

**THE PROCESS OF RESILIENCE PROMOTION IN SCHOOL  
CHILDREN IN AN URBAN SLUM AREA**

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Thesis  
entitle

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CHILDREN IN AN URBAN SLUM AREA**

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**THE PROCESS OF RESILIENCE PROMOTION IN SCHOOL CHILDREN IN AN URBAN SLUM AREA**

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**ABSTRACT**

The research used mixed methods to examine the process of resilience promotion for school children in an urban slum area. The specific objectives were to examine: 1) Resilience traits; 2) Protective factors of family, school, peers, and community; 3) Adaptive outcomes; 4) Factors predicting resilience and adaptive outcomes; and 5) Processes of resilience promotion. The subjects in the quantitative study were selected from secondary students in an urban slum area in Bangkok. Data were collected from 306 respondents using a set of questionnaires and analyzed using descriptive and inferential statistics. The qualitative study used purposive sampling from cluster groups for in-depth interviews for content analysis.

The results of this study showed that the means of the resilience traits of sense of purpose and ethics were at the high level. The means for sense of self and problem solving were at the low level. The means of the protective factors of family and school were at the high level as well as the mean of adaptive outcomes in learning achievement, but the mean of social behavior was at the low level. The protective factors can predict resilience traits by 37.2%. Some of the resilience traits can predict adaptive outcomes. The qualitative result revealed three resilience promotion processes: 1) The process of promotion and competency development was important to establish and maintain self-esteem and self-efficacy and promote positive behaviors; 2) Risk was reduced by prevention or suppression so children could deal with a problem; 3) The process of problem solving and healing management occurred in children exposed to risk factors, including problem solving management and reducing negative impacts from exposure to risks.

Suggestions include promotion and competency development and risk factors prevention. Problem solving and healing management are important processes to promote children's resilience traits by family, school, peers, and community.

**KEY WORDS : RESILIENCE TRAITS/ RISK FACTORS/ ADAPTIVE OUTCOME/ SCHOOL CHILDREN**

กระบวนการส่งเสริมความยืดหยุ่นทนทานของเด็กนักเรียนในชุมชนแออัดในเขตเมือง

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คณะกรรมการที่ปรึกษาวิทยานิพนธ์ ศุภวัฑฒ์ พลาชน้อย, กศ.ด., เนาวรัตน์ พลาชน้อย, กศ.ด., สุริยเดว ทรีปาตี, พ.บ.

#### บทคัดย่อ

การวิจัยนี้มีวัตถุประสงค์เพื่อศึกษากระบวนการส่งเสริมความยืดหยุ่นทนทานของเด็กนักเรียนในชุมชนแออัดในเขตเมือง โดยศึกษา 1) คุณลักษณะความยืดหยุ่นทนทาน 2) ปัจจัยปกป้องด้านครอบครัว โรงเรียน เพื่อน และด้านชุมชน 3) ผลลัพธ์การปรับตัว 4) ปัจจัยทำนายความยืดหยุ่นทนทานและผลลัพธ์การปรับตัว และ 5) กระบวนการส่งเสริมความยืดหยุ่นทนทาน ใช้วิธีการศึกษา แบบผสมผสาน การศึกษาเชิงปริมาณสุ่มตัวอย่างจากนักเรียนระดับมัธยมศึกษาตอนต้นที่อาศัยในชุมชนแออัดในเขตกรุงเทพมหานคร จำนวน 306 คน เก็บข้อมูลโดยใช้แบบสอบถาม วิเคราะห์ ข้อมูลด้วย สถิติเชิงพรรณนา และสถิติ เชิงอนุมาน การศึกษาเชิงคุณภาพเลือกตัวอย่างแบบเฉพาะเจาะจงจากกลุ่มศึกษาเชิงปริมาณ สัมภาษณ์เชิงลึกและวิเคราะห์ข้อมูลด้วยการวิเคราะห์เนื้อหา

ผลการศึกษา พบว่าคุณลักษณะความยืดหยุ่นทนทานเฉลี่ยด้านการมีเป้าหมายชีวิต และการมีศีลธรรม จริยธรรมอยู่ในระดับสูง ส่วนด้านความรู้สึที่ดีต่อตนเองและความสามารถ ในการเผชิญปัญหาอยู่ในระดับต่ำ ปัจจัยปกป้องเฉลี่ยด้านครอบครัวและโรงเรียนอยู่ในระดับสูง ส่วนปัจจัยปกป้องด้านเพื่อนและชุมชนอยู่ในระดับต่ำ สำหรับผลลัพธ์การปรับตัวเฉลี่ย พบว่า ด้านสัมฤทธิ์ผลทางการเรียนอยู่ในระดับสูง ส่วนพฤติกรรมทางสังคมอยู่ในระดับต่ำ ปัจจัยปกป้องสามารถร่วมกัน ทำนายความยืดหยุ่นทนทานได้ร้อยละ 37.2 ส่วนคุณลักษณะความยืดหยุ่นทนทาน พบว่าคุณลักษณะ สามารถทำนายผลลัพธ์การปรับตัวของนักเรียน กระบวนการส่งเสริมความยืดหยุ่นทนทาน พบ 3 กระบวนการ ที่สำคัญ คือ 1) กระบวนการส่งเสริมและพัฒนาศักยภาพ เป็นการเสริมสร้าง สนับสนุนให้เด็กเห็นคุณค่าในตน สมรรถนะแห่งตนและส่งเสริมให้ เด็กมีความสามารถเชิงบวก 2) กระบวนการป้องกันปัจจัยเสี่ยง คือ การ ป้องกันไม่ให้เด็กเข้าไปเผชิญกับปัญหา 3) กระบวนการแก้ปัญหาและเยียวยา เป็นกระบวนการที่พบ ในเด็กกลุ่มที่สัมผัสกับปัจจัยเสี่ยง ได้แก่ กระบวนการจัดการกับปัญหา และ กระบวนการลดผลกระทบจากการสัมผัสปัจจัยเสี่ยง

ข้อเสนอแนะ การส่งเสริมและพัฒนาศักยภาพ การป้องกันปัจจัยเสี่ยง และการแก้ปัญหาและเยียวยา เป็นกระบวนการที่ควรสนับสนุน โดยครอบครัว โรงเรียน เพื่อนและชุมชน เพื่อให้เด็กเกิดความยืดหยุ่นทนทาน

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## **CHAPTER I**

### **INTRODUCTION**

#### **1.1 Background and significance**

In the midst the boom in technology and globalization, social and economic changes in the structure of the transition from agricultural society to industrial society, the change from rural to urban growth including the effect of changes in population structure of Thai society's aging society, the child population has decreased in terms of quantity and quality as a result of the push for social development aimed at achieving a social objective. People have been driving for the success of their economic status and the dignity and interests. Success is thus in the competition system. Social trends are thus related to the view of business society in maximizing profit based on the goal of the success as the object to life and society (Phra Dhammapidok, u.d.). With such a modern concept, migration has been pursued among rural residents into the cities to earn a living, to obtain education in higher institutional settings, as well as to establish urban dwellings. As a result, the urban areas have had a large population in need of various necessities including housing and services. Many of them have to live in slum areas and are known as the urban poor. The productivity of the urban poor particularly children has been found from more than half of children and young people across the country. The results of the National Statistical Office (2006) nationwide survey showed that out of 370,356 slum children and people aged 6–24 years, 196,695 lived in Bangkok, representing 53.11 percent. These children are in urban communities that regarded as a center of cultural diversity with technological innovations, being cultivated on the belief that a modern democracy with independence in one's own decisions. This view is good but at the same time the children are both victims and at risk of becoming victims. The risk factors are poverty of the family, health problems, being unsafe, crime, substance abuse, sexual problems, poor educational system including moral issues that affect their learning capacity. Research and surveys have found that children leave school

prematurely or have not graduated from high school with subsequent problem issues (Grizzell, 2006; Sompong Jitradab, Suangkawatin, 2007; Tongasuk Mantatorn et al, 2007) as well as the stress from the environment. Children also have to face the changes in social, political, technological and natural disasters that occur in every phase of life. If the children cannot adapt, their physical, intellectual, and mental development will be affected (Pinker, 2002: 72).

Childhood is a phase in life that goes through changes and development in various aspects, physically, emotionally and intellectually. The child is to reach adulthood with rapid changes that has greatly influenced the inner feeling. There is growth in terms of height and weight as well as changes in sexual maturity. The mental development is the ability in abstract thinking. There are also developments socially, intellectually, and in ethics that reflect changes from the state of dependence on family members to responsible individuals with self-reliance (Sriruen Kaewkangwan, 2006: 50-52; Penpilai Littakananonta, 2007: 173). The development for the quality of the child population is significant to the future of a nation as the World Health Organization (WHO) said "Even though a child is only a part of a mass of humanism, they are 100 percent of the mass of humanism. So if a nation causes risk conditions to children, physically and mentally there would affect the future of the nation in as much as it has done so." (Suriyadeo Tripathi, n.d.b: 1) Children need to learn and acquire support for the development in line with their physical and mental development such as family care, learning through interactions with social and physical environment, increasing in their exposure as they are growing. The recreational facilities, the place identity, interactions with people and other means are important to the development of children in their knowledge, abilities, search, adventure, adaptation, new skills, imagination and creation memory forms (Frumkin, et al., 2004: 92-94).

The situation of problems, as well as risk factors for Thai students according to survey and research reports from various organizations in the years 2002–2009 found that the behavior of Thai youth is destructive or self-hurt. Such negative behavior included unsafe sexual behavior leading to premature pregnancy with the rate exceeding the WHO standard (10 percent). Youth in Bangkok face rather high emotional problems and behavioral abnormalities and lack rejection skills even though

the survey found that the average IQ of children in kindergarten and elementary schools in Bangkok was higher than the international standard and higher than the national average. There have been also a lack of moral, religious and cultural roots, loss of pride in being Thai, refusal of Buddhist ways of life, and experience of stress due to the pressure in a competitive society. The findings were consistent with the results of research related to children in Thailand which found the stress to be at moderate to high levels in urban areas including Bangkok and its vicinity. In the metropolitan area, the stress was mostly in the moderate to very high levels; 4.5 to 51.77 percent in the high to very high levels. In addition, the children have accumulated a “happiness-free circumstance”, such as being impatient, incapable of handling hard work, and self-focused, rather than public-focused. The negative behaviors such as alcohol abuse, substance abuse, Internet chat and gaming, and consumerism have affected the quality of life both in physical and mental health, such as an accident, sexually transmitted diseases and AIDS, suicide, obesity, stress, malnutrition, dental carries, and other health problems caused by poor personal hygiene and improper health behaviors (DMH, 2007; Ladda Mohsuwan, 2007; IPSR, 2003; IPSR, 2009; Ramjitti Institute, 2007–2008). In addition, it has also been found that the top five social issues affecting Thai people are the lack of family warmth, premature sex, the threat of the Internet, easy access to sinful stuff such as cigarettes, alcohol and drugs, and the lack of good role models or explicit good examples (Sukhum Chaloeysup, 2007:11).

Considering the causes of the collapsing or deteriorating quality of life of the children, Sompong Jitradab (2002), Phrakhru Sunthorndhammasophon (2005), and Sukhum Chaloeysup (2007) have consistently concluded that:

1.1.1 The problem of the family: A number of Thai families are not readily functional in almost all areas with such characteristics as poverty, low maturity, lack of knowledge and skills to raise their own children, lack of continuity in intellectual stimulation by learning activities, neglecting children, leaving children to the environmental risks and hazards that are linked to other problems, broken families, separated parents, lack of time for children, and domestic violence.

1.1.2 Materialism: The promotion of consumerism among Thai people with shopping and bonding with high-priced brand named merchandise, social values,

social status and class measured by the value of items used has caused children and youth to subscribe to such materialism considered as an important part in their lives.

1.1.3 Narcotics: The widespread abuse of drugs methamphetamine and ecstasy has occurred in Thailand for over five years and is likely to be more severe in the communities and schools.

1.1.4 Free sex: Many Thai children in secondary schools, aged 13–16 years have lovers; some have had sexual intercourse, changed partners, and offered covert prostitution as they have learned about sex from the media.

1.1.5 Behavioral and emotional violence: Children have accumulated violence from the family system with authoritarian father, from the schooling system that promotes competitiveness, the stress from taking tests and coursework, and reproduction of the media underlying the use of violence to solve problems using the variance of emotional and physical battering. Children are facing the world of ever winning; when they lose, they become severely disappointed, relying on emotion rather than reason, and committing suicide.

1.1.6 The Internet: In the age of information, the Internet causes a gap between children and parents as well as teachers. The Internet or the computer media has become the world library in which children learn and receive information quickly and abundantly. There are only about 2 percent of parents who are with children while using the computer. Therefore, most children use the Internet alone.

For improving the quality of life of the children, a number of countries have agreed to develop children under the World Declaration on Survival, Protection and Development of Children since 1990 and in 2002 the 27th UN General Assembly session in New York on children and endorsed the guidance document "A world fit for children", which focuses on the development and protection of children in four key priorities: promoting healthy lives; providing quality education for all; protecting children against abuse, exploitation and violence; and combating HIV/AIDS. Thailand has taken the agreement to formulate a national policy for children covering a 10-year period (2007–2016). The policy has the basic idea for child development based on the Constitution of the Kingdom of Thailand and the Convention on the Rights of the Child of which Thailand is a member. The knowledge and family-based, community-based, and area-based practices for the decade of child development place

importance on the use of positive and proactive approach coupled with defensive measures, emphasizing the promotion of children's capacity for problem-solving that requires a great deal of resources, and minimizing the impact on children and social disturbances.(OEC, 2007: 7)

When analyzing the paradigm in line with the aforementioned positive child development strategy using proactive measures, it was found that the concept in the development of capacity, strength of individuals, such as coping, adaptation, salutogenesis, and resilience, each of which carries different emphases. Coping is a reaction to stress that is complex and often found in the form of psychological mechanisms used to protect oneself through a short-term process. Adaptation is an attempt for self-development to suit the surrounding environment. Resilience and salutogenesis draw interest in a long-term process of the adaptation. Salutogenesis focuses on the characterization of health-related behaviors, while resilience focuses on characterizing individuals, the influence of families as well as other environmental factors, analysis of the mechanism of protection, the use of problem-solving and adjustment methods to maintain balance in the one's mind while facing critical events or later (Harrop, et al., 2007: 4-7; Mohaupt, 2008: 65-66). Resilience is thus different from salutogenesis, which implies the facing of sufferings or having common risk factors.

Resilience is a positive concept with a view of human strength in facing, fighting through, or living with adverse conditions. It is a paradigm that requires the integration of interdisciplinary knowledge in the fields of psychology, sociology, environment, and health. It is thus important and in line with present-day society that is facing the crises. The resilience of an individual occurs from the development of capacity or the strength to face the crisis, or miserable conditions in which such an individual can survive. Resilience is dynamic and changes according to age, situation or context. It is found that those who have resilience exhibit emotional and mental maturity (Mohaupt, 2008: 65), possess a high level of perceived self-efficacy, responsibility, intellectual capacity, positive interaction with peers and adults, a low level of resistance and aggression, a high level of cooperation, emotional stability, and a positive sense of self-efficacy with more strengths than weaknesses, internal locus of control, and academic success (Winfield, 1994; Grizzell, 2006: 21).

Resilience was discovered in a study conducted about 50 years by a group of researchers who tried to determine the cause of behavioral problems and mental illness, but the findings showed that many children facing high risk factors had positive development. The researchers then changed their research approach from deficit-based models to a positive framework, focusing on the strength aspect. This had benefited human adaptation and development in societal system (Masten & Wright, 2009: 213-214). The concept of resilience has been widely popular in social research. Resilience has two key elements, i.e. risk factors and protective factors, which interact with each other resulting in adaptation. The risk factors may be intrinsic or extrinsic such as disabilities, a failure in learning, drug abuse and addiction, living in a family and the environment that pose risk from hazards or crime. The protective factors include three elements, i.e. internal protective factors, external protective factor as family characteristics, and factors related to external institutions (Barnes & Morris, 2007; Werner & Smith, 1982; & Manyena, 2006 quoted in Mohaupt, 2008: 66). External protective factors influence the internal protective factors (Constantine & Benard, 2001:32), while the interaction between risk factors and protective factors could result in adaptive outcome. Individuals with resilience resulting from the interaction of risk factors and protective factors could affect the outcome of successful adaptation.

Resilience is thus considered as a feature of human intelligence in addition to the intelligence quotient and emotional intelligence. Child development for resilience is necessary because the current social condition carries diverse and complex problems. Studies on resilience have always been carried out in four phases. The first phase is to define and measure resilience including finding the differences between those with and without resilience in the context of risk characteristics. The results of this study are human characteristics, relationship features and the factors that predict resilience. Protective factors are important as the body of knowledge for research in a later stage. In the second phase, research questions are aimed at understanding the processes that lead to specific resilience including studies at the cellular focusing on neural processes. The finding is a way to respond to obstacles that are directly correlated with physical and mental health. Those who fight indomitable spirit are better immune to the illnesses. In the third phase, the study aims to test an

idea about the resilience by experiments to find ways to promote resilience. And in the fourth phase, studies are mixed to understand resilience in more advanced examples such as studies of the gene, development of the brain behavior in order to understand the complex processes of resilience (Masten & Wright, 2009: 214).

The body of knowledge about resilience among Thai children has not been sufficiently established as most studies involved only high school students. Some of the studies on resilience in relation to intrinsic protective factors such as that undertaken by Lhimsoonthon (2000) on the relationship between resilience and behaviors of slum children found that resilience was important in protecting children in a drug-plagued environment and that the children were resistant to the risk of substance abuse. Atchara Kittivongvisut (2001) studied the relationships between resilience with perceived hardships in life and health risk behaviors among students in vocational schools and showed that resilience was related to alcohol consumption and such resilience, personal factors, and risk factors could 15 to 21 percent predict the behavior of alcohol consumption, while Penprapa Parinyaphol (2003) studied the relationship between resilience and mental health of students at Chiang Mai University and found that their resilience was in the normal range and positively related to mental health, and the resilience, perceived negative events in life, and coping strategies could 29.3 percent predict mental health status. Penprapa Parinyaphol (2007) studied resilience of students at Prince of Songkla University (Pattani Campus) and found that most students' resilience score was in the normal range with differences in class year and school/faculty having different resilience score. The scores of sub-elements of resilience of the students were different in some respects. In addition, Nittaya Takviriyannun (2006) studied the mechanism of resilience in relation to environmental risk factors and personal protective factors against alcohol consumption behaviors among Thai teenagers in secondary schools; the study found that family, peers and personal protective factors directly influenced alcoholic consumption among Thai adolescents. The resilient traits found included confidence in personal relationships, practical guidelines, having a role model, independence, having support, having confidence in the performance of oneself, having sympathy, being helpful to others, feeling loved, being responsible, ability to locate sources of assistance, ability to control emotions, ability to communicate, ability for self-assessment, ability to solve

problems appropriately, commitment, having positive thinking, assertiveness, ability to maintain self-balance, being initiative, and moral ethics.

There have also been studies on resilience among athletes as well as those with impaired hearing, etc., one of which was on the developmental asset of children and youth by Suriyadeo Tripathi (2009) and found that such developmental assets by children's self-assessment were high on the cost of family power and intelligence of children, while those low regards were the assets of the community power, peers, activities, and the power within themselves. Of the research on children with two views on the problem and the positive view on resilience found that Thai children not only faced problems but also exhibited resilience and support of the protective factors that could be used to solve problems and overcome obstacles. For instance, some children who lived in an urban community exhibited traits of resilience such as dedication to pursue study until completing a university degree and get a job with environmental risk factors. Such children were, however, close to other family members and received the support as the protection from community organizations. A review of data on at least three children of poor slum families showed that, while studying in elementary school, two of them received scholarships to study up to the master's and doctoral levels (South Siam, 2003; Siamrath, 2003; Matichon, 2009). The study was consistent with the findings of Masten (2009: 28) which found that a surgeon who was a professor at the University of Minnesota was raised as a delinquent, served his time in a prison, and lived in a family with drug and alcohol; Masten revealed that the resilience in this case occurred when entering adulthood. However, the resilience could also occur in early childhood while facing hardships during war, disaster, poverty, family violence and other difficult conditions.

Resilience is not something inherent but a feature that can be promoted by socialization, gentle relationships with other individuals (attachment), development, practice, and inspiration, all of which depend on the person's motives, heredity and environment. With the support of external stimuli, having a good role model including strong participation from many sectors would lead the children to become independent and realize their self-esteem, self-respect, and confidence in their self-efficacy (Maclean, 2004: n.d.). Prawech Tantipiwatanasakul (2009: 4-5) noted that the development of resilience for children and youth was an application of understanding

of risk factors, protective factors, and capacity development requires time and persistent efforts because the resilience was not an expression that can be learned and developed in anyone. Rather, resilience was the system of thoughts, expressions, and actions that can be learned and developed in everyone. The key factors for resilience were good relationship, mutual respects and attentiveness, trust, a good role model, and encouragement. Supara Chaoprecha (2008: 314) noted that the way to promote resilience was to provide a not-too-much hardship situation for people to practice in managing problem issues, an opportunity to learn how to identify and tackle the problem appropriately by experts as well as to promote the protective factors in a positive way. O'Connell (2006: 3-4) indicated that in order to promote resilience the concept of strength-based approach had to be employed and should be promoted continuously throughout life stages by depending on family care, having friends, obtaining learning culture from schools, having strong community, and internal factors within the child as self-control and self-concept. Grizzell (2006:11) indicated that the process of resilience promotion in urban children had to integrate different techniques to tackle the problem. It was a process to change the attitudes, beliefs, social structure and physical environment. Therefore, the promotion of resilience required the entire community to work together with parents, children, schools and community organizations using the positive influence to make the children recognize their worthiness and to practice self-control.

The resilience can be promoted by a long-term process (Winfield, 1994) and requires a collaboration of the entire community to work together with family, school and community organization (Grizzell, 2006: 21). In reviewing a body of knowledge it was found that ways to promote resilience proceeded in two aspects, i.e. resilience promotion by increasing the capacity or the ability of the individual and by increasing both the capacity and protective factors of the individual. Resilience promotion at individual level with actions emphasizing personal capacity are for example: a project to enhance psychological endurance; the production of a manual for resilience promotion among schoolchildren; psychological counseling based on reality concept; the enhancement of psychological endurance to prevent suicide. The resilience promotion activities by increasing both the capacity and protective factors of the individual have been carried out based on various concepts such as Rutter's and

Benard's models of collaboration among schools/students, families and communities. Such activities or projects include: resilience promotion by instilling a value in children; support system for students; livable place for children; creative space for children; development of life capital network for clean Thai children; The Carlyle Resilience Method; Empower children! – Promotion of Resilience in Early Childhood Institutions; Bridge's Project; work plan for mental health promotion; and resilience promotion according to Masten's concept.

Based on the concepts and approaches to enhance resilience, there are similar principles in the emphasis on the increase of the capacity of individuals, reduction of risk factors, reduction of the negative impact, and the increase of various protective factors. Therefore, the study to determine a process to promote resilience in various population groups is interesting as it will be an answer to Thai society. However, since childhood is an important life stage that needs quality growth. In this study, the researcher chose to study in secondary school children living in urban slums to determine the extent of resilience of such children, a process to promote resilience, the associations and their characteristics among the role of protective factors. The study followed the concepts of Rutter (1987 quoted in Winfield, 1994), Fergus and Zimmerman (2005), Grizzell (2006), and Masten (2009) which describe the process to enhance capacity of individuals, promote positive environment, and discourage negative environment. The study examined issues consisting of: (1) reduction of the negative risks, (2) reduction of the negative reactions from exposure to risk factors, and (3) assurance of opportunities for children to express their skills and positive performance.

The body of knowledge gained from this research is an interdisciplinary approach involving psychology and sociology, relevant to the principles of population studies which focus on improving the quality of the population, and identifying and understanding the factors and processes to promote resilience of the children in the context of urban slum dwellers. It would be useful to children and organizations in urban areas to promote the resilience and useful to policy-makers both at the local and national levels in formulating plans and policies to promote such resilience.

## **1.2 Objectives**

1.2.1 To study the characteristics of resilience of school children in an urban slum area.

1.2.2 To study the protective factors such as the family, the school, the peer group, and the community, and to identify the factors that predict resilience.

1.2.3 To study the adaptive outcome on the aspects of learning achievement and social behavior, and analyze the characteristics of the factors that predict resilience.

1.2.4 To study the process of resilience promotion in school children in urban slums area.

## **1.3 Scope of the study**

This study was to examine resilience, protective factors, results of adaptive behaviors, processes which promote resilience in the specific context of schoolchildren in urban slums. The target audience was junior high school students living in slums in Bangkok. This study combined both quantitative and qualitative methods.

## **1.4 Operation definitions**

**1.4.1 Resilience traits** refer to traits that reflect the strength of the individuals. This study included four aspects of the traits which are having life goals, moral ethics, positive self-image, and the ability to face problems.

1.4.1.1 Sense of purpose is the setting up of the target in life, thinking or doing something new to achieve the goals.

1.4.1.2 Ethics refers to virtues that should be conducted, knowing what is right or wrong, commitment to the virtues, intention to stand for such beliefs, and helping others.

1.4.1.3 Sense of self refers to one's recognition of his/her worthiness and confidence in his/her own performance.

1.4.1.4 Problem-solving refers to one's recognition of problems faced and assessment of how to deal with the problems, having a positive view in solving the problems.

**1.4.2 Adaptive outcomes** refer to outcomes from the interaction of factors, both positive and negative protection resulting in resilience of individuals and in a positive adjustment of children. This study examined the results of the adjustment from learning achievement and social behavior of schoolchildren.

1.4.2.1 Learning achievement refers to academic scores of students in the past year up to the time of the data collection.

1.4.2.2 Social behaviors are defined as behaviors expressed socially in a positive way as emotional control, acceptance of rules and regulations, and assuming responsibility.

**1.4.3 Protective factors** are external factors to the individual, of the environment that promotes individuals' capacity and strength including protective factors of family, friends, school and community.

1.4.3.1 Family protective factors are defined as family support powers which are expressed as affection, compassion, being a good role model, encouragement, expectations with confidence, with certain limitations, close relationship, and family-bonding activities.

1.4.3.2 Peer protective factors are defined as support powers from friends who express love, compassion, being a good role model, encouragement, expectations with confidence, and assistance with certain limitations.

1.4.3.3 School protective factors are defined as support powers from school that show love, compassion, being a good role model, encouragement, expectations with confidence, care with certain limitations, close relationship, and school-bonding activities.

1.4.3.4 Community protective factors are defined as support powers from communities that show love, compassion, being a good role model,

encouragement, expectations with confidence, care with certain limitations and rules, close relationship, and community-bonding activities.

**1.4.4 Process of resilience promotion** is defined broadly as a framework for studying the role of components of resilience of schoolchildren in urban slums, which refers to the process of development of the children's capacity, a good environment promotion, and reduction of negative risk factors. The process can be described as follows:

1.4.4.1 Strengthening of and support for self-esteem and self-efficacy. Self-esteem and self-efficacy are vital to children's success in the future. Children should be exposed to positive social interactions with parents, caregivers, and other adults.

1.4.4.2 Reduction of risk factors is the process of moving or separating children from the negative environment or reducing negative risk factors.

1.4.4.3 Reduction of the impact of children's exposure to risk factors, such as implementation of education programs or participation or other activities of the school community in the prevention of risks.

1.4.4.4 Encouragement for children to express their skills and positive performance by providing opportunities for children in realizing self-control and self-concept, and to support and facilitate the system and the protective factors to function effectively.

**1.4.5 School children in urban slums** are students in junior high school living in slum areas in Bangkok.

#### **1.4.6 Characteristic of school children**

1.4.6.1 Age is the age of the student in years up to the last birth date.

1.4.6.2 Gender refers to male or female.

1.4.6.3 Religion refers to any of the religions, i.e. Buddhism, Islam, Christianity, or others.

1.4.6.4 Level of class refers to the grade in which the student is studying; Grade 7, 8 or 9.

1.4.6.5 Number of household members refers to the total count of household members.

1.4.6.6 Dwelling refers to the type of person with whom the student was living, i.e. parents or someone else.

1.4.6.7 Residence refers to the type of residence of the student, i.e. a single house, a townhouse, a shop house or row house, an apartment (a flat), or any other form of housing.

## **1.5 Benefits**

1.5.1 The knowledge on resilience promotion can be used to develop and support protective factors at different levels that will result in the children's resilience and adaptability to various matters.

1.5.2 The knowledge on resilience promotion can be applied as a model or activities/projects suitable to children in other groups.

1.5.3 The knowledge on resilience promotion can be applied as a guide for policy development in support of children and youth at the school, community, provincial and national levels.

1.5.4 The knowledge on resilience promotion can guide the study of processes which promote resilience in other contexts.

## **CHAPTER II**

### **LITERATURE REVIEW**

In this chapter, the researcher conducted a review of relevant literature and synthesized three major issues, namely resilience, schoolchildren in urban slums and resilience promotion, and conceptual framework of the study, based on the belief that if the schoolchildren were supported to have resilience through various processes involving the individuals, family, peers, school and the community, they would be resilient, resulting in their positive adaptive outcome and ability to live in society with various risk factors.

#### **2.1 Resilience**

The term “resilience” was initially introduced in 1950 involving a study on the concept of vulnerability, coping, and resistance to stress (Sun & Stewart, 2006: 3). After that, the resilience has been more clearly revealed by Werner and Smith (1982), based on a 30-year ethnographic study on 600 high-risk children in Hawaii, and by Garmezy and Rutter (1983) whose longitudinal study involved 200 American children and aimed to determine strategies to resolve the problems of children whose parents had psychosis and protective factors against negative outcome. Follow-ups were conducted on the children with the risk factors and potential problems related to psychosis in the families. The results showed that most of the children with such adversity did not develop any negative outcome; rather, some of them developed in to the positive side, which has led to a resilience concept believed to be a successful adaptation despite being in a risky situation. That might also be said that it is one of the learning processes for population quality development and a paradigm shift from negative to positive perspectives and strengths.

### 2.1.1 Definition

“Resilience” was derived from a Latin word “resillio” meaning “bounce back” (Manyena, 2006 quoted in Mohupt, 2008: 63). The term was firstly used by ecological academics and later used in physics, engineering and medical science. However, it has been chiefly used in social psychology and psychiatry (Bartley, 2006; Harrop, et al., 2007; Howard, et al., 1999; Luthar & Cicchetti., 2000; Luthar & Zelazo, 2003; Manyena, 2006 quoted in Mohupt, 2008).

The term has been defined with several perspectives, some of which are similar but some are different, all dealing with potential, capacity, strength, factors or resources and positive adaptation, whereas “resilience” will have a specific feature, i.e. coping with suffering or risk factors.

Within the ecological context, “resilience” is defined as good health despite living with suffering; a similar definition of an individual’s power to pullback without any crash or meaning the physical and mental ability to maintain the role in coping with stress in life, or skills, capacity, knowledge and internal feelings to forge the individual to cope with hardship and challenges, or the ability to make adaptation for success, positive role, or the capacity despite being in a high-risk situation with chronic stress or injury (Egeland, et al., 1993; Garnezy & Saleebey, 1994; Kaplan, et al., 1996; Vaillant, 1993 quoted in VanBreda, 2001: 5-6). Wolin & Wolin (1993 quoted in Patcharin Arunruang, 2002: 11) has stated that it is a potential or capacity to cope with hardship or suffering until it ultimately develops into strength. Grotberg (1995) defines that it is a universal capacity of the individual, group or community to prevent any loss, reduce violence, and get through any impact from various pressures that have to be well encountered. Alperstein, Raman & Victor (2003 quoted in Saowalak Pharachatree, Patraporn, 2008: 34) similarly define that it is a basic capacity of an individual, group or community to prevent or deal with stress or hardship being faced or to recover from a bad experience; while Harrop, et al. (2007: 4) specifies an acceptable meaning as a success in adaptation during a period of life that has to cope with a bad social condition or a very severe hardship.

The resilience in the postmodern era uses a constructionist perspective in describing its structure and meaning that it does not occur by itself; rather, it is developed during each period of life (Ronnau-Bose & Frohlich-Gildhoff, 2009: 301),

resulting from an interaction between the individual and his/her environment (Ungar, 2004: 341). But Masten (2001: 30) defines “resilience” as a phenomenal feature that is a positive outcome under threats on adaptation and development. Martinez-Torteya, et al. (2009: 563) summarizes that it is the capacity to efficiently cope with any problem by successfully dealing with the problem encountered, in terms of behaviors and emotion, with a structural characteristic associated with specific potential under a high level of stress. Sun & Stewart (2006: 3) defines that it is an interaction between a risk factor and a protective factor and a process resulting from the individual’s reaction with a risk factor or adversity.

