving on solid waste through information from government, the results showed in Table 19.

Table 19 showed the results of association between health risk behavior toward infection and information receiving on solid waste through information from government through friend and relative at moderate level 129 people who had the health risk behavior toward infection at moderate level 89 people (69.0%) had never received the information from government, when test the association between health risk behavior toward infection. The value of Chi-Square was 43.981, df = 10, and significance = .000. That was the behavior performance of sample group on health risk behavior toward infection was different according to the information from government.

Table 19 Association between Health Risk Behavior toward Infection and Information from government

Information from government	Health Risk Behavior toward Infection						Total	
	Low		Moderate		High			
	n	%	n	%	n	%	n	%
Never	33	25.6	89	69.0	7	5.4	129	100.0
rarely	11	13.6	41	50.6	29	35.8	81	100.0
1-2 times/month	6	46.2	6	46.2	1	7.7	13	100.0
1-2 times/week	1	12.5	6	75.0	1	12.5	8	100.0
3-4 times/week	5	35.7	5	35.7	4	28.6	14	100.0
daily	7	28.0	10	40.0	8	32.0	25	100.0
Total	**63**	**23.3**	**157**	**58.1**	**50**	**18.5**	**270**	**100.0**
Chi-Square =43.981 df = 10 significance = .000								

*P<.05

4.8.1.2 Association between Health Risk Behavior toward Injury and Information Receiving on Solid Waste

Analysis the association between health risk behavior toward injury of personnel and local people involved to solid waste disposal site Nonthaburi Province and independent variables that were information receiving on solid waste with different media that were radio, television, newspaper, magazine/ journal, personal media through friend/ relative, and information from government. The details showed in table 20-25.

1) Association between Health Risk Behavior toward Injury and Information Receiving on Solid Waste through Radio

Analysis of the association between health risk behavior toward injury and information receiving on solid waste through radio media, the results showed in table 20.

Table 20 showed the results of association between health risk behavior toward injury and information receiving on solid waste through radio receiving at moderate level 92 people who had the health risk behavior toward infection at

moderate level 53 people (57.6%) had never received the information from radio, when test the association between health risk behavior toward infection. The value of Chi-Square was 13.164 df = 10 significance = .215. That was the behavior performance of sample group on health risk behavior toward injury was not different according to the radio receiving.

Table 20 Association between Health Risk Behavior toward Injury and Radio

Radio Receiving	Health Risk Behavior toward Injury						Total	
	Low		Moderate		High			
	n	%	n	%	n	%	n	%
Never	24	26.1	53	57.6	15	16.3	92	100.0
rarely	14	17.5	56	70.0	10	12.5	80	100.0
1-2 times/month	4	57.1	2	28.6	1	14.3	7	100.0
1-2 times/week	6	37.5	7	43.8	3	18.8	16	100.0
3-4 times/week	11	22.0	32	64.0	7	14.0	50	100.0
daily	6	24.0	12	48.0	7	28.0	25	100.0
Total	**65**	**24.1**	**162**	**60.0**	**43**	**15.9**	**270**	**100.0**
Chi-Square =13.164 df = 10 significance = .215								

*P<.05

2) Association between Health Risk Behavior toward Injury and Information Receiving on Solid Waste through Television

Analysis of the association between health risk behavior toward injury and information receiving on solid waste through television media, the results showed in Table 21.

Table 21 showed the results of association between health risk behavior toward injury and information receiving on solid waste through television receiving at moderate level 73 people who had the health risk behavior toward infection at moderate level 49 people (67.1%) had never received the information from television, when test the association between health risk behavior toward infection. The value of Chi-Square was 13.356, df = 10, and significance = .204. That was the behavior

performance of sample group on health risk behavior toward injury was not different according to the television receiving.

Table 21 Association between Health Risk Behavior toward Injury and Television

Television Receiving	Health Risk Behavior toward Injury						Total	
	Low		Moderate		High			
	n	%	n	%	n	%	n	%
Never	18	24.7	49	67.1	6	8.2	73	100.0
rarely	12	18.2	42	63.6	12	18.2	66	100.0
1-2 times/month	8	38.1	11	52.4	2	9.5	21	100.0
1-2 times/week	12	29.3	23	56.1	6	14.6	41	100.0
3-4 times/week	7	30.4	10	43.5	6	26.1	23	100.0
daily	8	17.4	27	58.7	11	23.9	46	100.0
Total	65	24.1	162	60.0	43	15.9	270	100.0
Chi-Square =13.356 df = 10 significance = .204								

*P<.05

3) Association between Health Risk Behavior toward Injury and Information Receiving on Solid Waste through Newspaper

Analysis of the association between health risk behavior toward injury and information receiving on solid waste through newspaper media, the results showed in Table 22.

Table 22 showed the results of association between health risk behavior toward injury and information receiving on solid waste through newspaper reading at moderate level 100 people who had the health risk behavior toward infection at moderate level 60 people (60.0%) had never received the information from newspaper, when test the association between health risk behavior toward infection. The value of Chi-Square was 17.758, df = 10, and significance = .059. That was the behavior performance of sample group on health risk behavior toward injury was not different according to the newspaper reading.

Table 22 Association between Health Risk Behavior toward Injury and Newspaper

Newspaper Reading	Health Risk Behavior toward Injury						Total	
	Low		Moderate		High			
	n	%	n	%	n	%	n	%
Never	28	28.0	60	60.0	12	12.0	100	100.0
rarely	9	12.5	46	63.9	17	23.6	72	100.0
1-2 times/month	3	14.3	13	61.9	5	23.8	21	100.0
1-2 times/week	5	38.5	5	38.5	3	23.1	13	100.0
3-4 times/week	11	36.7	18	60.0	1	3.3	30	100.0
daily	9	26.5	20	58.8	5	14.7	34	100.0
Total	**65**	**24.1**	**162**	**60.0**	**43**	**15.9**	**270**	**100.0**
Chi-Square =17.758 df = 10 significance = .059								

*P<.05

4) ssociation between Health Risk Behavior toward Injury and Information Receiving on Solid Waste through Magazine/journal

Analysis of the association between health risk behavior toward injury and information receiving on solid waste through magazine/journal media, the results showed in Table 23.

Table 23 showed the results of association between health risk behavior toward injury and information receiving on solid waste through magazine/journal reading at moderate level 171 people who had the health risk behavior toward infection at moderate level 108 people (63.2%) had never received the information from magazine/journal, when test the association between health risk behavior toward infection. The value of Chi-Square was 19.581, df = 10, and significance = .034. That was the behavior performance of sample group on health risk behavior toward injury was different according to the Magazine/journal reading.

Table 23 Association between Health Risk Behavior toward Injury and Magazine/journal

Magazine/ journal Reading	Health Risk Behavior toward Injury						Total	
	Low		Moderate		High			
	n	%	n	%	n	%	n	%
Never	44	25.7	108	63.2	19	11.1	171	100.0
rarely	10	20.4	23	46.9	16	32.7	49	100.0
1-2 times/month	2	15.4	8	61.5	3	23.1	13	100.0
1-2 times/week	1	14.3	6	85.7	0	.0	7	100.0
3-4 times/week	3	30.0	7	70.0	0	.0	10	100.0
daily	5	25.0	10	50.0	5	25.0	20	100.0
Total	**65**	**24.1**	**162**	**60.0**	**43**	**15.9**	**270**	**100.0**
Chi-Square =19.581 df = 10 significance = .034								

*P<.05

5) Association between Health Risk Behavior toward Injury and Information Receiving on Solid Waste through Personal Media

Analysis of the association between health risk behavior toward injury and information receiving on solid waste through personal media through friend and relative, the results showed in Table 24.

Table 24 showed the results of association between health risk behavior toward injury and information receiving on solid waste through personal media through friend and relative at moderate level 99 people who had the health risk behavior toward infection at moderate level 55 people (55.6%) had received the information daily from personal, when test the association between health risk behavior toward infection. The value of Chi-Square was 10.854, df = 10, and significance = .369. That was the behavior performance of sample group on health risk behavior toward injury was not different according to the personal media through friend and relative.

Table 24 Association between Health Risk Behavior toward Injury and Personal Media

Personal media	Health Risk Behavior toward Injury						Total	
	Low		Moderate		High			
	n	%	n	%	n	%	n	%
Never	11	24.4	31	68.9	3	6.7	45	100.0
rarely	12	24.5	31	63.3	6	12.2	49	100.0
1-2 times/month	4	17.4	16	69.6	3	13.0	23	100.0
1-2 times/week	2	18.2	5	45.5	4	36.4	11	100.0
3-4 times/week	13	30.2	24	55.8	6	14.0	43	100.0
daily	23	23.2	55	55.6	21	21.2	99	100.0
Total	**65**	**24.1**	**162**	**60.0**	**43**	**15.9**	**270**	**100.0**
Chi-Square =10.854 df = 10 significance = .369								

*P<.05

6) Association between Health Risk Behavior toward Injury and Information Receiving on Solid Waste through Information from government

Analysis of the association between health risk behavior toward injury and information receiving on solid waste through information from government, the results showed in Table 25.

Table 25 showed the results of association between health risk behavior toward injury and information receiving on solid waste through information from government through friend and relative at moderate level 129 people who had the health risk behavior toward infection at moderate level 82 people (63.6%) had never received the information from government when test the association between health risk behavior toward infection. The value of Chi-Square was 16.921, df = 10, and significance = .076. That was the behavior performance of sample group on health risk behavior toward injury was not different according to the information from government.

Table 25 Association between Health Risk Behavior toward Injury and Information from government

Information from government	Health Risk Behavior toward Injury						Total	
	Low		Moderate		High			
	n	%	n	%	n	%	n	%
Never	30	23.3	82	63.6	17	13.2	129	100.0
rarely	16	19.8	52	64.2	13	16.0	81	100.0
1-2 times/month	6	46.2	5	38.5	2	15.4	13	100.0
1-2 times/week	2	25.0	4	50.0	2	25.0	8	100.0
3-4 times/week	5	35.7	3	21.4	6	42.9	14	100.0
daily	6	24.0	16	64.0	3	12.0	25	100.0
Total	**63**	**23.3**	**157**	**58.1**	**50**	**18.5**	**270**	**100.0**
Chi-Square =16.921 df = 10 significance = .076								

*P<.05

4.8.1.3 Association between Health Risk Behavior toward Disability and Information Receiving on Solid Waste

Analysis the association between health risk behavior toward disability of personnel and local people involved to solid waste disposal site Nonthaburi Province and independent variables that were information receiving on solid waste with different media that were radio, television, newspaper, magazine/ journal, personal media through friend/ relative, and information from government. The details showed in table 26-31.

1) Association between Health Risk Behavior toward Disability and Information Receiving on Solid Waste through Radio

Analysis of the association between health risk behavior toward disability and information receiving on solid waste through radio media, the results showed in table 26.

Table 26 showed the results of association between health risk behavior toward disability and information receiving on solid waste through radio receiving at moderate level 92 people who had the health risk behavior toward infection at moderate level 51 people (55.4%) had never received the information from radio,

when test the association between health risk behavior toward infection. The value of Chi-Square was 19.476, df = 10, and significance = .035. That was the behavior performance of sample group on health risk behavior toward disability was different according to the radio receiving.

Table 26 Association between Health Risk Behavior toward Disability and Radio

Radio Receiving	Health Risk Behavior toward Disability						Total	
	Low		Moderate		High			
	n	%	n	%	n	%	n	%
Never	21	22.8	51	55.4	20	21.7	92	100.0
rarely	17	21.3	40	50.0	23	28.8	80	100.0
1-2 times/month	3	42.9	2	28.6	2	28.6	7	100.0
1-2 times/week	2	12.5	8	50.0	6	37.5	16	100.0
3-4 times/week	4	8.0	39	78.0	7	14.0	50	100.0
daily	8	32.0	10	40.0	7	28.0	25	100.0
Total	**55**	**20.4**	**150**	**55.6**	**65**	**24.1**	**270**	**100.0**
Chi-Square =19.476			**df = 10**		**significance = .035**			

*P<.05

2) Association between Health Risk Behavior toward Disability and Information Receiving on Solid Waste through Television

Analysis of the association between health risk behavior toward disability and information receiving on solid waste through television media, the results showed in Table 27.

Table 27 showed the results of association between health risk behavior toward disability and information receiving on solid waste through television receiving at moderate level 92 people who had the health risk behavior toward infection at moderate level 51 people (55.4%) had never received the information fromtelevision when test the association between health risk behavior toward infection. The value of Chi-Square was 41.262, df = 10, and significance = .000.

That was the behavior performance of sample group on health risk behavior toward disability was different according to the television receiving.

Table 27 Association between Health Risk Behavior toward Disability and Television

Television Receiving	Health Risk Behavior toward Disability						Total	
	Low		Moderate		High			
	n	%	n	%	n	%	n	%
Never	21	22.8	51	55.4	20	21.7	92	100.0
rarely	17	21.3	40	50.0	23	28.8	80	100.0
1-2 times/month	3	42.9	2	28.6	2	28.6	7	100.0
1-2 times/week	2	12.5	8	50.0	6	37.5	16	100.0
3-4 times/week	4	8.0	39	78.0	7	14.0	50	100.0
daily	8	32.0	10	40.0	7	28.0	25	100.0
Total	**55**	**20.4**	**150**	**55.6**	**65**	**24.1**	**270**	**100.0**
Chi-Square =41.262			**df = 10**		**significance = .000**			

*P<.05

3) Association between Health Risk Behavior toward Disability and Information Receiving on Solid Waste through Newspaper

Analysis of the association between health risk behavior toward disability and information receiving on solid waste through newspaper media, the results showed in Table 28.

Table 28 showed the results of association between health risk behavior toward disability and information receiving on solid waste through newspaper reading at moderate level 100 people who had the health risk behavior toward infection at moderate level 57 people (57.0%) had never received the information from when test the association between health risk behavior toward infection. The value of Chi-Square was 29.244, df = 10, and significance = .001. That was the behavior

performance of sample group on health risk behavior toward disability was different according to the newspaper reading.

Table 28 Association between Health Risk Behavior toward Disability and Newspaper

Newspaper Reading	Health Risk Behavior toward Disability						Total	
	Low		Moderate		High			
	n	%	n	%	n	%	n	%
Never	25	25.0	57	57.0	18	18.0	100	100.0
rarely	15	20.8	31	43.1	26	36.1	72	100.0
1-2 times/month	4	19.0	12	57.1	5	23.8	21	100.0
1-2 times/week	1	7.1	11	84.6	1	7.7	13	100.0
3-4 times/week	4	13.3	25	83.3	1	3.3	30	100.0
daily	6	17.6	14	41.2	14	41.2	34	100.0
Total	**55**	**20.4**	**150**	**55.6**	**65**	**24.1**	**270**	**100.0**
Chi-Square = 29.244 df = 10 significance = .001								

*P<.05

4) Association between Health Risk Behavior toward Disability and Information Receiving on Solid Waste through Magazine/journal

Analysis of the association between health risk behavior toward disability and information receiving on solid waste through Magazine/journal media, the results showed in Table 29.

Table 29 showed the results of association between health risk behavior toward disability and information receiving on solid waste through magazine/journal reading at moderate level 171 people who had the health risk behavior toward infection at moderate level 105 people (61.4%) had never received the information from magazine/journal, when test the association between health risk behavior toward infection. The value of Chi-Square was 33.059, df = 10, and significance = .000. That was the behavior performance of sample group on health risk behavior toward disability was different according to the Magazine/journal reading.

Table 29 Association between Health Risk Behavior toward Disability and Magazine/journal

Magazine/ journal Reading	Health Risk Behavior toward Disability						Total	
	Low		Moderate		High			
	n	%	n	%	n	%	n	%
Never	29	17.0	105	61.4	37	21.6	171	100.0
rarely	17	34.7	15	30.6	17	34.7	49	100.0
1-2 times/month	1	7.7	5	38.5	7	53.8	13	100.0
1-2 times/week	2	28.6	5	71.4	0	.0	7	100.0
3-4 times/week	0	.0	10	100.0	0	.0	10	100.0
daily	6	30.0	10	50.0	4	20.0	20	100.0
Total	**55**	**20.4**	**150**	**55.6**	**65**	**24.1**	**270**	**100.0**
Chi-Square = 33.059 df = 10 significance = .000								

*P<.05

5) Association between Health Risk Behavior toward Disability and Information Receiving on Solid Waste through Personal Media

Analysis of the association between health risk behavior toward disability and information receiving on solid waste through personal media through friend and relative, the results showed in Table 30.