According to the aforementioned definitions, it is noteworthy that resilience’s definition in the first era chiefly aimed at the individual, especially the skills, potential and capacity, but in the later era the perspective has focused on the fact the resilience can be improved through the individual’s strength, capability or potential, and other resources – mental, social, cultural and physical – as supportive factors as well as interpersonal relationships within the context that the individual has to encounter risk factors or hardship, as far as such resources are sufficient for maintaining the well-being favorable to positive adaptation.

For this study, the researcher has defined “resilience” as the pattern showing the individual’s resilience trait.

**2.1.2 Resilience patterns.** There are four individual’s resilience patterns (Polk, 1997 quoted in VanBreda, 2001: 5-6) as follows:

Dispositional pattern related to physical and ego-related well-being as well as a sense of self-worth and self-autonomy.

Relational pattern concerning the individual’s roles in society and his/her relationships with others.

Situational pattern addressing the aspects involving a linkage between the individual and a stressful situation, including the individual’s problem-solving ability, the ability to evaluate situations and responses, and the capacity to take action in response to a situation.

Philosophical pattern referring to the individual's beliefs and faiths that promote resilience such as those related to positive thinking in all situations, self-development, and goal-oriented livelihood.

In addition, the resilience may be classified by type of risk factors into three aspects: (1) individual problems such as underweight and disability; (2) children's chronic stressful conditions such as drug abuse and parents' alcohol abuse; and (3) severe suffering conditions such as public disasters and death of a loved one (Newman & Blackburn, 2002: 2-3). Moreover, the classification can be made for the individual, family and community levels (Fleming & Ledogar, 2008: 7; Lankao & Tribbia, 2009: 2).

A person with resilience will have self-esteem or a sense of self such as the perception of childhood love with a brother or sister aged at least 1 year apart, the high level of intelligence, the capacity and skills to have good relationships with close friends, the success in and outside school, the ability to communicate any situation to others, the ability to choose to do or not to do anything at a suitable time and place, internal locus of control, no serious illness during adolescence, good relationships with mother or guardian, a high level of power, hobbies or specific interest, the ability to ask for help when needed, high self-respect, understanding for others, good skills in problem solving, and the support from friends (Sun & Stewart, 2006: 24-25).

The Department of Mental Health (2009: 2-3) describes a person with resilience as someone who does not complain or becomes hysterical when facing a problem; rather, he/she can keep calm and manage his/her own anger, has ever gone through hardships or depression in life and uses such lessons for life improvements, has a positive perspective in life, knows how to create mental power for him/herself, boosts his/her own morale, appreciates him/herself, controls his/her emotions, thoughts and behaviors appropriately, has faith in religion, follows the traditions, has communication skills in making friends, negotiations and asking for assistance, has problem-solving skills, knows how to find the way out, has got suitable plans for the future, has good relationships with close friends or others, has a sense of humor, and helps others.

Studies have revealed that the children with resilience (Benard & Marshall, 1997; Bogenschneider, 1996; Butler, 1997; Cederblad, et al., 1994; Hawley & De Haan, 1996; Parker, et al., 1990; Rutter, 1979; and Werner, 1990 quoted in VanBreda, 2001: 10-11) have the characteristics similar to those mentioned earlier, i.e. positive thinking, good socialization skills, calmness, good relationships with mother or guardian, grandmother, elder sister or other relatives, good examples from several caregivers. Such children are normally assigned to do or take charge of household chores, have an understanding of roles and systems in the family, can cope with problems, become energetic with a moderate level of talent; most of them are girls, not being separated from the caregiver during the first year of life; so they seem to be like the eldest child, not having a younger brother or sister before age 2, and go to a good school with teachers as role models in terms of teaching and behaviors. They have high self-esteem under the strict guidance of parents, skills in positive problem-solving, good self-adaptation, high power and learning ability, capacity and faith in leading a good life, self-dependence, hobbies or specific interests, and the ability to ask for help when needed.

**2.1.3 Relevant paradigm and theory.** The resilience paradigm is a positive one that gives importance to the perspective of strength and positive thinking. In terms of positive paradigm, based on the Buddhist principles, it has been found that a human-being has a complex thinking process classified as: creative thinking for a new answer unceasingly; critical thinking, both negative and positive, for weaknesses and strengths, not only advantages but disregarding disadvantages; positive thinking or hedonism, viewing changes as positive with no discouragement; strategic thinking for several alternatives as well as opportunities and threats; and ethical thinking, based on conscience, righteousness, right/wrong mindfulness and morality. Such thoughts have formed a thinking paradigm called Yonisomanasikara (proper attention and consideration) which includes two useful thoughts: (1) intelligence-creation thinking aiming to gain knowledge according to the situation and eliminate ignorance and (2) mental quality promotion thinking to strengthen the positive power, suppress evil ideas, and create the right view/understanding (Nakamon Chaoplaina Punchaketikul, n.d.). Thus, the use of positive concept or paradigm is regarded as the process for promoting

mental health and enhancing positive power which are consistent with the concept for raising righteous and successful children, as stated by Plato and Aristotle that “Raising children with torturing will make them surrender, uncreative and depressed...”. Venerable Panyananda Bhikkhu (n.d. quoted in Dolapat Yosathorn, 2008: 120) also states that one should “Avoid silly whipping/flogging and torturing, but use one’s wits as a tool for reshaping one’s habits instead”. Besides, Woolfson (2004 quoted in Dolapat Yosathorn, 2008: 120) also mentions about positive child rearing that “All children, no matter what their individual characteristics are, can be developed. They should be raised the way they want to be; accept their specific capacity and share and open an opportunity with each of them equally...”.

The positive paradigm is what enhances human capacity to further develop into the good aspects or good traits. The positive paradigm and concepts under this study include strength-based paradigm, salutogenesis, coping, adaptation, and broaden-and-build theory of positive emotions as described below.

2.1.3.1 Strength-based paradigm. The resilience under this concept recognizes that every human’s potential can change its form when facing a risk factor as a self-righting mechanism (Lifton, 1994 quoted in O’Connell, 2006: 3). It is a complex and unstable process between internal and external strength development, gradually occurring with continuous nurturing and support beyond child growth development. This paradigm involves the capacity and resources within and outside the individual, family, and community as well as the strength relationships such as child-family relationship, belief in being successful, child empowerment and being useful for others including the community.

2.1.3.2 Salutogenesis. This paradigm aims to find a way out for any pathogenesis and moves towards a different paradigm, focusing on a study related to health with a view beyond disease etiology, i.e. a positive health paradigm (Antonovsky, 1978 quoted in Lindstorm & Erikson, 2006: 238; Harrop, et al., 2007: 7; Sun & Stewart, 2006: 4; VanBreda, 2001: 12-14). It views disease and stress as an occurrence surrounding us everywhere all the time. The complexity and stress are parts of life and a natural condition. This health-related perspective includes two poles: salutogenesis and pathogenesis. This paradigm has two core fundamental concepts: General Resistance resources (GRRs) and Sense of Occurrence (SOC).

GRRs are psychological, biological or materialistic factors such as money, knowledge, experience, security need, health behaviors, social support, cultural capital, intelligence, custom, and view of life. These give an opportunity to people to gain life experience to promote the SOC strength, which is a flexible factor for maintaining life and health promotion with the following features: (1) it is a stimulus from inside and the external environment; (2) it is the source that responds to the needs; and (3) the needs are challenging and worth being recognized. Salutogenesis focuses on problem identification and solving as well as sorting out resources required for positive movements towards well-being (GRRs) and the analysis at the individual, group, people, or system level to promote the mechanism or potential of the process (SOC). Antonovsky views that SOC is a mechanism or tool applicable in all cultures.

2.1.3.3 Coping. The concept of coping with a problem deals with resolving stressful situations (Lazarus & Folkman, 1984 quoted in Harrop, et al., 2007: 5-6). A stressed person will develop a strategy or means for preventing the problem or adapting towards healthy living. It is an intellectual process that the person perceives and expresses the behavior to cope with the problem or the cause of the problem, both internal and external, to attain the balance. Lazarus and Folkman (1985 quoted in Prapapan Phakote, 2001: 31-32) divides the coping methods into eight features as follows:

1) Confrontive coping – the effort to resolve or change the situation, the determination to get what is wanted, and the expression of anger towards the other person who is the cause of the problem or trying to get that person to take responsibility or to change the idea or feelings of such a person.

2) Distancing – the effort to distance oneself from the stressful condition such as pretending to feel like nothing has happened, trying to forget it, and denying that there is stress.

3) Self-controlling – the effort to control one's feelings and action such as repressing the feelings or concealing something from other people.

4) Seeking social support – the seeking of various kinds of support by talking or consulting with other people to get advice, acceptance and understanding.

5) Accepting responsibility – the acceptance of what has happened such as criticizing or blaming oneself.

6) Escape and avoidance – the effort to escape from or avoid the problem, for example, by drinking alcohol, smoking cigarette, or taking drugs, avoiding meeting other people, sleeping, and hoping for something to help get through the situation.

7) Planful problem-solving – the attempt to think of how to resolve the problem, for example, by planning to resolve it and doing as planned, knowing how to resolve it, and doubling the effort to get the problem resolved.

8) Positive appraisal – the attempt to have a positive view such as believing that a person has got a positive growth, discovering a new faith, and praying as the person with positive thinking will help others to use the problem-solving methods.

2.1.3.4 Adaptation theory. Roy views that a person's adaptation is an open system with continuous changes and interaction with the internal and external environment (Roy, 1991 quoted in Nithet Charoenpantoon, 2000: 11–12). The person's system consists of "biopsychosocial being" that is holistic and inseparable. Adaptive and maladaptive adaptation is dependent on environmental changes, stimulus intensity and individual's adaptation capability as each person has his/her own characteristics and limitations. Such a stimulus means a focal stimulus such as the stimulus being directly encountered, contextual stimulus, i.e. any stimulus in the environment except for focal stimulus, and residual stimulus meaning individual's specific stimulus such as faith, attitudes, habits and values.

Adaptation requires two coordinated mechanisms – regulator and cognator – and then responds as four kinds of adaptive behaviors:

1) Adaptive behaviors for physiological needs, based on physiological security requiring basic needs such as food, oxygen, body balance, and body control system. The ultimate goal of life is the balance that every human being tries to maintain. If the balance cannot result in a positive response, there will be a maladaptive behavior.

2) Adaptive behaviors for self-concept as humans require mental security and what plays a significant role in maintaining such security is self-concept derived through experience, learning and interactions with other people. Psychologically, all human behaviors result from self-concept, which is related to their attitudes, thoughts, understanding and consciousness. If a person has mental security, self-concept, confidence and self-esteem, his/her adaptive capacity towards various pressures will be better than the one who has negative self-awareness or feel inferior and self-worthless. Self-concept includes self-ideal and self-expectation, moral ethical self, and self-esteem.

3) Adaptive behaviors for role function. Playing various roles is a person's response to his/her needs to play such roles in society, participate in social activities, and work together with other people to maintain his/her social security. In any circumstances, when a person is unable to perform his/her roles, he/she will adapt so as to perform such roles as usual, which will be successful or unsuccessful depending on the individual's adaptation capacity.

4) Adaptive behaviors for interdependence relation. Humans have to be interconnected and dependent on each other as basic needs in maintaining a kind of social security. The appropriateness of independence, dependence, and helpfulness for others help create mental and social security as normally a person will try to maintain his/her selfness and dependence to the extent that is acceptable to his/herself and society.

According to the aforementioned paradigms, each of them has positive perspectives, some of which are similar but some are different. Harrop and colleagues (2007) have analyzed salutogenesis, coping, strength-based paradigms and found a common feature in that a person will respond to a stressful condition in a positive manner and has an interaction between the individual and the environment. Regarding the differences, it has been found that problem-coping tends to be a short-term process, while the resilience and salutogenesis require a long period of time for adaptation.

In connection with the differences between resilience and salutogenesis, it is noteworthy that the salutogenesis concept pays attention to individual behaviors

especially health issues, while the resilience concept will pay attention to the whole individual and family influence as well as other environmental factors, not only health issues.

Besides, Foster (1997 quoted in Nikorn Pliawwinya, 2007: 26) differentiates adaptation, coping and resilience that coping is a complex reaction to a stressful condition often found as a mental mechanism for self-protection, while adaptation means an effort of self-development in accordance with the surrounding environment as a proactive adaptation rather than a passive adaptation, like the coping approach; and resilience is the ability to maintain the coping and adaptation capacity to attain one's mental balance while facing or after facing a crisis.

Therefore, for a person to have resilience, he/she needs to have the adaptation and coping capacity so as to rehabilitate or regain the power. Resilience is not a magic power possessed by any particular person, but it is something that the person can create (Mental Health Department, 2009: 1).

2.1.3.5 Positive emotion theory. Frederickson (2005 quoted in Hutchinson & Pretelt, 2009: 21-22) introduces the concept for broadening and building the theory of positive emotion that having a positive emotion creates the quality and is important for creating resilience as it will stimulate the person's physiological level that causes a reaction in response to the stress as well as the creation of a new mental reaction that limits the possible expression. The positive emotion plays a supportive role in releasing a negative emotion; for example, when a child enjoys playing something, he/she will have a good relationship with other people; and such a good experience will be gained and used for the next adaptation when facing other situations. Encountering some circumstances, thoughts and experiences repeatedly will help create a positive emotion, causing the person to discover and create his/her own enduring physical, mental, intellectual and social resources for further development of resilience.

Physical resources include strengths, flexibility and cooperation, whereas social resources develop from smiling and joyfulness as well as strong relationships and touches. Intellectual resources develop from problem-solving practices and learning about new information, while mental resources develop from identity perception and goal presentation as well as playing and positive experience. So,

frequently having a positive emotion is the key to the development of people's quality of life in the future.

Having a positive emotion while facing hardship is a good experience for the individual to learn how to better face and resolve problems in the future. Folkman and Moskowitz (2000 quoted in Hutchinson & Pretelt, 2009: 23) has explained that an individual has three methods to cope with problems leading to sustainably positive results in the context of chronic stress, namely: positive reappraisal, goal-directed/problem-focused coping or rationally analyzed problem solving, and infusing ordinary events with positive meaning, for example, by sorting out which people are helpful or which items are related to what other people highly value. To create a sustainably positive emotion is to be open-minded, leading to the creation of society, intelligence and mental and emotional resources for children.

2.1.3.6 Metacognition (Lai, 2011: 33-34). Metacognition is a multidimensional set of skills that involve "thinking about thinking" and entails two components: metacognitive knowledge and metacognitive regulation. Metacognitive knowledge includes knowledge about oneself as a learner and about the factors that might impact performance (declarative), knowledge about strategies (procedural), and knowledge about when and why to use strategies (conditional). Metacognitive regulation is the monitoring of one's cognition and includes planning activities, monitoring or awareness of comprehension and task performance, and evaluation of the efficacy of monitoring processes and strategies. Insights experienced while monitoring and regulating cognition play a role in the development and refinement of metacognitive knowledge. In turn, cognitive knowledge appears to facilitate the ability to regulate cognition. The two are empirically related and may be integrated in the form of metacognitive theories, which are formal or informal frameworks for representing and organizing beliefs about knowledge.

#### **2.1.4 Components of resilience.**

There are three components (Masten & Wright, 2009: 215-216), i.e. risk factors, protective factors, and adaptive outcome, as detailed below.

2.1.4.1 Challenges, adversity, risk factors, or vulnerability factors are any event, condition or experience that gives an opportunity to a problem to

occur, remain prevalent or become more serious. Risk factors may appear as a single one or a group of conditions within or outside the child's body, or a reaction between the child and the environment (Anthony, et al., 2009: 46).

The internal risk factors resulting from a biological factor or various other risk factors are the accumulation of hardships causing the adaptation more difficult. The risk factors are associated with the major problems of the child or youth, for example, delinquency, violence, drug/tobacco use, school failure, or teenage/unwanted pregnancy. These factors may appear at a different level depending on environmental influence, interpersonal relationship or the child's internal factors (Anthony, et al., 2009: 47).

The external or social risk factors include those related to the family, social networks, community, or institutions surrounding the child, that may occur during pregnancy or due to family relationships, workplace, school, interpersonal relationship, influence of the mass media, social or cultural activities, physical health, physical environment, or community's socio-economic conditions. During each period of life, the child may face different kinds of risk factors.

2.1.4.2 Protective factors or assets. There are two kinds of protective factors, namely "internal protective factors or internal assets" which are personal potential or capacity and "external protective factors or external assets" which exist in the environment outside the individual's body and help enhance the person's potential or capacity. Protective factors help minimize the impact of risk factors, hinder the path of the cause and impact, or obstruct the negative impact of the risk factors, resulting in a good adaptation (Constantine & Benard, 2001: 32). Protective factors can exist at different levels such as the environmental level especially the care from adults resulting in a positive impact for the child; while at the individual level the factors involve the child-parent bond which can provide protection against a number of negative drives. Protective factors are specific to the risks and have a good process or mechanism for improving the individual's capacity to successfully adapt or have a positive outcome, which is important for positive adaptation and for overcoming various obstacles (Anthony, et al., 2009: 49). During each stage of life, the individual will have different protective factors, chiefly for example, attachment relationship, social support, intelligence and problem-solving

skills, self-regulation skills, mastery motivation, self-efficacy, and cultural traditions (Masten & Wright, 2009: 221).

1) Internal protective factors are the individual's factors related to various capabilities such as intellectual capacity, social capacity, problem-solving skills, self-confidence, temperament, creativeness, sense of purpose and positive expectation at a high level, which are summarized in several concepts as follows:

(1) The concept of Grotberg. Individual's capacity characteristics are divided to three components (Maclean, 2004; Flach, 1988 quoted in Penprapa Prinyapol, 2003), i.e.:

“I have” meaning self-esteem with thinking and behavioral independence as a giver and a receiver, trustworthiness and love, and good relationships with other people.

“I am” meaning strong internal factors and personality including feelings, attitudes and personal beliefs.

“I can” meaning social factors and inter-personal interactions.

All the three components are internal factors of the individual with an important foundation being “I have someone...causing trust between each other”.

(2) The concept of Wolin and Wolin. The concept includes six strong personal characteristics, namely insight, independence, relationship, initiative, creativity and humor, and morality.

(3) The concept of Constantine and Benard (2001). The concept includes six characteristics of child's capacity, namely cooperation and communication, empathy, problem-solving, self-efficacy, self-awareness, and goals and aspirations.

(4) The concept of Suriyadeo Tripathi (2009). The concept involves internal assets so-called self-power which is the power of self-esteem as well as the power to create self-faith, self-confidence, and life skills. The self-power, very important for everyone in all age groups, consists of three groups

(Yongyuth Wongpiromsan, n.d. quoted in Suriyadeo Tripathi, 2009: 33), namely self-esteem, good behaviors and skills in creating good relationships with others.

2) External protective factors or external assets include those at the family, school, community, and peer levels (Suriyadev Tripathi, n.d.; Constantine & Benard, 2001: 20-22).

(1) Family protective factors include the warm and secure family relationships such as parents' support, child-parent relationship, parents' marital status, acceptance of advice from elders, proper time spending, and ability to have income.

(2) Peer protective factors. Peers provide the support that children do not obtain from their parents or others.

(3) School protective factors are the supportive factors from schools that promote positive development for children.

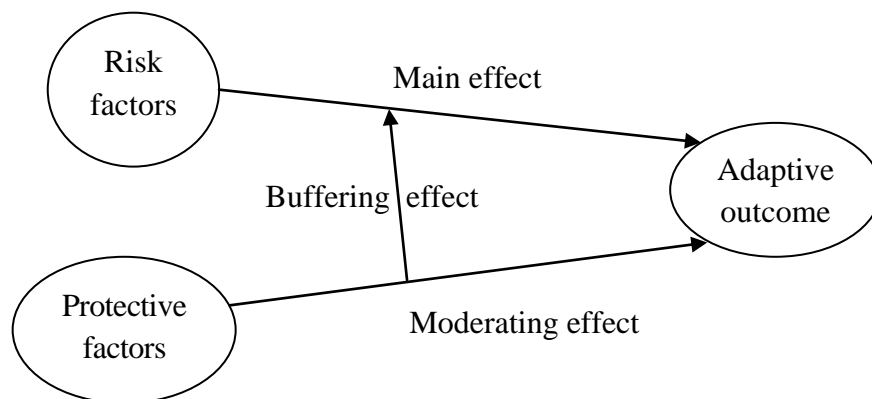
(4) Community protective factors include social support, creative areas, neighbor relationship in the community, community's environments (such as social and physical environments), and community arenas. The social context (structured and adult-controlled) should comprise space or activities such as sports fields/facilities, hobbies, volunteer activities, religious activities, music and arts, and participation opportunity (Swedish National Institute of Public Health, 2009: 24-31).

2.1.4.3 Adaptive outcome, positive adaptation, and successive outcome. The outcomes and adaptation result from the interaction between risk factors and protective factors that are illustrated as the outcomes or development. The important issue in the resilience study is the good outcomes. Therefore, the indicators of adaptive outcomes are successful outcomes that may be an internal function, such as health status, mental health condition, proper growth and development, and self-esteem or an external function, such as good learning achievements, successful working career, happy social life, positive social attitudes, or a combination of both kinds of indicators, such as happiness and success.

**2.1.5 Resilience model.**

The model for describing resilience are mostly associated with risk factors , protective factors and adaptive outcome, or under the context with risk factors as follows.

2.1.5.1 Keller’s resilience model (2003), adapted form the concept of Garmezy, et al.(1984); Luthar, et al. (2000); Masten, et al. (1988 quoted in Masten, 2009: 215); Grotberg (1995), describes the relationship between risk factors and adaptive outcome as well as protective factors, serving as a moderating effect resulting in an adaptive outcome. Whereas the risk factors and protective factors interact with each other depending on their own varying conditions, the results of such interaction will have a buffering or ameliorative effect on the adaptive outcome. However, sometimes the protective factor can serve as a major factor such as the warmth of family. This can be summarized in Figure 2.1



**Figure 2.1** Resilience model (Adapt from Keller, 2003: 4; Masten &Wright, 2009: 215)

2.1.5.2 Fergus and Zimmerman’s resilience model (2005: 401-404), summarized as three types: compensatory, protective, and challenge models.

Model 1: Compensatory model, protecting against or counter-attacking risk factors. The protective factor will have a direct impact on the outcome shown as Model 1 in Figure 2.2. For example, the children in poor areas are more likely to cause violence than those in other areas, but with adults’ control over their behavior, the negative effects will be replaced.

Model 2: Protective model, ameliorating the effect from risk factors that will result in negative outcomes such as the relationship between poverty and violent behavior among adolescents. Adolescent violence will be reduced when their parent provide a high level of care and support as protective factors shown as Model 2 in Figure 2.2. This model has two sub-models: protective-stabilizing and protective-reactive.

As illustrated in Figure 2.2 (Model 3), the protective-stabilizing (or a protective factor) helps lessen the impact of risk factors. In this case, the high level of risk factor is negatively associated with the outcome when there is no protection factor. But when there is a protective factor, the risk factors will be associated with outcomes.

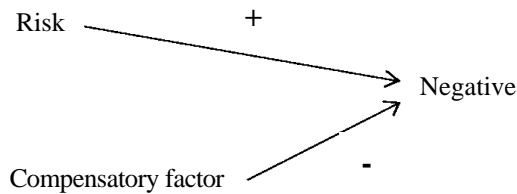
As for protective-reactive model, illustrated in Figure 2.2 (Model 4), the associated between risk factors and outcomes will be more obvious when there is no protective factor. For example, teenagers' drug abuse will be associated with risky behavior. However, the outcome will be reduced if the teenagers are taught sex education at school.

Model 3: Challenge model, illustrated in Figure 2.2 (Model 5), showing the relationship between the risk factor and the outcome in a parabolic manner as the level of risk factor is low, while the high level of risk factor results in a negative relationship. It has been found that the moderate level of risk factor is positively associated with the outcome. This model shows that the adolescent exposed to a moderate level of factor will be able to overcome such a risk, but with an excessive levels of risk, it might be difficult to do so. Therefore, the exposure to risk factors at a not- too-high level will help the child to practice the skills or to seek resources to cope with risks. In this model, risk factors and protective factors are the same variable.

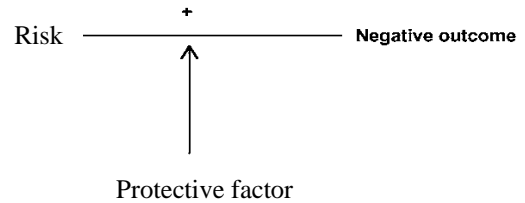
This model also has another feature, i.e. inoculation or steeling, as illustrated in Figure 2.2 (Model 6). When re-exposed to the low level of risk factor continuously, the child will be prepared to overcome the risk factor in the future. Thus, this model is a development process to learn how to use a protective factor to overcome a risk factor; having succeeded in overcoming the low level of risk

factor, the child will be prepared to face a higher level of such a risk. This is the combination of compensatory, protective, and challenge models.

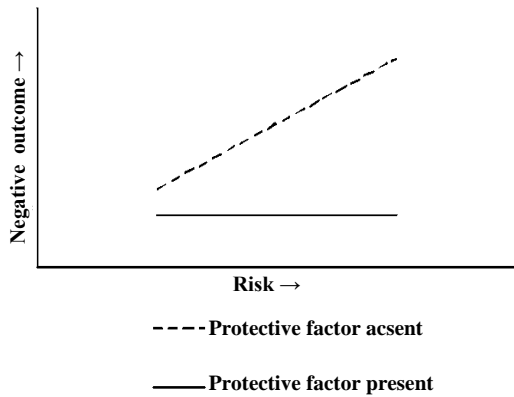
**Model 1 : Compensatory**



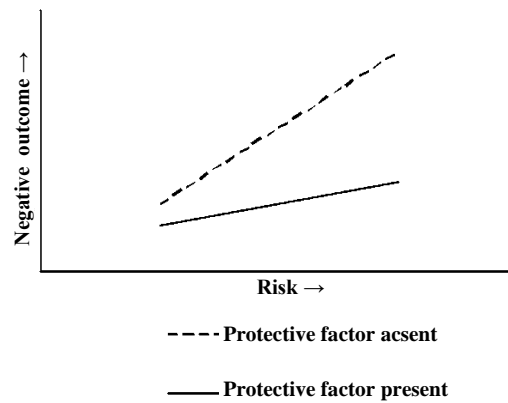
**Model 2 : Protective**



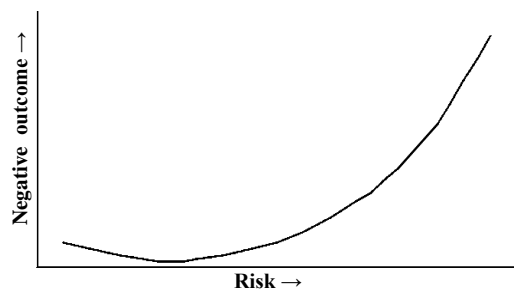
**Model 3 : Protective-Stabilizing**



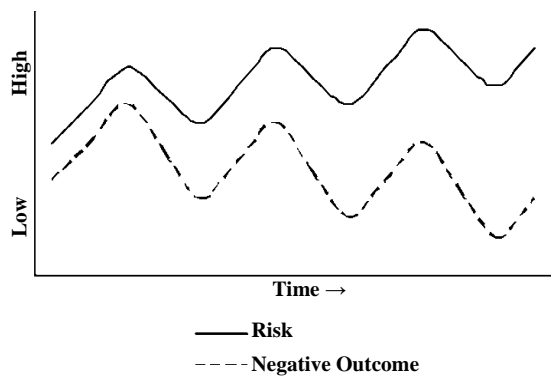
**Model 4 : Protective-Reactive**



**Model 5 : Challenging**



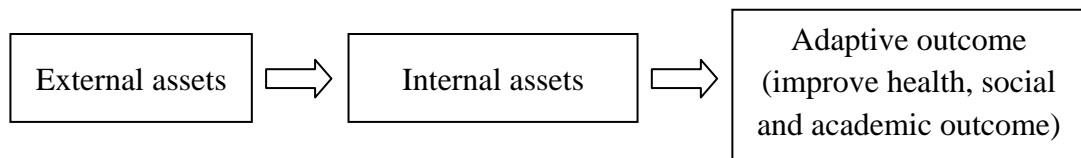
**Model 6 : Inoculation**



**Figure 2.2** Modeling the resilience (Fergus & Zimmerman, 2005: 402)

According to this model, it has been found that suitable risk factors can create resilience. So it is essential for children to learn and develop the capacity about how to live in the present-day social and environment conditions, based on the moderate level of external resources or risk factors so that their resilience will be enhanced with a good level of adaptation ability.

2.1.5.3 Constantine and Benard's resilience model (2001), assuming that the protective factors from outside the family including friends, school and community will have a supportive effect on the individual's adaptive outcomes as illustrated in Figure 2.3.



**Figure 2.3** Modeling the resilience (Constantine & Benard, 2001: 32)

### 2.1.6 Assessment of resilience.

As there has been no tools for resilience assessment and resilience cannot be directly assessed (Rutter, 2010), the tool to be used or for indirectly assessing resilience was designed according to its concept and definitions. Initially, the individual-based approach was adopted to measure the ability or skill of the person; and later on, or at present, the definition and concept of resilience are viewed as two aspects: one on the capability, strength or potential and the other on protective factors that are resources or assets.

2.1.6.1 Assessment forms based on personal capability are as follows:

- 1) The Resiliency Belief Scale developed by Jew (1997 quoted in Bakar, et al., 2010: 70) – based on the concept of Mrazek and Mrazek (1987) related to the cognitive appraisal theory of resiliency, the scale has three components: active skills, future orientation, and risk taking/independence, each of which has 15 questions.

Active skills needed for a child to be resilient such as rapid response to danger in order to avoid harm, information seeking, and knowledge of various events.

Future orientation related to the skills to have relationships with various things and to have hopes.

Risk taking and independence or the ability to take risk, eliminate the risk with confidence, potential and independence.

2) The Adolescent Resiliency Attitudes Scale (ARAS), developed by Biscoe and Harris (1994) based on the concepts of Wolin and Wolin (1993) with 72 items and 7 elements. The Scale uses a challenge model and the development characteristics of individual's stages of life. In Thailand, Patcharin Arunruang (2002) has used and modified the Scale so that it has only 45 questions under the same 7 components as follows:

(1) Insight – being acquainted with searching for questions and answers honestly to oneself including sensory reception, knowing and understanding.

(2) Independence – maintaining the boundaries between oneself and other important persons appropriately regarding distance and separation.

(3) Relationship – developing and maintaining close and intimate ties with others, including the creation of new relationships and attachment.

(4) Initiative – making decisions to deal with oneself and the environments including problem-solving and innovation.

(5) Creativity – having a safe refuge through imagination and being able to deal with all details in one's life satisfactorily, including creative ideas and creative expression of feelings.

(6) Humor – stimulating oneself to have a sense of humor.

(7) Morality – knowing what is right or wrong with the determination to uphold such beliefs including valuing and helping others.

3) Assessment forms based on personal capability and protective factors comprising:

(1) The resilience assessment questionnaire developed according to Grotberg's concept (Penprapa Parinyaphol, 2003) containing 19 questions covering 3 sub-types, i.e. I am a...; I can...; and I have someone....

(2) The protective resilience factors assessment form for Thai teenage students (Nidtaya Takviriyannun, 2008) developed according to the concept of successful adaptation of the children when facing obstacles of Grotberg (2003), consisting of 25 questions in 6 dimensions, namely (a) determination and problem-solving skills; (b) personal support; (c) other kinds of support; (d) positive thinking; (e) assertiveness; and (f) balance of self and social skills.

(3) Healthy Kids Resilience Module developed in 1998 and later on updated constantly, the last one in 2008 (Constantine & Benard, 2001; California Department of Education, 2008), based on the concept of external assets having an impact on internal assets and resulting in health, social and academic outcomes, and consisting of 56 questions in 2 main components, namely the external factors including protective factors related to school, community, peers and family, and the internal factors being the protective factors within the child.

(4) Resilience Youth Development Module (RYDM) (Furlong; Ritchey & O'Brennan, 2009) consisting of 56 questions and designed to measure internal assets and external resources or protective factors.

(5) Resilience scale for Adolescents (READ) developed by Hjemdal (2010) consisting 5 factors with 28 questions and similar characteristics as other assessment forms, namely personal competence, social competence, structured style, and social resources.

(6) Thai Child Development Assets assessment form (Suriyadeo Tripathi, 2009), designed to suit the Thai social and cultural context and consisting 2 parts (internal assets and external assets) with 48 indicators, divided into 5 of powers.

Personal power – the power of self-esteem for creating faith, self-confidence and life skills with 15 indicators.

Family power – the power of love, care discipline and exemplary livelihood with positive and appropriate follow-up support, kindly speech, warmth and safety with 8 indicators.

Intelligence power – the commitment to enhance one's wisdom with support to enhance the learning process both within and outside the educational system as well as local wisdom with 11 indicators.

Power of peers and activities – the power to undertake group activities for the benefits of society and community as well as better discipline among peers with 6 indicators.

Community Power – the power of the people who live and work together in a friendly, caring and understanding manner with good disciplines, good examples, kindly speech, volunteer spirit, warmth, and safety in the community with 8 indicators.

The review of the tools used to measure resilience reveals that resilience is used in two aspects: one as dependent variables when considering personal strengths and the other as independent variables when considering the positive adaptive outcomes. This study assesses the internal protective factors which are called resilience as a dependent variable, based on the concept that focuses on the potential of individuals and the support received from external resources that are external protective factors, which are referred to as protective factors.

## **2.2 School children in urban slums and resilience promotion processes.**

### **2.2.1 Children and development.**

Adolescents are the people aged 12–25 years and divided into 3 age groups: early adolescents aged 12–15 years with rather childish behaviors; middle adolescents aged 16–17 years with child/adult behaviors; and late adolescents aged 18–25 years with adult-like behaviors (Penpilai Rithakananone, 2007: 181; Sriruan

Kaeokangwan, 2006: 329) because kids today have to spend more time in educational institutions; and the modern lifestyles tend to delay the children's mental maturity compared with those in the previous era.

Adolescence is an overlapping phase of childhood and adulthood with physical, emotional, and social development as well as values, interests and identity determination including the interest in the opposite sex and others. If adolescents can live through this period with uncomplicated problems, their development to become adults will move along quite well and they can deal with their adulthood smoothly. According to the theory of steps for socio-psychological development, the human development process will move from one step to another like going up the stairs, without jumping over any step. The initial development steps have a consequence on the next steps in a series. The person's relationship with other people will encourage him/her to create behaviors and develop personality in various forms suitable for his/her age. If the person cannot smoothly resolve the crisis or problem, the development of his/her personality traits in a desirable manner will be affected. But if the person is unable to resolve the problem, there will be an effect on the development of the personality during that age. For early adolescents, their development will involve identity and identity diffusion. The conflict is more critical than that during other stages of life as it is a transition between childhood and adulthood. During this period, adolescents will erase their childhood image and move towards adulthood, causing a conflict in their relationship with adults, peers, and friends of opposite sex with serious socio-emotional confusion and violence. For the people who have got a balance between finding self and not understanding self, they will develop a sense of loyalty to ideology, life philosophy, people's groups/clubs, religion, culture, etc. While the feeling of loyalty will cause the children to be relieved of their self-confusion, helping them to lead smooth lives through the crisis (Erikson, 1902 quoted in Sriruan Kaeokangwan, 2006: 35). Similarly, according to the theory of the age-specific development, individual development in all aspects is a continuous process with each step affecting one another. The full and complete development process results in the development of the next step. If the quality of the development is incomplete in one step, it will affect the development in each of the next phases of life. At each phase of life, there will be major step-by-step growth and development in accordance with the

timing conditions. Any person who has developed “what has to be developed” as per appropriate timing, he/she will be happy and successful with his/her phase of life as the good quality of development in one phase will have an effect on the quality in the next phases continuously. And the meaning of quality covers both quantitative and qualitative aspects of development. The desirable aspects of development for adolescents under this theory are suitable conceptual and problem-solving skills, intimate relationship with peers, understanding and practice of ethical principles, having the aim of social behavior, acceptance of physical changes of the body, use of the body efficiently, preparation for the profession, and emotional independence from parents (Havighurst, 1979 quoted in Srirean Gaogungvan, 2006: 44).

However, it has been found that children in this age group are experiencing difficulties especially in present-day’s modern livelihood. As a result, it takes a longer time for them to reach mental maturity compared with those in the past. Thus, the children in this age group are in a “critical period” as they are exposed to both positive and negative environmental conditions, comparable with the “cradle-room-house-doorstep-neighborhood sequence” development as they live within the parental environment or care. When they grow up, their environments will be beyond the household’s boundaries; and in their teens, the environments will be even broader (Frumkin, et al., 2004: 192). This development can be explained with the ecological systems theory (Bronfenbrenner, 1917-2005 quoted in Oswalt, 2008: 11), based on the type of personal relationship and environment. With this approach, the child’s environments are divided into layers, the innermost one being the “microsystem” representing the interaction of all the people involved in the child’s life such as family members, peers, and teachers; then the environment is extended to the broader “mesosystem” representing the child’s interaction with other people or environment involving two or more situations in creating a positive relationship favorable to child development; and the outer layer, “exosystem”, representing external influences that affect child’s development such as parents’ occupations and various forms of mass media. Moreover, there are “macrosystem” including the cultural system that is related to the child’s livelihood and highly influential for the child’s ethics and identity, and the “chronosystem” being the context of changes that affect the interaction between the systems also related to child development. According to the ecological systems

theory, individual development is not determined by any particular factor in each of the systems as the factors in all systems will interact with each other – the interactions within each layer and across different layers.

The environment outside the home is the area where children can find out about capacity building, adventure, adaptation, new skill creation, imagination, and memorization models. Gaining a wide variety of experiences for everyday use, especially through meeting with other different people, will enhance the development of mental health and other aspects of life (Frumkin, et al., 2004: 193-194).

Thus the development of children in each age range requires different care. Early childhood is the ages between newborn to 6 years old. Parents, family and early childhood care centers are caretakers of the children. The key to the care for early childhood aged 6-12 years is the family and school as the children undergo transitional changes from being close to family to school system. As the children interact more with teachers and friends in their schools, the educational and family institutions become the key to the care for youth aged 12–25 years. The children are beginning to be more distant from their family but more attached to their friends. Peer groups and the community are the main focus in learning, absorbing or imitation. The family, however, still plays an important role in maintaining the same care and nurturing (Suriyadeo Tripathi, n.d.a.).

In addition, learning is an important part of the development because the development is a result of an individual having capability to increase his or her performance magnitude. This is as a result of a continuous learning process. One particular learning could be a link to learn other things. The social cognitive learning theory (Bandura, 1925 quoted in Srean Gaogungvan, 2006: 50-52) explains that learning occurs from the interaction between the learner and the social environment. Both the learners and the environment influence each other. The learners choose observe particular objects they want to learn. Learning is the cognition or cognitive processes. Both the environment and learners are equally important. Bandura did not believe that behavior was always constant as the environment always changed. Both of the environment and behavior can influence each other. The concept of this theory has two main distinct features.

2.2.1.1 Observational learning for imitation. The key is to learn from personal observation or imitation of a model. This could be a person in real life or in literature, comics, TV, cartoon, etc. The permanent learning behavior is established by reinforcement, observation and learning by doing. Bandura explained that imitation was the result of the observation of a model; the observation then results in the function of knowledge, cognitive, and memory system including reinforcement. Moreover the interaction between people and environment, external and internal motivation based on biological competency of the person produce four major processes of attention, retention, reproduction and motivation.

2.2.1.2 Self-efficacy. Bandura believed that self-efficacy was more important than observational learning by imitation. Self-efficacy refers to the ability to efficiently deal with circumstances that are ambiguous, difficult with high stress by relying on two component, i.e., management skill and belief in self-efficacy to successfully management those situations. There were four methods to develop self-efficacy.

- 1) Mastery Experiences. Bandura believed that mastery experiences were the most effective because of direct experience. The success could increase in self-efficacy. Individual with self-efficacy will not give up easily, but will try to work things out to achieve the desired goals.

- 2) Modeling. To observe the model that shows complex behavior with satisfactory results could orient an observer to realize that he or she is able to succeed if he or she truly try and put efforts.

- 3) Verbal Persuasion. Verbal persuasion is suggested to an individual that he or she has the ability to be successful. But it has to be persuasive and encouraging to an individual to experience success in a gradual and stepwise manner until he or she attain success.

- 4) Emotional arousal. This affects the perception of self-efficacy for an individual who is threatened, in anxiety or under stress. If the individual receives a strong stimulus, the results might not be so good, as a person normally expects to succeed when he/she is not under an undesirable stimulus. Fears may cause the person to be more fearful, resulting in a failure which will lower his/her self-efficacy.

Adolescents during puberty are in a significant phase of life and must be encouraged to develop their quality of life in various areas so that they are able to face various environments with which that they interact.

### **2.2.2 Risk, protective factors and resilience in school children in urban slums.**

In cities, there have been the expansions of both urban communities and slums, some with relatively more modern communities but some with about the same numbers. However, in South-east Asia, urbanization or urban growth has been found to be in both urban communities and slums with poor dwellers (UN-HABITAT, 2006) Therefore, there are risk factors related to urban poverty such as violence, population overcrowding, low schooling quality and housing inadequacy. The insufficiency of urban infrastructure results in increased stress, violence and deviance. The children who live in poor areas with poor health conditions tend to have study failure and behavioral problems, while facing a number of social and environmental risks such as drug abuse, gang bullying and crime. Slum areas are the main sources of illegal drug trade, violent behavior, temporary residency, low schooling standards and overcrowded housing (Cauce, et al., 2003: 343-350) Poor people in the inner-city slums are faced with stress, overcrowding, insufficient housing and risky environments, unfavorable to child development (Campbell, et al., 2000 quoted in Vanderbilt-Adriance & Shaw, 2008: 2)

In Thailand, slums have various characteristics and most slum dwellers are poor. Such urban poor people live in overcrowded communities, canal-side houses, under-bridge shelters, small encroached areas, groups moving from previous slums, low-cost rental rooms outside the slums, low-cost rental rooms/buildings in inner cities, construction workers camps and street-sides for homeless beggars (Prapas Pintobtang, 2008). When considering the quality of life in terms of economic, educational, health and environmental conditions, it has been found that many slum residents live in unsuitable housing such as a high or steep place, near an industrial factory or garbage dump, a moorland, a place under bridge/tollway, and an illegally occupied area. Even though some of such areas have been developed, many problems still exist, e.g. traffic jams, inadequate public utilities, poor mental health, poor

environmental conditions; and one of the major issues is the lack of permanent housing as they have been evicted from another place or improper living conditions. As a result, the quality of life of many urban residents is severely under threats that affect children's adaptability and quality of life. In fact, there are 370,356 children aged 6–24 years living in urban slums in Thailand, more than half of them (196,695 children, or 53.11%) in Bangkok (National Statistical Office Thailand, 2006)

A survey of health status of Thai people (Yaowaluk Porapakkham and Pornpan Boonyarattanapan, 2006) reveals that about 30 percent of pre-schoolchildren (aged 3 years and over) usually begin to have violence with friends and animals; and 40 percent of them are from families with verbal violence or physical abuse. At school, teaching life skills to solve problems by rejecting violence is noted in 58.8 percent of all schools. In the workplaces, only half of the shops located in such places do not allow the sale of cigarettes and alcohol; and there have been no systems for accident prevention, security protection and community recreation.

Regarding the risk behaviors among Thai youth, it has been found that the proportions of those with safe sex behavior and premature pregnancy exceed the 10-percent limit suggested by the World Health Organization. Among youth in Bangkok, a large proportion of them experience emotional and behavioral problems, lacking rejection skills, even though the survey reveals that kindergarten and primary school children in Bangkok have IQ levels higher than the international and national averages.

In addition, it has also been found that certain behaviors such as cigarette smoking, alcohol abuse, Internet game playing, online chat, and consumerism cause both physical and mental health effects such as accidents, sexually transmitted infections, AIDS, stress, suicide, obesity, malnutrition, dental caries, and other problems related to poor personal hygiene and unhealthy behaviors (Ladda Mo-suwan, 2007; IPSR, 2003; NSO, 2006; MHD, 2007; Institute for Population and Social Research, 2009; Ramajitti Institute, 2008). According to Sompong Jitradub (2007), his study in 1,200 communities (in 29 districts) in Bangkok shows that out of 12,000 children in the communities, about 15 to 20 in each community do not continue their study or drop out of secondary school and then form a group of youth with such behaviors as smoking, drinking, drug abuse, gambling, and burglary. The reasons for not attending or dropping

out of school are related to family status such as poverty, having to help family earn income, helping with family's work, taking care of siblings, limited seats in a nearby school and having to go to school in another district, inconvenient transportation, and school's poor quality. Concerning free-time activities, the school children will normally play sports, do homework, read a book, or help parents with house chores, while other children or school dropouts tend to play computer games, drink alcohol, smoke cigarettes, indulge in sex, sleep late, or ask friends to lead a risky and dangerous life. That is consistent with the findings of Thongsook Mantadara and colleagues (2003), i.e. children and youth in 72 slum communities nationwide have problems with their educational opportunities; some are neglected especially those who are orphans, street children, and child laborers, prostitutes, or beggars; some are abused/raped, stateless or HIV-infected. As many as 699 children and youth did not attend school or dropped out (during the data collection period) mainly due to socio-economic and family problems such as parents' divorce, being orphans, living with others, living alone, being punished/beaten, being under pressure, being street children, living with friends and becoming gangsters, indulging in games and premature sex, teenage pregnancy, anti-social behavior, and parents' disinterest in education. Many of them have problems with nationality or civil registration; some are foreign immigrants crossing the border from other countries; some have dual nationalities in southern border provinces; some are unregistered/uncovered children without any 13-digit ID number, not being enrolled in certain schools. Some live in poor environmental conditions with a lot of ways to the vice such as gambling or drug abuse. Some schools adopt a system of indirectly dismissing children by strictly enforcing school rules, reprimanding at the flag pole, inflexibility in some issues; some children are late for school due to their bad habits or characteristics, e.g. laziness, boredom with schooling, aggressiveness and inability to get along with peers, physical inferiority and being teased by friends, not daring to go to school.

For environmental factors, many children living in poor areas tend to be lacking the right and necessities. Their value is diminished by environmental factors that affect their quality of life and health status; such factors are, for example, physical environment as well as social and housing conditions. (Paris, et al., 2002: 8)

The physical environmental factors that Thailand is facing include indoor air pollution resulting from the economic growth and urban development that has caused the buildings (houses, apartments, hotels, condominiums, offices and schools) to use a closed system which lacks an adequate ventilation mechanism. A toxicology study on the exposure to PAHs and benzene has found that students in Bangkok have the levels of such chemicals in blood 6 and 2 times, respectively, higher than those of rural students, making them at greater risk for cancer. Foods have also been highly contaminated with hazardous chemicals such as fungicides and borax. Moreover, urban development has caused the roads to be extended and expanded, but their maintenance is lacking, resulting in more road traffic accidents. In the city, there are a lot of tall buildings or skyscrapers and many roads that cause climate warming with impacts on the mental health of residents. The proportion of risky areas in cities is higher than that for social or sport activities such as playgrounds or exercise arenas for children.

Social factors and globalization have caused dramatic changes in the Thai lifestyles and family including child care to be a materialistic society. It has been found that the proportion of nuclear families has increased; most of them with single mothers and the adolescents have to live by themselves. Regarding the way of child care, the parents and caregivers normally focus on physical rearing; urban children spent more time watching television than rural peers; the time proportion for such an activity is highest for Bangkok children. A lot of them watch or are exposed to non-creative media and live in the violent and complex society.

With regard to urban housing, a large number of households are related to slum areas with unhygienic conditions, using chemical and toxic substances, and being near garbage dumps. Some are overcrowded, in tall buildings, or near industrial plants and an airport, all being risk factors detrimental to children's quality of life.

Based on literature review on the concept of resilience, the risk factors for children are often described as the environmental factors or the factors associated with behavioral problems such as stressful mothers, adverse events, low income, and exposure to domestic violence in the community, making children vulnerable to various disorders. As mentioned above, studies have shown that the children exposed to various risks such as poverty, community violence, parents' alcohol abuse or mental

illness, discrimination, migration and poverty, and physical or sexual abuse will have poor adaptive behavior, mental disorders and poor learning achievements. However, the children who receive good parental care will have better adaptation than those with poor parents' attention (Grizzell, 2006: 6). Children's temperament and good intellectual capability are positively correlated with child caregivers. The positive mental health of child caregivers is correlated with good adjustments among the children with a low level of risk factors such as mother's mild mental health problems, stressful lives or poverty (Martinez-Torteya, et al., 2009: 564). A study on clusters of children with attitude risk factors towards anti-social behavior, drug use and perceived risk of drug use, shows that the children with high-risk factors have low grades or poor academic performance, highest reports of drug use, high levels of delinquency, few peer problems, and poor supervision and discipline. For the group with very high-risk factors have lowest grades or poorest academic achievements, high levels of delinquency and peer problems, low social support and neighborhood cohesion, experimental drug use and some family risk. In the group with low risk and high protective factors, the children have high levels of coping and self-esteem, commitment to school and good academic performance, few peer problems, moderately high social support, high neighborhood cohesion, few daily hassles, and minimal substance use or delinquency (Anthony, 2008: 6-16). It can be said that, in today's society, children must unavoidably encounter changes and problems; therefore, the children with risk factors as well as sufficient protective factors will be able to make better adjustments and coping better with problems.

However, even if the children are exposed to various risk factors, some of them are able to adapt successfully (O; Donnell, et al., 2002: 1265). The review of the situation in Thailand shows that there are at least three people who live in slums and could succeed in education. The first case is an engineering graduate from Chulalongkorn University and an owner as a kind of drink, being the diligent eldest brother with five siblings in a trading family, helping parents with trading to earn incomes and studying during the same period. Expressing his positive view, he said: "One advantage of poverty is that it is like a drive that makes me endure and persevere very much..." (South Siam, May 15, 2010).

The second one was a boy in Khlong Toei district's Bon Kai slum community, whose parents were merchants with good child care. As a good student, he was financially supported by the World Vision Foundation of Thailand (Supanimit in Thai) from the 5<sup>th</sup> through 12<sup>th</sup> grades. He received a certificate of recognition and cash award for winning a mathematics competition and later won a scholarship under the Development and Promotion for Science and Technology Talents Project to study at Oxford University in England and then for a doctorate at the University of Illinois, USA. What he thinks and says is: "For a person to succeed in study or reach a certain point, it depends on personal interest; it is important to know what he/she likes or is really interested in; such a thing has to be determined before moving forward in that direction; moreover, there should be someone who can sincerely give guidance" (Siamrat, July 14, 2003).

The third case was a girl who lived in the Seventy Rai Community, a slum in Bangkok's Khlong Toei district. In a poor family, the girl's father was an employee of a company and the sole breadwinner as her mother was chronically ill; so her two elder brothers had the opportunity to only complete 9<sup>th</sup> grade (Mathayom 3) as the family was unable to afford to send them to high school, but she said: "I nearly missed the opportunity to continue my study. Fortunately, I got a scholarship from the Duang Prateep Foundation to do so with good academic records. After completing 12<sup>th</sup> grade (Mathayom 6) from Wat Thatthong School with a GPA of 3.94, I was able to pass the university entrance examination to study at the Faculty of Allied Health Sciences, Chulalongkorn University. Life in the slum was difficult, walking through the flooded roads on rainy days; and when coming home late at night, I had to call my dad to pick me up for fear of assault by drug addicts." Later on, she graduated with honors and then got a scholarship to pursue her master's and doctoral degrees. She also said: "The people in slum communities would have better quality of life and be accepted by society if they all have an equal educational opportunity as education provides them with knowledge and access to occupational opportunities; and they will know how to distinguish between right and wrong. Importantly, after they are well educated, they must not forget to bring the knowledge gained to develop other people and the communities for better quality of life (Matichon, June 18, 2009)". That is consistent with Masten's findings (2009) on school resilience, which show that, in general,

children in poor families tend to have low academic performance in reading and mathematics. Homeless or frequently moving children have been found to have do academic success as well.

Based on the above information and concept of resilience in relation to risk factors, it has been found that even if a person encounters an adversity, what is the reason for someone to, or the factor that makes someone, choose to behave well or tend to do things that benefit themselves and society. Thus, this study was designed to study the risk factors for the slum areas especially among school children in residential slums who may have other risk factors such as individual, family, school and friends.

As for children's resilience found in the literature review, some researchers like Bussarin Limsoontorn (2000) applied the concept of Grotberg in evaluating the resilience of children living in slums, while Atchala Kittiwongwisut (2001) conducted a study among vocational college students, Penprapa Prinyapol (2003, 2006) assessed college students, and Sunipat Premamornkit (2000) assessed junior high school students who had a GPA lower than the fair level. They have found that the factor in the "I have" group include the confidence in the relationship, personal practice guidelines, independence and support, while the factors in the "I am" group are self-esteem, compassion, goodwill and empathy to help others, being loved, and freedom to act and take responsibility; and for the "I can" group, the factors are the help-seeking ability, emotional control, communication skills, emotional self-assessment and appropriate problem-solving capacity. And Nidtaya Takviriyannun (2008) found the factors related to perseverance, problem-solving skills, positive thinking, assertiveness, self-balancing ability, and social skills.

Keller (2003) and Patcharin Arunruang (2002) studied resilience based on the concept of Wolin & Wolin (1993) using the six features of strengths, i.e. insight, independence, relationship, initiative, creativity/humor and morality. Patcharin found that, based on the full score of 5, the average resilience score of early teenagers was 3.9; the relationship and innovator had the highest average score (4.1), followed by morality (4.0), and the creativity/humor (3.95), while the insight and independence had the average score lower than others (3.4 and 3.2, respectively).

The concept of Constantine and Benard (2001) is based on the competency of children in six issues, i.e. cooperation/communication, empathy, problem-solving

skills, self-efficacy, self-awareness, and goals/aspirations. The factor analysis showed that the factor loading was close to 1 and Eigen value was greater than 1 for all the factors. This concept is applied in assessing high school students at the national level in the U.S.A. and is updated regularly. It was found that this concept is similar to the assessment of children's Development Assets or life assets (Suriyadeo Tripathi, 2009 a.), which include the division of the internal assets (or powers) and is called resilience in this study. It is the power of self-esteem, the power of faith/confidence and the power to create life skills. The assessment of children's assets conducted among those aged 12 to 25 years in 18 provinces under the Children and Youth's Well-being program found that they have some problematic factors: only 34 percent had a giving skill, 43 percent took part in religious activities, and 30 percent accepted untruthful speaking.

A number of sub-factors related to children's potential are also found in other research such as the emotional adjustment, high IQ levels, sense of self, sympathy, problem-solving skills (Cowen, et al., 1996), future expectations, interpersonal relationship (Benard, 1999; O'Donnell, et al., 2002), self-responsibility and participation (Aecher, 2006), good temperament (Martinez-Torteya, et al., 2009), participation in volunteer activities, winning or successful in kindergarten, the value of school, using more than two languages (Perez, et al., 2009), and social competences, self esteem, confidence and autonomy (Mohaupt, 2008; Sun & Stewart, 2006).

The synthesis of the results of studies on resilience traits above, in summary, show in this study that the resilience will be measured by choosing the variables which are consistent, implied and found in research without any overlapping each other. The variables used to measure the resilience are divided into four groups: the sense of purpose, ethics, sense of self, and problems-solving ability.

The review of protective factors shows that one who has school resilience will have a protective factor from family, peers, lovers, teachers (Crosnoe & Elder, 2004). One who has health resilience will have protective factors related to social environment and built environment (Sanders, et al., 2008). For child victims of violence, their protective factors include the family, school and peers, being a key indicator and influence (O; Donnell, et al., 2002); and the external protective factors are associated with the adaptive outcomes.

When considering various protective factors, it has been found that the family protective factors include parents' ability or knowledge (Cowen, et al., 1996), parents' support, attention and guidance (O'Donnell, et al., 2002), parents' support for school activities, living with parents (Perez, et al., 2009), effective parents style that employs adequate and persistent role model, harmony between parents, quality time spent, socio-economic resources of the parents (Mohaupt, 2008), and the centre of family functioning, family coherence, and family as a unit in coping with the stresses of life (Sun & Stewart, 2006).

The peer protective factors are found to include peer's support (O'Donnell, et al., 2002) as well as peer's moral support or assistance for children with divorced parents or lover-related problems when the peer will play a role replacing the child-parent relationship (Crosnoe & Elder, 2004).

Regarding the school protective factors, it has been found that the children receive from school good opportunities and experiences (Barnes & Morris, 2007; Manyena, 2006; Werner & Smith, 1988 quoted in Mohaupt, 2008), social support, competency-promoting model, teacher's role model, facilitating environment, space and support for children activities (O'Donnell, et al., 2002), teachers' attention to children's learning as well as teachers' goal-directing power, support, expectations and counseling (Crosnoe & Elder, 2004), teachers' supervision, practices and expectations, school policy, classroom/school atmosphere encouraging positive attitude, teachers' time for developing relationships, and warmth to help relieve suffering (Green, et al., 2007), participation in extracurricular activities and voluntary activities (Perez, et al., 2009).

The community protective factors are found to be limited as very few studies have been undertaken on this issue; however, they include social support and bonds of neighbors (Anthony, 2008).

The review and synthesis of protective factors identified by the aforementioned studies, including those of Suriyadeo Tripathi (2009 a.), Nittaya Takviriyannun (2008) Constantine and Benard (2001) and Swedish National Institute of Public Health (2009) shows that there are diverse factors of family, peers, school and community, essentially covering the questions about caring relationship associated with love, compassion, role model, and support relationship; high expectation

associated with trust and limited expectation; and meaningful participation associated with good attachment and relationship-creating activities, for the family-school-community factors. As for the peer protective factors, there are questions about caring relationship and high expectation.

With regard to adaptive outcomes, children resilience will have a successful adaptation as determined by either internal conditions such as well-being or performance efficiency in a certain environmental or both (Masten, et al., 1990 quoted in Keller, 2003: 18).

A review of various resilience studies shows that they were conducted on various aspects of adaptive outcome such as expectations, self-reliance, interpersonal relationship, substance abuse, alcohol drinking, cigarette smoking, marijuana use, truancy (school avoidance), anxiety (O; Donnell, et al., 2002), well-being, depression, happiness, quality of life (Keller, 2003), and mental health conditions as well as health status (Ungar, 2004).

For the studies that focus on academic achievements, it has been found that the results of adaptive outcomes are similar to those of Borman and Rachuba (2001) which measured the orientation of self-esteem, confidence in learning mathematics, adherence to the program such as attention, learning and homework; Waxman, et al. (2003) measures the outcomes in term of grade point average (GPA), Scholastic Aptitude Test (SAT) scores, time spending on mathematics homework; school absenteeism, learning motivation, school leadership and volunteerism; Samuels (2004) measured the cumulative GPA, Academic Resilience Inventory (ARI), self-motivation and social desirability. Flynn (2006) measures GPAs, test scores, and staying in school; Anthony (2008) measures learning achievements and behaviors based on the standardized scores for mathematics, reading, writing and science, for learning performance, and on their self-reported behaviors related to drugs use and anti-social behavior and teachers' reports on classroom behaviors; Vanderbilt-Adriance and Shaw (2008) measures the adaptive outcome based on the child positive social adjustment which has two main parameters: (1) adolescent antisocial behaviors such as drug use, smoking habits, alcohol and violence, participation in the delinquent group and (2) child social skills related to self-control such as rules/regulations adherence, and emotional control when dealing with problems with friends or adults;

Perez (2009) focuses on GPAs, the number of awards received while at school and the subjects with outstanding achievements; Anthony, Alter and Jenson (2009) measures the outcomes based on four major variables, namely competence (read ability, learning capacity, and computer/technology skills), confidence (self-efficacy and self-identity), behavior (at school, in the family, with peers and among neighbors) , and relationship with others (school commitment, neighborhood attachment, attachment to mentor and adult and a volunteerism).

According to the adaptive outcomes review above, there are measurements of learning achievements, learning behaviors and social behaviors. In this study, the focus was on school children; so the researcher measured their adaptive outcomes in two aspects: learning achievement and social behavior. As for learning achievements, data were obtained from the children's cumulative record for the previous academic year until the data collection period; and for social behaviors, data include children's expressed positive social behaviors, emotional control behaviors, rules/regulation adherence, and responsibility.

### **2.2.3 Promotion of children's resilience.**

Based on the belief that resilience can be encouraged in children in terms of their speech, actions and surrounding environment, as well as how to cope with adversities (Benard , 1991:3), using various protective factors or supportive resources as children are an important group to be resilient. Bottrell (2009: 336-337) indicated that there were a lot of resilience studies in the past, but there has been no indication as to how to find an answer to such an issue.

Resilience is something that occurs intricately and dynamically through internal and external development; so its enhancement requires a continuous process of nurture and support with through and integrated efforts of the children, parents, peers, school and community (Weigand, 2007: 1-6). Therefore, resilience promoting is the use of lessons learned from studies on the factors affecting it to determine or design a resilience promotion process. Mcalpine (2009: 12-13) suggests that the promotion of resilience in the family is the enhancement of the quality of parent-child relationships, and more generally, the well-being of caregivers to promote secure attachments, encourage effective parenting, promote self-sufficiency, (in school)

promote student well-being, encourage teachers to remain involved with children, creatively re-assign teacher and administration staff's responsibilities so that they can offer continual support to children; and in the community, promote neighbor cohesion and involvement, connect youth to neighborhood support, organize groups of families to meet regularly and provide peer support, organize school clubs, including community youth organizations and so on.

A review of ways to encourage children's resilience shows the patterns or process for resilience promotion or development which can be grouped as two aspects. i.e. increasing individual competency or ability and increasing the capacity and protective factors as follows:

#### 2.2.3.1. Promoting resilience at the individual level.

1) Focusing on the personal capacity building approach developed by Wolin and Wolin based on the principle of traditional psychiatric care in identifying the patients' strength and behaviors when dealing with adversity, which are related to their relationship, creativity, humor and morality. This approach is like counseling for the children to learn to protect themselves and make emotional adjustment such as doing after-school activities, playing sports or watching TV soap operas of their interest, rather than doing nothing, emphasizing actions for the management of chaotic situations.

2) Using the concept of mental toughness. (resilience) strengthening (Prawech Tuntipiwatansakul, 2008), comprising for major elements as follows:

(1) Sense of self; people will feel good about themselves if they had a good experience during childhood; regularly receiving love and understanding will become strong mental assets when they become adults. It can be said that feeling good about themselves occurs after having had a good life experience, having done good things, and being optimistic. Importantly, having discovered their aptitude mean having developed their skills of which they are proud, having built resilience through the creation of the sense of self. It is thus a personal a practice for them to be optimistic, know themselves, and develop their own skills until they becomes successful with pride.

(2) Sense of control; things that happened in our lives come from a variety of causes which cannot directly controlled. People always find what they liked and dislike. The feeling that they are able to manage their own lives occurs when they are confident with their problem-solving and emotional management skills, having pleasure in life. Even in the worst situation, they will be able to accept something that is unchangeable and being determined to do what they can until they achieved the desired effect. The development of resilience by creating confidence in life management skills is self-training to recognize the reality of life or accepted what is unchangeable, while perservering to do what they can until are successful, learning to correctly manage their own emotion and having the skills to tackle the problem creatively.

(3) Sense of connection: having willpower to overcome any problems and barriers of life is being close to someone with love, understanding, encouragement and support, which are the key aspects of resilience. The development of resilience through supportive relationship is learning to develop good relationships with nearby people to have good communication skills, good understanding, loving kindness, and trust in each other. The supportive relationship is like a powerful source of encouragement in fighting for life even when faced with a crisis situation that is difficult to overcome.

(4) Sense of purpose: people will have the power to overcome difficulties and obstacles better when they have the aim of life, especially if the goal is not only for themselves. The ability to live with purpose and the sense that they are moving towards a valuable goal will help them to see that the problem is just a small one compared to other problems; and it will pass by, while they are moving towards the desirable goal.

3) Using the Resilience Quotient (RQ, or phalang sukhaparpjit) development manual for educational institutions developed by the Department of Mental Health, Ministry of Health (2009), for building resilience in children. The teacher can use the manual which contains three sections of activities as follows:

Section 1: RQ enhancement activities for the teacher to organize for children to learn about life experience in realizing what they

are, what they have and what they can do, using the “I am, I have, I can” or “phalang ued-hued-soo” approach for themselves.