Table 30 showed the results of association between health risk behavior toward disability and information receiving on solid waste through personal media through friend and relative at moderate level 99 people who had the health risk behavior toward infection at moderate level 57 people (57.6%) had received the information daily from personal when test the association between health risk behavior toward infection. The value of Chi-Square was 11.080, df = 10, and significance = .351. That was the behavior performance of sample group on health risk behavior toward disability was not different according to the personal media through friend and relative.

Table 30 Association between Health Risk Behavior toward Disability and Personal Media

Personal media	Health Risk Behavior toward Disability						Total	
	Low		Moderate		High			
	n	%	n	%	n	%	n	%
Never	9	20.0	24	53.3	12	26.7	45	100.0
rarely	9	18.4	22	44.9	18	36.7	49	100.0
1-2 times/month	3	13.0	15	65.2	5	21.7	23	100.0
1-2 times/week	2	18.2	6	54.5	3	27.3	11	100.0
3-4 times/week	6	14.0	26	60.5	11	25.6	43	100.0
daily	26	26.3	57	57.6	16	16.2	99	100.0
Total	**55**	**20.4**	**150**	**55.6**	**65**	**24.1**	**270**	**100.0**
Chi-Square = 11.080 df = 10 significance = .351								

*P<.05

6) Association between Health Risk Behavior toward Disability and Information Receiving on Solid Waste through Information from government

Analysis of the association between health risk behavior toward disability and information receiving on solid waste through information from government, the results showed in Table 31.

Table 31 showed the results of association between health risk behavior toward disability and information receiving on solid waste through information from government through friend and relative at moderate level 129 people who had the health risk behavior toward infection at moderate level 95 people (73.6%) had never received the information from government when test the association between health risk behavior toward infection. The value of Chi-Square was 47.362, df = 10, and significance = .000. That was the behavior performance of sample group on health risk behavior toward disability was different according to the information from government.

Table 31 Association between Health Risk Behavior toward Disability and Information from government

Information from government	Health Risk Behavior toward Disability						Total	
	Low		Moderate		High			
	n	%	n	%	n	%	n	%
Never	18	14.0	95	73.6	16	12.4	129	100.0
rarely	22	27.2	26	32.1	33	40.7	81	100.0
1-2 times/month	5	38.5	6	46.2	2	15.4	13	100.0
1-2 times/week	4	50.0	3	37.5	1	12.5	8	100.0
3-4 times/week	1	7.1	9	64.3	4	28.6	14	100.0
daily	5	20.0	11	44.0	9	36.0	25	100.0
Total	55	20.4	150	55.6	65	24.1	270	**100.0**
Chi-Square = 47.362 df = 10 significance = .000								

*P<.05

4.8.2 Association between Health Risk Behavior and Experience of Danger Received from Toxic Waste

Analysis the association between health risk behavior in the aspects of infection, injury, and disability and experience of danger received from toxic waste, the details were as following.

4.8.2.1 Association between Health Risk Behavior toward Infection and Experience of Danger Received from Toxic Waste

Analysis the association between health risk behavior toward infection of personnel and local people involved to solid waste disposal site Nonthaburi Province and experience of danger received from toxic waste. The details showed in table 32.

Table 32 showed the results of association between health risk behavior toward infection of personnel and local people involved in solid waste disposal site Nonthaburi Province and experience of danger received from toxic waste at moderate level 147 people who had the health risk behavior toward infection at moderate level

84 people (57.1%), when test the association between health risk behavior toward infection of personnel and local people involved in solid waste disposal site Nonthaburi Province and experience of danger received from toxic waste. The value of Chi-Square was 12.441, df = 4, and significance = .014. That was the health risk behavior toward infection from solid waste of sample group was different according to the level of experience of danger received from toxic waste.

Table 32 Association between Health Risk Behavior toward Infection and Experience of Danger Received from Toxic Waste

Experience of Danger Received from Toxic Waste	Health Risk Behavior toward Infection						Total	
	Low		Moderate		High			
	n	%	n	%	n	%	n	%
Low Level	7	11.9	40	67.8	12	20.3	59	100.0
Moderate	43	29.3	84	57.1	20	13.6	147	100.0
High Level	13	20.3	33	51.6	18	28.1	64	100.0
Total	**63**	**23.3**	**157**	**58.1**	**50**	**18.5**	**270**	**100.0**
Chi-Square = 12.441 df = 4 significance = .014								

*P<.05

4.8.2.2 Association between Health Risk Behavior toward Injury and Experience of Danger Received from Toxic Waste

Analysis the association between health risk behavior toward injury of personnel and local people involved to solid waste disposal site Nonthaburi Province and experience of danger received from toxic waste. The details showed in table 33.

Table 33 Table 32 showed the results of association between health risk behavior toward injury of personnel and local people involved in solid waste disposal site Nonthaburi Province and experience of danger received from toxic waste at moderate level 147 people who had the health risk behavior toward injury at moderate level 85 people (57.8%), when test the association between health risk behavior toward injury of personnel and local people involved in solid waste disposal site Nonthaburi Province and experience of danger received from toxic waste. The

value of Chi-Square was 14.941, df = 4, and significance = .005. That was the health risk behavior toward injury from solid waste of sample group was different according to the level of experience of danger received from toxic waste.

Table 33 Association between Health Risk Behavior toward Injury and Experience of Danger Received from Toxic Waste

Experience of Danger Received from Toxic Waste	Health Risk Behavior toward Injury						Total	
	Low		Moderate		High			
	n	%	n	%	n	%	n	%
Low Level	12	20.3	30	50.8	17	28.8	59	100.0
Moderate	39	26.5	85	57.8	23	15.6	147	100.0
High Level	14	21.9	47	73.4	3	4.7	64	100.0
Total	**63**	**23.3**	**157**	**58.1**	**50**	**18.5**	**270**	**100.0**
Chi-Square = 14.941 df = 4 significance = .005								

*P<.05

4.8.2.3 Association between Health Risk Behavior toward Disability and Experience of Danger Received from Toxic Waste

Analysis the association between health risk behavior toward disability of personnel and local people involved to solid waste disposal site Nonthaburi Province and experience of danger received from toxic waste. The details showed in table 34.

Table 34 showed the results of association between health risk behavior toward disability of personnel and local people involved in solid waste disposal site Nonthaburi Province and experience of danger received from toxic waste at moderate level 147 people who had the health risk behavior toward disability at moderate level 82 people (55.8%), when test the association between health risk behavior toward infection of personnel and local people involved in solid waste disposal site Nonthaburi Province and experience of danger received from toxic waste. The value

of Chi-Square was 14.941, df = 4, and significance = .005. That was the health risk behavior toward disability from solid waste of sample group was different according to the level of experience of danger received from toxic waste.

Table 34 Association between Health Risk Behavior toward Disability and Experience of Danger Received from Toxic Waste

Experience of Danger Received from Toxic Waste	Health Risk Behavior toward Disability						Total	
	Low		Moderate		High			
	n	%	n	%	n	%	n	%
Low Level	14	23.7	27	45.8	18	30.5	59	100.0
Moderate	33	22.4	82	55.8	32	21.8	147	100.0
High Level	8	12.5	41	64.1	15	23.4	64	100.0
Total	**63**	**23.3**	**157**	**58.1**	**50**	**18.5**	**270**	**100.0**
Chi-Square =5.788			**df = 4**		**significance = .216**			

4.8.3 Association between Health Risk Behavior and Experience of Danger Received from Toxic Waste

Analysis the association between health risk behavior in the aspects of infection, injury, and disability and knowledge on solid waste and dangers from of danger solid waste, the details were as following.

4.8.3.1 Association between Health Risk Behavior toward Infection and Knowledge on solid waste and danger from solid waste

Analysis the association between health risk behavior toward infection of personnel and local people involved to solid waste disposal site Nonthaburi Province and knowledge on solid waste and danger from solid waste. The details showed in table 35.

Table 35 Association between Health Risk Behavior toward Infection and Knowledge on Solid Waste and Danger from Solid Waste

Knowledge on solid waste and danger from solid waste	Health Risk Behavior toward Infection						Total	
	Low		Moderate		High			
	n	%	n	%	n	%	n	%
Low Level	23	50.0	21	45.7	2	4.3	46	100.0
Moderate	33	20.8	98	61.6	28	17.6	159	100.0
High Level	7	10.8	38	58.5	20	30.8	65	100.0
Total	**65**	**24.1**	**162**	**60.0**	**43**	**15.9**	**270**	**100.0**
Chi-Square =30.765 df = 4 significance =.000								

*P<.05

Table 35 showed the results of association between health risk behavior toward infection of personnel and local people involved to solid waste disposal site Nonthaburi Province and knowledge on solid waste and danger from solid waste at moderate level 159 people who had the health risk behavior toward infection at moderate level 98 people (61.6%), when test the association between health risk behavior toward infection of personnel and local people involved in solid waste disposal site Nonthaburi Province and experience of danger received from toxic waste. The value of Chi-Square was 30.765, df = 4, and significance = .000. That was the health risk behavior toward infection from solid waste of sample group was different according to the level of knowledge on solid waste and danger from solid waste.

4.8.3.2 Association between Health Risk Behavior toward Injury and Knowledge on solid waste and danger from solid waste

Analysis the association between health risk behavior toward injury of personnel and local people involved to solid waste disposal site Nonthaburi Province and knowledge on solid waste and danger from solid waste. The details showed in table 36.

Table 36 Association between Health Risk Behavior toward Injury and Knowledge on Solid Waste and Danger from Solid Waste

Knowledge on solid waste and danger from solid waste	Health Risk Behavior toward Injury						Total	
	Low		Moderate		High			
	n	%	n	%	n	%	n	%
Low Level	18	39.1	24	52.2	4	8.7	46	100.0
Moderate	34	21.4	106	66.7	19	11.9	159	100.0
High Level	13	20.0	32	49.2	20	30.8	65	100.0
Total	**65**	**24.1**	**162**	**60.0**	**43**	**15.9**	**270**	**100.0**
Chi-Square =20.242			**df = 4**		**significance = .000**			

*P<.05

Table 36 showed the results of association between health risk behavior toward injury of personnel and local people involved to solid waste disposal site Nonthaburi Province and knowledge on solid waste and danger from solid waste at moderate level 159 people who had the health risk behavior toward injury at moderate level 106 people (66.7%), when test the association between health risk behavior toward infection of personnel and local people involved in solid waste disposal site Nonthaburi Province and experience of danger received from toxic waste. The value of Chi-Square was 20.242, df = 4, and significance = .000. That was the health risk behavior toward injury from solid waste of sample group was different according to the level of knowledge on solid waste and danger from solid waste.

4.8.3.3 Association between Health Risk Behavior toward Disability and Knowledge on Solid Waste and Danger from Solid Waste

Analysis the association between health risk behavior toward disability of personnel and local people involved to solid waste disposal site Nonthaburi Province and knowledge on solid waste and danger from solid waste. The details showed in table 37.

Table 37 Association between Health Risk Behavior toward Knowledge on Solid Waste and Danger from Solid Waste

Knowledge on solid waste and danger from solid waste	Health Risk Behavior toward Disability						Total	
	Low		Moderate		High			
	n	%	n	%	n	%	n	%
Low Level	24	52.2	19	41.3	3	6.5	46	100.0
Moderate	21	13.2	102	64.2	36	22.6	159	100.0
High Level	10	15.4	29	44.6	26	40.0	65	100.0
Total	**65**	**24.1**	**162**	**60.0**	**43**	**15.9**	**270**	**100.0**
Chi-Square = 45.706 df = 4 significance = .000								

*P<.05

Table 37 showed the results of association between health risk behavior toward disability of personnel and local people involved to solid waste disposal site Nonthaburi Province and knowledge on solid waste and danger from solid waste at moderate level 159 people who had the health risk behavior toward disability at moderate level 102 people (6427%), when test the association between health risk behavior toward infection of personnel and local people involved in solid waste disposal site Nonthaburi Province and experience of danger received from toxic waste. The value of Chi-Square was 45.706, df = 4, and significance = .000. That was the health risk behavior toward disability from solid waste of sample group was different according to the level of knowledge on solid waste and danger from solid waste.

CHAPTER 5
DISCUSSIONS

This research was study on the "Health Risk Behaviors of Personnel and Local Residents Involved to Solid Waste Disposal Site of Nonthaburi Province". The survey research was selected and the questionnaires were used for data collection with 270 samples from the population of the 760 personnel and local residents at solid waste disposal site of Nonthaburi Province. The results would be discussed as following discussion.

The results of study can be summarized in order to answer the research objectives as follows:

1. The level of health risk behaviors toward infection, injury and disability of personnel and local residents involved to solid waste disposal site of Nonthaburi Province were at moderate level.

2. Knowledge of solid waste and danger from solid waste, experience of danger received from infection and injury, acceptance of information on infection and disability through newspaper and magazine/journal associated to health risk behavior of personnel and local residents involved in solid waste disposal site of Nonthaburi Province.

The results of study can be discussed according to the hypotheses as follows:

1. The health risk behaviors toward infection of personnel and local residents involved to solid waste disposal site of Nonthaburi Province associated with information receiving on collection, disposal and danger of solid waste, experience of danger received from toxic waste, and knowledge on solid waste and danger from solid waste.

2. The health risk behaviors toward injury of personnel and local residents involved to solid waste disposal site of Nonthaburi Province associated with information receiving on collection, disposal and danger of solid waste, experience of

danger received from toxic waste, and knowledge on solid waste and danger from solid waste.

3. The health risk behaviors toward disability of personnel and local residents involved to solid waste disposal site of Nonthaburi Province associated with information receiving on collection, disposal and danger of solid waste, experience of danger received from toxic waste, and knowledge on solid waste and danger from solid waste.

5.1 Hypothesis 1

The health risk behaviors toward infection of personnel and local residents involved to solid waste disposal site of Nonthaburi Province associated with the information receiving on collection, disposal and danger of solid waste, experience of danger received from toxic waste, and knowledge on solid waste and danger from solid waste. The details were as follows:

5.1.1 The personnel and local residents involved to the solid waste disposal site Nonthburi Province who were the sample group would have the health risk behavior toward infection differed according to the different level of information receiving, which was statistically significant at a level of 0.05. To test the difference of level media receiving, must be done separately since each type of media had different details such as the potential of receiver to access the media, the convenience of media receiving, and accessories used for access media. Therefore, it should not be considered as holistic view, it could not present in a clear picture of the involving to each media so it would be presented the association of health risk behavior and each type of media receiving as follows:

5.1.1.1 The association between health risk behavior toward infection of sample group through radio was different according to the frequency of radio receiving at level of statistical significance of 0.05. (table 14). This proved the hypothesis 1 that the radio associated with health risk behavior toward infection. It could be claimed that the frequency of radio access would cause the sample group had

different health risk behavior toward infection. Therefore, the radio could be used to promote solid waste management to the sample group to gain more knowledge and understanding. It was pertinent to the study of Viruch Chomcuen (1994: Abstract), Phiree Chaichana (2002: 80-90), Plengpin Mun-U (1997: Abstract), and Anan Skchareon (1997: Abstract).

5.1.1.2 The association between health risk behavior toward infection of sample group through television was different according to the frequency of television receiving at level of statistical significance of 0.05. (table 15). This proved the hypothesis 1 that the television associated with health risk behavior toward infection. It could be claimed that the frequency of television access would cause the sample group had different health risk behavior toward infection. Therefore, the television could be used to promote solid waste management to the sample group to gain more knowledge, understanding and raise consciousness since the television was interesting and attractive media because it provided both sound and picture. It was relevant to the study of Viruch Chomcuen (1994: Abstract), Phiree Chaichana (2002: 80-90), Plengpin Mun-U (1997: Abstract), and Anan Skchareon (1997: Abstract).

5.1.1.3 The association between health risk behavior toward infection of sample group through newspaper was different according to the frequency of newspaper reading at level of statistical significance of 0.05. (table 16). This proved the hypothesis 1 that newspaper associated with health risk behavior toward infection. It could be claimed that the frequency of reading newspaper would cause the sample group had different health risk behavior toward infection. Therefore, the newspaper could be used to promote solid waste management to the sample group to gain more knowledge and understanding because it was able to give more details and contents of knowledge. It was congruent to the study of Viruch Chomcuen (1994: Abstract), Phiree Chaichana (2002: 80-90), Plengpin Mun-U (1997: Abstract), and Anan Skchareon (1997: Abstract).