Section 2: RQ enhancement activities for the teacher to organize for training or meeting with parents to learn about RQ and to be able to assess the parents’ and children’s RQ and then develop ways to enhance children’s RQ when faced with a crisis.

Section 3: A guide for student leaders or the student council with examples of RQ enhancement activities to use in organizing such activities in cooperation with students’ clubs/gatherings, or student development projects.

4) Providing psychological counseling according to the reality therapy concept. Patcharin Arunruang (2002) studied the results of group counseling on resilience of children in secondary school. It used the seven-element framework of resilience of Wolin and Wolin and the eight-element psychological counseling through reality therapy concept of Glasgow; these include the relationship making, the focus on current behavior, behavior assessment, planning for change, announcing plan to gain commitment to plan implementation, non-acceptance of excuses, non-punishment, and non-cancelation of intention. The objective was to create supportive relationships, self-awareness and learning of new things among members. The group psychological counseling was held 11 times in 6 weeks, totaling 20 hours, for 36 9<sup>th</sup> grade (Mathayom 3) students under study; and it was found that, after the experiment, the group’s power-regaining capacity was better than before and higher than the control group.

5) Enhancing resilience or mental toughness for preventing suicide. Nikorn Pliewvinya (2007) evaluated the resilience against suicide project at Suanprung Hospital in Chiang Mai province, which was part of the suicide prevention program, focusing on providing knowledge in various aspects about resilience and learning activities for students. Each activity was designed by the Department of Mental Health in collaboration with teachers from different schools, which was regarded as the beginning of the development of young people’s quality with resilience in coping with life’s problems and a measure to reduce the suicide rate among youth. Under the project, a five-day training course was held to provide knowledge and problem-solving skills for students of Sansai Wittayakom School in

Chiang Mai's Sansai district. The results showed that, upon training completion, the students' mean resilience score was significantly higher than before.

Folkman and Moskowitz (2000 quoted in Hutchinson and Pretelt, 2010: 23) explained that a person had three methods to face problems in a positive and sustainable manner in the chronic stress context. It is a positive reappraisal reframing a situation to see it in a positive light with a goal-directed/problem-focused coping approach, efforts directed at solving or managing a problem through identifying realistic goals, internal resources and small acts of mastery over the difficult situation, and infusing ordinary events with positive meaning, e.g. identifying what people have done that has been helpful or which relates to something they give value to. The sustainability of positive emotions is to be open-minded so as to create social, intellectual, mental and emotional resources for the child, using the "Mighty Me" program whose steps are: interviewing to identify problems, mighty check-in, letter to supporters, and resounding effect (how to make problem small).

2.2.3.2 Promote resilience by increasing both individual capability and protective factors, which have been found as both the principles and actually implemented projects, as follows:

1) Promoting resilience according to Rutter's concept (1987 quoted in Winfield, 1994) using the following guidelines.

(1) Reducing negative outcomes by altering the risk or child's exposure to the risk, e.g. for poor children attending school, they should receive some compensations such as lower-priced (or free) lunch, breakfast, clothing, basic health care and good interaction with peers.

(2) Reducing a negative chain reaction following risk exposure, e.g. for school dropouts, opportunities and care should be given to them such as part-time jobs after class, close surveillance, counseling, more teachers' time probably during the day or after school, and teacher's counseling at a social event outside the school.

(3) Establishing and maintaining self-esteem and self-efficacy. Children have the learning opportunity in two ways: the

positive interacting with peers and successful adults and success in their own work or activities such as academic, music, arts or sports achievements.

(4) Opening up opportunities for children to show off their skills or capabilities such as social competence.

2) Promoting resilience using Benard's model, modified by Rutter, Garmezy, Wemer, Smith and others, based on the idea that adults have power and responsibility to create the environment favorable to children's positive growth. The important factors for creating resilience in children and youth are nurture, support and good relationships, whereas the important environments for children are the space for playing and activities at home, at school and in the community, which are essential for supporting their meaningful and expected involvement.

3) Supporting the collaboration between schools, families, communities and students, based on Milstein and Henry's model or resiliency wheel, and aiming to change the educational system and culture of the community with risky environmental conditions, in which there must be six elements interconnected like a wheel including social bonding or positive connections, clear level of boundaries, life skills, nurture/support, high expectations, and meaningful participation.

4) Building resilience by creating children's ladder of resiliency, based on the model developed by the Search Institute, which supports leadership, knowledge and resources for health promotion among children, youth and community. The main idea is to create the asset-building approach which postulates that more assets will be built through the cooperation of individuals, families, schools and communities in exploring and encouraging good activities such as doing homework for 1 hour, reading for 3 hours or more, having a happy family life, or doing religious activities for more than 1 hour per week. In this effort, children have an opportunity to negotiate their social needs and others such as values and ethics required for developing good adult behaviors. The development will focus on the principle of "play well, live well and work well", based on the ladder of resilience development of Wemer and Smith (1992 quoted in Jones, 2003) who have found that

there are five factors: good counseling, love of reading, problem-solving skills, social skills and hobbies.

5) The Students' Counseling System, developed in 2000 by the Institute of Child and Adolescent Mental Health, Ministry of Public Health (MOPH). In response to the rising suicide incidence among students in schools and universities, MOPH, in collaboration with the Ministry of Education, conducted a brainstorming session to monitor and prevent the problem and later established the Counseling System, using the strategies for students' behavior development by integrating mental health into the school curriculum. The system emphasizes the concept of teachers knowing each individual student (background, learning strengths/weaknesses and habits) and providing prevention services through classroom activities, remedial courses and support activities based on each student's capacity.

In 2008 and 2009, a pilot study was conducted by the National Health Foundation and the Office of the Basic Education Commission (2009) on the prevention and resolution of violence in basic educational institutions in Bangkok and Nonthaburi; its aims were to strengthen the student counseling system, develop and create knowledge about the prevention of violence in schools, support activities and good areas for all students to express themselves and be accepted in a proper way, and strengthen the family relationships. The study reveals that students have the power and need opportunities for knowledge sharing. With regard to the opening of forums for creative expression, at-risk students could create a learning process between teachers, students, researchers and network members, while the parents gained knowledge and had positive perspective on children and could take part in parent-school networks, particularly in inspecting the sources of vices or ruination and risky or dangerous places for children.

According to Weiss (2008: 127-130), humans need various skills that are integrated for problem-solving, based on the strength-based concept, i.e. human skills in one context can be applicable to others. For instance, children have a caregiver or mentor to help correct their weaknesses by having them learn of their mistakes through an inquiry or feedback from others; similarly, social support is like a guide to success by getting advice from others and facing challenges in order to do other things.

Nickolite and Doll (2008 quoted in Weiss, 2008: 128) used a teaching/instruction model to increase resilience in children by developing the classroom environment through Class Maps Consultation. In that process, initially a survey was undertaken and then six protective factors were added/enhanced, namely supportive peer relationships, academic efficacy, academic self-determination, behavioral self-control, teacher-student relationships, and home-school relationships. The study found that the organization of teaching/learning environment is to create an understanding of child resilience development and steps for teachers to arrange the learning atmosphere in the classroom to promote resilience.

6) Child Friendly City (Amornwich Nakornthap, 2007), an integrated concept for the development of children and youth at the provincial level under the framework of a comprehensive child development with all dimensions: basic rights, family, learning and social space for children's quality of life. The concept is similar to the efforts of many governments in many countries in creating a "Child Friendly City". In Thailand, the concept is also consistent with the results of the research on urban environments that affect children, based on the concept of Development Assets in children, who should be empowered by the family, educational institutions, religious institutions and whole society (Suriyadeo Tripathi, 2009). It also includes the measures that lead to systematic changes towards collaboration for the development of children and youth among various agencies in the province in a concrete manner. Moreover, there must be tools and clear indicators for undertaking the joint efforts, based on the Child Friendly City principles, namely safety promotion, health promotion, family strengthening, learning enhancement, effective mechanism for child rights protection, creative space provision, and child participation promotion.

7) The Capacity Building for Creative Area of Children established by the Foundation for Child Development (2007) urges all sectors of society to be aware of environmental issues that are toxic to children. Each sector cooperates in creating the environment favorable to child development in a well-rounded manner, as well as eliminates and controls unsuitable/harmful environment for children and youth including the allocation of social space and the investment in social activities for children and youth with serious and extensive

coverage. The campaign on creative space for children is the creation of area or space for children to gain experiences, opportunities, and age-appropriate development in response to their needs. Such activities aim to promote a creative learning process through the child-family-community participation. It is an area or opportunity for children, families, communities and relevant agencies to cooperate with freedom and happiness to achieve the result of creative learning and development for children. The creative space for children has several dimensions, i.e. physical space, areas of thought, social space and media area.

8) The development of the network of Thai children's Developmental Assets (Suriyadeo Tripathi, 2008), a project operated by the Health Program for Children and Youth of the Thailand Health Promotion Foundation. The project has developed a tool for measuring the child developmental assets which include the five powers of self, peers, family, wisdom and community, based on the positive-youth-based concept and three strategies involving children and youth (positive youth model), community and youth participation, and public motivation. At the local level, the project was directed by a seven-member child and youth development committee comprising three adults and four children, covering five working systems (mentoring and advisory, development and creative activities, resource management, surveillance, and referral) and implemented in 20 provinces as well as Bangkok (in Rom Klao community on a pilot scale as it has diverse poor ethnic groups at risk of drug abuse and gambling).

9) The Carlyle Resilience Method (CRM) (Grizzell, 2006), a project whose concept is to promote resilience in urban children, involving child care, education, protection, positive reinforcement and public participation (among families, religious groups, communities, and the educational system). The project believes that the efforts will lead to a positive social change, educational achievement and sustainable society.

The project adopts four processes to promote resilience according to Rutter's concept as follows:

(1) Reducing negative risks associated with outcomes to take the children away from the existing negative environment.

(2) Reducing negative reaction from the child's exposure to risks, e.g. gang involvement, school avoidance, and teenage pregnancy, with the school playing a key role through active school-parent participation.

(3) Establishing and maintaining self-esteem and self-efficacy that are very important for the child's success in the future through the positive social interaction with parents, caregivers and other adults.

(4) Opening up opportunities for children to demonstrate their positive skills leading to long-lasting development through the promotion of self-control and self-learning achievements.

Under this project, the key resource is the family, involving the education for the entire family, family counseling, environmental improvements and community activities such as after-school and holiday activities, college/university networking, local private-sector participation, and arts/language/books activities. So this project adopts the multisectoral participation approach with the family being the core unit and the supportive process can be undertaken in all components.

10) The Empower Children! – Promotion of Resilience in Early Childhood Institutions Project (Ronnau-Bose & Frohlich-Gildhoff, 2009). Based on previous studies on resilience, the project has found that the key factors that make children resilient are self-esteem, self-efficacy, social skills, problem-solving skills, self-control of emotion, perception of their own health and others, stress management skills, locus of self-control, positive life styles, and a normal intellectual level. Resilience does not occur spontaneously, but is developed during the life cycle. Early childhood is a critical period for the development of resilience. This project was implemented using the person-centered approach and the holistic learning process, targeting children aged 3–6 years who attended kindergarten in two urban schools and two rural schools. The project activities include:

(1) Training of teachers of pre-school children for a period of two years concerning the concept of resilience, how to work with children and their parents, and the ability to create a network. Once the training was completed, a social worker assumed a further role as a mentor for the program to continue.

(2) Operations in children using a training curriculum to enhance protective factors in children to protect themselves against stressful conditions and to have the ability to deal with crisis situations.

(3) Working with the parents' groups by providing counseling each week. The parental course was also organized as a resource for parents in raising children in various ways.

(4) The operation with the network members using the manual for creating close school-parent cooperation.

The results showed that both the children and teacher groups had improved developmental levels. The experimental and comparison groups had differences in their intellectual skills, self-esteem, self-control, and problem-solving capacity. The important factors contributing to child development were parents' counseling conducted by teachers, parents' participation in the program, close school-parent collaboration, and positive perception of all groups. These resulted in a relaxed relationship, creative problem-solving process, and increased secure feelings of the two parties.

11) The Bridge's Project (Anthony, Alter, & Jenson, 2009), an out-of-school time program that provides learning opportunities for 128 at-risk children and youth from families with HIV infection, poverty, and housing deprivation. This project used the concept of resilience and strategic coordination with others such as volunteers and universities that would take up the children to further their studies. Under the project, the children were prepared to increase their protective factors by accepting help from other people or bonding units, enhancing their academic skills and prosocial value, experiencing expanded personal horizons, creating continuity, and fostering resilience through such activities as tutorial programs, reading skill practice, leadership practice, extra opportunities, and summer camps. The measurement of the medium-term results was performed by assessing children's reading capacity, learning achievements, computer skills, self-efficacy, self-identity characteristics (behaviors at school, and with family, friends and neighbors), networking capacity (commitments to school and closeness to neighbors, caregivers and other adults), and volunteerism. As for the long-term results, the assessment was undertaken on the number of children who had furthered their education, the number

of children who could attend university, those who graduated, the number of children with economic success, sufficiency lifestyles, and positive or negative social behaviors. The evaluation of the project revealed that, overall it was successful, especially regarding the children's reading skills, and their self-efficacy was associated with learning accomplishment.

12) The Mental health promotion plan (Pravech Tuntipiwattansakul, n.d.), aiming to enhance the protective factors or mental health in youth, families, and specific target groups by undertaking the following:

(1) Developing innovations to promote access to mental health activities and services for youth, family, and specific target groups.

(2) Developing the mental health information systems at the provincial and national levels for public communication and area-based program implementation purposes.

(3) Fostering partnerships and networking with academic, service, and social agencies to support and strengthen the program.

(4) Undertaking activities related to knowledge management and tool/model development for the public and specific target groups to have better access to appropriate religious learning resources and principles as well as alternative psychological and spiritual services when seriously ill.

(5) Synthesizing knowledge and developing tools to support the formulation of sub-district mental health plans and the implementation of community mental health promotion programs.

(6) Providing public space for youth to establish a creative communication channel among teenagers themselves and between the youth and adults in society.

13) Masten's Resilience Promotion (Masten, 2009)  
Masten explained that the child who is in dangerous situation cannot wait for the result of research for solution; however, the existing knowledge should be used and a policy on resilience promotion should be set with three major components as follows:.

(1) Reducing risk exposure: the family, workplace or community gives importance to the prevention or reduction of violence that may affect children such as violence in the family or community and prevent accident from child playing.

(2) Increasing protective factors: even when risks have already occurred, it is often possible to increase protective factors in an effort to counterbalance the risk; for example, the school could provide meals, health care, computer services, books, tutorial, and teachers' training to mitigate the effect of high-risk situations.

(3) Mobilizing powerful protective systems: promotion of good adaptation can be undertaken by developing or restoring their specific roles or function, e.g. a project to foster the parent-child-mentor, or teacher-child relationships, or to promote the touch with orphaned children, or training to encourage self-regulation.

The review of the resilience promotion as mentioned above has found that the important elements for promoting resilience are individual and external factors as well as risk factor reduction. Resilience promotion is specific to each group for each area with specific risk and protective factors (Fergus & Zimmerman, 2005: 399-400). In other countries, there are resilience promotion projects with long-term operations, evaluation, and research. In Thailand, the operations as a resilience promotion project have not been obvious; however, there have been studies on individual capacity building and some operational projects such as the Child Friendly City Project, the Building Creative Area for Children Project, the Child Protection Program, the Child Well-being Program, and the Child Mental Health Promotion Program. The evaluation of the learning for well-being program of the Thailand Health Promotion Foundation (Somkid Promjouw, et al., 2008) shows that there have been a working group on child protection, a youth capacity development system, a creative model for youth activities (developmental assets measurement tools, a creative activities guide for developmental assets creation for Thai children and youth, a manual for training in positive discipline for children), a teenage counseling system, a strong family network, child friendly cities projects (e.g. in Chachoengsao; Huaiyot Municipalities, and the Yang Subdistrict Administrative Organization in Maha Sarakham province). The

sustainability evaluation has shown that programs have been established to set national policies and practice regulations (e.g. safety communities for local government organizations) and actions for children and youth. In their operations, the use of resilience concept is found only in the child mental health promotion program, while other projects/programs use the positive view concept such as those aimed at increasing good/creative space, capacity building, and increasing protective factors for children.

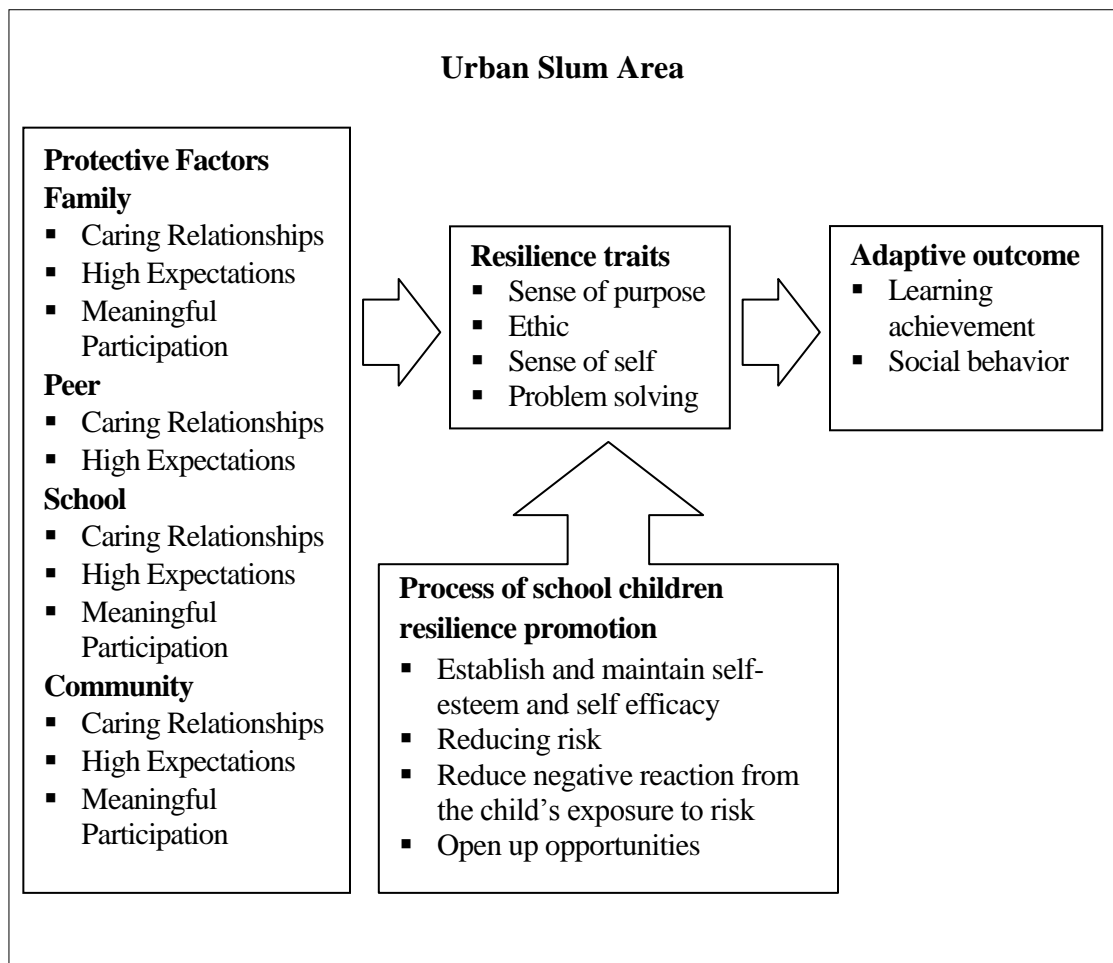
However, in the child resilience promotion process, it is unclear what the factors or features of the process are; so the literature review of such process will illustrate examples for the researcher to use in studying the process of child resilience promotion in urban slums.

In this study the researcher defines a framework for studying the roles of the components of resilience of school children in urban slums, using the concepts of Rutter (1987 quoted in Winfield, 1994), Fergus and Zimmerman (2005), Grizzell (2006) and Masten (2009), which are the process for developing child capacity, promoting good environments, and reducing negative risk factors as follows:

- 1) Promoting and supporting self-esteem and self-efficacy which are critical to the success of the children in the future. So, the children should receive positive interactions in society, for example, with parents, caregivers, and others adults.
- 2) Reducing risk factors to move or separate the children from negative environments or to reduce negative risk factors.
- 3) Reducing the impact of exposure to risk factors, for example, by providing knowledge to children and having them participate in activities run by the community, family, or school on child risk prevention.
- 4) Encouraging, and opening opportunities to, children to show their positive skills and capability by promoting self-regulation and self-education and supporting/facilitating an efficient protective system.

### 2.3 Conceptual framework for the study

This study chiefly used the concept of Constantine and Benard (2001) and Keller (2003). The researcher believed in the context of urban slum being the risk factors that interacted with external protective factors including family, school, peers and community resulting in resilience traits in children, which contributed to their positive adaptive outcomes.



**Figure 2.4** Conceptual framework of the study school children resilience promotion process

The variables in the study framework were derived from the concepts found by others based on the literature review and are summarized as follows:

**Protective factors** were analyzed from the concepts of Suriyadeo Tripathi (2009), Nittaya Takviriyannun (2008), Constantine and Benard

(2001), Swedish National Institute of Public Health (2009) and others. This study applied the protective factors from family, school, and community with the questions covering the elements of caring relationships (love, helpfulness, role model, and support relationship), high expectations (trust and regulated care), and meaningful participation (good attachment and attachment activities), while the questions on peer protective factors covered caring relationships and high expectations.

**Children resilience traits analyzed from the concepts of** Grotberg (1995), Wolin & Wolin (1993), Constantine & Benard (2001), Samuel (2004), Nidtaya Takviriyannun (2008), Suriyadeo Tripathi (2009), Prawate Tantipiwatanaskul (2010), Furlong, Ritchey and O'Brennan (2009), Hjendal (2010) and others. This study selected four variables that were consistent, referred to in the research findings with no duplication, i.e. sense of purpose, ethics, sense of self, and problem-solving skills.

**Process of resilience promotion.** The review shows that the important element of resilience promotion is individual and external risk reduction. In this study, the researcher defines a broad framework for studying the role of the components of resilience in school children in urban slums, based on the concepts of Rutter (quoted in Winfield, 1994), Fergus & Zimmerman (2005), Grizzell (2006) and Masten (2009), which includes the processes for developing child capacity, promoting good environments and reducing negative risk factors as follows:

- 1) Promoting and supporting self-esteem and self-efficacy which are critical to the success of children in the future. So, the children should receive positive interactions in society from such people as parents, caregivers, and other adults.

- 2) Reducing risk factors, an effort to move or separate children from negative environments or reduce negative risk factors.

- 3) Reducing the impact of exposure to risk factors, for example, by providing knowledge and having them participate in projects/activities in the community, family, and school for risk prevention purposes.

- 4) Encouraging, or opening up opportunities for, children to show or develop their positive skills, positive capability, self-regulation,

and self-education concept; and supporting and facilitating an effective system with protective factors.

**Adaptive outcome:** resilient children will have a successful outcome or adaptation. Adaptive behaviors can be considered from inner states or conditions such as well-being or appropriate behaviors or both (Masten, Best & Gamezy, 1990 quoted in Keller, 2003). This study involved school children, so the researcher measured two elements of their adaptive outcome: (1) learning achievements including cumulative grade point average for the past academic year until the semester under study and (2) social behaviors covering the expressions of positive social behaviors, emotional regulation behaviors, rule acceptance and social responsibility.

## **CHAPTER III**

### **RESEARCH METHODOLOGY**

The study on the Process of Resilience Promotion in School children in an Urban Slum Areas used the mixed methods research approach divided into two phases involving the collection and analyses of quantitative and qualitative data in the first and second phases, respectively. As the researcher gave importance to both quantitative and qualitative data, the details of each phase of the study are as follows:

#### **3.1 Phase I: Quantitative study**

This phase of the study aimed to respond to three objectives: (1) to determine the resilience of school children from urban slums; (2) to determine the factors related to family, school, peer and community protection, and to analyze the predictive factors for resilience; and (3) to determine the adaptive outcomes related to learning achievements and adaptation behaviors and to determine the characteristics of resilience that were predictive of the adaptive outcomes. The details and steps of the study as well as the study population, sample size, data collection tool, and data analysis are as follows:

**3.1.1 The study population** included the school children who lived in slums in Bangkok. The review revealed that there were three schools admitting children from urban slums, namely Chumchon Pattana School in Khlong Toei district (with all school children living in the slum), Mathayom Prachaniwet School in Chatuchak district, and Rattanakosinsompoj School in Lat Krabang district with about 30% of school children in some of their classes coming from slums (data from school). There were totally 2,347 school children in the three schools, but only 923 were living in slum areas (Table 3.1).

**3.1.2 The sample size** was calculated, based on the population of 923, using the Taro Yamane formula (Yamane, 1973: 729) as shown below:

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

Where, n = sample size

N = population, i.e. 923

e = sampling error, 5%

The calculated sample size was 279, which was rounded off as 280.

Based on the calculated sample size, the proportion of school children from each grade and the proportion of school children in the schools in the study areas were determined. The sample size was increased by 10%, to 306, to allow for data collection from not less than the calculated number. The proportions of school children are shown in Table 3.1.

Each of all school children or subjects participating in the study was selected using the simple random sampling method by drawing the number their student numbers.

**Table 3.1** Population and sample size (number of school children) by school and grade

<b>School</b>	<b>Population (persons)</b>	<b>Population who live in slum areas (persons)</b>	<b>Calculated sample size (persons)</b>	<b>Revised sample size (plus 10%, persons)</b>
<b>Chumchon Pattana</b>				
<b>School, Khlong Toei district</b>				
Grade 7	125	125	37	41
Grade 8	121	121	36	41
Grade 9	67	67	20	22
<b>Mathayom</b>				
<b>Prachaniwet School, Chatuchak district</b>				
Grade 7	120	36	12	14
Grade 8	120	36	12	14
Grade 9	120	36	12	14
<b>Rattanakosinsompoj School, Lat Krabang district</b>				
Grade 7	598	179	52	57
Grade 8	612	184	53	58
Grade 9	464	138	40	45
<b>Total</b>	<b>2,347</b>	<b>923</b>	<b>280</b>	<b>306</b>

**3.1.3 Tool for data collection.** The researcher developed a questionnaire for use in the study based on the knowledge gained from literature review and the application of guidance used in previous studies. The questionnaire has four parts, i.e. general information, protective factors, resilient trait assessment, and adaptive outcomes.

3.1.3.1 General information: This part includes seven close-ended and open-ended questions for asking about age, sex, religion, number of family members, living with parents or others, household characteristics, and level of schooling.

3.1.3.2 Protective factors: This part contains 32 close-ended questions, each with a 5-point rating scale, in the following 4 aspects:

1) Family protective factors: nine questions related to the peer support power showing love, compassion, being a good role model, encouragement, expectations with confidence, care with certain limitations, close relationship, and family-bonding activities.

2) Peer protective factors: six questions related to the peer support power showing love, compassion, being a good role model, encouragement, expectations with confidence, and assistance with certain limitations.

3) School protective factors: nine questions related to the school support power showing love, compassion, being a good role model, encouragement, expectations with confidence, care with certain limitations, close relationship, and school-bonding activities.

4) Community protective factors: nine questions related to the community support power showing love, compassion, being a good role model, encouragement, expectations with confidence, care with certain limitations and rules, close relationship, and community-bonding activities.

The criteria for selecting the response are as follows:

**Table 3.2** Criteria for specifying the score for the response on protective factors

<b>Level of opinion</b>	<b>Meaning</b>	<b>Positive score</b>	<b>Negative score</b>
Most strongly agree	The student agrees with the statement in all aspects.	5	1
Strongly agree	The student agrees with the statement in most of the aspects.	4	2
Moderately agree	The student moderately agrees with the statement.	3	3
Slightly agree	The student agrees with the statement in some aspects.	2	4
Least slightly agree	The student agrees the least or disagrees with the statement.	1	5

3.1.3.3 Characteristics of resilience. This part contains 32 close-ended questions, each with a 5-point rating scale, in the following 4 aspects:

1) Sense of purpose: eight questions about setting the sense of purpose, courage to express opinions, and thinking or doing new things to achieve the purpose.

2) Ethics: eight questions about good conducts, awareness of good and bad things and the determination to adhere to such beliefs, and valuing and assisting other people.

3) Sense of self: eight questions about self-worth or self-esteem and confidence in their own capacity.

4) Problem-solving: Eight questions about problem acceptance, assessment of how to deal with the problem, and positive thinking about problem-solving.

The criteria for selecting the response are as follows:

**Table 3.3** Criteria for specifying the score for the response on resilience characteristics

<b>Level of opinion</b>	<b>Meaning</b>	<b>Positive score</b>	<b>Negative score</b>
Most strongly agree	The student agrees with the statement in all aspects.	5	1
Strongly agree	The student agrees with the statement in most of the aspects.	4	2
Moderately agree	The student moderately agrees with the statement.	3	3
Slightly agree	The student agrees with the statement in some aspects.	2	4
Least slightly agree	The student agrees the least or disagrees with the statement.	1	5

3.1.3.4 Adaptive outcomes. This part contains open-ended and close-ended questions about the students' learning achievements and social behaviors.

Learning achievements are the student's cumulative scores of the previous learning years through the semester when the data were collected.

Social behaviors are the positive social behaviors including those related to emotion control, rule acceptance and responsibility; there are six questions in this section.

The close-ended questions will be responded using a 5-point rating scale, based on the following criteria:

**Table 3.4** Criteria for specifying the score for the response on adaptive outcomes

<b>Level of practice</b>	<b>Meaning</b>	<b>Positive score</b>	<b>Negative score</b>
Highest level of practice	The student frequently or regularly practises according to the statement.	5	1
High level of practice	The student most of the time practises according to the statement.	4	2
Moderate level of practice	The student moderately or occasionally practises according to the statement.	3	3
Low level of practice	The student rarely practises according to the statement.	2	4
Lowest level of practice	The student least frequently practises or does not practise according to the statement.	1	5

**Research tool validation** – two steps were undertaken as follows:

**Step 1: Content validation** – this step was undertaken by seven advisors and experts (Appendix A) using the Item Objective Congruence Index (IOC), based on the scoring criteria of 1 as “appropriate” and 0 as “unsure” and -1 as “inappropriate”. The IOC value was calculated using with formula below.

$$\text{IOC} = \frac{\text{Total score of all experts}}{\text{Total number of experts}}$$

The questions selected were those with an IOC value of 0.5 or more; and then they were revised as per the recommendations of the advisors and experts.

**Step 2: Try-out** – the questionnaire that had passed the content validation was tried out to check the validity for the target group, i.e. 30 school children whose characteristics were very similar to those of the study subjects. And then a statistical analysis was undertaken to determine alpha ( $\alpha$ ) validity coefficient; the questionnaire

was later revised before actual use. The alpha coefficient of the questionnaire was 0.905, whereas that for protective factors was 0.824, that for resilient trait was 0.866, and that for adaptive outcome was 0.652.

**3.1.4 Data collection.** As this study was conducted on humans, the endorsement from the Mahidol University's Ethics Committee on Human Research (Social Sciences Branch) with project code MU-SSIRB 2011/073.2903 (Appendix B). The researcher had to be obtained prior to conducting the study with the following steps:

3.1.4.1 Sending a letter to the directors of the schools where the study would be carried out, requesting permission for data collection.

3.1.4.2 Coordinating with the school directors or designated officials to inform them about the characteristics of school children to be selected as a sample; making an appointment to give a Participant Information Sheet to each of the selected children and to get an informed consent from each of them. That was to show that they had been informed of the study and willing to take part in the study.

3.1.4.3 Handing a Participant Information Sheet to the participating school children and obtaining an informed consent from the school children's parents; and to make up for those who did not give a consent, more school children were randomly selected to replace them.

3.1.4.4 Making an appointment for data collection; and then the researcher and assistants would distribute the questionnaire and inform the participating school children to make them understand it and let them complete the questionnaire.

**3.1.5 Data analysis.** The quantitative analysis was undertaken using a computer program to determine the following:

3.1.5.1 General characteristics of school children, using descriptive statistics such as percentage, means, and standard deviation.

3.1.5.2 Protective factors, resilience, learning achievements, and social behaviors:

- 1) Using descriptive statistics such as percentage, means, and standard deviation.
- 2) Ranking the average scores of the protective factors, resilience, learning achievements, and social behaviors in two levels (high and low) as shown in Table 3.5.

**Table 3.5** Criteria for ranking average scores of protective factors, resilience, learning achievements and social behaviors

Score	Level
< average score	Low
> average score	High

3.1.5.3 Grouping the resilience characteristics by resilience level (high and low), using the cross-tabulation method, to determine the association between protective factors and learning achievements as well as social behaviors.

3.1.5.4 Conducting statistical analyses to determine the factors predictive of school children's resilience and adaptive outcomes using the multiple regression method.

## **3.2 Phase II: Qualitative study**

To respond to Objective 4, i.e. to determine the process that promoted resilience of school children in urban slums.

This phase involved a case study to get an understanding of factors, conditions, and process that promoted resilience for each school child until a clear answer was derived for collective cases.

**3.2.1 The study groups:** The groups of school children were purposively selected from those involved in Phase 1, as shown in Table 4.16, especially those with

a high level of resilience but different levels of protective factors, learning achievements and social behaviors. Three groups were selected, namely:

Group 1: School children with a high level of resilience, a high level of protective factors, and a high level of learning achievements and social behaviors.

Group 2: School children with a high level of resilience, a low level of protective factors, and a low level of learning achievements and social behaviors.

Group 3: School children with a high level of resilience but different (high and low) levels of protective factors, learning achievements and social behaviors.

However, attention had to be paid to the human research ethics. Thus, the researcher had to give importance to the informed consent in taking part in this step of research, similar to that for Phase 1, as well as the confidentiality and privacy of the participants while collecting data.

**3.2.2 The study tool.** A questionnaire for in-depth interview was developed based on the information obtained from the response from the school children who took part in the case study, i.e. learning achievements, outstanding resilience characteristics, and protective factors. The questions were semi-structured each with the main question, but open to issues that might arise from discussion, based on the principles of Rubin and Rubin (1995 quote in Chai Podhisita, 2006: 289). The main questions are, for example:

1) For the school child to have such resilience, learning achievements and social behaviors, what are the reasons? In his/her opinion, what or who plays a part in promoting and supporting such things?

2) What are such promotion and support actions in the family, school and community? And how are they undertaken?

3) Is the school child proud of his/her own learning achievements and behaviors? And what are the factors that help him/her to maintain such pride?

4) Has the school child ever faced any problems/obstacles? How did he/she get through such problems/obstacles? What are his/her viewpoints on such problems/obstacles?

**3.2.3 Data collection.** The researcher collected data by conducting an in-depth interview first with the selected school children and then with other people referred to by the children (snowball sample) such as teachers, friends, parents, community members; some of whom might be interviewed together.

The interviews with the school children, teachers, and friends were undertaken in the school area; so were the observations of their learning actions and activity participation.

As for parents, friends as well as others in the community, the interviews were held at the child's house or any other place specified by the interviewee, using the home-visit technique. The interview with such people or other key persons whose work was related to children was carried out together with the observation of school children's activities at home or in the community.

**3.2.4 Data analysis.** The program Atlas.ti version 6.2 was deployed for qualitative data analysis including coding, content analysis, thematic analysis, and analytic induction.

Regarding the analysis process, the three principles (Chai Podhisita, 2006) deployed were: data organizing; data display; and conclusion, interpretation and verification.

**3.2.5 Study quality control.** In this study, the quality control was conducted in accordance with recommendations of Guba & Lincoln (1989) to ensure the qualitative research restriction comprising credibility, fittingness, auditability, and confirmability.

3.2.5.1 Credibility. The steps for creating clarity and reliability in describing the phenomena of this study include the data collection from the study subjects in all aspects to be studied and the use of various methods of data collection, namely formal and informal interviews, in-depth interview, observations, and surveys

of resources in the school and community. The key respondents were selected school children, parents, friends, teachers and relevant persons, and representatives from the community as well as relevant persons. That was to ensure that all aspects of the data would be collected.

After each step of data collection, the researcher would verify the data, preliminary classification of data, definitions, and coding of important data for use as key issues in the next interview until all required data were obtained. Or in case when another issue outside but related to the study framework was found, the researcher would collect more data on such an issue until the collected data could be used to explain the promotion of resilience of the study group. The data had to be logically related to each other and no new issue arose during data collection; and then the researcher would decide to end the data collection process.

3.2.5.2 Fittingness. This is the ability to explain as the study was conducted in the groups or area that had resilience. Thus, the conditions or contexts had to be explainable.

3.2.5.3 Auditability. This is the ability to trace for decision-making or verification of the decision-making process; it is the overall result of the decision made by the researcher in each step of data analysis.

3.2.5.4 Conformability. This is the process of directly and indirectly confirming the data by listening and reviewing various sources of data, or using the experience in the study phenomenon.

## **CHAPTER IV**

### **RESULTS: PHASE I QUANTITATIVE STUDY**

The study process of resilience promotion in school children in an urban slums area in the first phase to evaluate the quantitative objectives; 1) To study the characteristics of resilience of school children in an urban slum area. 2) To study the protective factors such as the family, the school, the peer group, and the community, and to identify the factors that predict resilience. And 3) To study the adaptive outcome on the aspects of learning achievement and social behavior, and analyze the characteristics of the factors that predict resilience. The questionnaire was used to collect data at this stage.

The result in this phase was divided into 3 parts; Part 1 General information, Part 2 Resilience, Adaptive outcome and Protective factors which promoted resilience, and Part 3 the result of statistical analysis.

#### **4.1 Part 1 : General information**

The sample of students in three schools include Chumchon Pattana School in Khlong Toei district with all schoolchildren living in the slum, Mathayom Prachaniwet School in Chatuchak district, and Rattanakosinsompoj School in Lat Krabang district with school children in some of their classes coming from slums.

For students in the study group in terms of gender, age, religion, level of class, number of household members, dwelling, and residence. The details are shown in Table 4.1.

**Table 4.1** Overview of the students in the study group.

<b>Variable</b>	<b>Percentage</b>
<b>Sex</b>	
Male	40.2
Female	59.7
<b>Age (Years)</b>	
12-13	44.2
14-15	54.5
16-17	1.3
Max= 17, Min= 12, $\bar{X}$ =13.72, SD=0.968	
<b>Religion</b>	
Buddhism	91.7
Islam	1.9
Christian	6.4
<b>Level of class</b>	
Grade 7	40.7
Grade 8	30.0
Grade 9	29.3
<b>Number of household members</b>	
2-4	49.0
5-7	37.8
8-10	8.5
>10	1.8
Other	2.9
Max= 25, Min= 2, $\bar{X}$ =5.01, SD= 2.34	
<b>Dwelling</b>	
Father	8.5
Mother	17.5
Father and Mother	59.3
Others, including grandmother or relative	14.7

**Table 4.1** Overview of the students in the study group (cont.)

<b>Variable</b>	<b>Percentage</b>
<b>Residence</b>	
Single home	51.1
Townhouse	11.7
Commercial building/The row house	8.2
Apartment	0.5
Condominium	0.8
Flat	18.6
Others	8.5

Table 4.1 The majority of respondents were female, minimum age 12 years, maximum age 17 years, and mean age of 13.72 years. Age group 14-15 years was the most, followed by 12-13 years and age group 16-17 years respectively. The Religion of the respondents were Buddhist, Christian and Islam respectively. The most of respondents studied in Grade 7.

The respondents based on the number of household members that had minimum 2, maximum 25 persons. And found that family size of the sample is a small family with 2-4 members, followed by a medium family with 5-7 members.

The majority of respondents lived with his father and mother, followed by with mother, and lived with people who are not parents or relatives etc. which may be their grandmother.

The majority of the residents were single homes, followed by flat and townhouses respectively.

## 4.2 Part 2 : Resilience traits, adaptive outcome and protective factors.

### 4.2.1 Resilience traits.

In this study, based on four key features are sense of purpose, ethics, sense of self and problem solving. It offers key features were mean and each resilience traits. The details were shown in Table 4.2-4.4

4.2.1.1 The mean, standard deviation and level of resilience trait including, sense of purpose, ethics, sense of self and problem solving. The details were shown in Table 4.2

**Table 4.2** The mean and standard deviation of resilience traits.

<b>Resilience trait</b>	$\bar{X}$	<b>SD</b>	<b>Level</b>
<b>Sense of purpose</b>	<b>3.88</b>	<b>0.53</b>	<b>High</b>
I think that my future depends on myself.	4.22	1.07	High
I like to do new thing.	4.10	0.87	High
I know I want to do in the future.	4.07	1.00	High
After graduate school, I know I will do next.	4.01	1.00	High
I can take care of by myself better.	3.84	0.92	High
I set goals in my lifestyle.	3.74	1.00	Low
I do not like to follow others.	3.58	1.12	Low
I can express my opinions with other people.	3.46	1.04	Low
<b>Ethics</b>	<b>3.89</b>	<b>0.50</b>	<b>High</b>
I know of others that theft is immoral.	4.59	0.91	High
I can do amenities even not return.	4.20	0.83	High
I do not maltreat animals.	4.01	1.01	High
I can do amenities even unseen.	3.93	0.96	High
I dare to help a friend was persecuted.	3.89	0.98	High
I love to help others.	3.75	0.94	Low
I use religious doctrine as an anchor for my practice.	3.58	0.97	Low
I can distinguish between what is right and what is wrong.	3.12	1.26	Low

**Table 4.2** The mean and standard deviation of resilience traits (cont.)

<b>Resilience traits</b>	$\bar{X}$	<b>SD</b>	<b>Level</b>
<b>Sense of self</b>	<b>3.75</b>	<b>0.62</b>	<b>Low</b>
I'm so proud of my success.	4.29	0.86	High
I can succeed if I tried.	4.16	0.83	High
I know that I have talent for the subject.	3.97	1.03	High
I work hard to accomplish it.	3.83	0.89	High
I've been successful in things made me proud.	3.75	1.26	Low
I think I have ability.	3.57	1.31	Low
I do not feel that I am lowly.	3.51	1.24	Low
I still have confidence even there is no to help.	2.85	1.16	Low
<b>Problem solving</b>	<b>3.50</b>	<b>0.49</b>	<b>Low</b>
I use the lessons of the past to make the future better.	3.95	0.95	High
I do not escape the problems by to hang with my friends.	3.75	1.26	Low
I know if I agree my problem, I cannot be hard to solve that problem.	3.67	0.97	Low
I do not blame fate, even I have to deal with problem.	3.60	1.34	Low
I solved the problem by using reason rather than emotion.	3.45	1.10	Low
I always face many problems, but can manage them.	3.40	1.05	Low
I know where I go to ask for help.	3.25	1.13	Low
I hope I did not, although have to face the problem.	2.99	1.13	Low
<b>Overall mean of Resilience traits</b>	<b>3.76</b>	<b>0.42</b>	

Table 4.2 shows that the overall mean of resilience traits was 3.76 (SD = 0.42). When considered the mean of each resilience traits found to be similar. The highest mean is the ethics, followed by the sense of purpose, sense of self and problem solving, respectively.

Considering in detail of each resilience traits found in the following.

Sense of purpose. The sample group features the highest mean was “I think that my future depends on myself.” And the lowest mean was “I can express my opinions with other people.”

Ethics. The result found that the samples with the highest mean was “I know of others that theft is immoral.” And the lowest mean was “I can distinguish between what is right and what is wrong.”

Sense of self. The result found that the samples with the highest mean was “I'm so proud of my success.” And the lowest mean was “I still have confidence even there is no to help.”

Problem solving. The result found that the samples with the highest mean was “I use the lessons of the past to make the future better.” And the lowest mean was “I hope I did not, although have to face the problem.”

When considered resilience traits mean into 2 levels, one was low level which was lower than the overall mean (<3.76) and high levels which was higher than the overall mean (> 3.76). The result found the high level of resilience traits was only two aspects of sense of purpose and ethics. When considered sub-features of each resilience traits. It found that there were 5 traits of high level with sense of purpose. Also found 5 traits with ethics, 4 traits with sense of self and only 1 traits with problem solving.

**Table 4.3** Percentage of level of total and each resilience traits.

<b>Resilience traits</b>	<b>Low level (percentage)</b>	<b>High level (percentage)</b>	<b>Missing (percentage)</b>
Sense of purpose	41.5	58.2	0.3
Ethics	43.6	56.1	0.3
Sense of self	53.5	46.0	0.5
Problem solving	73.1	26.3	0.5
<b>Total of resilience traits</b>	<b>52.9</b>	<b>46.3</b>	<b>0.8</b>

Table 4.3, It found that total and sub-features of resilience traits of study groups in high level had lower than a half (46.3 %). When considered in each resilience traits, it found that there were high level in sense of purpose, and ethics 58.2% and 56.1% respectively. For sense of self and problem solving, there were in high level less than half about 46.0 % and 26.3 % respectively.

4.2.1.2 Comparison of the mean of the resilience by the characteristics of the demographic. In this study, the researchers collected some data on demographic characteristics which associated with resilience traits. So, that data were analysed by comparing the mean of resilience traits according to gender, age, level of class, dwelling and residence. The details were shown in Table 4.4.

**Table 4.4** Compares the mean of resilience traits by sex, age, level of class, dwelling and residence.

<b>Characteristic</b>	$\bar{X}$	<b>t-test</b>	<b>sig</b>
<b>Sex</b>			
Male	3.67	3.295	.001
Female	3.82		
<b>Characteristic</b>	$\bar{X}$	<b>F-test</b>	<b>sig</b>
<b>Age</b>			
12-13	3.77	.105	.900
14-15	3.75		
>15	3.76		
<b>Level of Class</b>			
Grade 7	3.76	.130	.878
Grade 8	3.69		
Grade 9	3.73		
<b>Dwelling</b>			
2-4	3.77	2.075	.127
5-7	3.73		
>8	3.89		

**Table 4.4** Compares the mean of resilience traits by sex, age, level of class, dwelling and residence.(cont.)

Characteristic	$\bar{X}$	F-test	sig
<b>Resident</b>			
Father	3.82	.789	.501
Mother	3.68		
Father and Mother	3.76		
Who are not parents	3.79		

Table 4.4, when compared the mean of resilience traits between sex with statistical t-test. The test showed that females had more resilience traits mean than males with statistically significant (p-value = 0.001). For other demographic characteristics including age, level of class, dwelling and resident were compared with an ANOVA test. The test showed no statistically significant difference.

#### 4.2.2 Adaptive outcome

This study measured the adaptive outcome in learning achievement and social behavior. This was positive behaviors, emotional control behavior, acceptance rules, and responsibility. The detailed of study results were shown in Table 4.5 to 4.7.

4.2.2.1 Mean and standard deviation of adaptive outcome. The adaptive outcome of this study consisted of learning achievement and social behavior. The result of mean and standard deviations were shown in Table 4.5.

**Table 4.5** Mean and standard deviation of adaptive outcome.

<b>Adaptive outcome</b>		$\bar{X}$	<b>SD</b>
<b>Learning achievement</b>	Max= 4, Min= 0.5	2.82	0.75
<b>Social behavior (total)</b>		<b>3.72</b>	<b>0.57</b>
I have a sense of humor.		4.12	1.01
I can smile easily.		4.04	0.99
I follow the rules or regulations.		3.94	0.85
I do not punch or slap hit with friends.		3.75	1.00
I can control my emotion on the dispute or conflict.		3.23	1.04
I'm not angry and frustrated when I am not satisfied.		3.21	1.24

Table 4.5 the adaptive outcome in learning achievement of the respondents in this study was based on academic scores at last semester. It was found that the minimum academic scores average of 0.5 and the highest of 4. The learning achievement average of students was 2.82 (SD = 0.75).

For the adaptive outcome of social behavior in the overall mean of 3.72 (SD = 0.57), social behavior, with an average of the highest “I have a sense of humor”.

4.2.2.2 The level of adaptive outcome. The adaptive outcome of learning achievement and social behavior were ranked in two levels: low and high as the average. Therefore, low level of learning achievement was less than 2.82 and high level was more than 2.82. For social behavior, the average was 3.72. Therefore, low level of social behavior was less than 3.72 and high level was more than 3.72. The profile was shown in Table 4.6.

**Table 4.6** Percentage, level of adaptive outcome dividing by learning achievement and social behavior

<b>Adaptive outcome</b>	<b>Low level (percentage)</b>	<b>High level (percentage)</b>	<b>Missing (percentage)</b>
Learning achievement	43.6	50.5	5.9
Social behavior	52.1	47.1	0.8

Table 4.6 the adaptive outcome in learning achievement had high level of 50.5 percent; whereas the adaptive outcome in social behavior had high level of 47.1 percent.

4.2.2.3 Comparison of the average of adaptive outcome by demographic characteristic. The researcher compared the adaptive outcome in learning achievement and social behavior with sex, age, level of class, dwelling and residence to determine whether or not the differences as follows:

1) To compare the average of learning achievement of students according to sex, age, level of class, dwelling and residence by using non-parametric statistics. Because of the distribution of learning achievement and social behavior were not normally. The details were shown in Table 4.7.

**Table 4.7** Comparing the average of learning achievement by sex, age, level of class, dwelling and residence

Characteristic	$\bar{X}$	Mann-Whitney Test	sig
<b>Sex</b>			
Male	2.58	10966.5	.000**
Female	2.98		
Characteristic	$\bar{X}$	Kruskal-Wallis test	sig
<b>Age</b>			
12-13	2.97	13.165	.001*
14-15	2.70		
>15	2.94		
<b>Level of class</b>			
Grade 7	2.84	3.310	.191
Grade 8	3.06		
Grade 9	2.54		
<b>Dwelling</b>			
2-4	2.88	2.513	.285
5-7	2.74		
>8	2.96		
<b>Residence</b>			
Father	2.65	1.563	.668
Mother	2.78		
Father and Mother	2.86		
Who are not parents	2.82		

\* Statistically significant .05

Table 4.7 when compared the means of learning achievement by sex, age, level of class, dwelling and residence; it was found that only sex and age were different. The means of learning achievement in female had more than male at statistically significant (p-value = 0.000) and learning achievement average in age group 12-13 years and 14-15 years were different at statistically significant (p-value = .001).

2) To compare the means of social behavior according to sex, age, level of class, dwelling and residence. The details were shown in Table 4.8.

**Table 4.8** Comparing the means of the social behavior by sex, age, level of class, dwelling and residence

<b>Characteristic</b>	$\bar{X}$	<b>Mann-Whitney Test</b>	<b>sig</b>
<b>Sex</b>			
Male	3.50	10908	.000*
Female	3.85		
<b>Characteristic</b>	$\bar{X}$	<b>Kruskal-Wallis test*</b>	<b>sig</b>
<b>Age</b>			
12-13	3.76	.872	.647
14-15	3.70		
>15	3.47		
<b>Level of Class</b>			
Grade 7	3.72	.423	.809
Grade 8	3.81		
Grade 9	3.65		
<b>Dwelling</b>			
2-4	3.71	.612	.736
5-7	3.73		
>8	3.67		
<b>Residence</b>			
Father	3.73	6.001	.112
Mother	3.57		
Father and Mother	3.74		
Who are not parents	3.79		

\* Statistically significant .05

Table 4.8 when compared the means of social behavior based on demographic characteristics with sex, age, level of class, dwelling and residence; it was found that only sex was different. The average of social behaviors in female was more than in male at statistically significant ( $p$ -value = 0.000).

#### **4.2.3 The protective factor.**

In this study, the protective factors were measured with 4 protective factors including; **family protective factors** as family support powers which are expressed as affection, compassion, being a good role model, encouragement, expectations with confidence, with certain limitations, close relationship, and family-bonding activities, **peers protective factor** as support powers from friends who express love, compassion, being a good role model, encouragement, expectations with confidence, and assistance with certain limitations, **school protective factors** as support powers from school that show love, compassion, being a good role model, encouragement, expectations with confidence, care with certain limitations, close relationship, and school-bonding activities, and **community protective factors** as support powers from communities that show love, compassion, being a good role model, encouragement, expectations with confidence, care with certain limitations and rules, close relationship, and community-bonding activities. The results were presented with average, standard deviation, and ranking average in high level and low level. The details were shown in Table 4.9

**Table 4.9** Means and standard deviation of the protective factors

<b>Protective factor</b>	$\bar{X}$	<b>SD</b>	<b>Level</b>
<b>Family protective factors</b>	<b>3.83</b>	<b>0.59</b>	<b>High</b>
I've been loved, attended by parents or adults in the family.	4.29	0.81	High
Parents or adults in the family are a role model.	4.18	0.81	High
Parents or adults in the family punished me with reasons.	4.11	1.08	High
I would like to live with my parent or adult in the family.	4.10	1.25	High
Parents or adults in the family cheer me up.	4.07	0.94	High
I can comfortably consult or seek advice from parent or adult in the family.	3.78	1.12	High
I'm in a family with clear and reasonable regulations.	3.66	0.95	Low
Parents or adults in a family trust that I will succeed.	3.20	1.12	Low
I and my parents or adults in the family like to always do things together.	3.07	1.22	Low
<b>Peer protective factors</b>	<b>3.64</b>	<b>0.69</b>	<b>Low</b>
I have friends who listen to me about my problems.	3.75	1.16	Low
I have friends who would help me when I have problems.	3.73	1.06	Low
I have close friends who are role model.	3.69	0.99	Low
I have friends who committed to do what is good.	3.62	0.99	Low
I've been loved, attended by my friend.	3.57	1.01	Low
My friend trust that I will succeed.	3.47	1.01	Low
<b>School protective factors</b>	<b>3.94</b>	<b>0.60</b>	<b>High</b>
Teachers as a role model.	4.37	0.86	High
The teachers' punishment is reasonable.	4.18	1.18	High
School rules are clear and reasonable.	4.05	0.99	High
I had teachers who encourage me.	4.02	1.08	High
I have opportunity to participate in school-organized activities.	3.90	1.04	High
I receive attention from teachers.	3.81	0.93	High
I can comfortably consult or seek advice from my teacher.	3.75	1.17	Low

**Table 4.9** Means and standard deviation of the protective factors (cont.)

<b>Protective factors</b>	$\bar{X}$	<b>SD</b>	<b>Level</b>
<b>School protective factors (cont.)</b>	<b>3.94</b>	<b>0.60</b>	<b>High</b>
I feel as I am part of this school.	3.74	1.10	Low
My teacher trust that I will succeed.	3.64	0.98	Low
<b>Community protective factors</b>	<b>3.65</b>	<b>0.64</b>	<b>Low</b>
Adults in community take care for children.	3.88	1.20	High
Adults in the community encourage children.	3.87	1.13	High
Adults in the community concern value of youth.	3.7	1.08	Low
Adults in the community advice me when I do wrong.	3.72	1.13	Low
There are spaces to play or do activities in the community.	3.65	1.12	Low
I receive attention from adults in the community.	3.58	1.07	Low
Adults in the community are a role mode.	3.58	1.05	Low
Adults in the community depend on each other.	3.50	1.23	Low
I participated in various community activities.	3.29	1.25	Low
<b>Overall mean of protective factor</b>	<b>3.76</b>	<b>0.47</b>	

Table 4.9 the protective factors showed that the mean of school protective factor was the highest, followed by family protective factor, community protective factor and peers protective factor, respectively.

Considering the details of each protective factor, it was shown that the high average protective factors were school protective factors and family protection factors. Considering that was high average of 10 protective factors including “Teachers as a role model.”, “I receive attention from parents or adults in the family.”, “Parents or adults in my family is a role model.”, “Teacher punished me with reasons.”, “Parents or adults in my family punished me with reasons.”, “I would like to live with my parent or adult in family.”, “Parents or adults in the family cheer me up.”, “School rules are clear and reasonable.”, “Teachers encourage me.”, and “I have opportunity to participate in school-organized activities.”, respectively.

Considering the protective factors were ranked in two levels: low and high level. The overall average of protective factor (3.76) was used to divide. Therefore, low level protective factor was less than 3.76 and high level was more than 3.76. The overall and sub-categories of each protective factors average were shown in table 4.10

**Table 4.10** Percentage and level of protective factors which promote resilience, separately on each.

<b>Protective factors</b>	<b>Low level (percentage)</b>	<b>High level (percentage)</b>	<b>Missing (percentage)</b>
Family protective factor	37.8	59.6	2.7
School protective factors	32.4	61.7	5.9
Community protective factor	53.7	43.4	2.9
Peers protective factor	52.9	46.2	1.6
<b>Overall mean of protective factor</b>	<b>50.5</b>	<b>47.9</b>	<b>1.6</b>

Table 4.10 the average of protective factor was ranked above. It found that average protective factor in the overall was at the high level of 47.9 percent. When considered the protective factors in each of the factors; the highest number of high level was school protective factor with 61.7 percent, followed by 59.6 percent in family protective factor, and 43.4 percent in community protective factor was the lowest number in high level.

#### **4.2.4 The level of resilience traits, level of learning achievement, level of social behavior and level of protective factors.**

In order to visualize the resilience traits, protective factors, and adaptive outcome of each sample, researcher was projected by grouping with cross tabulation to get relationship of these variables. Resilience traits were the main for grouping. The linking group was organized into two levels, high and low levels as above criteria. The results of cross tabulation when cutting of some missing was shown in table 4.11

**Table 4.11** Cross tabulation between high and low level of resilience traits, level of learning achievement, level of social behavior and level of protective factors.

<b>Level of resilience</b>	<b>Level of Learning achievement</b>	<b>Level of Social behavior</b>	<b>Level of Protective factor</b>	<b>%</b>
Low (53.15%)	<u>Low</u>	<u>Low</u>	<u>Low</u>	32.47
	<u>Low</u>	High	<u>Low</u>	12.89
	High	<u>Low</u>	<u>Low</u>	17.53
	High	High	<u>Low</u>	11.34
	<u>Low</u>	High	High	5.67
	High	<u>Low</u>	High	6.19
	<u>Low</u>	<u>Low</u>	High	8.25
	High	High	High	5.67
High (46.85%)	Low	Low	Low	7.02
	Low	High	Low	4.09
	High	Low	Low	5.26
	High	High	Low	8.77
	Low	High	High	15.79
	High	Low	High	14.62
	Low	Low	High	11.11
	High	High	High	33.33

Table 4.11 showed that 53.15 % of the samples had low level of resilience traits while 46.85% of samples had high level. When considered level of protective factor, level of learning achievement, and level of social behavior were found to be consistent. Most of sample with low level of resilience had low level of protective factors, learning achievement, and low level of social behavior (32.47%). As the most samples with high level of resilience had high level of protective factors, learning achievement, and high level of social behavior (33.3%). Anyway the result was shown that some of the samples with high level of protective factors, learning achievement, and high level of social behaviors but was shown low level of resilience (5.67%). And

in some samples with low level of protective factors, learning achievement, and low level of social behavior were shown high level of resilience (7.02%).

### 4.3 Part 3: Result of predicting factors analysis.

#### 4.3.1 Protective factors which predicted school children resilience.

From the conceptual framework showed that protective factors could affect resilience. So, researcher analysed the factors that can predicted school children resilience with multiple regression. The assumption of statistic was tested intercorrelation of independent variable with correlation, the result showed the correlation coefficient lower than 0.65 (Appendix E). The stepwise regression was used to analyse and found that all variables of protective factors included school protective factors, family protective factors, peers protective factors, and community protective factors could predict resilience as shown in table 4.12 and table 4.13. The standard score equations of the regression coefficient were as follows.

$$\text{The resilience} = 0.219 Z_{\text{school}} + 0.274 Z_{\text{family}} + 0.212 Z_{\text{friends}} + 0.137 Z_{\text{community}}$$

From the equation was shown that the family protective factors influenced mostly the resilience (beta = 0.274) followed by school protective factors (beta= 0.219), peers protective factors (beta=0.212) and community protective factors (beta= 0.137) respectively.

**Table 4.12** The result of protective factors in the equation.

Sources of variation	Sum of squares (SS)	Degree of freedom (df)	Mean square (MS)	F-test	Sig
Regression	20.899	4	5.225		
Residual	34.116	299	0.114	45.79	0.000

When considering the resilience prediction appropriation of school, family, peers and community protective factors; found that when used all 4 protective factors were the most influence to resilience. The equation could predict 37.2% and the standard errors of the estimation =0.338 which was lower than to use 1,2 or 3 protective factors. The details were shown in table 4.13.

**Table 4.13** The appropriate of protective factors for resilience prediction

<b>Protective factors</b>	<b>R</b>	<b>R square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimation</b>
School	0.474	0.225	0.222	0.376
School & family	0.563	0.317	0.312	0.353
School, family and peers	0.607	0.368	0.362	0.340
School, family, peers and community	0.616	0.380	0.372	0.338

#### **4.3.2 The resilience traits which predicted adaptive outcome.**

The concept in this study believed that positive protective factors initiate to resilience and resilience initiate to positive adaptive outcome. This study was measured adaptive outcome with learning achievement and social behavior. Therefore, the researcher wanted to examine that concept by using adaptive outcome as dependent variable and resilience traits as independent variable, and using multiple regression with stepwise method for analysis. The inter-correlation between independent variables was determined and found that alpha coefficient was lower than 0.65 (Appendix E)

4.3.2.1 Adaptive outcome in learning achievement. When used adaptive outcome as the dependent variable and used resilient traits including; sense of purpose, ethics, sense of self, and problem solving as the independent variables. When analysed by using stepwise multiple regression, found that only problem solving of resilience traits could predict learning achievement as shown in

table 4.14-4.15. The standard score equations of the regression coefficient were as follows.

$$\text{Learning achievement} = 0.284 Z_{\text{problem solving}}$$

It found from the equation above that resilience traits in problem solving had influence to predict the learning achievement (beta= 0.284).

**Table 4.14** The result of variable in the equation.

Sources of variation	Sum of squares (SS)	Degree of freedom (df)	Mean square (MS)	F-test	Sig
Regression	15.762	1	15.762	30.700	0.000
Residual	179.180	349	0.513		

When considered the appropriate of the factors to predict learning achievement, it found that resilience traits in problem solving had influence 7.8 % and the standard errors of the estimation =0.71. The details were shown in table 4.16.

**Table 4.15** The appropriate of resilience traits for learning achievement prediction

Resilience traits	R	R square	Adjusted R Square	Std. Error of the Estimation
Problem solving	0.284	0.081	0.078	0.717

4.3.2.2 Adaptive outcome in social behaviors. When used the adaptive outcome in social behaviors as dependent variable, resilience traits include; sense of purpose, ethic, sense of self, and problem solving as independent variables. The analysis was used multiple regression with stepwise method. The inter-correlation between independent variables was determined and found that alpha coefficient was lower than 0.65 (Appendix E). The stepwise method of multiple regression result was found that the resilience traits in ethic, sense of self, and problem solving could predict

social behaviors of the school children sampling. The standard score equations of the regression coefficient were as follows and the details were shown in table 4.17-4.18.

$$\text{Social behaviors} = 0.186 Z_{\text{ethic}} + 0.178 Z_{\text{sense of self}} + 0.168 Z_{\text{problem solving}}$$

As equation above, it found that the resilience traits in ethic was the most influence to social behavior of schoolchildren (beta= 0.186) follow by sense of self (beta= 0.178) and problem solving (beta= 0.168).

**Table 4.16** The result of variable in the equation.

Sources of variation	Sum of squares (SS)	Degree of freedom (df)	Mean square (MS)	F-test	Sig
Regression	22.454	3	7.485		
Residual	95.475	366	0.261	28.692	0.00

When considered the appropriate of the factors to predict social behavior of schoolchildren, it found that resilience traits in ethic, sense of self, and problem solving had mostly influence to predict social behavior 18.4 % and the standard errors of the estimation =0.511. The details were shown in table 4.18.

**Table 4.17** The appropriate of resilience traits to social behaviors prediction.

Resilience traits	R	R square	Adjusted R Square	Std. Error of the Estimation
Ethic	0.365	0.134	0.131	0.527
Ethic & sense of self	0.413	0.171	0.166	0.516
Ethic, sense of self, & problem solving	0.436	0.190	0.184	0.511

#### **4.4 Summary the results of phase I: resilience traits, protective factors, and adaptive outcome of school children in urban slum area.**

In this study, the resilience was indirectly measured in four traits as ethics, sense of self, sense of purpose, and problem-solving. The analysis by each of the individual traits revealed that the proportion of students with a very high level of sense of purpose, followed by the ethic. For the resilience in sense of self and problem-solving were at low level. When comparing the average traits of resilience by demographic characteristics, it was found only females were found to show a significantly higher level of resilience than males (p-value = 0.001).