5.1.1.4 The association between health risk behavior toward infection of sample group through magazine/journal reading was different according to the frequency of magazine/journal receiving at level of statistical significance of 0.05. (table 17). This proved the hypothesis 1 that the magazine/journal associated with health risk behavior toward infection. It could be claimed that the frequency of magazine/journal would cause the sample group had different health risk behavior toward infection. Therefore, the magazine/journal could be used to promote solid waste management to the sample group to gain more knowledge and understanding because it was able to give more details and contents of knowledge. It was related to the study of Viruch Chomcuen (1994: Abstract), Phiree Chaichana (2002: 80-90), Plengpin Mun-U (1997: Abstract), and Anan Skchareon (1997: Abstract).

5.1.1.5 Personal media through friends and relatives did not associate with health risk behavior toward infection of sample group at level of statistical significance of 0.05. (table 18). It did not follow the hypothesis 1. It was obviously seen that the personal media through friends and relatives could not cause the different of health risk behavior toward infection. It might due to their almost equality of knowledge because they had the similar experience from the same occupation so they might bore to talk about their job.

5.1.1.6 The acceptance of information from government associated with health risk behavior toward infection of sample group at level of statistical significance of 0.05. (table 19). This proved the hypothesis 1 that the information from government associated with health risk behavior toward infection. It could be claimed that the frequency of information from government would cause the sample group had different health risk behavior toward infection. Therefore, the information from government could be used to promote solid waste management to the sample group to gain more knowledge and understanding. It was relevant to the study of Viruch Chomcuen (1994: Abstract), Phiree Chaichana (2002: 80-90), Plengpin Mun-U (1997: Abstract), and Anan Skchareon (1997: Abstract).

5.1.2 The personnel and local residents involved to the solid waste disposal site Nonthburi Province who were the sample group would have the health risk behavior toward infection differed according to the different level of experience of danger received from toxic waste at level of statistical significance of 0.05. (table 32). It followed the hypothesis 1. Since most of sample group, had experience of danger received infection from solid waste at moderate level. If it was considered in term of the holistic view, it found that 76.7% of sample group (moderate level summarized with high level), therefore, it was be said that their practice of waste collecting behavior were rather frequently to avoid the danger of solid waste better. This might indicated that the sampler group of higher experience of danger received infection from solid waste had more carefulness than the low experience because experience was a learning from the actual situation of any events so the sample group who ever had direct experience of danger received infection from solid waste, they should gain more knowledge and understanding about the danger of solid waste. This was relevant to the study of Wanlee Kanchanakitsakul (1996: Abstract) studied about "Knowledge and Attitudes of the First year Nursing Students of Mahidol University towards Solid Waste Disposals" and the finding indicated that the experience involved solid waste associated with knowledge on solid waste management at level of statistical significance of 00.05.

Furthermore, the results showed that most of sample group had high experience of danger received from toxic waste in different facets such as scratches from pointed objects 85.9%, cuts from sharp objects 87.0%, rashes come up on hands and arms 74.8%, and feel weak / tired 80.0for instance so they were familiar with contacting with the toxic waste, additionally, the restrictions of education of sample group causing the limitation of occupation selection. Subsequently, they had contacted with the toxic substances, the immune system of their body would develop the resistance by construct the immunity to protect. If their immunity would not be developed well they would be sick. Nevertheless it was their occupation so it was difficult for them to avoid this situation (table 3).

5.1.3 The association between health risk behavior toward infection of sample group and knowledge on solid waste and danger from solid waste, it was found that the health risk behavior toward infection associated with knowledge on solid waste and danger from solid waste at level of statistical significance of 0.05 (table 35). It followed the hypothesis 1. It was relevant to the study of of Viruch Chomcuen (1994: Abstract), Anan Sukchareon (1997: Abstract), and Wanlee Kanchanakitsakul (1996: Abstract). It might consider on the behavior of human being had changed according to their development since people would develop all their life span without stopping by starting at delivering time from mother womb and then it had been changed by the changing of their age and their experiences. Even though, some behavior might be existed but some would changed by imitating the parents, teacher, lecturers, and actors (Varee Rakiti, 1984: 98-101). Besides the knowledge factor was an essential factor toward behavior change of person since the knowledge factor was a complicated factor that composed of different sub-factors such as repeated action, experience, and information for instance like as the sample group who had learnt from direct experience of danger received from toxic waste from actual situation due to their main occupation of waste collectors and waste truck driver so they had acted repeatedly everyday with the complemented opportunity of the modern information technology in the present so they had chance to received different type of media.

5.2 Hypothesis 2

The health risk behaviors toward injury of personnel and local residents involved to solid waste disposal site of Nonthaburi Province associated with the information receiving on collection, disposal and danger of solid waste, experience of danger received from toxic waste, and knowledge on solid waste and danger from solid waste. The details were as follows:

5.2.1 The personnel and local residents involved to the solid waste disposal site Nonthburi Province who were the sample group would have the health risk behavior toward injury differed according to the different level of information

receiving at level of statistical significance of 0.05. To test the difference of level media receiving, must be done separately since each type of media had different details such as the potential of receiver to access the media, the convenience of media receiving, and accessories used for access media. Therefore, it should not be considered as holistic view, it could not present in a clear picture of the involving to each media so it would be presented the association of health risk behavior and each type of media receiving as follows:

5.2.1.1 The association between health risk behavior toward injury of sample group and radio receiving was not different according to the frequency of radio receiving at level of statistical significance of 0.05. (table 20). It did not follow the hypothesis 2 since the radio media had diversity of presentation such as radio play, song, and new but most of news frequently presented in form of attractive the feeling in the negative direction or giving the superficial knowledge more than emphasizing on the detail of injury directly about the occupation involved of solid waste collection.

5.2.1.2 The association between health risk behavior toward injury of sample group and television receiving was not different according to the frequency of television receiving at level of statistical significance of 0.05. (table 21). It did not follow the hypothesis 2. It was similar as radio media that it usually presented the news in form of attractive the feeling in the negative direction or giving the superficial knowledge more than emphasizing on the detail of injury directly about the occupation involved of solid waste collection. Moreover, the feature of most of sample group had time to watch television at the evening, and night time which are the prime time of soap opera, and entertainment program.

5.2.1.3 The association between health risk behavior toward injury of sample group and newspaper receiving was different according to the frequency of newspaper reading at level of statistical significance of 0.05. (table 22). This proved the hypothesis 2 that newspaper reading associated with health risk behavior toward

injury. It could be claimed that the frequency of reading newspaper would cause the sample group had different health risk behavior toward injury. Therefore, the newspaper could be used to promote solid waste management to the sample group to gain more knowledge and understanding because it was able to give more details and contents of knowledge. It was congruent to the study of Viruch Chomcuen (1994: Abstract), Phiree Chaichana (2002: 80-90), Plengpin Mun-U (1997: Abstract), and Anan Skchareon (1997: Abstract).

5.2.1.4 The association between health risk behavior toward injury of sample group and magazine/journal reading was different according to the frequency of magazine/journal receiving at level of statistical significance of 0.05. (table 23). This proved the hypothesis 2 that magazine/journal reading associated with health risk behavior toward injury. It could be claimed that the frequency of magazine/journal would cause the sample group had different health risk behavior toward injury. Therefore, the magazine/journal could be used to promote solid waste management to the sample group to gain more knowledge and understanding because it was able to give more details and contents of knowledge. It was related to the study of Viruch Chomcuen (1994: Abstract), Phiree Chaichana (2002: 80-90), Plengpin Mun-U (1997: Abstract), and Anan Skchareon (1997: Abstract).

5.2.1.5 The association between health risk behavior toward injury of sample group and personal media through friends and relatives receiving was different according to the frequency of personal media through friends and relatives receiving at level of statistical significance of 0.05. (table 24). It did not follow the hypothesis 2. It was obviously seen that the personal media through friends and relatives could not cause the different of health risk behavior toward injury of sample group. It might due to their almost equality of knowledge because they had the similar experience from the same occupation so they might bore to talk about their job.

5.2.1.6 The association between health risk behavior toward injury of sample group and information from government receiving was not different according to the frequency of information from government receiving at level of statistical

significance of 0.05. (table 25). It did not follow the hypothesis 2. It might due to injury from toxic waste was usually occurred since it did not appear serious effect acutely like as infection or disability. Therefore, the information from government mostly was given in pattern of danger prevention and proper waste management a holistic view but it did not be stressed on injury solely

5.2.2 The personnel and local residents involved to the solid waste disposal site Nonthburi Province who were the sample group would have the health risk behavior toward injury differed according to the different level of experience of danger received from toxic waste at level of statistical significance of 0.05. (table 33). It followed the hypothesis 2. Since most of sample group, had experience of danger received injury from solid waste at moderate level. If it was considered in term of the holistic view , it found that 76.7% of sample group (moderate level summarized with high level), therefore, it was be said that their practice of waste collecting behavior were rather frequently to avoid the danger of solid waste better. This might indicated that the sampler group of higher experience of danger received injury from solid waste had more carefulness than the low experience because experience was a learning from the actual situation of any events so the sample group who ever had direct experience of danger received injury from solid waste, they should gain more knowledge and understanding about the danger of solid waste. This was relevant to the study of Wanlee Kanchanakitsakul (1996: Abstract) studied about “Knowledge and Attitudes of the First year Nursing Students of Mahidol University towards Solid Waste Disposals” and the finding indicated that the experience involved solid waste associated with knowledge on solid waste management at level of statistical significance of 00.05.

Additionally, the results showed that most of sample group had high experience of danger received from toxic waste in different facets such as scratches from pointed objects 85.9%, cuts from sharp objects 87.0%, rashes come up on hands and arms 74.8%, and feel weak / tired 80.0for instance so they were familiar with contacting with the toxic waste, additionally, the restrictions of education of sample group causing the limitation of occupation selection. Subsequently, they had contacted with

the toxic substances, the immune system of their body would develop the resistance by construct the immunity to protect. If their immunity would not be developed well they would be sick. Nevertheless it was their occupation so it was difficult for them to avoid this situation (table 3).

5.2.3 The association between health risk behavior toward injury of sample group and knowledge on solid waste and danger from solid waste, it was found that the health risk behavior toward injury associated with knowledge on solid waste and danger from solid waste at level of statistical significance of 0.05 (table 36). It followed the hypothesis 2. It was relevant to the study of of Viruch Chomcuen (1994: Abstract), Anan Sukchareon (1997: Abstract), and Wanlee Kanchanakitsakul (1996: Abstract). It might consider on the behavior of human being had changed according to their development since people would develop all their life span without stopping by starting at delivering time from mother womb and then it had been changed by the changing of their age and their experiences. Even though, some behavior might be existed but some would changed by imitating the parents, teacher, lecturers, and actors (Varee Rakiti, 1984: 98-101). Besides the knowledge factor was an essential factor toward behavior change of person since the knowledge factor was a complicated factor that composed of different sub-factors such as repeated action, experience, and information for instance like as the sample group who had learnt from direct experience of danger received from toxic waste from actual situation due to their main occupation of waste collectors and waste truck driver so they had acted repeatedly everyday with the complemented opportunity of the modern information technology in the present so they had chance to received different type of media.

5.3 Hypothesis 3

The health risk behaviors toward disability of personnel and local residents involved to solid waste disposal site of Nonthaburi Province associated with the information receiving on collection, disposal and danger of solid waste, experience of danger received from toxic waste, and knowledge on solid waste and danger from solid waste. The details were as follows:

5.3.1 The personnel and local residents involved to the solid waste disposal site Nonthburi Province who were the sample group would have the health risk behavior toward disability differed according to the different level of information receiving at level of statistical significance of 0.05. To test the difference of level media receiving, must be done separately since each type of media had different details such as the potential of receiver to access the media, the convenience of media receiving, and accessories used for access media. Therefore, it should not be considered as holistic view, it could not present in a clear picture of the involving to each media so it would be presented the association of health risk behavior and each type of media receiving as follows:

5.3.1.1 The association between health risk behavior toward disability of sample group and radio receiving was different according to the frequency of radio receiving at level of statistical significance of 0.05. (table 26). This proved the hypothesis 3 that the radio associated with health risk behavior toward disability. It could be claimed that the frequency of radio access would cause the sample group had different health risk behavior toward disability. Therefore, the radio could be used to promote solid waste management to the sample group to gain more knowledge and understanding. It was pertinent to the study of Viruch Chomcuen (1994: Abstract), Phiree Chaichana (2002: 80-90), Plengpin Mun-U (1997: Abstract), and Anan Skchareon (1997: Abstract).

5.3.1.2 The association between health risk behavior toward disability of sample group and television receiving was different according to the frequency of television receiving at level of statistical significance of 0.05. (table 17). This proved the hypothesis 3 that the television associated with health risk behavior toward disability. It could be claimed that the frequency of television access would cause the sample group had different health risk behavior toward disability. Therefore, the television could be used to promote solid waste management to the sample group to gain more knowledge, understanding and raise consciousness since the television was interesting and attractive media because it provided both sound and picture. It was

relevant to the study of Viruch Chomcuen (1994: Abstract), Phiree Chaichana (2002: 80-90), Plengpin Mun-U (1997: Abstract), and Anan Skchareon (1997: Abstract).

5.3.1.3 The association between health risk behavior toward disability of sample group and newspaper receiving was different according to the frequency of newspaper reading at level of statistical significance of 0.05. (table 28). This proved the hypothesis 3 that newspaper associated with health risk behavior toward disability. It could be claimed that the frequency of reading newspaper would cause the sample group had different health risk behavior toward disability. Therefore, the newspaper could be used to promote solid waste management to the sample group to gain more knowledge and understanding because it was able to give more details and contents of knowledge. It was congruent to the study of Viruch Chomcuen (1994: Abstract), Phiree Chaichana (2002: 80-90), Plengpin Mun-U (1997: Abstract), and Anan Skchareon (1997: Abstract).

5.3.1.4 The association between health risk behavior toward disability of sample group and magazine/journal reading was different according to the frequency of magazine/journal receiving at level of statistical significance of 0.05. (table 29). This proved the hypothesis 3 that the magazine/journal associated with health risk behavior toward disability. It could be claimed that the frequency of magazine/journal would cause the sample group had different health risk behavior toward disability. Therefore, the magazine/journal could be used to promote solid waste management to the sample group to gain more knowledge and understanding because it was able to give more details and contents of knowledge. It was related to the study of Viruch Chomcuen (1994: Abstract), Phiree Chaichana (2002: 80-90), Plengpin Mun-U (1997: Abstract), and Anan Skchareon (1997: Abstract).

5.3.1.5 The association between health risk behavior toward disability of sample group and personal media through friends and relatives receiving was different according to the frequency of personal media through friends and relatives receiving at level of statistical significance of 0.05. (table 30). It did not follow the

hypothesis 3. It was obviously seen that the personal media through friends and relatives could not cause the different of health risk behavior toward disability of sample group. It might due to their almost equality of knowledge because they had the similar experience from the same occupation so they might bore to talk about their job.

5.3.1.6 The association between health risk behavior toward disability of sample group and information from government receiving was different according to the frequency of information from government receiving at level of statistical significance of 0.05. (table 31). This proved the hypothesis 3 that the information from government associated with health risk behavior toward disability. It could be claimed that the frequency of information from government would cause the sample group had different health risk behavior toward disability. Therefore, the information from government could be used to promote solid waste management to the sample group to gain more knowledge and understanding. It was relevant to the study of Viruch Chomcuen (1994: Abstract), Phiree Chaichana (2002: 80-90), Plengpin Mun-U (1997: Abstract), and Anan Skchareon (1997: Abstract).

5.3.2 The personnel and local residents involved to the solid waste disposal site Nonthburi Province who were the sample group would have the health risk behavior toward disability did not differ according to the different level of experience of danger received from toxic waste at level of statistical significance of 0.05. (table 34). It might due to most of the sample group (75.5%) having primary school level education and illiteracy (table 2). Therefore, they might lack of knowledge and understanding to prevent themselves from the health risk of danger from solid waste. Additionally, most of sample group had high experience of danger received from toxic waste in different facets such as scratches from pointed objects 85.9%, cuts from sharp objects 87.0%, rashes come up on hands and arms 74.8%, and feel weak / tired 80.0 for instance so they were familiar with contacting with the toxic waste, additionally, the restrictions of education of sample group causing the limitation of occupation selection. Subsequently, they had contacted with the toxic substances, the

immune system of their body would develop the resistance by construct the immunity to protect. If their immunity would not be developed well they would be sick. Nevertheless it was their occupation so it was difficult for them to avoid this situation (table 3). Nevertheless, there was few case of disability to be seen frequently such as the case of radioactive harmful at Klong Tuey few years ago. Most of them received from the news and they did not face the direct experience so they might forget. Besides it was their occupation for earning so it was difficult for them to avoid to contact the toxic waste. Most of their direct experiences were injury so it might not cause the difference of health risk behavior toward disability.