The protective factors that promote resilience include the family, school, peer, and community protective factors. It was found that the children had a high level of each of protective factors include; school and family protective factors, respectively; however, it had low levels of peer and community protective factors.

In comparing the adaptive outcomes of learning achievement and social behavior with demographic factors, it was found that the adaptive outcomes in learning achievement were significantly different by gender and age (p-value <0.05), whereas the adaptive outcome in social behavior was found to be significant only by gender (p-value <0.05).

The analysis of the protective factors to predict the resilience in two parts include protective factors that predicted the resilience and resilience traits that predicted the adaptive outcome. The important results were shown:

1. All of protective factors include, school, family, peer, and community protective factors can mutually predict the resilience of schoolchildren in slum area in this study 37.2%. The family protective factors had the greatest influence on resilience followed by school, peers, and community protective factors respectively.

2. In this study, the adaptive outcome was measured by learning achievement and social behaviors, When analysed the factors that predicted of 2 adaptive outcome by using the resilience traits as independent variables.

The results were found that only the problem-solving can predict 7.8 percent of the learning achievement.

For the resilience traits that can predict adaptive outcomes in social behavior in this study. There were 3 re included the traits of ethics, sense of self, and ability to face problems. They could mutually predict 18.4 percent of the social behavior of the schoolchildren, whereby the ethics had the highest influence on the children's social behavior.

## **CHAPTER V**

### **RESULTS: PHASE II QUALITATIVE STUDY**

The qualitative study in this chapter is corresponding to understand the resilience promotion process in school children in urban slum area. Data was collected by interviewing the purposive sampling among the respondents of quantitative study. Then crossed tabulation was done; by mainly choose high resilience level sample group and the student who proud to be interviewed. In order to be able to completely collected data in all dimensions, researcher interviewed the study group (Table 5.1), including the related persons for example their family members, teachers, peers, and adults in their community as well. Otherwise the observation of surrounding environments in the study area also was done.

For analysis of resilience promotion process, the researcher analyzed from the data which was deeply interviewed from the students, and related persons, including observation of the surrounding environments both in habitats and schools. Then linkage analysis among risk factors, protective factors and adaptive outcome in many dimensions, in order to find out how is it took role on resilience promotion process of the student. Analysis of pattern of resilience promotion process was done in each group separation, then make conclusion to show up important activities of resilience promotion process.

Data presentation in this chapter was divided into 3 parts as following: Grouping of the school children samplings; 2) Analytic result of resilience promotion process; and 3) Conclusion of resilience promotion process.

#### **5.1 Grouping of the school children samplings.**

The 15 purposive school children samplings were selected from high resilience level group who proud to be interviewed and divided into 4 groups. The first group: high resilience level group, low protective factor, low adaptive outcome level

in either 1 or 2 dimensions. The second group: high resilience level, low protective factor, but high adaptive outcome. The third group: high resilience level, high protective factor but low adaptive outcome either 1 or 2 dimensions. The fourth group: high resilience level, high protective factor, high adaptive outcome. As shown in table 5.1.

**Table 5.1** Details of resilience, protective factor, adaptive outcome in learning achievement (grade) and social behavior.

Supposed name	Resilience (high level)				Protective factors	Grade	Social behavior	
	Ethic	Sense of self	Sense of purpose	Problem solving				
<b>Group I</b>								
1.Gun G.9	<b>4.75</b>	4.12	3.88	4.12	3.71L	2.75L	3.67L	
2. Sa G.8	4.25	3.88	4.0	<b>4.5</b>	3.71L	2.96H	3.5L	
3. Porn G.7	4.0	4.0	<b>4.75</b>	4.12	3.57L	1.41L	4.67H	
<b>Group II</b>								
4.Fern G.8	<b>4.75</b>	4.12	3.75	3.88	3.64L	2.93H	5.0H	
<b>Group III</b>								
5.Prig G.8	<b>4.88</b>	4.50	4.75	3.0	4.22L	2.09 L	3.33L	
6.Baitoey G.8	4.38	<b>5.0</b>	4.38	4.0	4.14H	3.53H	3.33L	
7.Opal G.8	4.38	3.5	<b>5.0</b>	4.0	3.78H	3.17H	3.33L	
8.Gee G.9	<b>4.38</b>	4.5	4.25	3.62	4.61H	2.41L	3.83H	
9.Fai G.8	3.75	3.88	4.12	<b>4.25</b>	4.06H	1.88L	4.17H	
10.Om G.8	<b>4.88</b>	4.50	<b>4.88</b>	4.75	4.81H	2.32L	4.67H	
11.Mint G.8	3.88	<b>4.38</b>	4.25	4.25	4.0H	2.77L	4.17H	

**Table 5.1** Details of resilience, protective factor, adaptive outcome in learning achievement (grade) and social behavior.(cont.)

Supposed name	Resilience (high level)				Protective factors	Grade	Social behavior
	Ethic	Sense of self	Sense of purpose	Problem solving			
<b>Group IV</b>							
12.Bee G.9	3.88	<b>4.75</b>	4.38	4.38	4.22H	2.97H	4.5H
13.Cat G.8	4.25	<b>4.75</b>	4.38	4.12	3.97H	3.18H	4.83H
14.Nun G.7	<b>5.0</b>	<b>5.0</b>	4.38	4.88	4.74H	3.86H	5.0H
15.Namfon G.7	4.12	<b>4.25</b>	4.12	4.12	4.31H	3.75H	5.0 H

**Note** L: mean is in low level group: lower than mean of that parameter

H: mean is in high level group: higher than mean of that parameter

## 5.2 Results of resilience promotion process.

Presentation of the results of resilience promotion process in each group consisted of risk factors, protective factors and resilience promotion process as following:

**5.2.1 Result of resilience promotion process in group I.** This group has high resilience, low protective factor, low adaptive outcome in either 1 or 2 dimension.

5.2.1.1 Risk factor: This sampling group student's habitats are all in urban slum area, but characteristic of habitats are different. Porn lives in flat. Gun lives in a rental-temporary built house (labor's house), for SA stays in a rental house in an original slum. Besides, there were the other risk factor; unsafe community, untamed, narcotic drug resource, games store, socio-economic problem, family adversity such as, divorced parents and each has new family, mother worked in other province and visited home 2 times/month (Gun); mother had medical history, brother-

in-law is in jail , sister has broken family (Sa) and moved to new home, parent's busy working and back home late (Porn)

5.2.1.2 Protective factor: Average protective factor of this group is lower than mean. According to interviewing, the three of respondents took important on family and school, but Porn also mention about community as well.

5.2.1.3 Resilience promotion process group I: From the study, all the three of this sampling group was in the context of slum area but characteristic of habitats were different. Risk factors in family were parents divorced 2 cases, another case parents were busy working. Nobody was obviously closed related with the children because sometimes the children had to stay alone or stayed either with sister-in-law or father-in-law. So even though it looked clear in the risk factors but caretaker did not mind the problem. They took care of children in naturally, and did not beware or used any special technique.

Each of students was obviously trained by family in responsibility, disciplinary, every student was able to do their own daily activities, for example, laundry, ironing, cooking. Besides they could help other family members and did other responsibility for example, looked after child (nephew or niece), and housework. The students' responsibility was due to their parents role model, or caretaker who was patience, industrious, and struggle in life. Because they have opportunity in doing many activities both at home, school and responsibility of their own affairs, so this give rise to experience in self system management, for example; make up their own schedule for many activities, including planning for part-time job in order to earn some money.

Teacher in school though that the students were lack of love or budget. So the school set up many projects include home visit project was done in order to be able to access the student's problems. Budget-fund was given to the student for many purpose, for example; lunch-fund, educational-scholarship and solution, moral and ethics training program, based on principle of each religious. Besides, the space was open up for student to do many activities, for example promotion of volunteer activities, community service, student committee which they agreed to participate and had to help the others.

In community, only Porn was invited by community leader to participate in community service on various occasions.

So the conclusion on resilience promotion process of the group I (Figure 5.1) was related to promote and support for self esteem and self efficacy. The children were trained of responsibility by their families, training of disciplinary, self- job planning for more income, spirit of volunteer training, advantage performed and leadership supported by school and community.

Encourage the children to show their skills and positive ability. Family and school opened up their opportunities to show their skills or abilities, for example be school's musician, join with interested club, and be member of student committee.

<p><b>Establish and maintain self- esteem and self efficacy</b></p> <ul style="list-style-type: none"> <li>• Practice self responsibility (laundry, cooking)</li> <li>• Disciplinary (work system planning, housework, review lessons)</li> <li>• Leadership (member of student committee)</li> <li>• Volunteer (advantage performed in community)</li> </ul>	<p><b>Open up opportunities</b></p> <ul style="list-style-type: none"> <li>• Join in school's orchestra (be musician) supported by family, school</li> <li>• do part time job (to earn some money)</li> </ul>
	<p><b>Reduce negative reaction from the child's exposure to risk</b></p> <ul style="list-style-type: none"> <li>• Lunch fund</li> <li>• Educational scholarship</li> <li>• Home visit project</li> <li>• Ethics and moral training - program</li> </ul>

**Figure 5.1** Resilience promotion process of the group I.

**5.2.2 Result of resilience promotion process in the study group II** This group has high resilience, low protective, high adaptive outcome.

5.2.2.1 Risk factors: The study group stays in a structural-developmental slum in urban area, but there still is dangerous environment. As Fern's brother said "If I don't have grandma, I would be a narcotic drug deliver". Internal risk factors were orphan (parents left to have new family), drug abuse parents, mother and child abuse.

5.2.2.2 Protective factors: The mean of protective factor was in low level, lower than total mean. From interviewing, found that the child has good protective factor from family, grandma, grandpa and from school by received love and interested from teacher, budget supported, open up opportunity for child to do interested activities. Opportunity to access area and the persons who are able to give the child spiritual and moral training, for example; at temple, monks and adults. Children had the opportunity to do activities together, such as which they villager scout' activities, travelling with senior, teenage camping.

5.2.2.3 Resilience promotion process of the group II. This study group is consisted of only one study case. There is obvious resilience promotion process. The children were exposed to both internal and external family risk factors. External risk factor, child living in the community was a source of drug. Internal risk factors were a child whose parents abandoned, violent father, and both parents are addiction. Caregiver was grandma who was very close with the child. She used to mistake experience in taking care of her child, so she intended to move her mistake by nurturing her niece a good girl. First of all she found out the appropriate place for training her niece, frequently companion her niece go to nearby temple for listening to religious instruction, perform religious activities, pray, join in the spiritual strengthen training, for example teenage camping, villager scout's activities or travelling with related senior, taught cooking, house work, laundry etc.

The student was supported by school in doing interested activities or ability, for example be a school's musician, had the opportunity to join some shows in various occasions. Otherwise the child received lunch fund.

Community is one of the important place for the child's opportunity in this group. But it was also the opportunity of caregiver delivered the

child into community, for example; went to temple, grandma had chosen the temple which have religious performed and religious instruction teaching, joined with villager scout, teenage relationship camping, joined dharma answering race and reward accepted.

So resilience promotion process of the child group II (Figure 5.2) was related with self-esteem and self-efficacy promotion and supportive, by receiving responsibility training from family, disciplinary, strengthen spiritual training by using religious instruction as media.

The child was promoted and supported from family and school to express various positive practicing skills, for example; school's musician, joined in interested club, joined in dharma answering contest.

Reduce risk factors, because the child's community's environment has narcotic drug resource and gambling. So, grandma did not allow niece to stay alone. She took her niece together to join activities, in order to avoid her to expose risk factors, for example; join with villager scout's activities, and companion her go to temple.

The student in this group exposed to complicated risk factor, so the study result found the obvious point of resilience promotion process, that is aim of the problem management is purposive and related with problem condition which accepted by the child.

Reduce negative from the child's exposure to risk. The child exposed to many risk factors since in mother's uterus (ante partum). Child was suppressed deeply in her mind. Grandma really understands her niece, so she had given warmth love, and found out fascinating place which could heal her mind meanwhile, to strengthen her niece. She took important on religious principle, instruction and performance, including praying. These made her niece to positive thinking and learning to face with adversity.

<p><b>Establish and Maintain Self – Esteem and Self Efficacy</b></p> <ul style="list-style-type: none"> <li>• General responsibility training (help grandma do housework).</li> <li>• Self responsibility training (self-laundry, cooking, wake up by herself).</li> <li>• Religious perform, training meditation, pray.</li> <li>• Reward accepted from religious answering contest.</li> </ul>	<p><b>Open Up Opportunity</b></p> <ul style="list-style-type: none"> <li>• Join with school’s orchestra supported by family, school.</li> <li>• Religious answering contest supported by family, school.</li> <li>• Join school’s club supported by family, school.</li> </ul>
<p><b>Reducing Risk</b></p> <ul style="list-style-type: none"> <li>• Closed observation, warmth love from grandma and grandpa.</li> <li>• Not allow the child staying alone (travel with senior, participate with villager scout).</li> </ul>	<p><b>Reduce Negative from The Child’s Exposure to Risk</b></p> <ul style="list-style-type: none"> <li>• Lunch fund</li> <li>• Educational scholarship</li> <li>• Religious perform follow principle of religious, dharma</li> <li>• Teenage relationship camping</li> </ul>
<p><b>Problem Management</b></p> <ul style="list-style-type: none"> <li>• Accepted the problem</li> <li>• Provide joint interested activities(go to temple with religious perform)</li> <li>• Provide media and persons influenced the child ‘ s mind (person who can give easily understandable religious speech.)</li> </ul>	

**Figure 5.2** Resilience promotion process of the group II

**5.2.3 Result of resilience promotion process in group III.** This group was high resilience, high protective factors, but low adaptive outcome in either 1 or 2 dimensions.

There were 7 persons in group III, each confronted a different risk factors. The presentation was shown in 4 subgroups as following:

5.2.3.1 Subgroup III (1) (Prig)

1) Risk Factors: Prig was in the context of slum in urban area. Her internal risk factor was experienced in joining with delinquent, when she studied in grade 7, and her older sister had family in education age.

2) Protective Factor: Prig had high level in overall mean protective factors. Her mother, friends and teacher trained, advised or as a role model for Prig.

3) Resilience promotion process subgroup III (1) (Figure 5.3). The finding consisted of all five processes. However, it was remarkable her parents took participation in management of children problem, but school (teacher) ignored those problems, no procedures or guidelines for problem management or prevent problem in the long run

<p><b>Establish and maintain self-esteem and self efficacy</b></p> <ul style="list-style-type: none"> <li>• Public mind and volunteer training, public mind (Volunteer camping)</li> <li>• Reward accepted from contest</li> </ul>	<p><b>Open up Opportunities</b></p> <ul style="list-style-type: none"> <li>• Joining in rhythmic reading, quick calculation</li> </ul>
<p><b>Reducing Risk</b></p> <ul style="list-style-type: none"> <li>• Closely nurture, teaching by parents</li> <li>• Parents send children to and from school.</li> <li>• Be good role model</li> </ul>	<p><b>Reduce Negative Reaction from the Child's exposure to Risk.</b></p> <ul style="list-style-type: none"> <li>• To share learning, consult friends</li> <li>• Lesson or experience learning.</li> </ul>
<p><b>Problem Management</b></p> <ul style="list-style-type: none"> <li>• Accept the problem</li> <li>• Withdrawal from undesired peer group (mother help to separate from undesired peer group)</li> </ul>	

Figure 5.3 Resilience promotion process of subgroup III (1)

5.2.3.2 Subgroup III (2) (Baitoey and Opal) Adaptive outcome of this group was in the same level, that was high level of learning achievement, low level of social behavior and high level of protective factors.

1) Risk factor: During studying in grade 7, Baitoey had ever been joined with group of friends delinquent and absent school, and she was frequently punished by her teacher. Her internal family risk factor was parents frequently quarrel with each others, drunken father, older sister (from former father) has family in education age. For Opal's risk factors were divorced parents, he lived with his father, grandma and mother in law. During studying in grade 7, he felt very lonely as observed by his teacher, so his teacher invited his parents to know his problem. But Opal's father thought that Opal just asking for interesting.

2) Protective factor: These two study group had overall protective factor mean in high level. Persons who were closed related and give role model for them were parents, grandma, mother in law , teacher and his friend.

3) Resilience promotion process of subgroup III (2) (Figure 5.4) Opal and Baitoey were rather prefer to keep quiet and stay alone. Sometimes they solved problems on their own. When he exposed to risk factors, his father did not accept his problem. So, it was lack of specific experience in dealing with the problem. The details of resilience promotion process in this group were shown in figure 5.4. During Baitoey exposed to the problems, she was frequently punished by her teacher, later her friend's parents helped her to separate from undesired group. Then Baitoey chose to join the other new group. In grade 8, her advisor did not use punishment (different from the former teacher), so Baitoey was able to adapt herself better. For Opal, during he felt very lonely, his guidance teacher knew his problem and invited his father to manage problem together. Finally, Opal's father accepted the problem and adapts himself by spending more time to join activities with Opal. Opal said he could adapt himself, but he still preferred to stay alone and keep quiet drawing.

<p><b>Establish and maintain self- esteem and self – efficacy:</b></p> <ul style="list-style-type: none"> <li>• Responsibility training (house work, cooking, take care of family’s business)</li> <li>• Self responsibility training (self laundry)</li> <li>• Self problem- solving (some situation)</li> <li>• Self schedule management in playing, learning</li> <li>• Seek knowledge on their own</li> </ul>	<p><b>Open up opportunities:</b></p> <ul style="list-style-type: none"> <li>• Joining in educational club</li> </ul>
<p><b>Reduce risk (protection):</b></p> <ul style="list-style-type: none"> <li>• Closed nurture and teaching by parents, grandma (parenting with friend, parenting with reason, sometime strict)</li> <li>• Mother and advisor Consultation</li> <li>• Participate activities with mother (go to temple and make merit)</li> <li>• Good role model from parents, teachers</li> </ul>	<p><b>Reduce negative reaction from the child’s exposure to risk:</b></p> <ul style="list-style-type: none"> <li>• Sharing or consulting knowledge with friends</li> <li>• doing interested activities (drawing)</li> </ul>
<p><b>Risk management:</b></p> <ul style="list-style-type: none"> <li>• separate from undesired or delinquent group (choose to participate with good friend / help by friend’s mother)</li> </ul>	

**Figure 5.4** Resilience promotion process of subgroup III (2)

5.2.3.3 Subgroup III(3) (Gee and Fai). The results of adaptive outcome of this group were in the same level, -the learning achievement was in low level, but social behavior and protective factor were in high level.

1) Risk Factor: GEE’s risk factor are parents divorced. She lived with her father and mother in law, her flat environment had the space of teenagers mingling, controvert and drugs. But Fai lived with parents, her older brother with drug addition. Her Fai’s flat environment is one of narcotic drug resource.

2) Protective factor: GEE and FAI’s overall average protective factors were in high level. The persons who give closed training, teaching and be role model were her parents, mother in law, teacher, older brother, friends, and adults in her community.

3) Resilience promotion process: The study samples of subgroup III (3) (Figure 5.5); Gee and Fai had covered 4 dimensions of resilience promotion process. There was no specific problem management. The feature of Gee and Fai were supported and promoted their potential in sport, computer and public mind which gave them to realize of self value.

<p><b>Establish and maintain self-esteem and self- efficacy:</b></p> <ul style="list-style-type: none"> <li>• Responsibility training (house work, cooking, help parents’ business)</li> <li>• Self responsibility training(self laundry, self ironing)</li> <li>• Awarded the gold medal reward from sport competition</li> <li>• Certificate of computer program</li> <li>• volunteer (joining with community activities)</li> </ul>	<p><b>Open up opportunity:</b></p> <ul style="list-style-type: none"> <li>• They were promoted to study as they preferred.</li> <li>• They were promoted in sports, doing activities.</li> </ul>
<p><b>Reducing risk (protective):</b></p> <ul style="list-style-type: none"> <li>• Closed training, teaching by parents (parenting in reason- based)</li> <li>• Mother and advisor Consultation</li> <li>• Participate activities with family (travel)</li> <li>• Good role model (parents, teacher)</li> <li>• Father send children to and from school</li> </ul>	<p><b>Reduce negative reaction from the child’s exposure to risk:</b></p> <ul style="list-style-type: none"> <li>• Sharing to learn, consult , do activities with friends (tutorial, discussion, and private consultant)</li> </ul>

**Figure 5.5** Resilience promotion process of subgroup III (3)

5.2.3.4 Subgroup III (4) (Om and Mint): The results of adaptive outcome of this group were in the same level, -the learning achievement was in low level, but social behavior and protective factor were in high level.

1) Risk factors: Om and Mint had not internal risk factor and external risk factors in their home environment were lower than other group. Only Om and her mother said they found someone played gambling in their flat.

2) Protective factor: Om and Mint had overall average of protective factors in high level. The persons who took care them in closed nurture, teaching and be role model are parents, brother, friends, grandpa and grandma.

3) Resilience promotion process of subgroup III (4) Om and Mint had obviously nurtured with more protection than the other child. Om's family and Mint's family took important mainly on learning, and older sister and mother helped them to do house work and their personal affairs. According to observation during interview, found that Mint was not enjoyed with her class' learning-teaching management. She thought that there were too many ex-curriculum activities. She need to learn more in academic class. Om's mother and older sister blamed the teachers were not interested in child's learning etc. The result of resilience promotion process was found in 3 dimensions. As shown in Figure 5.6

<p><b>Establish and maintain self-esteem and self-efficacy:</b></p> <ul style="list-style-type: none"> <li>• Success in learning because of committed effort.</li> <li>• Pray, meditation (trained by grandpa and grandma)</li> <li>• Passed the science competition</li> <li>• Reward accepted from mathematic competition</li> </ul>	<p><b>Open up opportunity:</b></p> <ul style="list-style-type: none"> <li>• They were promoted to study as they preferred.</li> <li>• Joining in mathematic and science project competition</li> </ul>
<p><b>Reducing risk (protection):</b></p> <ul style="list-style-type: none"> <li>• Closely nurture, teaching by parents (parenting in reason- based)</li> <li>• Participate activities with family (travel)</li> </ul>	

**Figure 5.6** Resilience promotion process of subgroup III (4)

### **5.2.4 Result of resilience promotion process in group IV**

This group has high resilience level, high protective factors level and high adaptive outcome level.

Although in this group, the student had high level of resilience, protective factors and adaptive outcome, every child had characteristic of resilience promotion process in self value higher than the others. Everybody except Nun has high level in ethics and moral too. Every child had special ability and role of leadership. But each student in this study group has different risk factors, so the researcher divided the study group into two subgroups according to risk factors as follow:

#### **5.2.4.1 Subgroup IV (1) (Bee and Cat)**

1) Risk factor: Bee and Cat experienced direct exposure to risk factors. Bee was games addiction during studying in grade 6, her mother was un- law-debt (for helping relatives). There was narcotic drug resource at her home environment. Cat experienced of epilepsy when she was a childhood. Otherwise, her father was in debt by causing father's son. That made Cat was anxiety as well.

2) Protective factor: Bee and Cat's overall average protective factors were in high level. The person who took part in instruction, nurture, give advice, and be good role model were parents, friend, teacher and their adult in their community.

3) Resilience promotion process subgroup IV(1) (Figure 5.7) The resilience promotion process results of Bee and Cat had cover all 5 processes which the important process help B to separate from games addiction, that was problem management .

<p><b>Establish and maintain self-esteem and self- efficacy:</b></p> <ul style="list-style-type: none"> <li>• Reward on lady boxing competition</li> <li>• General responsibility training (help family's business, cooking for sell, taking care of child (brother and sister), doing work in class, follow up friend's homework, coordination between teacher and student in her class, student's behavior surveillance, junior training, help family's job arrangement, co operate with teacher in making biochemical fermentation)</li> <li>• Analytic training, right or wrong</li> <li>• Self responsibility training (self laundry, ironing, cooking)</li> <li>• Sense of generous training, not take exploit on others</li> <li>• Survive and confront with problem training, go to school and back home by oneself)</li> <li>• Leadership (committee, president, treasurer, vice president of student committee, guide)</li> <li>• Seeking budget for student project (open up hat for donation)</li> <li>• Volunteer (teaching boxing skill for children in community)</li> </ul>	<p><b>Open up opportunity:</b></p> <p>-join doing interested activities(ex-curriculum activity, sports, showing, guide, drama club)</p> <p>-support doing interested things(drawing)</p>
<p><b>Reducing risk ( protective):</b></p> <ul style="list-style-type: none"> <li>• Closely nurture and teaching by parents (parenting in reason-based, not overprotection, adding teaching during conversation and daily activities)</li> <li>• Participate activities with family (travel, excursions)</li> <li>• Good role model (parents, teacher)</li> <li>• Positive thinking with child's behavior</li> <li>• Create school's disciplinary and activities for separating the child away from drug addiction</li> </ul>	<p><b>Reduce negative reaction from the child's exposure to risk</b></p> <ul style="list-style-type: none"> <li>• Parenting in friend base closely nurture</li> <li>• Perform activities with daughter (concert, travel)</li> <li>• Received scholarship</li> <li>• Give advice and consult by one's friend</li> </ul>
<p><b>Problem management:</b></p> <ul style="list-style-type: none"> <li>• Accept the child problem</li> <li>• Time arrangement for closely taking care children (mother resign from full-time job)</li> <li>• Provide fascinated &amp; interesting activities to separate the child from games addiction (boxing)</li> <li>• Perceived family problem and adaptation oneself</li> </ul>	

**Figure 5.7** Resilience promotion process of subgroup IV (1)

#### 5.2.4.2 Subgroup IV (2) (Nun and Namfon)

1) Risk Factor: Nun and Namfon had low risk factor. Namfon and her mother said there was some quarrelsome between flat. For Nun, her mother worried about premature family, because of an example in the community.

2) Protective Factors: Nun and Namfon had overall average protective factor in high level. The persons who took part in taking care, nurture, counseling, including giving role model were parents, grandma, friends, teachers and community.

3) Resilience promotion process in subgroup IV (2) (Figure 5.8): The finding of resilience promotion process of Nun and Namfon had many processes which related with potential promotion, for example promotion process of self- esteem and self-efficacy, reduce risk factor and open up opportunity for performing skills and activity. But the process for reduce negative reaction from the child exposure to risk did not found, because this study group did not have direct contact with risk factor.

<p><b>Establish and maintain self esteem and self efficacy:</b></p> <ul style="list-style-type: none"> <li>• Pray, meditation</li> <li>• General responsibility training (help parents to sell soybean juice, baby sitter with mother)</li> <li>• Self responsibility training (self laundry, ironing, cooking, wake up oneself)</li> <li>• Planning activities management system</li> <li>• Competition rewards and proud of learning score (mathematics, alphabet arrangement, rhythmic reading)</li> <li>• Passed the 2<sup>nd</sup> theologian examination</li> <li>• Leadership ( class' leader, students president)</li> <li>• Volunteer (mathematic tutorial, join in reading for young club in community, teaching the children in community, teaching homework for classmate)</li> <li>• Desire for knowledge</li> </ul>	<p><b>Open up opportunity:</b></p> <ul style="list-style-type: none"> <li>• Provide opportunity and support in interested activities performing</li> <li>• Provide opportunity and support for learning theologian</li> <li>• Open space for activities performed and sport-yard in community</li> <li>• join to do activities in community (make merit, showing in special occasion)</li> <li>• To promote from family and school to join singing contest</li> <li>• To promote from family and school to join competition in alphabet arrangement, rhythmic reading.</li> </ul>
<p><b>Reduce risk:</b></p> <ul style="list-style-type: none"> <li>• Closely nurture, teaching by parents (advise, teaching during conversation, doing daily activities)</li> <li>• Daily pick up children to school</li> <li>• Participate activities with family (play games, travel, make merit)</li> <li>• Parents in sight in some activities (talk with boyfriend, friend relationship)</li> <li>• Good role model (parents, teachers)</li> <li>• The rules for practice (recreation with friends, time commitment, creative games playing)</li> </ul>	

**Figure 5.8** Resilience promotion process of subgroup IV (2)

### 5.3 Conclusion of resilience promotion process

According to the result of resilience promotion process of all 4 groups, by divided into subgroups, which were different of risk factors, protective factors and adaptive outcome. Under analytic framework the researcher designed, there were found totally 8 patterns of resilience promotion process. However according to the analysis, there is further point which the study group who exposed to risk factors, for example Prig, Fern and Bee had problem solving process which seeking by their caretakers. The researcher called “problem management”. And the resilience promotion process could be concluded in 3 major processes as following:

#### 5.3.1 The promotion and developmental of capacity.

This is the basic and important process in all groups under study, which includes strengthening and supporting self-esteem, self-efficacy and positive talent/ability expression. This can be carried out in various ways such as practicing as follow in Table 5.2

**Table 5.2** The promotion and developmental capacity process.

<b>Establish and maintain self –esteem and self efficacy</b>	<b>Open up opportunities</b>
<ul style="list-style-type: none"> <li>• Self responsibility training</li> <li>• General responsibility training</li> <li>• Encouraging volunteerism</li> <li>• Promoting praying and meditation according to religious guidance.</li> <li>• Leadership promotion</li> <li>• Promoting and appreciated for children success by giving rewards, certificate in various occasions.</li> <li>• Encouraging learning experience for activities planning and organize work system</li> <li>• Encouraging children for learning new things or in their interests.</li> <li>• Self problem solving training in real or stimulation situation for children.</li> </ul>	<ul style="list-style-type: none"> <li>• Providing spaces for children to carry out activities.</li> <li>• supporting the children to develop their abilities in their interests.</li> <li>• Providing opportunities for the children to demonstrate their ability to compete.</li> <li>• School or community creates various extra-curriculums for children.</li> <li>• Part time job promotion.</li> </ul>

**5.3.2 The process of the prevention of risk factors** (reducing risk) is the preventive process or suppression for the children to avoid facing problems or reducing the risk. This process is usually the result of caring for children by the caregivers or school with respect to risk factors that could have happened to children. The conclusion was shown as following: (Table 5.3)

**Table 5.3** The process of the prevention of risk factors

<b>Reducing risk</b>
<ul style="list-style-type: none"> <li>• Close nurture, teaching by parents, caregiver, teacher</li> <li>• Participate activities with family</li> <li>• Under supervision or boundary of caregiver</li> <li>• Good role model</li> <li>• Create practical criteria, disciplinary with the child.</li> <li>• Be good counselor</li> </ul>

**5.3.3 The process of problem-solving and remedies.** It is the process that occurs in the children who are exposed to or faced with risk factors, which includes the problem management and reduces negative reaction from the child's exposure to risk. The result found that the study group who get attention from protective factor, for example; family, school, but in some cases were their friend. The details of activities in problem management and remedies were shown in Table 5.4

**Table 5.4** The process of problem-solving and remedies.

<b>Problem management</b>	<b>Reduce negative reaction from the child's exposure to risk</b>
<ul style="list-style-type: none"> <li>• accept the child's problem</li> <li>• Allocating time for thorough child care</li> <li>• Pursuing the activities that can draw children's attention away from the problem being faced.</li> <li>• Understanding and learning to adapt with children.</li> </ul>	<ul style="list-style-type: none"> <li>• Providing warmth</li> <li>• Performing joint activities</li> <li>• Sharing lessons learned or experiences among peers of the same or different age groups.</li> <li>• Supporting scholarship</li> <li>• Specialist counsellors in school and community                             <ul style="list-style-type: none"> <li>• religious practices, performed principle of religious, and religious instruction</li> <li>• projects or training camp for learning risk in society or community</li> <li>• home visit</li> </ul> </li> </ul>

## CHAPTER VI

### DISCUSSION

This chapter presents a discussion of research findings based on the objectives of the study which include resilience, protective and risk factors, adaptive outcomes, and process for promoting resilience.

#### 6.1 Discussion of the results

##### 6.1.1 Resilience

In this study, resilience is defined as traits that show the strength of an individual composed of four aspects as sense of purpose, ethics, sense of self, and problems solving. The overall quantitative analysis revealed that the school children had an average resilience score of 3.76 (SD = 0.42) and only 46.3 percent of all school children or respondents had a high level of resilience. The order of high to low levels of resilience aspects is: ethics ( $\bar{X}$  = 3.89, SD = 0.50), sense of purpose ( $\bar{X}$  = 3.88, SD = 0.53), sense of self ( $\bar{X}$  = 3.75, SD = 0.62), and ability to face problems ( $\bar{X}$  = 3.50, SD = 0.49).