5.3.3 The association between health risk behavior toward disability of sample group and knowledge on solid waste and danger from solid waste, it was found that the health risk behavior toward disability associated with knowledge on solid waste and danger from solid waste at level of statistical significance of 0.05 (table 37). It followed the hypothesis 3. It was relevant to the study of of Viruch Chomcuen (1994: Abstract), Anan Skchareon (1997: Abstract), and Wanlee Kanchanakitsakul (1996: Abstract). It might consider on the behavior of human being had changed according to their development since people would develop all their life span without stopping by starting at delivering time from mother womb and then it had been changed by the changing of their age and their experiences. Even though, some behavior might be existed but some would changed by imitating the parents, teacher, lecturers, and actors (Varee Rakiti, 1984: 98-101). Besides the knowledge factor was an essential factor toward behavior change of person since the knowledge factor was a complicated factor that composed of different sub-factors such as repeated action, experience, and information for instance like as the sample group who had learnt from direct experience of danger received from toxic waste from actual situation due to their main occupation of waste collectors and waste truck driver so they had acted repeatedly everyday with the complemented opportunity of the modern information technology in the present so they had chance to received different type of media.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

This study was a survey research with the main objective to study health risk behavior and variables related to health risk behavior of personnel and local residents involved in solid waste disposal site of Nonthaburi Province. The study was able to answer research questions that acceptance of information on solid waste, experience of danger received from toxic waste, and knowledge of solid waste associated with health risk behavior of the sample group on infection, injury and disability, which was statistically significant at a level of 0.05.

The results of this study would be used as guideline and appropriate process to give knowledge, understanding and awareness to the sample group to realize on the importance of self-prevention to avoid the infection, injury, and disability in order to accomplish the healthy for better quality of life. This chapter included research conclusions, research recommendations and recommendation for the further research.

6.1 Research Conclusions

6.1.1 General Information of the sample group

The information presented the sample profiles of the sample group in terms of characteristics; sex, age, education level and occupation. The results were revealed that most of the sample group was males (92.6%), age group between 31-40 years (46.6%), education level was primary school level 4-6 (63.3%), and the main occupation was waste collectors (56.3%) (table 2).

6.1.2 Experience of Danger Received from Toxic Waste

The sample group had experienced of danger received from toxic waste such as scratches from pointed objects (85.9%), cuts from sharp objects (87.0%), rashes come up on hands and arms (74.8%), headache (72.6%), tired (80.0%), and itchiness on the body (78.5%) (table 3). Level of experience of danger received from toxic waste at moderate level (55.44%) with range scores between 5-8 scores (table 4).

6.1.3 Information Receiving about Collection, Disposal and Danger of Solid Waste

The sample group received information about collection, disposal and danger of solid waste every day through friend and relative (36.7%), television (17.0%), newspaper (12.6%), government information (9.3%), radio (9.3%), magazine/journal (7.4%) (table 5).

6.1.4 Knowledge of Solid Waste and Danger from Solid Waste

The sample group did not know about the meaning of “dry solid waste” (71.1%), solid waste (57.4%) and “hazardous waste” (56.7%), what was related to the problem of solid waste (63.3%), what was the major reason for recycle (51.9%) (table 6). The sample group had moderate level knowledge of solid waste and danger from solid waste (58.89%) (table 7).

6.1.5 Health Risk Behavior toward Infection from Solid Waste

The sample group had health risk behavior toward infection from solid waste; they never and sometimes wash their hands after collecting solid waste (27.4%), the sample group practiced frequently, when a wound appeared on their body they did not put a bandage on it (29.6 %) (table 8). Most of them (58.15%) had level of health risk behavior toward infection from solid waste at moderate level with range scores between 9-12 scores (table 9).

6.1.6 Health Risk Behavior toward Injury from Solid Waste

The sample group performed their health risk behavior toward injury from solid waste by the following issues. The sample group never cleaned the wound immediately when received a wound during collection of solid waste (70.0%). In collecting solid waste, the sample group did not care whether the solid waste was dangerous. (48.5%). The sample group did not separate dangerous solid waste in order to prevent dangers from that waste. (45.6%) (table 10). Level of health risk behavior toward injury from solid waste at moderate (60.0%) with range scores between 9-11 scores (table 11).

6.1.7 Health Risk Behavior toward Disability from Solid Waste

The sample group performed their health risk behavior toward disability from solid waste by the following issues. The sample group used their fingers to touch their eyes while collecting solid waste (53.3%). The sample group picked up solid waste they did not recognize without using any protection (25.6%) (table 12). The most of them (55.56%) had level of health risk behavior toward disability from solid waste at moderate level with range scores between 10-13 scores (table 13).

6.1.8 Association between Health Risk Behavior and Independent Variables

Health risk behavior toward infection and disability associated with 5 media of information receipt; radio, television, newspaper, magazine/journal, and information from government which was statistically significant at a level of 0.05, but they did not associate with the personal media.

For health risk behavior toward injury associated with newspaper and magazine/journal at 0.05 level of statistical significance, but they did not associate with radio, television, personal, and information from government. Moreover, the results showed that the health risk behavior toward infection and injury associated with the experience of danger received from toxic waste at 0.05 level of statistical significance, but the health risk behavior toward disability did not associate with the experience of danger received from toxic waste at 0.05 level of statistical significance.

In addition, the health risk behavior toward infection, injury, and disability associated with knowledge of solid waste and danger from solid waste, which was statistically significant at a level of 0.05.

6.2 Research Recommendations

6.2.1 From the research, it was found that the experience of dander received from solid waste could not make the sample group to be aware of practice to prevent and avoid the danger from solid waste so it should provide the knowledge to disseminate to them directly about the proper mean to avoid the danger from solid waste.

6.2.2 From the research, it was found that the knowledge on solid waste and danger from solid waste associated with the health risk behavior toward infection, injury, and disability. Moreover, the sample group preferred to receive the information from personal media through friends and relatives, therefore, it might hold the training for the leader or the people who are respected by local people in order to transfer knowledge to the sample group to create the awareness on danger and implement the solid waste management effectively for better of life quality.

6.2.3 The research found that the information receiving in different media associated with health risk behavior so it might be given the attractive story about the sadness of the disability from ignorance of danger of radioactive waste which caused harmful widely and difficult recovery.

6.2.4 The research showed that the sample group had certain level of knowledge but they lack of consciousness and awareness to have self-prevented from waste danger. Therefore, training should be organized in both theory and practice in order to emphasize on the precise mean of practice for the sample group such as AIC (Appreciation-Influence-Control) workshop, technique or method to promote the involved member of organization to learn together to be an actual practice.

6.3 Recommendation for the Further Research

6.3.1 It should be arranged activities, and campaign for solid waste disposal properly for people in different aspects in order to decrease the work burden of the sample group such as waste separation of dry waste and wet waste, and dangerous waste in order to prevent the danger to have to the sample group at least one level.

6.3.2 It should be studied on construction of media about solid waste management for distribution to the sample group straightly in order to study by themselves.

6.3.3 It should be promoted to the sample group to use the tools and equipment of prevention from toxic waste which effectiveness and efficiency for waste collection and separation in accordance with academic principle.

6.3.4 It should be studied about the responsible governmental unit on solid waste collection whether they had the readiness of equipment and personnel to be core of cooperation of waste management of all sectors, including private and government sectors for higher efficiency and effectiveness more than existing state.

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APPENDIX

APPENDIX A

QUESTIONNAIRE

Topic "Health Risk Behaviors of Personnel and Local Residents Involved to Solid Waste Disposal Site of Nonthaburi Province"

Explanation

1. This Question had 6 sections composed of:

Part 1: General Information

Part 2: Information Receiving on Solid Waste

Part 3: Knowledge on Danger of Solid Waste

Part 4: Health Risk Behavior toward Infection from Solid Waste

Part 5: Health Risk Behavior toward Injury from Solid Waste

Part 6: Health Risk Behavior toward Disability from Solid Waste

2. Please answer every question and answer it according to the your actual performance because it would no effect to you as well.

3. The questionnaire is part of thesis of Pol. Capt. Worapan Pisutthanon who is the Master Degree student of Environmental Education Program, Social Sciences and Humanities, Mahidol University.

Thank you very much for your cooperation of answering the questionnaire

Pol. Capt…….

(Worapan Pisutthanon)
Researcher

Part 1: General Information

Directions: Please place a √ in the ( ) and fill in the blanks with truthful answers.

1. Gender ( ) Male ( ) Female

2. Present age: …….. years (If more than 6 months, it would count as 1 year)

3. Highest level of education completed:

( ) Illiteracy or Lower than Level 4 of Primary school( ) Primary school level 4-6

( ) Secondary school ( ) High school or vocational school

( ) Diploma or equivalent ( ) Others, specify……

4. Occupation

( ) Local Waste Collector Residents ( ) Waste Collector

( ) Waste Truck Driver ( ) Others, specify……

5. Have you ever received any danger from collecting solid waste?

	Yes	**No**
1. Scratches from pointed objects		
2. Cuts from sharp objects		
3. Allergic to chemicals		
4. Allergic to dust particles		
5. Fungus infection		
6. Rashes come up on hands and arms		
7. Headache		
8. Feel weak / tired		
9. Uncomfortable / cannot breathe		
10. Itchiness on the body		

Part 3: Knowledge about Solid Waste and Their Dangers

1. Which of the following is true about "solid waste"?
    a. Solid waste means things that have been used and can be re-used completely
    b. Solid waste means things that have been used and can be completely destroyed immediately
    c. Solid waste means things that cannot be re-used again
    d. Solid waste means things that can be re-used again in part

2. Which of the following is the best answer when talking about "dry solid waste"?
    a. Foam and plastic
    b. Paper and glass
    c. Needles and bandages
    d. Soda cans and thinner bottles

3. What are the steps in managing solid waste?
    a. Collect → Transport → Transmute → Disposal
    b. Collect → Transmute → Transport → Disposal
    c. Transport → Collect → Transmute → Disposal
    d. Transport → Transmute → Collect → Disposal

4. What is the largest impact resulting from solid waste in communities?
    a. A breeding ground for disease
    b. Destroying the beautiful landscape; lack of orderliness
    c. Creating water, air, and land pollution
    d. All of the above

5. Solid waste can impact your health in the following ways, except:
    a. Headaches and dizziness
    b. Nausea
    c. Skin irritations
    d. Heart palpitations

6. Which of the following is the correct container for solid waste?

a. Wet waste – blue container; Dry waste – yellow container

b. Wet waste – yellow container; Dry waste – green container

c. Wet waste – yellow container; Dry waste – blue container

d. Wet waste – green container; Dry waste – yellow container

7. The container for storing dangerous solid waste is colored:

a. Green

b. Yellow

c. Blue

d. Grey with a red lid

8. The problem of solid waste is most related to which of the following?

a. Consumption behavior of the people

b. Lack of land for disposing solid waste

c. Lack of funding for disposing solid waste

d. Crowded and increasing people

9. An important reason for recycling resources is:

a. Lowering production costs

b. Decreasing pollution

c. Decreasing the amount of waste

d. Resources are hard to find and beginning to be rare

10. Which of the following is classified as dangerous solid waste?

a. Batteries, neon lights

b. Spray cans, plastic bottles, pesticides

c. Metals, DDT bottles, soda cans

d. Batteries, plastic, glass

11. Which source of activity creates the least dangerous solid waste?
    a. Industrial factory
    b. Orchards and farms
    c. Restaurants
    d. Hospitals

12. Which of the following solid waste is easily rotted and biodegradable?
    a. Dry solid waste, like paper and cloth
    b. Ashes
    c. Wet solid waste or fresh solid waste, such as food scraps
    d. Vehicle scraps

13. Dangers from solid waste can affect us in many ways except:
    a. Eating
    b. Breathing
    c. Touching
    d. Seeing

14. How does burning solid waste take place?
    a. Burn in the community
    b. Burn in an incinerator
    c. Burn in open spaces
    d. Burn at the side of the road

15. Solid waste like aerosol spray cans and pesticides should be disposed of with what method?
    a. Burning
    b. Burying
    c. Fermentation
    d. Throw it in the river

16. Which is the correct way to collect dangerous solid waste from residences?
    a. Separate them so they do not contaminate other waste
    b. Collect them with other trash
    c. Re-use them
    d. Let them go through biodegradation and then collect them with other trash

17. Dangerous solid waste from residences include
    a. Glass and sharp objects
    b. Containers for weed killer
    c. Needles, cotton balls, bandages
    d. Chemical residue

18. Dangerous solid waste in your understanding means which waste category:
    a. General waste
    b. Waste from agriculture
    c. Waste from markets
    d. Waste that can harm humans and animals

19. Which of the following is the method of disposing dangerous solid waste that has the least effect on the environment?
    a. Mana gives food scraps to animals
    b. Suda burns foam and plastic
    c. Somsri uses needle bottles to decorate gifts
    d. Manee buries the waste from production

20. Solid waste from communities should be disposed of through which method?
    a. Burning
    b. Landfill
    c. Burying
    d. Fermenting

Part 4: Health Risk Behavior toward Infection from Solid Waste

Directions: Please place a / in only one space that best fits your opinion.

Health Risk Behavior toward Infection from Solid Waste	Behavior		
	Frequently	Sometimes	Never
1. After collecting solid waste, you do other activities without washing your hands.			
2. After collecting solid waste, you wash your clothes every time.			
3. No matter what the pollution from solid waste is, you still work.			
4. You take a bath immediately after collecting solid waste.			
5. You wear gloves each time you collect solid waste.			
6. You clean your equipment every time after finishing work.			
7. When a wound appears on your body you do not put a bandage on it.			
8. You place a cloth over your nose and mouth during collection of solid waste.			
9. In collecting solid waste, you do not care where the solid waste comes from.			

Part 5: Health Risk Behavior toward Injury from Solid Waste

Directions: Please place a / in only one space that best fits your opinion

Health Risk Behavior toward Injury from Solid Waste	Behavior		
	Frequently	**Sometimes**	**Never**
1. You use your bare hands in collecting solid waste without the use of other equipment, which is a normal thing to do.			
2. You avoid collecting infectious solid waste from hospitals to avoid poison			
3. You wear boots every time you collect solid waste			
4. When you receive a wound during collection of solid waste, you clean the wound immediately.			
5. You inspect the equipment each time before going to work.			
6. You use defective equipment in collecting solid waste.			
7. You will separate dangerous solid waste in order to prevent dangers from that waste.			
8. In collecting solid waste, you don't care whether the solid waste is dangerous.			
9. You wear long-sleeved shirts and long Pants when collecting solid waste every time.			

Part 6: Health Risk Behavior toward Disability from Solid Waste

Directions: Please place a / in only one space that best fits your opinion

Health Risk Behavior toward Disability from Solid Waste	Behavior		
	Frequently	Sometimes	Never
1. You use your fingers to touch your eyes while collecting solid waste			
2. When you feel there is something wrong with your body, you go to see the doctor each time.			
3. You have been short of breath during collection of solid waste.			
4. You usually try to find more information on how to prevent pollution from solid waste.			
5. You use equipment to help in digging through solid waste.			
6. During waste collection, you have been dizziness and headaches but you still work.			
7. When you receive dangers from solid waste, you go see the doctor each time.			
8. You pick up solid waste you don't recognize, without using any protection.			
9. You go for a health checkup every 6 months			

APPENDIX B
GENERAL INFORMATION OF NONTHABURI PROVINCE
NONTHABURI PROVINCE
จังหวัดนนทบุรี

1. สภาพทั่วไป

1.1 ลักษณะที่ตั้ง จังหวัดนนทบุรี ตั้งอยู่ในภาคกลางของประเทศไทย เป็นหนึ่งในห้าของจังหวัดปริมณฑล (นนทบุรี ปทุมธานี นครปฐม สมุทรปราการ และสมุทรสาคร) มีเนื้อที่ประมาณ 622.30 ตารางกิโลเมตร หรือประมาณ 388,939 ไร่ มีอาณาเขตติดต่อ ดังนี้

ทิศเหนือ	ติดต่อกับจังหัดปทุมธานี และจังหวัดพระนครศรีอยุธยา
ทิศใต้	ติดต่อกับกรุงเทพมหานคร
ทิศตะวันออก	ติดต่อกับกรุงเทพมหานคร ตั้งแต่เขตดุสิต, เขตบางเขนไปจนจรดจังหวัดปทุมธานี
ทิศตะวันตก	ติดต่อกับจังหวัดนครปฐม

แผนที่

อาณาเขตติดต่อจังหวัดนนทบุรี

เขตการปกครองจังหวัดนนทบุรี แบ่งออกเป็น 6 อำเภอ (เมืองนนทบุรี ปากเกร็ด บางบัวทอง บางกรวย บางใหญ่ ไทรน้อย) 52 ตำบล 421 หมู่บ้าน โดยมีองค์กรปกครองส่วนท้องถิ่นในพื้นที่ ดังนี้ องค์การบริหารส่วนจังหวัด 1 แห่ง เทศบาลนคร 2 แห่ง (เทศบาลนครนนทบุรี เทศบาลนครปากเกร็ด) เทศบาลเมือง 1 แห่ง (เทศบาลเมืองบางบัวทอง) เทศบาลตำบล 6 แห่ง (เทศบาลตำบลบางศรีเมือง บางกรวย ปลายบาง บางใหญ่ บางม่วง ไทรน้อย) และองค์การบริหารส่วนตำบล 37 แห่ง (องค์การบริหารส่วนตำบลไทรม้า บางกร่าง บางไผ่ บางรักน้อย เกาะเกร็ด คลองข่อย คลองพระอุดม ท่าอิฐ บางตะไนย์ บางพลับ อ้อมเกร็ด บางคูลัด บางบัวทอง บางรักพัฒนา บางรักใหญ่ พิมลราช ละหาร ลำโพ บางขนุน บางสีทอง บางขุนกอง ปลายบาง มหาสวัสดิ์ ศาลากลาง บางม่วง บางแม่นาง บางเลน บางใหญ่ บ้านใหม่ เสาธงหิน ขุนศรี คลองขวาง ทวีวัฒนา ไทรน้อย ไทรใหญ่ รายฎร์นิยม หนองเพรางาย)

ประชากร จังหวัดนนทบุรีมีประชากร (ข้อมูล ณ เดือน ธันวาคม 2544) รวมทั้งสิ้น 886,698 คน เป็นชาย 424,269 คน เป็นหญิง 462,429 คน จำนวนบ้าน 370,809 หลังคาเรือน

ตารางแสดงประชากรในอนาคตจังหวัดนนทบุรี

ปี พ.ศ.	จำนวนประชากร (คน)
2545	907,435
2546	928,760
2547	950,586
2548	972,924
2549	995,788
2550	1,019,189
2551	1,043,140
2552	1,067,654
2553	1,092,744
2554	1,118,423
2555	1,144,706
2556	1,171,607
2557	1,199,140
2558	1,227,319
2559	1,256,161
2560	1,285,681

2. การใช้ที่ดิน

การใช้ที่ดินของจังหวัดนนทบุรีส่วนใหญ่ในปัจจุบัน (พ.ศ. 2539) เป็นกิจกรรมเพื่อการเกษตรกรรม คิดเป็นร้อยละ ประมาณ 49.9 ของพื้นที่จังหวัดหรือประมาณ 193,928 ไร่ ซึ่งเมื่อเปรียบเทียบกับปี พ.ศ. 2532 พบว่า พื้นที่การเกษตรลดลง 79,223 ไร่ หรือคิดเป็นร้อยละ 20.36 ของพื้นที่ทั้งหมด

ลักษณะของการเจริญเติบโตของที่อยู่อาศัยในเขตพื้นที่ศูนย์กลางชั้นในของจังหวัดนนทบุรี ซึ่งอยู่ในเขตเทศบาลนครนนทบุรี มีลักษณะการขยายตัวตามแนวสูงขึ้นเรื่อยๆ เนื่องจากความเจริญของกรุงเทพมหานครขยายแผ่กว้างไปสู่พื้นที่ชั้นนอก อาคารสูงที่เกิดขึ้นส่วนใหญ่เป็นอาคารสูงเพื่อที่พักอาศัยหรือคอนโดมิเนียม

สำหรับการเจริญเติบโตของเมืองในเขตพื้นที่นอกของจังหวัด ในรัศมีประมาณ 20-40 กิโลเมตร จากศูนย์กลางกรุงเทพมหานคร มีลักษณะการขยายตัวตามแนวราบลักษณะการปลูกสร้างอาคารจะเป็นประเภออาคารพาณิชย์ ทาวน์เฮ้าส์ และบ้านเดี่ยว

ลักษณะการเจริญเติบโตของย่านธุรกิจ มีลักษณะการขยายตัวตามเขตชุมชนอยู่อาศัยที่ขยายตัวออกมาจากกรุงเทพมหานคร และมีลักษณะการเกิดขึ้นเป็นหย่อม ๆ บนถนนสายหลัก เช่น บริเวณจุดตัดของถนนประชาราษฎร์ และถนพิบูลสงคราม บนถนนกรุงเทพ-นนท์ เป็นต้น

ส่วนการใช้ประโยชน์ที่ดินในอนาคต กรมการผังเมือง ได้กำหนดการใช้ประโยชน์ที่ดินในอนาคต พ.ศ. 2557 และจากการรายงานผลการศึกษาของบริษัท คอนซัลแทนท์ ออฟ เทคโนโลยี จำกัด ซึ่งคาดการณ์ไว้ในปี พ.ศ. 2560 จังหวัดนนทบุรี จะมีการใช้ประโยชน์ที่ดินหลักๆ ดังนี้คือ

การใช้ประโยชน์ที่ดินประเภทที่อยู่อาศัย แบ่งเป็น 2 ระดับความหนาแน่น คือ

1. ที่อยู่อาศัยหนาแน่นน้อย (มีความหนาแน่นของประชาประมาณ 20 คน ต่อไร่) มีพื้นที่ทั้งหมดประมาณ 103,300 ไร่ หรือคิดเป็นร้อยละ 25,27 ของพื้นที่จังหวัด โดยจะอยู่กระจายรอบศูนย์กลางชุมชน

2. ที่อยู่อาศัยหนาแน่นปานกลาง (มีความหนาแน่นของประชากรประมาณ 50 คนต่อไร่) มีเนื้อที่ประมาณ 46,000 ไร่ หรือคิดเป็นร้อยละ 11.25 ของพื้นที่จังหวัด โดยกำหนดไว้ในบริเวณที่มีแนวโน้มของความหนาแน่นบริเวณถนนแจ้งวัฒนะ

การใช้ประโยชน์ที่ดินประเภทพาณิชยกรรม และที่อยู่อาศัยหนาแน่นมาก (ความหนาแน่นของประชากรประมาณ 70 คนต่อไร่) มีเนื้อที่ทั้งหมดประมาณ 9,800 ไร่ หรือคิดเป็นร้อยละ 2.41 ของพื้นที่จังหวัด โดยศูนย์กลางหลักของชุมชน ฝั่งตะวันออกก็ยังเป็นบริเวณเดิม คือ

1. บริเวณเขตเทศบาลนคร ซึ่งเดิมเป็นที่ตั้งของศาลากลางจังหวัด (ท่าน้ำนนท์) บริเวณสองถนนประชาราษฎร์ และถนนพิบูลสงคราม ทั้งนี้เนื่องจากบริเวณดังกล่าว เป็นย่านธุรกิจการค้าที่ประชาชนทั้ง 2 ฝั่งแม่น้ำเจ้าพระยา มาใช้บริการตั้งแต่เดิมของจังหวัด โดยเป็นบริเวณที่ตั้งของตลาดเทศบาล โรงภาพยนต์ ศูนย์การค้า ธนาคาร และยังเป็นเส้นทางที่เป็นแนวต่อเนื่องกับกรุงเทพฯ ด้วย

2. บริเวณถนนงามวงศ์วาน และถนนติวานนท์ เชื่อมโยงกัน บริเวณนี้เป็นย่านการค้าและที่พักอาศัยหนาแน่น ที่ขยายตัวเนื่องจากบริเวณสี่แยกพงษ์เพชรของกรุงเทพฯ ประกอบด้วยธุรกิจการค้า ศูนย์การค้า ที่มีขึ้นเพื่อตอบสนองผู้พักอาศัยในชุมชนใหญ่ทั้งในเขตนนทบุรี และกรุงเทพฯ ได้แก่ หมู่บ้านประชานิเวศน์ 1, 2, 3 หมู่บ้านชินเขต และหมู่บ้านพงษ์เพชร เป็นต้น

3. บริเวณห้าแยกปากเกร็ด บริเวณนี้เป็นย่านธุรกิจการค้าสำคัญจุดหนึ่งของจังหวัดทางตอนเหนือ เพราะเป็นจุดที่ประชาชนสองฝั่งแม่น้ำเจ้าพระยาเดินทางข้ามฟาก โดยทางเรือ นอกจากนี้ยังมีเส้นทางคือ ถนนแจ้งวัฒนะ ที่สามารถใช้เป็นเส้นทางติดต่อกับกรุงเทพฯ นอกจากนี้ปัจจุบันบริเวณดังกล่าวมีการขยายตัวด้านที่พักอาศัยมากขึ้น จึงทำให้มีกิจการค้า เช่น ศูนย์การค้าเข้ามาในพื้นที่บริเวณดังกล่าว

3. สภาพภูมิอากาศ

จังหวัดนนทบุรีมีภูมิอากาศร้อนชื้น ได้รับอิทธิพลจากมรสุมที่พัดผ่าน 2 ชนิด คือ ลมมรสุมตะวันตกเฉียงเหนือใต้ และลมมรสุมตะวันออกเฉียงเหนือ แบ่งฤดูกาลออกได้เป็น 3 ฤดู คือ

- ฤดูร้อน เริ่มตั้งแต่เดือนมีนาคม ถึงเดือนพฤษภาคม
- ฤดูฝน เริ่มตั้งแต่เดือนมิถุนายน ถึงเดือนตุลาคม
- ฤดูหนาว เริ่มตั้งแต่เดือนพฤศจิกายน ถึงเดือนกุมภาพันธ์

จากผลการตรวจวัดอากาศของสถานีตรวจวัดอากาศดอนเมือง ของกรมอุตุนิยมวิทยา ซึ่งสรุปลักษณะภูมิอากาศที่สำคัญได้ดังนี้

1. อุณหภูมิ (Temperature)

อุณหภูมิสูงสุดเฉลี่ยอยู่ในช่วงเดือนเมษายนเท่ากับ 36.2 $^{\circ}$C อุณหภูมิต่ำสุดเฉลี่ยอยู่ในช่วงเดือนธันวาคม เท่ากับ 21.5 $^{\circ}$C อุณหภูมิเฉลี่ยตลอดปี คือ 28.7 $^{\circ}$C

2. ความชื้นสัมพัทธ์ (Relative Humidify)

ความชื้นสัมพัทธ์มีค่าเฉลี่ยสูงสุดในช่วงเดือนมีนาคม กันยายน ตุลาคม ถึง 92% และมีค่าต่ำสุดเฉลี่ยอยู่ในช่วงเดือนกุมภาพันธ์ คือ 41% โดยมีความชื้นสัมพัทธ์เฉลี่ยตลอดปี เท่ากับ 69%

3. ลม (Wind)

ความเร็วเฉลี่ยตลอดปี คือ 3.9-6.5 น็อต ส่วนใหญ่ เป็นลมที่พัดมาจากทางใต้ ยกเว้นในฤดูหนาวจะเป็นลมที่พัดมาจากทางเหนือและทางตะวันออก

4. ประมาณน้ำฝน (Precipitation)

ปริมาณน้ำฝนรายปีเฉลี่ยแต่ละอำเภอของจังหวัดนนทบุรี อยู่ในช่วง 913-1,356 มิลลิเมตร มีค่าเฉลี่ยทั้งจังหวัด 1,180 มิลลิเมตร สำหรับสถานที่กำจัดมูลฝอยของ อบจ.นนทบุรี ซึ่งอยู่ใกล้สถานีวัดน้ำฝนที่อำเภอไทรน้อย มีปริมาณน้ำฝนเฉลี่ย 913 มิลลิเมตรต่อปี

ข้อมูลทั่วไปของอำเภอไทรน้อย

4.1 สภาพทั่วไปและข้อมูลพื้นฐานของอำเภอไทรน้อย

4.1.1 ลักษณะที่ตั้ง

เลขที่ 10/7 ถนนบางกรวย-ไทรน้อย ตำบลคลองขวาง อำเภอไทรน้อย ตั้งอยู่ทางทิศตะวันตกของจังหวัดนนทบุรี ห่างจากจังหวัด 28 กิโลเมตร

4.1.2 เนื้อที่

เนื้อที่ 186.017 ตารางกิโลเมตร

4.1.3 อาณาเขตติดต่อ

ทิศเหนือ ติดต่อกับอำเภอลาดบัวหลวง จังหวัดพระนครศรีอยุธยา

ทิศใต้ ติดต่อกับอำเภอบางใหญ่ จังหวัดนนทบุรี

ทิศตะวันออก ติดต่อกับอำเภอบางบัวทอง จังหวัดนนทบุรี และอำเภอลาดหลุมแก้ว จังหวัดปทุมธานี

ทิศตะวันตก ติดต่อกับอำเภอบางเลน และอำเภอนครชัยศรี จังหวัดนครปฐม

4.1.4 ลักษณะภูมิประเทศ

พื้นที่ส่วนใหญ่เป็นที่ราบลุ่ม มีลำคลองต่าง ๆ ในพื้นที่จำนวนมาก คลองที่สำคัญได้แก่ คลองพระพิมลราชา คลองทวีวัฒนา คลองลากค้อน และคลองขุนศรี

ภูเขา ไม่มี

แม่น้ำ ไม่มี

ภูมิอากาศ ลักษณะทางภูมิอากาศเป็นแบบมรสุม มี 3 ฤดู คือ

ฤดูร้อน เริ่มตั้งแต่เดือนมีนาคม ถึงเดือนมิถุนายน

ฤดูฝน เริ่มตั้งแต่เดือนกรกฎาคม ถึงเดือนตุลาคม

ฤดูหนาว เริ่มตั้งแต่เดือนพฤศจิกายน ถึงเดือนกุมภาพันธ์

4.1.5 พื้นที่และการใช้ประโยชน์

เนื่องจากพื้นที่เป็นที่ราบลุ่มสภาพดินเหมาะแก่การเพาะปลูก มีลำคลองผ่านหลายสาย การใช้ประโยชน์ในพื้นที่จึงมุ่งเน้นในด้านเกษตรกรรมและเลี้ยงสัตว์ แต่มีบางส่วนได้แปรสภาพเป็นบ้านจัดสรรและโรงงานอุตสาหกรรมการถือครองที่ดินอำเภอไทรน้อย การออกเอกสารสิทธิให้แก่ราษฎร มีรายละเอียดดังนี้

โฉนดที่ดิน	จำนวน	19,795	แปลง
หนังสือรับรองการทำประโยชน์ (น.ส. 3 ก.)	จำนวน	-	แปลง
หนังสือรับรองการประโยชน์ (น.ส. 3)	จำนวน	-	แปลง
หนังสือสำคัญสำหรับที่หลวง (น.ส.ล.)	จำนวน	-	แปลง

4.1.6 การปกครอง

แบ่งเขตการปกครองตาม พ.ร.บ. ลักษณะปกครองท้องที่ พ.ศ. 2457 เป็น

ตำบลไทรน้อย	หมู่บ้าน	8	หมู่บ้าน
ตำบลไทรใหญ่	หมู่บ้าน	10	หมู่บ้าน
ตำบลราษฎร์นิยม	หมู่บ้าน	5	หมู่บ้าน
ตำบลคลองขวาง	หมู่บ้าน	9	หมู่บ้าน
ตำบลขุนศรี	หมู่บ้าน	8	หมู่บ้าน
ตำบลทวีวัฒนา	หมู่บ้าน	8	หมู่บ้าน
ตำบลหนองเพรางาย	หมู่บ้าน	12	หมู่บ้าน
รวมตำบล 7 ตำบล	หมู่บ้าน	60	หมู่บ้าน

เทศบาล 1 แห่ง คือ เทศบาลตำบลไทรน้อย

องค์การบริหารส่วนตำบล 7 แห่ง คือ

1. ไทรน้อย 2. ไทรใหญ่ 3. ราษฎร์นิยม 4. ขุนศรี
5. คลองขวาง 6. หนองเพรางาย 7. ทวีวัฒนา

ประชากร

มีประชากรทั้งสิ้น 43,074 คน แยกเป็นชาย 20,999 คน หญิง 22,075 คน จำนวนบ้าน 16,680 หลังคาเรือน มีความหนาแน่นเฉลี่ยต่อพื้นที่ ประมาณ 232 คน/ตารางกิโลเมตร ประชากรสามารถแยกเป็นรายตำบลได้ดังนี้

ลำดับที่	ตำบล	ชาย (คน)	หญิง (คน)	รวม (คน)
1.	ไทรน้อย	5,547	5,796	11,343
2.	ราษฎร์นิยม	2,696	2,821	5,517
3.	หนองเพรางาย	2,716	2,939	5,655
4.	ไทรใหญ่	2,879	3,006	5,885
5.	ขุนศรี	2,153	2,282	4,435
6.	คลองขวาง	2,451	2,538	4,989
7.	ทวีวัฒนา	2,557	2,693	5,250