Based on the comparative analysis of the overall resilience traits by population characteristic indicates that females had a significantly higher level of resilience than males. This is consistent with those from previous research (Benard & Marshall, 1997; Bogenschneider, 1996; Butler, 1997; Cederblad, et al., 1994; Cowen, Work & Wyman, 1990; Hawley & De Haan, 1996; Parker, 1979; Werner, 1984, 1990 quoted in VanBreda, 2001) which can be explained that it might have been a result of the development of adolescent girls being more advanced in their physical, mental, and emotional intelligence aspects than those of males, by 1–2 years. The girls thus exhibit more adulthood affecting also their resilience.

Resilience traits that were found at a high level included ethics and the sense of purpose in life, while those at a lower level were the sense of self and the lowest level was found for the ability to face problems. This is consistent with the study of Patcharin Arunruang (2002), while the study of Suriyadeo Tripathi (2009) found that children and young people aged 12–25 years seldom participated in religious activities. However, the findings among these studies demonstrate the consistency of the Thai culture including the morality in Thai society which has still adhered to and viewed it as a virtue to be practiced. The expression of Thai children still carries dependency; hence, resulting in the ability to confront the problems to be at a lower resilience level than other traits. However, among the school children who possess an overall high resilience level, the resilience trait of high level among others is the sense of self. This can be explained that the sense of self has fostered self-esteem and perceived self-efficacy, which is critical to the success of children in the future. Children who have positive social interaction, such as with parents, caregivers and other adults are in the process of cultivation and accumulation of the sense of self. People who can feel good about themselves are found to have positive childhood experience by having felt loved persistently. Such experience has become strong mental assets when the children grow up as adults. The sense of self is thus a result of having positive life experience, having opportunities to exercise good conducts, having been optimistic, and importantly, having discovered own talents that have eventually led to the success that they can be proud of (Prawate Tantipiwatanaskul, 2010).

Based on the interviews with the school children, all had the ability to perform daily activities such as taking care of their own laundry, cooking, tending young siblings, taking young siblings to school, and helping parents' in house works. The family encourages the children to think and decide for themselves. Training for or delegation of duties is thus a compilation of responsibilities for children. Practical training for children to learn to solve immediate problems from routine tasks that may be called missions or activities that the children need to learn to perform with other family members or by themselves is defined as a low-risk factor. This is consistent with the definition of resilience by Fergus and Zimmerman (2005: 404) according to the inoculation or steeling that proposes that repetitive exposure to risk factors

continuously at a low level can prepare children to overcome such risk factors in the future. This model is a developmental process by which learning has prompted the children to use protective factors to overcome risk factors. When they succeeded in overcoming the low (level) risk factors, they are prepared to face a higher level of risk factors. In addition, the notation suggests that the Japanese have been recognized worldwide as the people of a nation with a high level of resilience, having found them trained since kindergarten to pay respect to adults, be honest, take self-responsibility, be polite, be humble to others, but be strict and self-disciplined. (Leo, 2011).

The qualitative study also found that the school children have a clear sense of purpose, capable powers in many ways, and self-confidence. This is probably the result of the strengthening and support for self-confidence by encouraging the children to express their skills positively by caretakers, teachers, and peers. When the children come across situations, ideas, and experiences repeatedly in a positive way, they would gain self-confidence and positive emotions (Ronnau-Bose & Frohlich-Gildhoff, 2009: 314-315). This is an action or activity that the children feel satisfied with that would result in the discovery and fostering of own resources in physical, mental, intellectual and social forms, which are enduring and affecting children's resilience. Having positive emotions can cause quality as it stimulates physiological functions associated with the response to stress and creates psychological reactions as a new realm of possible expression. Positive emotions have thus played a role in the cancellation of negative emotions such as joy felt from experience during play could interact with others and have a bonding relationship. This creates the new information about the situation and environment in which the children use to adjust themselves further when facing various events. To experience positive emotions frequently is the key to improving their quality of lives in the future.

### **6.1.2 Protective factors**

Protective factors to be discussed are the external protective factors or external assets based on the concept of resilience. The external factors are external to individuals from the environment, which promote individuals' capacity or ability. External protective factors and internal protective factors will help to alleviate the impact of risk factors, obstructing the path of cause and effect or negative impact of

risk factors. This results in good adaptive outcomes (Constantine & Benard, 2001: 32). Protective factors can exist at different levels in the environment. Relationship in the care by adults can cause positive impacts on children. While on a personal level the bond of father and mother can be a buffer against negative thrusts. The findings of the external protective factors aside from those that this study is to discuss are the protection of the family, peer, school, and community whose details are as follows.

6.1.2.1 The family protective factors. The quantitative study found that the family protective factors were at a high level among other external protective factors. Of all the topics, the school children's most selected choices were: "I've been loved, attended by parents or adults in the family", "parents or adults in the family are a role model", "parents or adults in the family punish me with reason", "I would like to live with my parents or adult in the family", "parents or adults in the family cheer me up", and "I can comfortably consult or seek advice from parents or adults in the family". The qualitative study also found that the school children under study who exhibit a high level of resilience and adaptive outcomes are close to their families. These school children were different but share a common ground of meaningful participation as good attachment. Family members by whom the children have been implanted or instructed were regarded as their template and example. They were the father, mother, stepfather, stepmother, grandmother, brother, etc. It is thus the family that served as the first fortified outpost where children face. Learning to live within the family and also the family itself could encourage children to be able to face society and the external environment. It was found that the interviewed families appear to have a close bond with a positive relationship and child-rearing practice. Characteristics of child-rearing and teaching are rearing with love and compassion that is caring relationship, setting a good example (role model), providing encouragement (support relationship), trust, and care with limited extent and expectations, and sharing of activities for mutual obligation. It is found that the children have been raised by family in a friendly manner with exchange of family talk. Some families chose to join or conduct activities that are considered a good role model such as volunteering for social activities and attending religious preaching.

However, the topics of protective factors found to be at an average low level, much lower than the overall average included "I'm in a family with clear and reasonable regulations", "parents or adults in a family trust that I will succeed", and "I and my parents or adults in the family like to always do things together", which suggests that some families may lack closeness to the child. The study found that 42 percent of children were living with either mother or father, or some with neither of them. The qualitative study found that most children lived with parents who were divorced.

6.1.2.2 The peer protective factors. The quantitative study found that 53 percent of the school children had the average protective score at a low level. The children responded that their peers were not role models or they had committed good deed in a lesser extent or did not receive love and care from peers. This might have been because the children just moved into new school during the first year of secondary school (Grade 7), when it was an adjustment period to make new friends. As for the sub-factors, the average high levels were found for "I have friends who listen to me about my problems" and "I have friends who would help me when I have problems", which is consistent with the results of the qualitative study that found the nature of love, compassion of the children from schools. They often went to schools on regular school days or for tutorial classes. For instance, the children together thought of helping friends who suffered or were poorer, or assisted in the promotion of good friends. Staying with friends from school who could make them happy as a result of friendly talks, being dependent on a psychological aspect of counseling, exchange of ideas, listening to friends could help relieve sufferings. Some children could help friends to solve problems, such as in tutoring. The protective factors of peers found in this study revealed important characteristics as reciprocal reliance, assistance, and reinforcement.

6.1.2.3 The school protective factors. The contributing factors of schools which encourages positive development in children were: caring relationship which was associated with love, compassion, a good example (role model), encouragement (support relationship); high expectations, associating with trust, caring to some extent, expectations; and meaningful participation, associating with close ties, good attachment, and activities for mutual obligation.

The study found the average score of school protective factors at the high level. As many as 62 percent of the school children had an average high level of such factors; the protective factors with the high level were "teacher as a role model", "the teachers' punishment is reasonable", "school rules are clear and reasonable", "children have opportunities to participate in school-organized activities", and "children receive attention from teachers". This is consistent with the qualitative study which found that school teachers had good relationships with parents of the school children, an understanding of children on basic ground, among those with some deprivations such as the lack of warmth because of parents' divorce, lack of finance, or living in at-risk environments with quarrelling/fighting, gambling, drug abuse or a gathering of the children who failed from a presumably good/competent school. The teachers at the school thus tended to be quite compassionate, feel sorry for, and have understanding in the children. The teachers thus treated the children in special caring, compassion, attention, and closeness to the children. The teachers cultivated in the children the senses of hospitality, generosity, immunity and strength, especially for the children to cope with any particular problems which required particular guidelines to help them.

**Financial problems:** The assistance system for the children was in place through home visits, students' portfolios, and child care system. Should any problems arise, they would be forwarded to the student counseling unit to provide appropriate assistance, such as provision of financial aid, basic essentials, and lunch, normally provided by external agencies, based on certain criteria such as poverty and good academic performance.

**Drugs problems:** There were specific programs/activities to deal with drug abuse in schools. In the past, drug use was quite a problem in school, but the problem is much less severe now. Schools conduct activities such as establishing rules with students' council, involving the community, such as sending students to participate in training activities, designating a 'white classroom' emphasizing student's leadership, and training them to serve as core members in the surveillance system in the classroom, etc.

**Sexual problems:** As the problems are getting more prevalent, schools have set up a system for preventing the problems by integrating the issues and sex education into various existing subjects and in the curriculum at each level of

education. Health education subject and guidance could serve as a core to provide sex education. The schools also organized life skills training, activities with community hospitals to provide a lecture on sex education, camping for grade 7 children with trained senior students serving as core facilitators/leaders in the camps. The children in the same age group could communicate better and dare to express, rather than having the teacher to do so, but only serve as a close supervisor or mentor.

The school protective factors were an important protective factor for school-age children. School protective factors contribute to children's positive development especially for those who experience deprivation as a result of various problems, such as poverty, parents' divorce, and failure at a conceivably better school. When the school serves as a good protective factor, it could take part in supporting the school children to get a good attachment, resulting in positive emotional and mental development.

6.1.2.4 The community protective factors. This is social support through providing creative space for good relationships with neighbors in the community, positive physical and social environments as well as neighborhoods in a good social context. The nature of the activities are structured and adult-controlled contexts, such as sporting events, hobbies, volunteer activities, music, art, religion and political participation (Swedish National Institute of Public Health, 2009: 24-31), etc.

The quantitative study found the average score of community protective factors as a whole at a low level; 54 percent of all the school children had such a low score. It might be because the children spent most of their time at school as the school was an open space with facilities for activities on various occasions. However, the qualitative study found that there were less of these factors in the community. The children participated in community activities as physical exercise, going to a mobile library or attending on special occasions such as New Year's Day, Children's Day, etc., or some other activities organized by some volunteering children. Overall, some children were reinforced by the community even though there were a small number of community leaders who organized such activities or had a project for and could reach the children. Some children were taken care of closely by their families. Participation in the community or in community groups were often caused by someone else,

relatives, or leaders in that community. When schools have more activities, children would place their priorities and choose to participate in school activities.

Based on the observation, residential areas are in various forms such as flat, one-storey townhouse, two-storey townhouse, and small single house in a rather congested community. Only the townhouses and flats have a public area as a playground, depending on their sizes. A small area may accommodate a small playground area with rundown equipment or was converted for social gathering and events for adults living or even for storing community property. The flat type has a larger public space, but there is not much play equipment; some space dedicated for activities is unclear. In a community, usually there is a one large park and a community library, which belong to the Bangkok Metropolis Administration. The public space is easily accessible because it is in the center of the community, being close to school. It can be used for physical exercise, doing activities with family and friends; they may have community activities in public parks and libraries with printed technical and entertainment materials for people of all age groups and a room for children to do activities and watch movies or cartoons.

### **6.1.3 Risk factors**

Risk factors are conditions or events or experiences which would cause problems to emerge, maintain, or become increasingly aggravated. Risk factors may appear in a single state or a group of conditions or arise from within the children or outside the children or as an interaction between the children and the environment (Anthony, Alter & Jenson, 2009: 46). Risk factors reflect the state of life that is negative, which is related to the difficult adjustment. An exposure to chronic violence in the community is a situation that affects the psychological development of children becoming variables or characteristics that are related to individuals with developing problems.

Risk factors include those internal and external to individuals. Risk factors within individuals are caused by biological factors which make it difficult to adapt successfully, or various risk factors are the accumulation of miseries that causes a difficult adjustment. External factors or social factors, family or social networks, communities, or institutions surrounding the individuals may emerge from influences

in the womb, family relationships, workplace, school, and interpersonal relationships. The influence of the media, social and cultural activities, physical health, physical environment and socio-economic conditions of communities during the life cycle may be risk factors that vary according to age.

6.1.3.1 Internal risk factors found in the findings of the qualitative study were the risk factors that used to occur to children, including addiction to computer games, persistent truancy, indiscipline, and personal chronic illness. External risk factors were the risk factors of family, including parental divorce, family debt, abandonment by parents, father's mental problem, poverty, parental quarrels, father's attacking mother, mother's having new husband, father's having more than one wife, or sister's premature pregnancy. Social and environmental risk factors included living in communities with drug trafficking, teenage bullying, schoolchildren's use of weapons and gambling, siblings/relatives' drug abuse, teenage drug/solvent abuse, tobacco smoking, and having a computer-game shop in the community.

1) Addiction to computer games. The children in this study who used to be addicted to computer games were those from communities with a computer café being close to their homes, having parents at work. Normally, the children like to play and are naughty, but when they attended a computer café, they would stay inside and did not go anywhere else. So their parents thought that they behaved well and did not go astray, but the parents were careless about computer games. After a while the parents began to notice that their children kept themselves inside the café after school and missed evening meals. The parents then realized that their children were addicted to the games. The parents of one of the children discussed the problem and agreed that the mother quit her job to take care of the child closely for the child's academic performance, to persuade the child to do things the child likes. The child chose boxing and the parents supported the idea. The child then later helped the mother in her cooking for sale in front of the house or in the market. Today, this child is a student leader and volunteers to teach boxing to other children in the community.

2) Truancy and unruly children. The problems in this regard occurred during the transition to a new school environment in the 1<sup>st</sup> year

of secondary schooling when the children made new friends and did not know each other well enough. When they were in a group of friends who had unruly behavior, they became unruly as well. The problems included also with adaptation in learning and relationships with the teacher. They were punished or reprimanded for such a behavior by the teacher. It was a stimulant that encouraged children to go to class and maintained such a behavior. The children had a gang leader to lead them to various places for occasional talks or to skip school for some activities outside. The factors in this issue that encouraged the children to misbehave were the children themselves, peers, teachers, and families. However, in this situation, the parents were the ones who noticed such a behavioral problem; they tried successfully to separate their children from a peer group that had the problem. When the children continued into the grade 8<sup>th</sup> in school and associated with new friends who did not misbehave and also had a good academic performance, they also had a better behavior.

Some children with risk factors, both internal and external, were those with parents with child abuse, drug addiction, parental divorce, and child negligence. The risk factors were redundant. The children who could survive the miseries due to love and care of their grandparents, by their own failure in child care as a lesson and tried to accommodate their grandchildren to overcome negative feelings. They used dhamma (Buddhist principles) practice until the children became motivated much the same way and supported them to participate in the youth camps, and activities of the elderly groups.

6.1.3.2 The external risk factors were found to be the residence of the school children interviewed mostly at the home of their parents as a single house or townhouse by the size of approximately 20 square meters. Some had a small house as a leased property. However, each child in the study group was satisfied with his/her own housing, but not satisfied with the external environment. Most of the interviewed children expressed that there were risk factors such as quarrels among adolescents and adults, gambling, which were not good examples, and having a source for drug trade, a computer café, and liquor store, etc.

Despite those risk factors, the children could live through. Their risk factors were those found in the surroundings of the community that could be mostly classified or avoided. The important factors that could cause the school

children to live through such risk factors were the protective factors of the family and the school. The family protective factors were caregivers, which might be the children's parents (or a single parent), or grandparents, or step father or mother who gave them love, close ties, support for protection, and assistance to creatively solve problems. The school protective factors were found to be the teachers and school administrators having understanding of the children's problems. The teachers thus provided open space for activities that support children, gave them love and compassion, provided various funds, including home visits. This is consistent with the results of the quantitative study by multiple linear regression analysis which revealed that the protective factors of the school, family, peers, and communities could 37.2 percent predict the resilience of the children. The family protective factor had the most influence (beta = 0.274), followed by the school protective factor (beta = 0.219) and the peer protective factor (beta = 0.212), while the community protective factor, despite the provision of facilities, public areas, playgrounds, public libraries, including activities organized by various agencies for children in the community, had the least influence over the resilience prediction (beta = 0.137).

#### **6.1.4 Adaptive outcomes.**

The idea that children have resilience would result in better adjustment or successful outcomes or successful adaptation suggests that adaptive behavior is determined by the inner state or behavior expressed appropriately in society or both (Masten, Best & Gamezy, 1990 quoted in Keller, 2003: 18). In this study, two parts of adaptation were examined for learning achievement and social behavior of the school children.

The study quantitatively showed the adaptive outcomes of learning achievement of the study group in the past semester with an average GPA of 2.82 (SD = 0.75), minimally at 0.5 and maximally at 4. Only one resilience trait that had influence in predicting learning achievement according to the multiple linear regression analysis was the problem-solving. While the study of the qualitative study of the children with high level of resilience showed good adaptive outcomes of the learning achievement with an average GPA of 3.04 (SD = 0.56), minimally at 1.88 and maximally at 3.86.

The overall adaptive outcomes of social behavior revealed the average value of 3.72 (SD = 0.57). Such adaptive outcomes of social behavior, with an average in descending order were: "I have a sense of humor", "I can smile easily", "I observe rules and regulations", "I do not fight with friends", "I can control my emotions when having dispute or conflict", "I do not have much anger when I am not satisfied". When analyzing the resilience traits by the multiple linear regression analysis, it was found that the traits that were influential in predicting social behavior were ethics, sense of self, and their problem-solving, which could 18.4 percent predict the social behavior of the children. The ethic feature showed the strongest influence on such social behavior (beta = 0.186), while the qualitative study, among the children with a high resilience level revealed adaptive outcomes of social behavior with the average in descending order as: "I do not fight with friends", "I can smile easily", "I have a sense of humor", "I do not have much anger when I am not satisfied", "I observe rules and regulations", and "I can control my emotions when having dispute or conflict".

The results related to the adaptation of the children, according to the interviews with them and other persons concerned, showed that the children were responsible, could control emotions, were calm, were humble, were respectful to others, and could work with others by volunteering, and could accept and abide by the rules of the school and society.

Thus, the adaptive outcomes of this study are consistent with the findings of Grizzell (2006), whose study showed that children were exposed to various risks such as poverty, violence in the community, parents with alcohol addiction or mental illness, separation, migration and poverty, and physical or sexual abuse. These children were found to have undesirable adaptive outcomes or mental condition and academic performance. However, in children who received good care from parents showed better adaptive outcomes than those whose parents did not do so. The study by Martinez-Torteya, et al. (2009) found that certain characteristics of children such as good temperament, good intelligence, and personal potential were positively correlated with the characteristics of child caregivers as having positive mental health and also correlated with good adaptive outcomes. This is consistent with the results of the study of a cluster group by Anthony (2008) which found that children with high risk factors had the lowest academic performance, were not responsible, had the high

level of delinquency and peer problems, had low social support and neighborhood cohesion, had experienced experimental drug use, with some family risks. While in the group with low risk, there were more high protection features such as a high level of coping and self-esteem, commitment to school and good academic performance, few peer problems, moderately high social support, high neighborhood cohesion, few daily hassles, and minimal substance use or delinquency. In addition, at least three successful Thai persons were found to live in slums with poverty, but had educational success. One case graduated with an engineering degree and is a current business owner. The second case received a doctoral degree with a scholarship from a science and technology development program; the third one also received a scholarship to study for a master's degree and Ph.D. (Matichon, June 18, 2009; Siamrat, July 14, 2003; Southern Siam, May 15, 2010).

For this study, the level of resilience traits of high and low groups of 366 people were cross-tabulated or compared with adaptive outcomes, i.e. learning achievement, social behavior, and level of protective factors; the results were consistent with the findings of others previously mentioned. The group with a low level of resilience exhibited low levels of learning achievement, social behavior, and protective factors (32.82 percent), while the group with high resilience showed high levels of learning achievement, social behavior, and protective factors (33.33 percent).

### **6.1.5 The process of resilience promotion**

The findings of this study were from a qualitative study using in-depth interviews with the school children with high resilience and others concerned. There were eight processes in the promotion of resilience for these four study groups as the children had different risk factors, protective factors, and adaptive outcomes. When analyzed in a subset of each group, the following interesting issues were found.

6.1.5.1 The promotion of resilience that could contribute to children's resilience and positive adaptive outcomes requires protective factors interacting with each other. The children must have caregivers to attend to. The school has to provide space and pay attention to needs of the children, and community and their friends, which are protective factors contributing to the full development of children through the promotion of resilience process. Risk factors are an important

lesson to be learned for the management and adaptation of the children and the protective factors. The example of four cases, Bee, Nun, Cat and Namfon, who were the children with the high level of resilience, lived through the clear promotion of resilience process. In this regard, the researcher found that children's resilience emerged from the attention of the caregivers who could be parents, father, mother, grandmother, or teachers who were aware of problems and needs of the children. But in the interesting case of Fern with a contrasting low level of protective factors, she managed to show a high level of adaptive outcomes and lived through the clear promotion of resilience process. That was as a result of close care and attention given to her and her brother by her grandmother in choosing areas, other individuals, as well as social and community facilities in developing Fern's resilience along with the interest of the school in the development of their children.

6.1.5.2 The analysis of resilience promotion of the remaining five sub-groups revealed a low level of adaptive outcomes in either or both areas as learning achievement and social behavior. The process of resilience promotion was found to be lacking in certain elements, such as the attention given by caretakers to children's problems such as in the case of Opal, another case of Porn and Gun to whom her parents gave little time, and the last case of Baitoey whose school paid no attention to her problems.

6.1.5.3 Trying to solve the problems by the children themselves is not sufficient to yield positive adaptive outcomes such as the cases of Baitoey and Opal.

Based on the process of resilience promotion from the qualitative analysis, three major processes were identified: the process of promotion and development of children's capacity, the process of risk factor prevention or reduction, and the process of problem-solving and remedies. This is consistent with the findings of Weigand (2007) who noted that resilience occurred in a complex manner and could be characterized by the dynamic development from within and outside an individual. The continuous process is thus needed to nurture and support the covering and integrating of children, parents, peers, school, and community. The factors found to be influential in the promotion of resilience of the children were the protective factors of the family, schools, community, and peers. The family protective

factors has the greatest influence (beta = 0.274), followed by the school protective factors (beta = 0.219), the peers (beta = 0.212), and the community protective factors (beta = 0.137), respectively. Similarly, Mcalpine (2009: 13) proposed that the promotion of resilience in the family involved the quality relationship between children and their parents or caregivers who promoted a good relationship, encouraged parents to take good care of their children, promoted self-sufficiency in school, promoted the school children's happiness, prepared a teacher's model, and took responsibility for supporting the children continuously. In a community, there should be the promotion of involvement and networking of neighbors, linking youth and community support, the role of family in setting up meetings and support among their children's friends, and the establishment of organizations in school and community (such as a youth organization), etc.

The findings by each of such resilience promotion processes are discussed as follows.

1) The promotion and development of children's capacity. This includes strengthening and supporting the children's self esteem, self-efficacy, and encouraging children to express their skills and capacity in a positive way (opening up opportunities). This process was found in all groups studied. The various methods used for the support (see Table 5.2) were practicing for self-responsibility, responsibility in general matters, encouraging and giving praise to the success of children, and giving awards or certificates in various occasions. The encouragement of children to express their skills and capacity in a positive way includes, for instance, giving an opportunity and space for children to carry out activities, encouraging children to develop their capability as they wish, and ensuring schools or communities' extra-curricular activities, etc.

Self-esteem and self-efficacy is what a psychologist attributed to as important to child development. Bandura (1986 quoted in Sriruan Kaeokangwan, 2006: 50-52) believed that children were able to deal with circumstances that were ambiguous and complicated. A child could deal with stress effectively if he/she had self-efficacy. The dealing with such situations required two components, namely, skills in management and belief in their ability to succeed. In order to encourage the children to realize their efficacy, they must have confidence in themselves. This is a

positive self-feeling towards self or a sense of self. Pravech Tantipiwattansakul (2007: 3) noted that people can feel good about themselves if they had a positive experience during childhood. To be loved and understood consistently would become a mental asset in adulthood. It can be said that when people feel good about themselves, have a good life experience, do good things, have a positive thinking, and importantly discover their own talents could make them become proud of their achievements. The results of a qualitative study of the school children with high resilience revealed that the resilience trait of the sense of self was mostly at a higher level than other traits. Similarly, Brooks (2008: 5-20) emphasized the importance of self-confidence. He referred to the elements of resilience (mindset) that families, schools and parents should encourage while interacting with children, such as managing a sense of control, the ability to tackle the problem (problem-solving), simulating the situation in the home or school so the children would face the problems and learn to deal with by themselves. This is consistent with the findings of this study which found that most children were responsible to themselves in the assigned roles in the family or volunteering in activities in their school and community, etc.

Creating resilience through self-esteem and self-efficacy is the training of children to have positive thinking, search for and understand their own selves, and develop their talents that would become a successful pride. An example was the case of Nun who said, "I have a lot of good qualities, a good look, strong self-responsibility, excellent academic performance, and the students' leader". This is consistent with Bandura who said that the development confidence in self-efficacy was attributed to successful or mastery experiences. Bandura believed that it was the most effective means since direct successful experience could enhance their own capacity. Based on this study's findings, the school children in the group with the high level of resilience and adaptive outcomes were those who had various talents, received awards in competitions and contests, and had undergone continuous development. For example, Namfon who was good at mathematics, English, dancing, and also interested in improving her singing skills. Bee, another case said "While in high school, I keep on doing activities".

In addition, there were other ways to promote resilience by enhancing and improving the school children's capacity such as enhancing the

capacity to play violin, strengthening mental health, resilience enhancement method by the Department of Mental Health, and psychological counseling according to reality recognizing approach.

Promoting resilience by promoting responsibility could be cited such as a case of Porn whose mother said, "Start with assigning Porn some small house tasks, then more work was added. Now she can do all house works." A similar idea is by having children practice dealing with direct situations or simulated situations so that they can learn to solve problems. This is consistent with the resilience model of Fergus and Zimmerman (2005: 403-404), Model 3, the challenge model that describes the relationship between risk factors and outcomes that have a curve shape. This suggests that children who are exposed to risk factors at a moderate level can learn how to overcome those risks. But if the child is exposed to excessive level of risk factors, he or she may find it difficult to overcome the risks faced. Therefore, the level of exposure to a not-too-excessive level of risk factors can help a child to practice skills in problem-solving or inoculation or steeling. This model suggests that the exposure to a low level of repetitive and continuous risk factors can prepare a child to overcome the risk factors in the future. This model is thus a development process by learning to overcome the risk factors. When a child can succeed in overcoming a low level of risk factors, he/she would be prepared to face the risks in the next higher level.

2) The prevention of risk factors. The process is the prevention or deterrence that does not allow the children to face the problems or risk factors. This study has found the method or approach that indicates the prevention and such as close instruction and guidance by parents, caregivers, teachers, doing activities together in family, being under close supervision or in sight of caregivers, the children's having a good role model, establishing rules and regulations by the children, and being a good adviser. This process occurred with the care of children by caregivers and other those close persons who do not want the children to face any risk factors. Some examples could be cited: the grandmother of Fern said that: "I want her to be like her parents; I failed to raise her mother who was addicted to drugs"; another case, as the child caregiver can predict that the child would at potential risk, was Nun's mother who viewed that the community had a problem of children (in Nun's age group) having a

family prematurely, or the caregiver who had gone through miserable experiences or faced the risk factors before could serve as a counselor for the children.

Adolescence is the overlapping phase between childhood and adulthood as the adolescent has to go through the development of physical body, emotions, social attachment, values, interests, identity, interests in the opposite sex, and others. If they can live through this time period, their adulthood could be successful, being able to handle the adult's life smoothly. But if they could not solve problems, their development and personality would be affected. The early adolescents undergo development in terms of identities in conflict with self-understanding (identity vs identity diffusion). In this phase, their conflicts are more critical than in any other phases of life. It is a transition period between childhood and adulthood. During this period children give up their image as children to get into an image as adults. This condition causes the conflicts in the relationship with adults, peers and friends of the opposite sex, society, and severe mental confusion (Ericsson, 1950 quoted in Sriruan Kaeokangwan, 2006: 39-40). The children at this age were thus found to face a lot of difficulties to the extent known as an "age of life crisis" because the children are exposed to the environment increasingly in both positive and negative aspects according to the development known as "cradle-room-house-doorstep-neighborhood sequence". This refers to the children whose early period of lives is under specific environment within the eyes of their parents. When they grow up, the environment is extended outside the home. When they become adolescents the scope of the environment increasingly expands (Frumkin, et al., 2004: 192). The children have the opportunity to face risk factors within their inner selves and outside. Suriyadeo Tripathi (2009: 5-6) noted that the development of each child's age group would require different care. Children aged 6–12 years are those with a change from being close to family to being in school, having teachers and more friends. The school-age children have the educational institution and the family as the key in child care and rearing. While being 12–25 years of age, children are distant from family and become more attached to friends and they have increasingly more friends and the community as the key in their learning, assimilation, and imitation.

Resilience consists of risk factors, protective factors, and adaptive outcomes. Although the risk factors are parts of resilience, they could bring

about a negative impact to a child if there are too many of such factors. The study of Anthony (2008) which studied cluster groups with the attitude, as risk factors, of antisocial behavior, drugs abuse, and perceived risk of drugs abuse found that children with high risk factors had the lowest grades, were not responsible, showed high levels of delinquency and peer problems, had low social support and neighborhood cohesion, had experimental drug use experience, and had some family risk. In contrast, the group with low risk factors showed high protection characteristics such as high levels of coping and self-esteem, commitment to school and good academic performance, few peer problems, moderately high social support, high neighborhood cohesion, few daily hassles, substance abuse, and minimal substance use or delinquency.

Therefore, the prevention of risk factors is the process of prevention or separation of children from risk factors. This can be done either in the family, school, community or network operations. Those close to the children must pay close attention to the problems or the risk factors that the children face and sort out ways to deal with such risk factors. This study found that the risk factors reduction process could be carried out by the family, school and community by having close relationships, surveillance of risk factors, parenting, counseling, and good community space. This is consistent with the operation in Thailand such as the project on the development of networks for bright and clean Thai children (Suriyadeo Tripathi, 2008) under the Healthy Children and Youth Programme of the Thai Health Promotion Foundation, based on concept of working on youth's values or positive youth-based approach. The project employs a three strategies: regarding the children and youth as the age group with the potential and self-value (positive youth model); involvement of children, youth, families and communities in public activities (community and youth participation); and dissemination of and positive reinforcement to desirable activities in the community (public motivation). To implement the project in the community, a committee for children and youth development was set up with three adults and four children and youth as its members. There are five work systems including the mentor and counselor system, the system for development, creativity, and activities, the resource management system, the surveillance systems, and the referral system. Healthy Cities for Children (Amornwich Nakornthap, 2007) is a concept that integrates the development of children and youth under the framework of a

comprehensive child development in all aspects as the fundamental right, family, learning, the use of social space that is conducive to quality of children's lives, and having the measures leading to systematic changes with substantial collaboration in the development of children and youth among various agencies at the provincial level. The dimensions of the Healthy Cities for Children consist of the safety of children, health and well-being of children, strong family, learning of children, mechanism to protect children's rights, creative space for children, and the participation of children. The creative space for children program (Foundation for Child Development, 2007) urges all sectors of society to be aware of environmental problems that are toxic to children, collaborate in creating an environment conducive to the comprehensive development of children, eliminate and control undesirable environments for children and youth, including the allocation and investment in social space and activities for children and youth with serious and extensive coverage. Creative space to be promoted is the space for children to experience and receive opportunities for age group specific development, meeting the needs of children in promoting creative learning process. This requires the participation of children, families, and communities. This is the place or opportunity for children, families, communities, and relevant agencies to co-operate freely and feel happy until they attain the result of learning and creative development for children. Creative space for children is a multi-dimensional physical space for children to express in various dimensions such as physical space, space of thought, social space, and the media space. The Mental Health Promotion Plan of the Thai Health Promotion Foundation (Pravech Tantipiwatanaskul, n.d.b.) is the plan that aims to increase the protection factors for mental health promotion in youth, family, and specific target groups with the development in innovation, information systems, and partnership networks, as well as establishing public space for children.