ข้อมูล ณ เดือนกันยายน พ.ศ. 2544

สภาพทางเศรษฐกิจ

การเกษตรกรรม อำเภอมีพื้นที่ทางเกษตรทั้งสิ้น 65,432 ไร่ ครอบครัวเกษตรกร จำนวน 2,964 ครอบครัว สภาพการผลิตพืชทางเศรษฐกิจที่สำคัญ ๆ แยกได้ดังนี้

ที่	ประเภท	พื้นที่ (ไร่)	จำนวนครัวเรือนที่ปลูก
1.	ข้าว	64,240.50	2,533
2.	ผัก	2,518.25	637
3.	ไม้ผล	6,722.50	1,779
4.	ไม้ยืนต้น	545	161
5.	ไม้ดอก	479	94
6.	การประมง	271 บ่อ	218

ที่มา : สำนักงานเกษตรอำเภอไทรน้อย

การปศุสัตว์ ข้อมูลจำนวนสัตว์

สัตว์ที่เลี้ยง	จำนวน (ตัว)
โค	515
กระบือ	58
แพะ	268
แกะ	20
สุกร	1,296
ไก่เนื้อ	316,181
ไก่ไข่	59,356
ไก่บ้าน	126,483
เป็ดเนื้อ	94,903
เป็ดไข่	235,216
นกกระทา	24,200

ที่มา : สำนักงานปศุสัตว์อำเภอไทรน้อย

การอุตสาหกรรม มีโรงงานอุตสาหกรรม ที่ได้รับอนุญาตดำเนินการและประกอบการ จำนวน 134 แห่ง ดังนี้

ตำบล	จำนวนโรงงาน (แห่ง)
ไทรน้อย	47
ไทรใหญ่	24
ราษฎร์นิยม	27
คลองขวาง	12
ขุนศรี	17
ทวีวัฒนา	2
หนองเพรางาย	5

ที่มา : สำนักงานอุตสาหกรรมจังหวัดนนทบุรี

การพาณิชย์

มีสถานีบริการน้ำมันเชื้อเพลิงขนาดใหญ่ จำนวน 6 แห่ง

มีธนาคาร จำนวน 2 แห่ง ได้แก่

ธนาคารไทยพาณิชย์

ธนาคารเพื่อการเกษตรและสหกรณ์การเกษตร

มีสหกรณ์ จำนวน 1 แห่ง ได้แก่ สหกรณ์การเกษตรอำเภอไทรน้อย

สภาพทางสังคม

การศึกษา ข้อมูลด้านการศึกษา

สถานศึกษา สังกัด	จำนวน (โรงเรียน)	จำนวน ห้องเรียน	จำนวนครู	จำนวน นักเรียน
สปช.	22	248	224	6,105
สศ.	2	43	82	1,561
อศ.	1	34	43	790
สนง.สป.สธ.	1	30	15	340

ที่มา : สำนักงานศึกษาการอำเภอไทรน้อย

ระบบการศึกษานอกโรงเรียน

กลุ่มสนใจ	3	กลุ่ม
วิชาชีพระยะสั้น	5	กลุ่ม
ที่อ่านหนังสือประจำหมู่บ้าน	60	แห่ง
ห้องสมุดสำหรับประชาชน	1	แห่ง

การศึกษาอื่น ๆ

โรงเรียนพระปริยัติธรรมแผนกธรรม	2	แห่ง
หน่วยอบรมประชาชนประจำตำบล	7	แห่ง
ศูนย์พัฒนาเด็กเล็ก	3	แห่ง

การศาสนาและศิลปวัฒนธรรม

การศาสนา ประชากรส่วนใหญ่นับถือศาสนาพุทธ คิดเป็นร้อยละ 95

- มีสถาบันหรือองค์กรทางศาสนา

วัด ที่พำนักสงฆ์	จำนวน	15	แห่ง
มัสยิด	จำนวน	2	แห่ง

ศาลเจ้า	จำนวน	2	แห่ง
ศูนย์วัฒนธรรมอำเภอ	จำนวน	1	ศูนย์

ศิลปวัฒนธรรมและขนบธรรมเนียมประเพณี
ประเพณีเติมน้ำมันตะเกียง วัดสโมสร
ประเพณีทำขวัญข้าว วัดไทรน้อย
ประเพณีตักบาตรกลางน้ำ วัดไทรใหญ่
ประเพณีตักบาตรดอกไม้ วัดสโมสร
ประเพณีสงกรานต์ วัดไทรใหญ่ วัดสโมสร
ประเพณีลอยกระทง วัดไทรใหญ่

4.1.10 การสาธารณสุข

มีสถานบริการด้านการสาธารณสุข โดยมีสถานบริการ ดังนี้

- โรงพยาบาล ขนาด 60 เตียง	จำนวน	1	แห่ง
- สำนักงานสาธารณสุขอำเภอ	จำนวน	1	แห่ง
- สถานีอนามัยประจำตำบล/หมู่บ้าน	จำนวน	11	แห่ง
- สำนักงานส่วนมาลาเรีย	จำนวน	-	แห่ง
- สถานพยาบาลเอกชน	จำนวน	1	แห่ง
- ร้านขายยาแผนปัจจุบัน	จำนวน	2	แห่ง

จำนวนบุคลากรทางด้านสาธารณสุข

- แพทย์, ทันตแพทย์	จำนวน	6	คน
- เภสัชกร	จำนวน	3	คน
- พยาบาล	จำนวน	59	คน
- เจ้าหน้าที่สาธารณสุข	จำนวน	16	คน
- เจ้าหน้าที่อื่น ๆ	จำนวน	61	คน
- อาสาสมัครสาธารณสุข (อสม.)	จำนวน	409	คน

อัตราการมีและใช้ส้วมราดน้ำ ร้อยละ 100
หอกระจายข่าว จำนวน 12 แห่ง ครอบคลุมได้ร้อยละ 20

4.1.11 ความปลอดภัยในชีวิตและทรัพย์สิน

- มีสถานีตำรวจภูธรอำเภอ จำนวน 1 แห่ง สถานีตำรวจภูธรอำเภอไทรน้อย
- จุดตรวจ (ป้อมยาม) จำนวน 6 แห่ง ดังนี้

จุดตรวจตำบลหนองเพรางาน (ถนนไทรน้อย-ต้นเชือก)

จุดตรวจตำบลไทรน้อย (ปากทางเข้าวัดไทรน้อย)

จุดตรวจตำบลคลองขวาง (สี่แยกคลองขวาง)

จุดตรวจตำบลขุนศรี (หน้าวัดยอดพระพิมล)

จุดตรวจตำบลไทรใหญ่ (ถนนตลิ่งชัน – สุพรรณบุรี)

จุดตรวจตำบลราษฎร์นิยม (หน้าวัดราษฎร์นิยม)

4.1.12 ระบบบริการพื้นฐาน

การคมนาคมการคมนาคมติดต่อระหว่างอำเภอกับจังหวัด รวมทั้งการคมนาคมภายในตำบลและหมู่บ้านมีรายละเอียดดังนี้

ทางหลวงแผ่นดินหมายเลข 340 สุพรรณบุรี – บางบัวทอง

ทางหลวงแผ่นดินหมายเลข 346 ปทุมธานี – บางเลน

ทางหลวงแผ่นดินหมายเลข 3215 บางกรวย – ไทรน้อย

ทางหลวงชนบท รพช.	จำนวน	28	สาย
ทางหลวงชนบทของโยธาธิการ	จำนวน	4	สาย
ทางหลวงท้องถิ่น	จำนวน	2	สาย
ถนนลูกรังเชื่อมต่อระหว่างหมู่บ้าน ตำบล	จำนวน	40	สาย

การโทรคมนาคมติดต่อสื่อสาร

(1) มีที่ทำการไปรษณีย์โทรเลข	จำนวน	1	แห่ง
(2) มีการให้บริการติดต่อสื่อสารทางโทรศัพท์	จำนวน	3,000	คู่สาย

การสาธารณูปโภค

มีการประปาระดับอำเภอและตามตำบลหมู่บ้านดังนี้

- การประปานครหลวง	จำนวน	1	แห่ง
- การประปาหมู่บ้าน	จำนวน	51	แห่ง

แหล่งน้ำกิน – น้ำใช้ ประเภท อื่น

- บ่อบาดาล	จำนวน	60	บ่อ
- ถังเก็บน้ำ	จำนวน	40	แห่ง

4.1.13 ทรัพยากรธรรมชาติ

- ทรัพยากรดิน พื้นดินมีความอุดมสมบูรณ์เหมาะแก่การทำการเกษตร

ทรัพยากรน้ำ มีคลอง 53 คลอง

สถานที่ศูนย์กำจัดมูลฝอยรวมแบบครบวงจรขององค์การบริหารส่วนจังหวัดนนทบุรี ตั้งอยู่ที่ ต.คลองขวาง อ.ไทรน้อย จ.นนทบุรี ตั้งอยู่ทิศเหนือของกรุงเทพมหานคร มีเนื้อที่ประมาณ 662,303 ตร.กม. ลักษณะภูมิประเทศเป็นที่ราบลุ่ม ระดับพื้นดินเฉลี่ยประมาณ +1.8 เมตร (รทก.) มีแม่น้ำเจ้าพระยาไหลผ่านกลาง แบ่งพื้นที่ออกเป็น 2 ส่วน คือ ฝั่งตะวันตกและฝั่งตะวันออก มีประชาชนอาศัยอยู่หนาแน่นตามริมฝั่งแม่น้ำเจ้าพระยา และริมคลองทั่วไปทางฝั่งตะวันตกและมีพื้นที่ที่อยู่อาศัยหนาแน่นและย่านอุตสาหกรรมในฝั่งตะวันออก ตำบลคลองขวาง ซึ่งเป็นที่ตั้งของสถานที่กำจัดขยะมูลฝอยของ อบจ.นนทบุรี อยู่ห่างจากที่ว่าการอำเภอไทรน้อยประมาณ 4.5 กิโลเมตร มีพื้นที่ประมาณ 2.377 ตารางกิโลเมตร หรือ ประมาณ 14,857 ไร่ เป็นพื้นที่เกษตร ประมาณ 12,755 ไร่ อาณาเขตติดต่อ ดังนี้

ทิศเหนือ	จดตำบลราษฎร์นิยม	อำเภอไทรน้อย	จังหวัดนนทบุรี
ทิศตะวันออก	จดตำบลราษฎร์นิยม	อำเภอไทรน้อย	จังหวัดนนทบุรี
ทิศใต้	จดตำบลไทรน้อย	อำเภอไทรน้อย	จังหวัดนนทบุรี
ทิศตะวันตก	จดตำบลไทรน้อย	อำเภอไทรน้อย	จังหวัดนนทบุรี

ตำแหน่งที่ตั้งของสถานที่กำจัดขยะมูลฝอย อบจ.นนทบุรี ดังแสดงในรูป

แผนที่แสดงที่ตั้งศูนย์กำจัดมูลฝอย อบจ.นนทบุรี

ปริมาณมูลฝอยที่เกิดขึ้นในปัจจุบัน

ที่ปรึกษาไทยทำการศึกษามูลฝอยในปัจจุบันของพื้นที่โครงการ พบว่า หน่วยงานราชการที่นำมูลฝอยมาทิ้งที่สถานที่จัดมูลฝอยของ อบจ.นนทบุรี มีจำนวน 21 หน่วยงานดังนี้

องค์การบริหารส่วนจังหวัดนนทบุรี เทศบาลนครนนทบุรี เทศบาลเมืองบางบัวทอง เทศบาลนครปากเกร็ด เทศบาลตำบลบางกรวย เทศบาลตำบลบางศรีเมือง เทศบาลตำบลบางใหญ่ เทศบาลตำบลบางม่วง เทศบาลตำบลปลายบาง เทศบาลตำบลไทรน้อย อบต.บาลเลน อบต.บางม่วง อบต.ไทรม้า อบต.เสาธงหิน อบต.บางขนุน อบต.บางขุนกอง อบต.ไทรน้อย อบต.ขุนศรี อบต.บางบัวทอง อบต.บางรักน้อย และอบต.ท่าอิฐ

จากรายงานสถิติการทิ้งมูลฝอยประจำเดือนกุมภาพันธ์ (พ.ศ. 2545) โดยกองช่าง อบจ.นนทบุรี พบว่า ปริมาณมูลฝอยมีเท่ากับ 843 ตัน/วัน และชุมชนที่มีมูลฝอยมากที่สุดและรองลงมา คือ เทศบาลนครนนทบุรี และเทศบาลนครปากเกร็ด โดยมีปริมาณมูลฝอยเท่ากับ 338 และ 182 (ตามลำดับ) ดังแสดงรายละเอียด

ตารางแสดงปริมาณมูลฝอยปัจจุบัน ณ สถานที่กำจัดมูลฝอยองค์การบริหารส่วนจังหวัดนนทบุรี

หน่วยงาน	จำนวนรถขนมูลฝอย (คัน)	จำนนเที่ยวทั้งหมด	ปริมาณมูลฝอย (ลบ.ม./เดือน)	ปริมาณมูลฝอย (ตัน/วัน)
องค์การบริหารส่วนจังหวัดนนทบุรี	8	163	2,779.15	38.71
เทศบาลนครนนทบุรี	38	1499	24,286.29	338.27
เทศบาลเมืองบางบัวทอง	10	189	2,880.35	40.12
เทศบาลนครปากเกร็ด	44	985	13,083.75	182.24
เทศบาลตำบลบางกรวย	18	321	4,685.08	65.26
เทศบาลตำบลบางศรีเมือง	10	141	2,072.85	28.87
เทศบาลตำบลบางใหญ่	3	52	737.32	10.27
เทศบาลตำบลบางม่วง	3	34	579.70	8.07
เทศบาลตำบลปลายบาง	5	90	1,403.88	19.55
เทศบาลตำบลไทรน้อย	1	22	375.10	5.22
อบต.บางเลน	2	42	716.10	9.97
อบต.บางม่วง	3	47	509.01	7.09
อบต.ไทรม้า	4	72	942.96	13.13
อบต.เสาธงหิน	4	125	2,050.39	28.56

หน่วยงาน	จำนวนรถขนมูลฝอย (คัน)	จำนนเที่ยวทั้งหมด	ปริมาณมูลฝอย (ลบ.ม./เดือน)	ปริมาณมูลฝอย (ตัน/วัน)
อบต.บางขนุน	1	8	136.40	1.90
อบต.บางขุนกอง	1	19	205.77	2.87
อบต.ไทรน้อย	1	19	323.95	4.51
อบต.ขุนศรี	1	20	103.80	1.45
อบต.บางบัวทอง	3	64	1,091.20	15.20
อบต.บางรักน้อย	2	48	818.40	11.40
อบต.ท่าอิฐ	2	45	767.25	10.69
รวม	**164**	**4005**	**60,548.70**	**843.36**

ที่มา : กองช่าง อบจ.นนทบุรี (กุมภาพันธ์ 2545)

ระบบการจัดการมูลฝอยของ อบจ.นนทบุรี

1. ระบบเก็บรวบรวมมูลฝอย

ปัจจุบัน อบจ.นนทบุรี มีรถยนต์เก็บขนมูลฝอยชนิดอัดท้าย ความจุ 10 ลบ.ม. ทั้งหมด 11 คัน โดยจัดเก็บมูลฝอยในเขตพื้นที่ อบต.ต่าง ๆ ที่ไม่มีรถเก็บขนมูลฝอยหรือมีแต่ไม่เพียงพอ วันละ 2 เที่ยว คิดเป็นมูลฝอยประมาณ 40 ตัน/วัน

2. การกำจัดมูลฝอย

วิธีการกำจัดมูลฝอยในปัจจุบัน คือ นำมูลฝอยเทกองกลางแจ้ง (เดิมเป็นบ่อดิน) โดยที่ไม่ได้มีการกลบทับด้วยดิน ขาดการบดอัดมูลฝอยที่ดี ขาดการป้องกันในด้านต่าง ๆ กล่าวคือ น้ำชะมูลฝอยสามารถไหลลงสู่พื้นที่ข้างเคียงและแหล่งน้ำใต้ดิน เนื่องจากก้นบ่อไม่ได้ปูวัสดุกันซึม และไม่มีระบบระบายก๊าซที่เกิดจากการย่อยสลายของมูลฝอย ระบบบำบัดน้ำเสียหรือน้ำชะมูลฝอย เป็นระบบเติมอากาศ (Aerated Lagoon) แต่ในปัจจุบันได้ยกเลิกการใช้งานแล้ว เนื่องจากไม่สามารถระบายน้ำทิ้งที่ผ่านการบำบัดแล้วลงสู่แหล่งน้ำสาธารณะได้ เพราะน้ำทิ้งมีสีดำ ทำให้เกิดการประท้วงจากชาวบ้านซึ่งต่อมาบ่อบำบัดน้ำเสียดังกล่าว จึงใช้เพื่อกักน้ำเสียจากกองมูลฝอยและน้ำเสียส่วนเกินได้ปนเปื้อนไปทั่ว ๆ บริเวณ ทำให้ในขณะนี้มีบึงน้ำเสียอยู่ข้างสถานที่กำจัดมูลฝอยมีความลึกประมาณ 0.5 เมตร