3) The process for problem-solving and remedies. The process occurs in children who faced or exposed to risk factors, which includes problem management process and reduction of negative reaction from the child's exposure to risks process.

Activities or approaches in the process of problem-solving include the recognition that there are problems with children, allocation of time to

comprehensive child care, identification of activities that can better attract children than the problems faced, understanding and learning for adaptation with the children.

Opening up for problems that appear to lead to the next step is an approach to solve the problems. So the problem-solving process is the scientific process with steps for discovering the problems, finding alternative ways to solve problems, taking action on problem-solving, and evaluating the process. This is consistent with the “Four Noble Truths” in Buddhism or the causes and effects as *dukkha* or sufferings or problems or risk factors, *samudaya* or origin of sufferings, *nirodha* or the cessation of sufferings, and *maggā* or the path to the cessation of sufferings. The clear problem solving process from the findings of this study is the case of Fern whose grandmother recognized the problems and searched for ways to provide good care for her. The grandmother chose a Buddhist monastery and monks as the media along with the love and intimacy to lead Fern to participate in social activities for her development. Another case of Bee whose mother chose to take close care of Bee by giving up her job and motivated Bee to do other activities of her interest along with activities that the mother did with her. Based on these two cases, both the grandmother of Fern and the mother of Bee admitted that they have considered various ways before coming to the conclusion for their approaches, which were probable choice or the best solution.

The process of impact reduction from exposure to risk factors is the process that occurs after the children are exposed to the risk factors and the children could adapt and pass through hardships. This process is thus the process where the protective factors function to support, restore, and give remedies for the children to continue to overcome the problems. The activities in the process based on this study are providing warmth, doing activities together, exchanging of lessons learned or experiences with those in the same or different age groups, giving financial support for study, having a specialized counselor in schools and communities, practicing the *dhamma* or Buddhist principles, using the religious principles or *dhamma*, organizing a training camp to learn the risk factors found in the society or communities, and establishing home visits in the school program. The findings of such protective factors of family, school and community are powerful and consistent with the implementation of the project to establish a system to provide care for the school

children by the Child and Youth Mental Health Institute, Ministry of Public Health, in 2000. To cope with the crisis of rising suicide incidence among children in schools and universities, the Ministry of Education and the Ministry of Public Health have jointly brainstormed ways to improve surveillance and prevent the problems. As a result, such a "system for care of school children" was formed as a strategic model for behavior development of school children. The system integrates the mental health program into the school curriculum, ensuring the teachers' knowing each individual school children (personal history, strengths and weaknesses in learning, and habits), and providing prevention services by conducting classroom or extra-curricular activities including remedial actions, taking into account the school children's capacity. In addition, Patcharin Arunruang (2002) studied the effects of group counseling on their ability to regain power in students of lower secondary school using the framework of resilience of Wolin and Wolin with seven elements. The psychological counseling by reality (reality therapy) of Glassor entails eight principles as fostering personal relationships, focusing on current behaviors, behavioral assessment, planning for behavioral change, declaring plans to commit to actions, not accepting the excuse, not using punishment, and refusing to give up intention or commitment. The objective is to foster a helping relationship, self-awareness, and getting to know new members.

The resilience promotion process found in this study is among the findings that pointed out the role of the protective factors and their relationships and obligation among the factors in strengthening the capacity and managing appropriate protection process in general situation. However, the role of protective factors has to be intensive and specific and more intensive as the children are exposed to more risk factors, externally or internally. The process of solving problems and remedies can be explained by the Bronfenbrenner's Ecological Theory (Härkönen, 2007) that uses the type of relationships and environment of the individuals to explain the development. By this, the child's environment is sliced into layers: the innermost layer or Microsystem which is the interaction of individuals such as family members, friends, teachers, etc., from the small units and expands according to the increasing environmental characteristics; the middle layer which is the interaction between the children and the environment involving two or more of the positive relationships that

facilitate the children's development; the Exosystem, the external influences that affect children such as occupations of the parents; the media or Macrosystem which is the cultural system associated with the living of the children having high influence on the ethics and the identity of the children; and the Chronosystem being the context that may change over time and affects the interaction between the systems, influencing the development of the children. The Ecological Theory believes that the development of individual is not determined by one particular factor but factors in each of the systems, which interact with each other. It is the interactions of the internal structure and the interactions across the layers.

The fostering of resilience traits through resilience promotion process would result in children's resilience. The adaptive outcomes of the children found in this study were at a high level on both academic achievement and good social behavior. When examining the process of resilience promotion, it was found that the process was clear where the protective factors were consistent and vigorous in the mutual relationships. The adaptation of the children could be explained by the adaptation theory, which is an open system with dynamic changes, interaction with internal and external environments all the time. In the system, the so-called biopsychosocial being consists of physical, mental, and social qualities. It is a holistic entity and inseparable. The adjustment in view of the resilience which is a view of the successful outcomes requires the protective factors. However, the adjustment requires two mechanisms that functions in coordination as regulator mechanism and cognator mechanism. The function can be explained by the concept of cognitive control.

Metacognition (Lai, 2011: 33-34) is a multidimensional set of skills that involve "thinking about thinking". Metacognition entails two components: metacognitive knowledge and metacognitive regulation. Metacognitive knowledge includes knowledge about oneself as a learner and about the factors that might impact performance (declarative), knowledge about strategies (procedural), and knowledge about when and why to use strategies (conditional). Metacognitive regulation is the monitoring of one's cognition and includes planning activities, monitoring or awareness of comprehension and task performance, and evaluation of the efficacy of monitoring processes and strategies. The insights experienced while monitoring and regulating cognition play a role in the development and refinement of metacognitive

knowledge. In turn, cognitive knowledge appears to facilitate the ability to regulate cognition. The two are empirically related and may be integrated in the form of metacognitive theories, which are formal or informal frameworks for representing and organizing beliefs about knowledge.

## **CHAPTER VII**

### **CONCLUSIONS AND RECOMENDATIONS**

This study of resilience among school children in a few slums of Bangkok was undertaken with the objectives of investigating (1) the characteristics of resilience and (2) the protective factors that promote resilience of school children living in the slums. Data were collected from a sample of school children using a questionnaire as a tool; the data included general profile, protective factors, assessment of resilience traits and adaptive outcomes. The questionnaire had an overall alpha coefficient of 0.905. Data collection in Phase 1 was based on school children or students studying in three lower secondary schools in Bangkok, namely Chumchon Pattana in Khlong Toei district, Prachaniwet in Chatuchak district, and Rattanakosinsompoch in Lat Krabang district. Out of 923 students who lived in the slums and studied in various classrooms, 306 were selected using the stratified and simple random sampling methods. Phase 2 was a qualitative study to describe in depth the protective factors that promote resilience. The study chose a specific sample of students whose levels of resilience and protective factors were high and with various adaptive outcomes. In-depth interviews were conducted with students, parents, teachers, peers or fellow students and personnel who worked with the children in the communities. All respondents had given their consents.

#### **7.1 The study findings**

##### **7.1.1 Overview of the sample**

The majority of respondents were female with a mean age of 13.72 years, Buddhists, mostly in grade 7 of lower secondary schooling. The children were from families of 4 members (26.9 percent) and families of 2–4 members (49 percent), and mostly lived with father and mother (59.3 percent) in single homes (51.1 percent).

### **7.1.2 The resilience of school children in the slums of Bangkok**

In this study, the resilience was indirectly measured in four traits as ethics, sense of self, sense of purpose, and problem-solving. It was found that less than half (46.3 percent) of the respondents had the overall traits of resilience at a high level. The analysis by each of the individual traits revealed that the proportion of students with a very high level of sense of purpose was 58.2 percent, followed by the ethical feelings, sense of self, and problem-solving at 56.1, 46.0 and 26.3 percent, respectively. When comparing the average traits of resilience by gender, females were found to show a significantly higher level of resilience than males (p-value = 0.001).

### **7.1.3 The protective factors and adaptive outcomes**

In this study, the conceptual framework illustrates that the protective factors affect salient and adaptive outcomes. The results can be summarized as follows:

7.1.3.1 The protective factors that promote resilience include the protection power of the family, school, peer, and community. It was found that less than half (47.9 percent) of the children had a high level of overall protective factors; more than half (61.7 and 59.6 percent) had very high levels of school and family protective factors, respectively; however, less than half (46.2 and 43.4 percent) had high levels of peer and community protective factors.

The analysis of the protective factors to predict the resilience of the children using the stepwise multiple linear regression analysis showed that the protection of the school, family, peer, and community can mutually predict the resilience by 37.2 percent while the family protective factors had the greatest influence on resilience (beta = 0.274). The equation of the regression coefficient is shown below:

$$\text{The resilience} = 0.219 Z_{\text{school}} + 0.274 Z_{\text{family}} + 0.212 Z_{\text{peer}} + 0.137 Z_{\text{community}}$$

7.1.3.2 Adaptive outcomes. This study assessed the adaptive outcomes in learning achievement and social behavior. It was found that about half of the children (50.5 percent) had a better learning achievement – their grade point

averages were higher than the class average; whereas less than half (47.1 percent) had a high level of adaptive outcomes; the average levels of social behaviors, from highest to lowest, were: “I have a sense of humor”, “I can smile easily”, “I follow the rules or regulations”, “I do not engage in bullying at school”, “I can control my emotions on any dispute or conflict”, and “I’m not angry and frustrated when I am displeased”.

In comparing the adaptive outcomes of learning achievement and social behavior with demographic factors, it was found that the adaptive outcomes in learning achievement were significantly different by gender and age (p-value <0.05), whereas the adaptive outcome in social behavior was found to be significant only by gender (p-value <0.05).

Data analysis using the stepwise multiple regression approach revealed that only the problem-solving can predict 7.8 percent of the academic outcome as shown in the equation of the regression coefficient below.

$$\text{Learning achievement} = 0.284 Z_{\text{problem-solving}}$$

For the resilience traits that can predict adaptive outcomes in social behavior using the stepwise multiple regression analysis included the traits of ethics, sense of self, and problems solving. They could mutually predict 18.4 percent of the social behavior of the school children, whereby the ethics had the highest influence on the children’s social behavior (beta = 0.186), based on the equation of regression coefficient below.

$$\text{Social behavior} = 0.186 Z_{\text{ethics}} + 0.178 Z_{\text{sense of self}} + 0.168 Z_{\text{problem-solving}}$$

#### **7.1.4 The process of resilience promotion**

The results of this aspect were obtained from the qualitative study. Of all the school children who participated in the quantitative study, 15 were purposively selected and willing to be interviewed and then classified into 4 groups: Group 1, for those who exhibited high resilience, low protective factors, and low adaptive outcomes on one or both aspects; Group 2, for those who exhibited high resilience, low protective factors, but high adaptive outcomes; Group 3, for those who exhibited high

resilience, high protective factors, but low adaptive outcomes on one or both aspects; Group 4, for those who exhibited high resilience, high protective factors, and high adaptive outcomes.

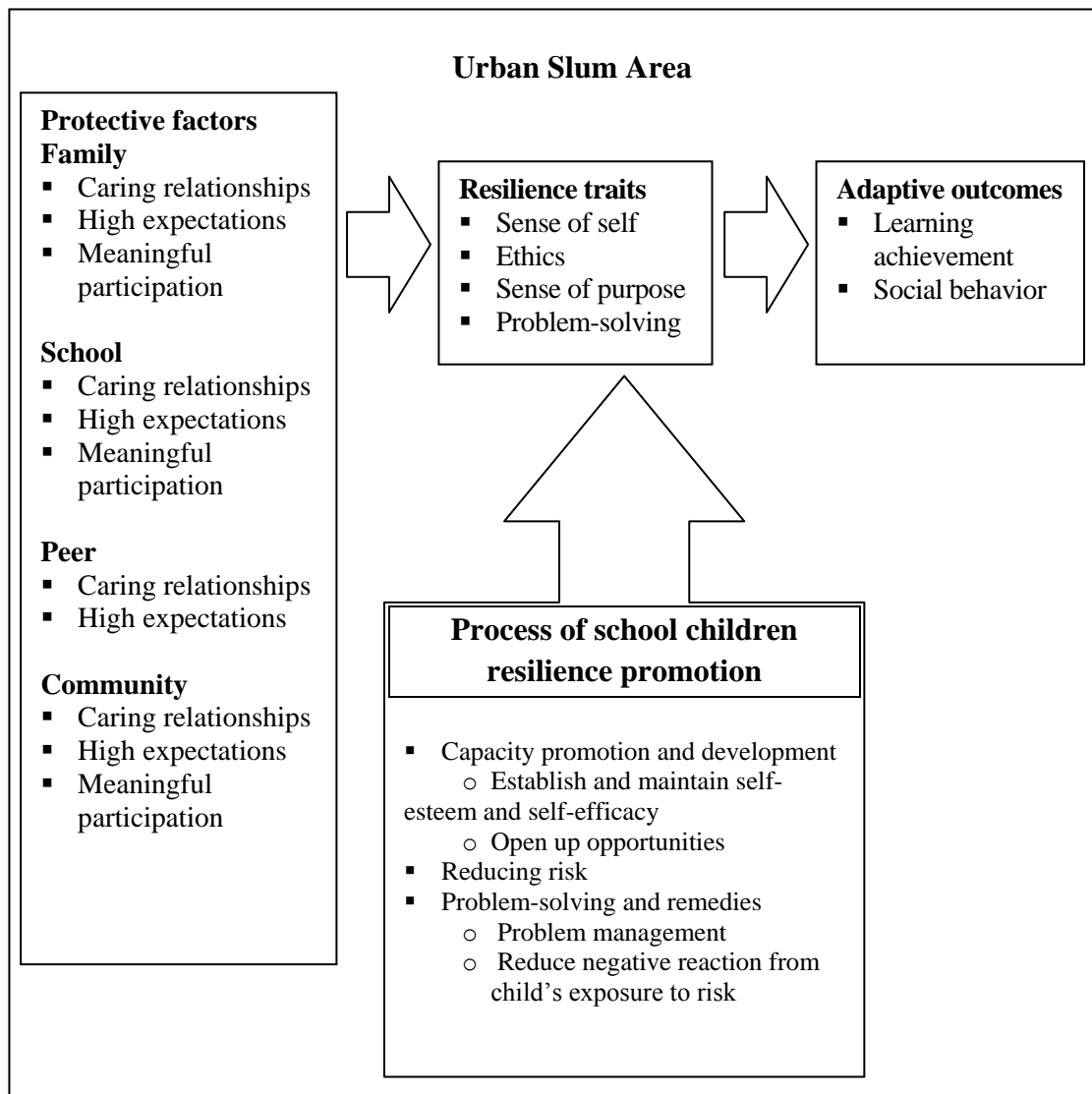
The promotion of resilience can be summarized in three major processes: the process of the promotion and development of children's capacity; the process of the prevention of risk factors; the process of problem-solving and remedies. The family, school, peer, and community protective factors were those that influence the promotion of resilience, whereas the family and school protective factors played clearer roles in the promotion than other protective factors.

7.1.4.1 The promotion and development of capacity. This is the basic and important process in all groups under study, which includes strengthening and supporting self-esteem, self-efficacy and positive talent/ability expression. This can be carried out in various ways such as practicing self-responsibility, encouraging volunteerism, promoting praying and meditation according to religious guidance, providing spaces for the children to carry out activities, supporting the children to develop their abilities in their interests, and providing opportunities for the children to demonstrate their ability to compete.

7.1.4.2 The process of risk factor prevention (reducing risks) is the prevention or suppression for the children to avoid facing problems or reducing the risks. This process is usually the result of caring for the children by the caregivers or schools with respect to risk factors that could have happened to the children. This includes close rearing, attention or supervision by parents, caregivers, and teachers.

7.1.4.3 Solving problems and remedies. It is the process that occurs in the children who are exposed to or faced with risk factors, which includes the problem management and reduction of negative reaction from risk exposure. The examples are accepting that the problem has occurred with children, allocating time for thorough child care, pursuing the activities that can draw children's attention away from the problem being faced, providing warmth, performing joint activities, and sharing lessons learned or experiences among peers of the same or different age groups.

Based on the findings from this study the process of resilience promotion can be summarized as shown in Figure 7.1.



**Figure 7.1:** The process of resilience promotion among school children in urban slum areas.

## 7.2 Recommendations

### 7.2.1 Recommendations for future policy-making and implementation.

7.2.1.1 The family protective factors, illustrated by this study, bear influences in promoting resilience and greatly affect the adaptive outcomes of the children. This indicates that the family is a significant institution, referred to as both

the father and mother, or either one, or stepfather or stepmother, or relatives who are raising the children, which should be supported to understand and value the development of resilience in children. A guide book may be prepared and made available for parents or caregivers, or a training program may be established for child caregivers to have the skills to appropriately provide care and promote resilience of children in accordance with the situations.

7.2.1.2 The school protective factors also influence the promotion of resilience in this study. As the children under study are in the school system, the teachers and administrators pay attention to the problems and organize both curricular and extracurricular activities in accordance with current conditions and children's needs. Thus, encouragement should be provided to set up a good model school whose approach can be adopted or replicated by other schools. In addition, the networking of schools should be supported for knowledge sharing purposes.

7.2.1.3 Peers as a protective factor in this study also influence the promotion of resilience in children. However, data from interviews revealed that they are only those who are close friends in the same class or in the same school. The children are encouraged to participate in school activities to build good relationships. It is thus essential to promote joint activities for children to create personal relationship and share knowledge.

7.2.1.4 The findings in this study show that the community protective factors are another kind of factors that can predict the resilience of children. Interviews with community leaders indicate that activities for children or setting up a public space for children or surveillance of harmful things for children have not been thoroughly or sustainably provided. The Bangkok Metropolitan Administration should set a policy to increase the number of programs to reach out to the children.

7.2.1.5 Activities or guidelines in the three processes for promoting the resilience found in the qualitative study are the body of knowledge that should be used in the preparation of parent's manual, training documents or training guidelines on specific issues for those involved in the development of early adolescents.

7.2.1.6 The promotion of resilience found in this study has to be associated with interactions among protective factors. Agencies involved in child

development should be linked to enhance their relationships or develop a network of relevant sectors, such as families, schools, peers, and communities.

### **7.2.2 Recommendations for further study**

7.2.2.1 This study on resilience in children was conducted in a specific group of school children who lived in urban slums and were in educational institutions. Therefore, it should be extended to other groups of children such as those outside the formal educational system including homeless children or other special groups to obtain a clear understanding about the resilience traits, their protective factors that promote resilience as well as the process to promote resilience of children in each group.

7.2.2.2 There should be a follow-up study (cohort study) in children with a high level of resilience to monitor the development and progress of children in their lives, and changes concerning protective factors in each age group.

7.2.2.3 As this study was based on children with various risk factors, the results are relatively non-specific. Thus, a further study should be carried out in children with specific risk factors, such as children from families of divorced parents that were found mostly among the interviewed children.

7.2.2.4 Since the groups under study were school children, the important protective factor next to their family was thus the school. An in-depth study should be conducted in a school that has a project or program for the development of child's resilience as a case study to serve as a prototype or a more substantial model.

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มรสุมแห่งชีวิตและพฤติกรรมเสี่ยงทางด้านสุขภาพของนักเรียนระดับอาชีวศึกษา.  
วิทยานิพนธ์ปริญญาพยาบาลศาสตรมหาบัณฑิต, สาขาวิชาการพยาบาลอนามัยชุมชน  
บัณฑิตวิทยาลัย มหาวิทยาลัยมหิดล.

## **APPENDICES**

**APPENDIX A**  
**SPECIALIST**

1. Asst. Prof. Dr Theradej Chai-Aroon  
Department of education  
Faculty of Social Sciences and  
Humanities, Mahidol University
2. Asst.Prof. Dr.Wiladlak Chuawanlee  
Government Pension, Behavioral  
Science Research Institute,  
Srinakharinwirot University
3. Asst.Prof. Supara chaopreecha  
Department of Psychiatry  
Faculty of Medicine, Thammasat  
Universiy
4. Dr. Pravech Tuntipiwatanasakul  
Department of Mental Health  
Ministry of Public Health

## APPENDIX B



COA.No.2011/073.2903

**Documentary Proof of The Committee for Research Ethics (Social Sciences)**

**Title of Project:** Process of School Children Resilience Promotion in Urban Slum Area  
(Thesis for Ph.D.)

**Principal Investigator:** Mrs. Sompoch Ratorian

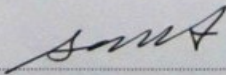
**Name of Institution:** Faculty of Social Sciences and Humanities, Mahidol University

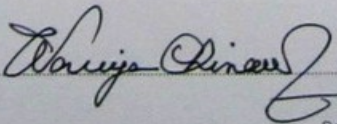
**Approval includes:**

- 1) MU-SSIRB Submission form version received date 11 February 2011
- 2) Participant Information sheet for In-depth Interview: Parent and Student Who Has 15 Years Old version date 22 March 2011
- 3) Participant Information sheet for In-depth Interview: Other Person version date 22 March 2011
- 4) Participant Information sheet for Questionnaire: Parent and Student Who Has 15 Years Old version date 22 March 2011
- 5) Assent form for Questionnaire version date 22 March 2011
- 6) Assent form for In-depth Interview version date 22 March 2011
- 7) Informed Consent form for In-depth Interview: Parent and Student Who Has 15 Years Old version date 11 February 2011
- 8) Informed Consent form for In-depth Interview: Other Person version date 11 February 2011
- 9) Informed Consent form for Questionnaire: Parent and Student Who Has 15 Years Old version date 11 February 2011
- 10) In-depth Interview Guideline version received date 11 February 2011
- 11) Questionnaire version received date 11 February 2011

The Committee for Research Ethics (Social Sciences) is in full compliance with International Guidelines of Human Research Protection such as Declaration of Helsinki, The Belmont Report, CIOMS Guidelines and the International Conference on Harmonization in Good Clinical Practice (ICH-GCP)

**Date of Approval:** 29 March 2011  
**Date of Expiration:** 28 March 2012

**Signature of Chairman:**   
(Emeritus Professor Santhat Sermseri)

**Signature of Head of the Institute:**   
(Assoc. Prof. Dr.Wariya Chinwanno)  
Dean of Faculty of Social Sciences and Humanities

Office of The Committee for Research Ethics (Social Sciences), Faculty of Social Sciences and Humanities,  
Mahidol University, Phuttamonthon 4 Rd., Salaya, Phuttamonthon District, Nakhon Pathom 73170. Tel.(662) 441 9080 Fax.(662) 441 9081

## **APPENDIX C**

### **EXAMPLE OF PARTICIPANT INFORMATION SHEET**

In this document, If you and your child did not understand some sentences, you can ask the head of this project. She will explain you. When you received this document, you read and consult your relative or others at your home for your deciding to join in this research.

Project: The Process of Resilience Promotion in School Children in an Urban Slum Area

Researcher: Mrs.Sompoch Ratoran

Study Place: Chumchon Pattana School, Mathayom Prachaniwet School, and Rattanakosinsompoj School.

Workplace and Telephone number: 132/113 Thararintr Chaopraya Bangrasor sub-district, Mueang, Nonthaburi Province 11000  
081-3040261

The objective of this research is to study characteristic, factors and process of resilience promotion in school children in urban slum area. The expected benefits could to use as model or activities or project that appropriate with children. Including, it can use for policy formulate for promote quality of all child and youth.

Your child were invited to join this research because he/she studies in secondary school and he/she could give important information for resilience characteristic and factors related in life and learning.

The participant of this research about 378 persons. Duration of research 4 months.

If you decided to allow your child to join this research, the step of research as follow:

The researcher will appoint date, time and place of you child that available to do questionnaires “Process of resilience Promotion in School Children in Urban Slum Area” total 79 items. The child will use the time to answer questionnaires about 15-20 minutes. The questionnaire is divided in 4 parts as follow:

Part 1: General information	8 items
Part 2: Protective Factors	33 items
Part 3: Resilience traits	32 items
Part 4: Adaptive Outcome	6 items

The researcher will use code for your child name and after finished the researcher will ruin all information from your child.

The risk that may happen when your child join in this research such as; feel uncomfortable, uneasy, or stress with some questions. Your child can not need to answer those questions. Your child can quit this project at any time and not impact for his/her learning outcome.

If you and your child have any questions, you can contact to Mrs. Sompoch Ratoran, tel. 081-3040261

Personal information of your child will keep and not open to public and not show name or address of your child. The researcher will report the result of research in public information. The person who can access to information is researcher or some committee such as; institute, government organization, or ethics committee.

Your child will not receive compensation and charge in this project.

The researcher will early inform you when other advantages and disadvantages of this project have.

You and your child can quit this project any time and your quitting did not impact to your child.

This project was endorsed from the Mahidol University’s Ethics Committee on Human Research (Social Sciences Branch). The office is at Faculty of social sciences and Humanities, Mahidol University, Budhamonthol street Sai 4 Salaya Sub-district Budhamonthol District Nakornprathom province 73170 Phone: 024419180 Fax: 024419181. If you have some problem about this project, you can contact to chairman of the committee or delegate at place or phone number as above.

I and my child read all this document.

Sign.....Participant

(.....)

Date.....

Sign.....Parent

(.....)

Date.....

**APPENDIX D**  
**EXAMPLE OF QUESTIONNAIRE**

**“The Process of Resilience Promotion in School Children  
in an Urban Slum Area”**

Explanation

To: all school children

My name is Sompoch Ratoran (Mrs.). I am a Ph.D. candidate in the Population Education Programme, department of Education, Faculty of Social Sciences and Humanities, Mahidol University. My thesis is a study of “The Process of Resilience Promotion In School Children in an Urban Slum Area”. This project will study in secondary student, I would like to ask for cooperation to answer about resilience. You should read and answer as same as you think. All your information that you give in this questionnaire will be kept secret. The data will be analyzed and shown for the benefit of academic study.

With respectful thank for your kind cooperation.

Sompoch Ratoran  
(Mrs. Sompoch Ratoran)

**Part I: General Information**

**Direction:** Please read the following items and mark ✓ into ( ) or fill in the blank with your true information

1. Student age.....years.( full year)
2. Sex        ( ) Male    ( ) Female
3. Religion    ( ) Buddhist ( ) Christian ( ) Islam    ( ) others.....
4. Number of person in this home.....persons (add school children)
5. Dwelling    ( ) Father ( ) Mother ( ) Parents ( ) Others.....
6. Resjdent    ( ) Single home ( ) Townhouse  
                  ( ) Commercial building/ The row house  
                  ( ) Apartment ( ) Condominium ( ) Flat ( ) others.....
7. Level of class ( ) Grade 7 ( ) Grade 8 ( ) Grade 9
8. Average grade cumulative.....(Last semester)

**Part II: Opinion about lifestyle environment of school children**

**Direction:** In life living including education, school children have to live in different environment with each others. Give school children read to understand this document, then select the document that suit to your activities and/or suit to your confrontation, more or less. School children sign ✓ into only one in the right box of each document that more suit to your situation.

Most strongly agree means the student agrees with the statement in all aspects.

Strongly agree means the student agrees with the statement in most of the aspects.

Moderately agree means the student moderately agrees with the statement.

Slightly agree means the student agrees with the statement in some aspects.

Least slightly agree means the student agrees the least or disagrees with the statement.

item	Issues	Most strongly agree	Strongly agree	Moderat-ely agree	Slightly agree	Least slightly agree
1	I get love and attention from my parent or adult in the family					
2	Parent or adult in the family is role model					
3	Parent or adult in the family always encourage me.					
4	I live in a family with clear and reasonable regulations.					
5	Parent or adult in a family trust that I will succeed.					
	..... .....					
32	Adults in the community depend on each other.					
33	There are spaces to play or do activities in the community.					

**Part III:** Opinion about school children resilience trait.

**Direction:** Resilience is characteristic that show strong in person. School children read to understand this document, then decide which document match to your character or behavior much or less, and sign √ only one in the right box of each document.

Most strongly agree means the student agrees with the statement in all aspects.

Strongly agree means the student agrees with the statement in most of the aspects.

Moderately agree means the student moderately agrees with the statement.

Slightly agree means the student agrees with the statement in some aspects.

Least slightly agree means the student agrees the least or disagrees with the statement.

item	Issues	Most strongly agree	Strongly agree	Moderately agree	Slightly agree	Least slightly agree
1	I like to do new things.					
2	I can take care of by myself better.					
3	I know I want to do in the future.					
4	I can express my opinions with other people.					
5	Parent or adult in a family trust that I will succeed.					
...	..... .....					
31	I do not blame fate, even I have to deal with problem.					
32	I know if I agree my problem, I cannot be hard to solve that problem.					

**Part IV: Opinion about social practice.**

**Direction:** School children read to understand this document, then decide which document match to your character or behavior much or less, and sign √ only one in the right box of each document.

Highest level of practice means the student frequently or regularly practises according to the statement.

High level of practice means the student most of the time practises according to the statement.

Moderate level of practice means the student moderately or occasionally practises according to the statement.

Low level of practice means the student rarely practises according to the statement.

Lowest level of practice means the student least frequently practises or does not practise according to the statement.

<b>item</b>	<b>Issues</b>	<b>Highest level of practice</b>	<b>High level of practice</b>	<b>Mod-level of practice</b>	<b>Low level of practice</b>	<b>Lowest level of practice</b>
1	I follow the rule or regulations.					
2	I do punch or slap hit with friends					
3	I am angry and frustrated when I am not satisfied.					
4	I can control my emotion on the dispute or conflict					
5	I can easily smile.					
6	I have a sense of humor.					

After analyzed this data, the researcher will in-depth interview the school children to find the answer of the process of resilience promotion. Could you please to give the information at that time?

( ) Agree give student number.....Class .....

( ) Not agree

**APPENDIX E**  
**INTER-CORRELATION BETWEEN INDEPENDENT VARIABLE**

**Correlations**

		RESIT	ENVHT	ENVFT	ENVTT	ENVCT
RESIT	Pearson Correlation	1	.471**	.396**	.472**	.451**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	341	333	336	324	332
ENVHT	Pearson Correlation	.471**	1	.233**	.421**	.431**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	333	366	361	345	356
ENVFT	Pearson Correlation	.396**	.233**	1	.310**	.353**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	336	361	370	351	360
ENVTT	Pearson Correlation	.472**	.421**	.310**	1	.527**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	324	345	351	354	344
ENVCT	Pearson Correlation	.451**	.431**	.353**	.527**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	332	356	360	344	365

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Correlations**

		GOALT	ETHIT	SENSST	PROBST	ADAPT
GOALT	Pearson Correlation	1	.545**	.527**	.396**	.298**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	371	367	359	354	365
ETHIT	Pearson Correlation	.545**	1	.553**	.488**	.370**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	367	371	360	356	365
SENSST	Pearson Correlation	.527**	.553**	1	.483**	.361**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	359	360	363	347	358
PROBST	Pearson Correlation	.396**	.488**	.483**	1	.336**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	354	356	347	359	353
ADAPT	Pearson Correlation	.298**	.370**	.361**	.336**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	365	365	358	353	370

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Correlations**

		SCORE	GOALT	ETHIT	SENSST	PROBST
SCORE	Pearson Correlation	1	.181**	.209**	.222**	.281**
	Sig. (2-tailed)		.001	.000	.000	.000
	N	354	353	353	352	352
GOALT	Pearson Correlation	.181**	1	.547**	.518**	.409**
	Sig. (2-tailed)	.001		.000	.000	.000
	N	353	375	375	374	373
ETHIT	Pearson Correlation	.209**	.547**	1	.552**	.489**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	353	375	375	374	373
SENSST	Pearson Correlation	.222**	.518**	.552**	1	.488**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	352	374	374	374	373
PROBST	Pearson Correlation	.281**	.409**	.489**	.488**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	352	373	373	373	374

\*\* . Correlation is significant at the 0.01 level (2-tailed).

## **BIOGRAPHY**

<b>NAME</b>	Sompoch Ratoran
<b>DATE OF BIRTH</b>	October 26, 1957
<b>PLACE OF BIRTH</b>	Samutsakhon, Thailand
<b>INSTITUTION ATTENDED</b>	Khon Kaen University, 1979 B.Sc.(Nursing) Mahidol University, 1984 M.Sc. (Epidemiology) Mahidol University, 2003 M.P.H.M (Primary Health Care Management) Mahidol University, 2012 Ph.D. (Population Education)
<b>PRESENT POSITION</b>	Associate professor, School of Health Science Sukhothai Thammathirat Open University Nonthaburi province, Thailand Tel.(66) 02-5033610 E-mail: ratiosom@hotmail.com Sompoch.Rat@stou.ac.th