3. ปัญหาการจัดการมูลฝอยปัจจุบัน

(1) วิธีการกำจัดไม่ถูกต้องตามหลักวิชาการ ใช้การเทกองกลางแจ้งแล้วเผาเป็นครั้งคราวก่อให้เกิดผลกระทบต่อพื้นที่ใกล้เคียง (กลิ่นเหม็นและควันไฟ)

(2) ปัญหาการจัดการขยะมูลฝอยติดเชื้อของสถานพยาบาลในจังหวัดนนทบุรี เมื่อทำการเก็บขนแล้วจะนำมาทิ้งปะปนกับมูลฝอยทั่วไป

(3) ปัญหาเรื่องกลิ่นและแมลง เนื่องจากขาดงบประมาณในการซื้อสารเคมีควบคุมแมลง

(4) ปัญหาจากน้ำชะมูลฝอยไหลล้นออกสู่บริเวณรอบ ๆ กองมูลฝอย (ขากการควบคุมและบำบัด)

(5) ปัญหาเรื่องสีในน้ำทิ้ง ทำให้ไม่สามารถระบายน้ำที่บำบัดแล้วออกจากพื้นที่ได้

(6) กากของเสียจากโรงงานอุตสาหกรรม เช่น กากตะกอนของระบบบำบัดน้ำเสียได้ถูกนำมาทิ้งร่วมกับมูลฝอยชุมชน ทำให้เกิดการปนเปื้อนต่อดินและน้ำใต้ดินสูงมาก ควรมีการห้ามนำมาทิ้งโดยเด็ดขาด

(7) สิ่งปฏิกูล (Night Soil) ที่รถดูดสิ่งปฏิกูลนำมาถ่ายทิ้งในบริเวณกองมูลฝอย ทำให้เกิดความเสี่ยงต่อการเกิดโรคระบาด และการแพร่กระจายของเชื้อโรค จึงจำเป็นต้องก่อสร้างระบบบำบัดสิ่งปฏิกูลขึ้นมาโดยเฉพาะ

(8) การเกิดเพลิงไหม้กองมูลฝอยทุก ๆ ปีในฤดูแล้ง จะต้องมีการเฝ้าระวัง และควบคุมอย่างใกล้ชิดจากผู้บริหารและผู้รับผิดชอบและต้องมีการประสานงานกับหน่วยงานที่มีหน้าที่รับผิดชอบในการดับเพลิง

(9) ขาดระบบการสื่อสาร และการรายงานผลหรือเหตุการณ์ต่าง ๆ ที่มีประสิทธิภาพระหว่างพื้นที่ทิ้งขยะเจ้าหน้าที่รับผิดชอบ

ระบบจัดการมูลฝอยของเทศบาลนครนนทบุรี

1. ระบบเก็บรวบรวมมูลฝอย

ปัจจุบันเทศบาลนครนนทบุรี มีรถยนต์เก็บขนมูลฝอยจำนวน 60 คัน และเรือเก็บขนมูลฝอยตามบ้านเรือนริมน้ำอีก 4 ลำ โดยเก็บขนมูลฝอย 2 เที่ยว/วัน รวมปริมาณมูลฝอยที่เก็บขนได้ 338.27 ตัน/วัน

2. ระบบกำจัดมูลฝอย

กำจัดโดยวิธีการเทกองกลางแจ้ง ที่สถานที่กำจัดมูลฝอยของ อบจ.นนทบุรี ซึ่งตั้งอยู่ที่หมู่ 8 ต.คลองขวาง อ.ไทรน้อย โดยอยู่ห่างจากสำนักงานเทศบาลฯ เป็นระยะทาง 35 กิโลเมตร

3. ปัญหาการจัดการมูลฝอย

(1) ไม่มีสถานที่กำจัดมูลฝอยเป็นของตนเอง

(2) มีปัญหาในการนำมูลฝอยไปทิ้งยังสถานที่กำจัดของ อบจ.นนทบุรี เนื่องจากถนนทางเข้า และถนนภายในชำรุด ทำให้เสียเวลาในการเท และทำให้รถเก็บมูลฝอยชำรุดบ่อย

ระบบจัดการมูลฝอยของเทศบาลนครปากเกร็ด

1. ระบบเก็บรวบรวมมูลฝอย

ปัจจุบันเทศบาลนครปากเกร็ด มีรถยนต์เก็บขนมูลฝอยจำนวน 52 คัน โดยเก็บขนมูลฝอย 2 เที่ยว/วัน รวมปริมาณมูลฝอยที่เก็บขนได้ 182.24 ตัน/วัน

2. ระบบกำจัดมูลฝอย

กำจัดโดยวิธีการเทกองกลางแจ้ง ที่สถานที่กำจัดมูลฝอยของ อบจ.นนทบุรี ซึ่งตั้งอยู่ที่หมู่ 8 ต.คลองขวาง อ.ไทรน้อย โดยอยู่ห่างจากสำนักงานเทศบาลฯ เป็นระยะทาง 50 กิโลเมตร

3. ปัญหาการจัดการมูลฝอย

(1) ไม่สามารถกำจัดมูลฝอยได้ด้วยตนเอง เนื่องจากมีปัญหาประชาชนที่อาศัยอยู่โดยรอบสถานที่กำจัดต่อต้าน

(2) มีปัญหาในการนำมูลฝอยไปทิ้งยังสถานที่กำจัดของ อบจ.นนทบุรี เนื่องจากถนนทางเข้า และถนนภายในชำรุด ทำให้เสียเวลาในการเท และทำให้รถเก็บขนมูลฝอยชำรุด ประกอบกับสถานที่กำจัดมูลฝอยของ อบจ.นนทบุรี ถูกใช้จนเต็ม จนมีสภาพเป็นภูเขาขยะขนาดใหญ่

ระบบจัดการมูลฝอยของเทศบาลเมืองบางบัวทอง

1. ระบบเก็บรวบรวมมูลฝอย

ปัจจุบันเทศบาลเมืองบางบัวทอง มีรถยนต์เก็บขนมูลฝอยจำนวน 10 คัน โดยเก็บขนมูลฝอยวันละ 1 เที่ยว รวมปริมาณมูลฝอยที่เก็บขนได้ 40.12 ตัน/วัน

2. ระบบกำจัดมูลฝอย

กำจัดโดยวิธีการเทกองกลางแจ้ง ที่สถานที่กำจัดมูลฝอยของ อบจ.นนทบุรี ซึ่งตั้งอยู่ที่หมู่ 8 ต.คลองขวาง อ.ไทรน้อย โดยอยู่ห่างจากสำนักงานเทศบาลฯ เป็นระยะทาง 20 กิโลเมตร

3. ปัญหาการจัดการมูลฝอย

(1) ไม่มีสถานที่กำจัดมูลฝอยของตนเอง

(2) มีปัญหาในการนำมูลฝอยไปทิ้งยังสถานที่กำจัดของ อบจ.นนทบุรี เนื่องจากถนนทางเข้า และถนนภายในชำรุด ทำให้เสียเวลาในการเท และทำให้รถเก็บขนมูลฝอยชำรุด

ระบบจัดการมูลฝอยของเทศบาลตำบลบางกรวย

1. ระบบเก็บรวบรวมมูลฝอย

ปัจจุบันเทศบาลตำบลบางกรวย มีรถยนต์เก็บขนมูลฝอยจำนวน 10 คัน โดยเก็บขนมูลฝอยวันละ 1 เที่ยว รวมปริมาณมูลฝอยที่เก็บขนได้ 65.26 ตัน/วัน

2. ระบบกำจัดมูลฝอย

กำจัดโดยวิธีการเทกองกลางแจ้ง ที่สถานที่กำจัดมูลฝอยของ อบจ.นนทบุรี ซึ่งตั้งอยู่ที่หมู่ 8 ต.คลองขวาง อ.ไทรน้อย โดยอยู่ห่างจากสำนักงานเทศบาลฯ เป็นระยะทาง 60 กิโลเมตร

3. ปัญหาการจัดการมูลฝอย

(1) ไม่มีสถานที่กำจัดมูลฝอยของตนเอง

(2) มีปัญหาในการนำมูลฝอยไปทิ้งยังสถานที่กำจัดของ อบจ.นนทบุรี เนื่องจากถนนทางเข้า และถนนภายในชำรุด ทำให้เสียเวลาในการเท และทำให้รถเก็บขนมูลฝอยชำรุด

ระบบจัดการมูลฝอยของเทศบาลตำบลบางศรีเมือง

1. ระบบเก็บรวบรวมมูลฝอย

ปัจจุบันเทศบาลตำบลบางศรีเมือง มีรถยนต์เก็บขนมูลฝอยจำนวน 10 คัน โดยเก็บขนมูลฝอยวันละ 1 เที่ยว รวมปริมาณมูลฝอยที่เก็บขนได้ 28.87 ตัน/วัน

2. ระบบกำจัดมูลฝอย

กำจัดโดยวิธีการเทกองกลางแจ้ง ที่สถานที่กำจัดมูลฝอยของ อบจ.นนทบุรี ซึ่งตั้งอยู่ที่หมู่ 8 ต.คลองขวาง อ.ไทรน้อย โดยอยู่ห่างจากสำนักงานเทศบาลฯ เป็นระยะทาง 32 กิโลเมตร

3. ปัญหาการจัดการมูลฝอย

(1) ไม่มีสถานที่กำจัดมูลฝอยของตนเอง

(2) มีปัญหาในการนำมูลฝอยไปทิ้งยังสถานที่กำจัดของ อบจ.นนทบุรี เนื่องจากถนนทางเข้า และถนนภายในชำรุด ทำให้รถเก็บขนมูลฝอยชำรุด และทำให้เสียเวลาในการรอคิวเพื่อเทมูลฝอย เนื่องจากมีรถเก็บขนมูลฝอยจากหน่วยงานอื่นที่มาร่วมกำจัดด้วยเป็นจำนวนมาก

ระบบจัดการมูลฝอยของเทศบาลตำบลบางใหญ่

1. ระบบเก็บรวบรวมมูลฝอย

ปัจจุบันเทศบาลตำบลบางใหญ่ มีรถยนต์เก็บขนมูลฝอยจำนวน 3 คัน โดยเก็บขนมูลฝอยวันละ 1 เที่ยว รวมปริมาณมูลฝอยที่เก็บขนได้ 10.27 ตัน/วัน

2. ระบบกำจัดมูลฝอย

กำจัดโดยวิธีการเทกองกลางแจ้งบ ที่สถานที่กำจัดมูลฝอยของ อบจ.นนทบุรี ซึ่งตั้งอยู่ที่หมู่ 8 ต.คลองขวาง อ.ไทรน้อย โดยอยู่ห่างจากสำนักงานเทศบาลฯ เป็นระยะทาง 34 กิโลเมตร

3. ปัญหาการจัดการมูลฝอย

(1) ไม่มีสถานที่กำจัดมูลฝอยของตนเอง

(2) มีปัญหาในการนำมูลฝอยไปทิ้งยังสถานที่กำจัดของ อบจ.นนทบุรี เนื่องจากถนนทางเข้า และถนนภายในชำรุด ทำให้รถเก็บขนมูลฝอยชำรุด และทำให้เสียเวลาในการรอคิวเพื่อเทมูลฝอย เนื่องจากมีรถเก็บขนมูลฝอยจากหน่วยงานอื่นที่มาร่วมกำจัดด้วยเป็นจำนวนมาก

ระบบจัดการมูลฝอยของเทศบาลตำบลบางม่วง

1. ระบบเก็บรวบรวมมูลฝอย

ปัจจุบันเทศบาลตำบลบางม่วง มีรถยนต์เก็บขนมูลฝอยจำนวน 3 คัน โดยเก็บขนมูลฝอยวันละ 1 เที่ยว รวมปริมาณมูลฝอยที่เก็บขนได้ 8.07 ตัน/วัน

2. ระบบกำจัดมูลฝอย

กำจัดโดยวิธีการเทกองกลางแจ้ง ที่สถานที่กำจัดมูลฝอยของ อบจ.นนทบุรี ซึ่งตั้งอยู่ที่หมู่ 8 ต.คลองขวาง อ.ไทรน้อย โดยอยู่ห่างจากสำนักงานเทศบาลฯ เป็นระยะทาง 20 กิโลเมตร

3. ปัญหาการจัดการมูลฝอย

(1) ไม่มีสถานที่กำจัดมูลฝอยของตนเอง

(2) มีปัญหาในการนำมูลฝอยไปทิ้งยังสถานที่กำจัดของ อบจ.นนทบุรี เนื่องจากถนนทางเข้าและถนนภายในชำรุด ทำให้รถเก็บขนมูลฝอยชำรุด และทำให้เสียเวลาในการรอคิวเพื่อเทมูลฝอย เนื่องจากมีรถเก็บขนมูลฝอยจากหน่วยงานอื่นที่มาร่วมกำจัดด้วยเป็นจำนวนมาก

ระบบจัดการมูลฝอยของเทศบาลตำบลปลายบาง

1. ระบบเก็บรวบรวมมูลฝอย

ปัจจุบันเทศบาลตำบลปลายบาง มีรถยนต์เก็บขนมูลฝอยจำนวน 5 คัน โดยเก็บขนมูลฝอยวันละ 1 เที่ยว รวมปริมาณมูลฝอยที่เก็บขนได้ 19.55 ตัน/วัน

2. ระบบกำจัดมูลฝอย

กำจัดโดยวิธีการเทกองกลางแจ้ง ที่สถานที่กำจัดมูลฝอยของ อบจ.นนทบุรี ซึ่งตั้งอยู่ที่หมู่ 8 ต.คลองขวาง อ.ไทรน้อย โดยอยู่ห่างจากสำนักงานเทศบาลฯ เป็นระยะทาง 30 กิโลเมตร

3. ปัญหาการจัดการมูลฝอย

(1) ไม่มีสถานที่กำจัดมูลฝอยของตนเอง

(2) มีปัญหาในการนำมูลฝอยไปทิ้งยังสถานที่กำจัดของ อบจ.นนทบุรี เนื่องจากถนนทางเข้า และถนนภายในชำรุด ทำให้รถเก็บขนมูลฝอยชำรุด และทำให้เสียเวลาในการรอคิวเพื่อเทมูลฝอย เนื่องจากมีรถเก็บขนมูลฝอยจากหน่วยงานอื่นที่มาร่วมกำจัดด้วยเป็นจำนวนมาก

ระบบจัดการมูลฝอยของเทศบาลตำบลไทรน้อย

1. ระบบเก็บรวบรวมมูลฝอย

ปัจจุบันเทศบาลตำบลไทรน้อย มีรถยนต์เก็บขนมูลฝอยจำนวน 1 คัน โดยเก็บขนมูลฝอยวันละ 1 เที่ยว รวมปริมาณมูลฝอยที่เก็บขนได้ 5.22 ตัน/วัน

2. ระบบกำจัดมูลฝอย

กำจัดโดยวิธีการเทกองกลางแจ้ง ที่สถานที่กำจัดมูลฝอยของ อบจ.นนทบุรี ซึ่งตั้งอยู่ที่หมู่ 8 ต.คลองขวาง อ.ไทรน้อย โดยอยู่ห่างจากสำนักงานเทศบาลฯ เป็นระยะทาง 6 กิโลเมตร

3. ปัญหาการจัดการมูลฝอย

(1) ไม่มีสถานที่กำจัดมูลฝอยของตนเอง

(2) มีปัญหาในการนำมูลฝอยไปทิ้งยังสถานที่กำจัดของ อบจ.นนทบุรี เนื่องจากถนนทางเข้า และถนนภายในชำรุด ทำให้รถเก็บขนมูลฝอยชำรุด และทำให้เสียเวลาในการรอคิวเพื่อเทมูลฝอย เนื่องจากมีรถเก็บขนมูลฝอยจากหน่วยงานอื่นที่มาร่วมกำจัดด้วยเป็นจำนวนมาก

(3) ปัจจุบันมีปริมาณมูลฝอยจากบ้านจัดสรรเพิ่มมากขึ้น ทำให้มีปัญหาเก็บขนมูลฝอยไม่ทัน เนื่องจากมีรถเก็บขนเพียงคันเดียว

ระบบจัดการมูลฝอยขององค์การบริหารส่วนตำบลบางเลน

1. ระบบเก็บรวบรวมมูลฝอย

ปัจจุบันองค์การบริหารส่วนตำบลบางเลน มีรถยนต์เก็บขนมูลฝอยจำนวน 2 คัน โดยเก็บขนมูลฝอยวันละ 2 เที่ยว รวมปริมาณมูลฝอยที่เก็บขนได้ 9.97 ตัน/วัน

2. ระบบกำจัดมูลฝอย

กำจัดโดยวิธีการเทกองกลางแจ้ง ที่สถานที่กำจัดมูลฝอยของ อบจ.นนทบุรี ซึ่งตั้งอยู่ที่หมู่ 8 ต.คลองขวาง อ.ไทรน้อย

3. ปัญหาการจัดการมูลฝอย

(1) ไม่มีสถานที่ และงบประมาณในการกำจัดมูลฝอยด้วยตนเอง

(2) มีปัญหาในการนำมูลฝอยไปทิ้งยังสถานที่กำจัดของ อบจ.นนทบุรี เนื่องจากถนนทางเข้า และถนนภายในชำรุด ทำให้รถเก็บขนมูลฝอยชำรุด และทำให้เสียเวลาในการรอคิวเพื่อเทมูลฝอย เนื่องจากมีรถเก็บขนมูลฝอยจากหน่วยงานอื่นที่มาร่วมกำจัดด้วยเป็นจำนวนมาก

ระบบจัดการมูลฝอยขององค์การบริหารส่วนตำบลบางม่วง

1. ระบบเก็บรวบรวมมูลฝอย

ปัจจุบันองค์การบริหารส่วนตำบลบางม่วง มีรถยนต์เก็บขนมูลฝอยจำนวน 3 คัน โดยเก็บขนมูลฝอยวันละ 1 เที่ยว รวมปริมาณมูลฝอยที่เก็บขนได้ 7.09 ตัน/วัน

2. ระบบกำจัดมูลฝอย

กำจัดโดยวิธีการเทกองกลางแจ้ง ที่สถานที่กำจัดมูลฝอยของ อบจ.นนทบุรี ซึ่งตั้งอยู่ที่หมู่ 8 ต.คลองขวาง อ.ไทรน้อย

3. ปัญหาการจัดการมูลฝอย

(1) ไม่มีสถานที่ และงบประมาณในการกำจัดมูลฝอยด้วยตนเอง

(2) มีปัญหาในการนำมูลฝอยไปทิ้งยังสถานที่กำจัดของ อบจ.นนทบุรี เนื่องจากถนนทางเข้า และถนนภายในชำรุด ทำให้รถเก็บขนมูลฝอยชำรุด และทำให้เสียเวลาในการรอคิวเพื่อเทมูลฝอย เนื่องจากมีรถเก็บขนมูลฝอยจากหน่วยงานอื่นที่มาร่วมกำจัดด้วยเป็นจำนวนมาก

ระบบจัดการมูลฝอยขององค์การบริหารส่วนตำบลไทรม้า

1. ระบบเก็บรวบรวมมูลฝอย

ปัจจุบันองค์การบริหารส่วนตำบลไทรม้า มีรถยนต์เก็บขนมูลฝอยจำนวน 4 คัน โดยเก็บขนมูลฝอยวันละ 1 เที่ยว รวมปริมาณมูลฝอยที่เก็บขนได้ 13.13 ตัน/วัน

2. ระบบกำจัดมูลฝอย

กำจัดโดยวิธีการเทกองกลางแจ้ง ที่สถานที่กำจัดมูลฝอยของ อบจ.นนทบุรี ซึ่งตั้งอยู่ที่หมู่ 8 ต.คลองขวาง อ.ไทรน้อย

3. ปัญหาการจัดการมูลฝอย

(1) ไม่มีสถานที่ และงบประมาณในการกำจัดมูลฝอยด้วยตนเอง

(2) มีปัญหาในการนำมูลฝอยไปทิ้งยังสถานที่กำจัดของ อบจ.นนทบุรี เนื่องจากถนนทางเข้า และถนนภายในชำรุด ทำให้รถเก็บขนมูลฝอยชำรุด และทำให้เสียเวลาในการรอคิวเพื่อเทมูลฝอย เนื่องจากมีรถเก็บขนมูลฝอยจากหน่วยงานอื่นที่มาร่วมกำจัดด้วยเป็นจำนวนมาก

ระบบจัดการมูลฝอยขององค์การบริหารส่วนตำบลเสาธงหิน

1. ระบบเก็บรวบรวมมูลฝอย

ปัจจุบันองค์การบริหารส่วนตำบลเสาธงหิน มีรถยนต์เก็บขนมูลฝอยจำนวน 4 คัน โดยเก็บขนมูลฝอยวันละ 1 เที่ยว รวมปริมาณมูลฝอยที่เก็บขนได้ 28.56 ตัน/วัน

2. ระบบกำจัดมูลฝอย

กำจัดโดยวิธีการเทกองกลางแจ้ง ที่สถานที่กำจัดมูลฝอยของ อบจ.นนทบุรี ซึ่งตั้งอยู่ที่หมู่ 8 ต.คลองขวาง อ.ไทรน้อย

3. ปัญหาการจัดการมูลฝอย

(1) ไม่มีสถานที่ และงบประมาณในการกำจัดมูลฝอยด้วยตนเอง

(2) มีปัญหาในการนำมูลฝอยไปทิ้งยังสถานที่กำจัดของ อบจ.นนทบุรี เนื่องจากถนนทางเข้า และถนนภายในชำรุด ทำให้รถเก็บขนมูลฝอยชำรุด และทำให้เสียเวลาในการรอคิวเพื่อเทมูลฝอย เนื่องจากมีรถเก็บขนมูลฝอยจากหน่วยงานอื่นที่มาร่วมกำจัดด้วยเป็นจำนวนมาก

ระบบจัดการมูลฝอยขององค์การบริหารส่วนตำบลบางขนุน

1. ระบบเก็บรวบรวมมูลฝอย

ปัจจุบันองค์การบริหารส่วนตำบลบางขนุน มีรถยนต์เก็บขนมูลฝอยจำนวน 1 คัน โดยเก็บขนมูลฝอยวันละ 1 เที่ยว รวมปริมาณมูลฝอยที่เก็บขนได้ 1.90 ตัน/วัน

2. ระบบกำจัดมูลฝอย

กำจัดโดยวิธีการเทกองกลางแจ้ง ที่สถานที่กำจัดมูลฝอยของ อบจ.นนทบุรี ซึ่งตั้งอยู่ที่หมู่ 8 ต.คลองขวาง อ.ไทรน้อย

3. ปัญหาการจัดการมูลฝอย

(1) ไม่มีสถานที่ และงบประมาณในการกำจัดมูลฝอยด้วยตนเอง

(2) มีปัญหาในการนำมูลฝอยไปทิ้งยังสถานที่กำจัดของ อบจ.นนทบุรี เนื่องจากถนนทางเข้า และถนนภายในชำรุด ทำให้รถเก็บขนมูลฝอยชำรุด และทำให้เสียเวลาในการรอคิวเพื่อเทมูลฝอย เนื่องจากมีรถเก็บขนมูลฝอยจากหน่วยงานอื่นที่มาร่วมกำจัดด้วยเป็นจำนวนมาก

ระบบจัดการมูลฝอยขององค์การบริหารส่วนตำบลบางขุนกอง

1. ระบบเก็บรวบรวมมูลฝอย

ปัจจุบันมีรถยนต์เก็บขนมูลฝอยจำนวน 1 คัน โดยเก็บขนมูลฝอยวันละ 2 เที่ยว รวมปริมาณมูลฝอยที่เก็บขนได้ 2.87 ตัน/วัน

2. ระบบกำจัดมูลฝอย

กำจัดโดยวิธีการเทกองกลางแจ้ง ที่สถานที่กำจัดมูลฝอยของ อบจ.นนทบุรี ซึ่งตั้งอยู่ที่หมู่ 8 ต.คลองขวาง อ.ไทรน้อย

3. ปัญหาการจัดการมูลฝอย

(1) ไม่มีสถานที่ และงบประมาณในการกำจัดมูลฝอยด้วยตนเอง

(2) มีปัญหาในการนำมูลฝอยไปทิ้งยังสถานที่กำจัดของ อบจ.นนทบุรี เนื่องจากถนนทางเข้า และถนนภายในชำรุด ทำให้รถเก็บขนมูลฝอยชำรุด และทำให้เสียเวลาในการรอคิวเพื่อเทมูลฝอย เนื่องจากมีรถเก็บขนมูลฝอยจากหน่วยงานอื่นที่มาร่วมกำจัดด้วยเป็นจำนวนมาก

ระบบจัดการมูลฝอยขององค์การบริหารส่วนตำบลไทรน้อย

1. ระบบเก็บรวบรวมมูลฝอย

ปัจจุบันองค์การบริหารส่วนตำบลไทรน้อย มีรถยนต์เก็บขนมูลฝอยจำนวน 1 คัน โดยเก็บขนมูลฝอยวันละ 2 เที่ยว รวมปริมาณมูลฝอยที่เก็บขนได้ 4.51 ตัน/วัน

2. ระบบกำจัดมูลฝอย

กำจัดโดยวิธีการเทกองกลางแจ้ง ที่สถานที่กำจัดมูลฝอยของ อบจ.นนทบุรี ซึ่งตั้งอยู่ที่หมู่ 8 ต.คลองขวาง อ.ไทรน้อย

3. ปัญหาการจัดการมูลฝอย

(1) ไม่มีสถานที่ และงบประมาณในการกำจัดมูลฝอยด้วยตนเอง

(2) มีปัญหาในการนำมูลฝอยไปทิ้งยังสถานที่กำจัดของ อบจ.นนทบุรี เนื่องจากถนนทางเข้า และถนนภายในชำรุด ทำให้รถเก็บขนมูลฝอยชำรุด และทำให้เสียเวลาในการรอคิวเพื่อเทมูลฝอย เนื่องจากมีรถเก็บขนมูลฝอยจากหน่วยงานอื่นที่มาร่วมกำจัดด้วยเป็นจำนวนมาก

ระบบจัดการมูลฝอยขององค์การบริหารส่วนตำบลขุนศรี

1. ระบบเก็บรวบรวมมูลฝอย

ปัจจุบันมีรถยนต์เก็บขนมูลฝอยจำนวน 2 คัน โดยเก็บขนมูลฝอยวันละ 2 เที่ยว รวมปริมาณมูลฝอยที่เก็บขนได้ 1.45 ตัน/วัน

2. ระบบกำจัดมูลฝอย

กำจัดโดยวิธีการเทกองกลางแจ้ง ที่สถานที่กำจัดมูลฝอยของ อบจ.นนทบุรี ซึ่งตั้งอยู่ที่หมู่ 8 ต.คลองขวาง อ.ไทรน้อย

3. ปัญหาการจัดการมูลฝอย

(1) ไม่มีสถานที่ และงบประมาณในการกำจัดมูลฝอยด้วยตนเอง

(2) มีปัญหาในการนำมูลฝอยไปทิ้งยังสถานที่กำจัดของ อบจ.นนทบุรี เนื่องจากถนนทางเข้า และถนนภายในชำรุด ทำให้รถเก็บขนมูลฝอยชำรุด และทำให้เสียเวลาในการรอคิวเพื่อเทมูลฝอย เนื่องจากมีรถเก็บขนมูลฝอยจากหน่วยงานอื่นที่มาร่วมกำจัดด้วยเป็นจำนวนมาก

ระบบจัดการมูลฝอยขององค์การบริหารส่วนตำบลบางบัวทอง

1. ระบบเก็บรวบรวมมูลฝอย

ปัจจุบันองค์การบริหารส่วนตำบลบางบัวทอง มีรถยนต์เก็บขนมูลฝอยจำนวน 3 คัน โดยเก็บขนมูลฝอยวันละ 2 เที่ยว รวมปริมาณมูลฝอยที่เก็บขนได้ 15.20 ตัน/วัน

2. ระบบกำจัดมูลฝอย

กำจัดโดยวิธีการเทกองกลางแจ้ง ที่สถานที่กำจัดมูลฝอยของ อบจ.นนทบุรี ซึ่งตั้งอยู่ที่หมู่ 8 ต.คลองขวาง อ.ไทรน้อย

3. ปัญหาการจัดการมูลฝอย

(1) ไม่มีสถานที่ และงบประมาณในการกำจัดมูลฝอยด้วยตนเอง

(2) มีปัญหาในการนำมูลฝอยไปทิ้งยังสถานที่กำจัดของ อบจ.นนทบุรี เนื่องจากถนนทางเข้า และถนนภายในชำรุด ทำให้รถเก็บขนมูลฝอยชำรุด และทำให้เสียเวลาในการรอคิวเพื่อเทมูลฝอย เนื่องจากมีรถเก็บขนมูลฝอยจากหน่วยงานอื่นที่มาร่วมกำจัดด้วยเป็นจำนวนมาก

ระบบจัดการมูลฝอยขององค์การบริหารส่วนตำบลบางรักน้อย

1. ระบบเก็บรวบรวมมูลฝอย

ปัจจุบันองค์การบริหารส่วนตำบลบางรักน้อย มีรถยนต์เก็บขนมูลฝอยจำนวน 2 คัน โดยเก็บขนมูลฝอยวันละ 2 เที่ยว รวมปริมาณมูลฝอยที่เก็บขนได้ 11.40 ตัน/วัน

2. ระบบกำจัดมูลฝอย

กำจัดโดยวิธีการเทกองกลางแจ้ง ที่สถานที่กำจัดมูลฝอยของ อบจ.นนทบุรี ซึ่งตั้งอยู่ที่หมู่ 8 ต.คลองขวาง อ.ไทรน้อย

3. ปัญหาการจัดการมูลฝอย

(1) ไม่มีสถานที่ และงบประมาณในการกำจัดมูลฝอยด้วยตนเอง

(2) มีปัญหาในการนำมูลฝอยไปทิ้งยังสถานที่กำจัดของ อบจ.นนทบุรี เนื่องจากถนนทางเข้า และถนนภายในชำรุด ทำให้รถเก็บขนมูลฝอยชำรุด และทำให้เสียเวลาในการรอคิวเพื่อเทมูลฝอย เนื่องจากมีรถเก็บขนมูลฝอยจากหน่วยงานอื่นที่มาร่วมกำจัดด้วยเป็นจำนวนมาก

ระบบจัดการมูลฝอยขององค์การบริหารส่วนตำบลท่าอิฐ

1. ระบบเก็บรวบรวมมูลฝอย

ปัจจุบันมีรถยนต์เก็บขนมูลฝอยจำนวน 2 คัน โดยเก็บขนมูลฝอยวันละ 2 เที่ยว รวมปริมาณมูลฝอยที่เก็บขนได้ 10.69 ตัน/วัน

2. ระบบกำจัดมูลฝอย

กำจัดโดยวิธีการเทกองกลางแจ้ง ที่สถานที่กำจัดมูลฝอยของ อบจ.นนทบุรี ซึ่งตั้งอยู่ที่หมู่ 8 ต.คลองขวาง อ.ไทรน้อย

3. ปัญหาการจัดการมูลฝอย

(1) ไม่มีสถานที่ และงบประมาณในการกำจัดมูลฝอยด้วยตนเอง

(2) มีปัญหาในการนำมูลฝอยไปทิ้งยังสถานที่กำจัดของ อบจ.นนทบุรี เนื่องจากถนนทางเข้า และถนนภายในชำรุด ทำให้รถเก็บขนมูลฝอยชำรุด และทำให้เสียเวลาในการรอคิวเพื่อเทมูลฝอย เนื่องจากมีรถเก็บขนมูลฝอยจากหน่วยงานอื่นที่มาร่วมกำจัดด้วยเป็นจำนวนมาก

BIOGRAPHY

NAME Police Captain Worapan Pisutthanon

DATE OF BIRTH 11 April 1976

PLACE OF BIRTH Bangkok, Thailand

INSTITUTION ATTENDED Police Cadet College, 1994-1998
Bachelor of Political Science (Police)
Mahidol University, 1999-2003
Master of Education (Environmental Education)

POSITION & OFFICE 1999 to present
Police Captain,
Sai Noi District Police Station,
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