CHAPTER 2

LITERATURE REVIEW

This chapter reviews the literature related to child physical abuse prevention. It includes a definition of child physical abuse, consequences of child physical abuse, causal theories of child abuse, factors influencing child physical abuse, child physical abuse risk assessment, prevention of child physical abuse, and theoretical framework of this study.

Definition of Child Physical Abuse

In a broader review of definitions of child physical abuse [CPA] from a health sciences perspective, the World Health Organization [WHO] (1999) proposed that CPA is one form of child abuse or maltreatment. CPA refers to actions resulting in actual or potential physical harm from interactions or lack of interactions reasonably within the control of parents or persons in positions of responsibility, power or trust. From a nursing perspective, CPA is one type of child maltreatment which involves the purposeful use of force applied to a child's body and potentially or actually resulting in pain, physical injury or death (Allender & Spradley, 2005; Gary, Campbell, & Humphreys, 2004).

From a social work perspective, the National Clearinghouse on Family Violence of Canada (1997) and the National Clearinghouse on Child Abuse and Neglect

Information of the United States (2004) state that CPA is the deliberate application of force to any part of a child's body, which results or may result in a non-accidental injury. The Federal Child Abuse Prevention and Treatment Act [CAPTA] of the United States of America defines CPA for legal purpose as physical injury ranging from minor bruises to severe fractures or death as a result of punching, beating, kicking, biting, shaking, throwing, stabbing, choking, hitting (with a hand, stick, strap, or other object), burning, or otherwise harming a child. Such injury is considered as abuse regardless of whether the caretaker intended to hurt the child" (U.S. Department of Health and Human Services, 2006; p.3).

The Thai legal system also offers a broad definition of child abuse. The Thai Child Rights Protection Act (2003) defines child abuse as parents' or caregivers' acts of commission or omission which result in physical, emotional, and sexual harm. These acts are unmerited, unlawful, and diminish the freedom of a child even though a child may agree to them. It can be assumed that definitions of CPA proposed by the legal systems of both the United States of America and Thailand include any actions of parents or caregivers which are intended to hurt a child and which result in physical injuries.

Among definitions used in empirical studies, CPA can sometimes be confused with physical punishment, since physical punishment, if overdone, can be CPA (Durrant, 2004). Milner (1986) defined CPA as the inflicts or allows to be inflicted upon such a child a physical injury by other than an accidental means which causes or creates a substantial risk of death or impairment of physical health or loss of function of any body organ. Many Thai studies have provided definitions of CPA that closely aligns with physical punishment. Two Thai investigators operationally defined CPA

as the infliction of physical injury or over discipline/physical punishment such as punching, beating, kicking, slapping, burning, shaking, or otherwise harming a child (Kongkaew, 2001; Krongyuth, 2001). Another Thai study proposed a definition of CPA as any inappropriate parental disciplinary acts which are harmful to a child's physical health and emotional well being (Auewattana, 1999).

In sum, many definitions of CPA developed for various reasons by federal legislators, agency officials, and researchers reflect many differing perspectives on CPA. Furthermore, researchers use varying methods and instruments to measure and define CPA which makes it difficult to compare findings across studies. Despite the differences, however, there are commonalities among definitions. Thai studies have primarily defined CPA as the infliction of a non accidental physical injury upon a child. However, in some of these cases the injury may have been the result of over discipline or physical punishment that is inappropriate to the child's age such as striking a child with a hand or a rod, slapping, spanking, kicking, or otherwise harming a child (Auewattana, 1999; Kongkaew, 2001; Krongyuth, 2001; Tanwattanakul, Sweangjareon, Chantapreeda, Ittarat, & Wattananukulkiat, 2003). Hence, this study defines CPA as any physical acts of parents or primary caregivers including excessive physical punishment which bring actual or potential harm to a child's health and development through non-accidental physical injury. With regard to prevention effort, the modification of improper child rearing practices and reduction of abusive behaviors of parents is intended purpose of this study.

Consequences of Child Physical Abuse

The consequences of CPA include both the immediate personal effects and the problems that may manifest in later childhood, adolescence, and adult life (Runyan, Wattam, Ikeda, Hassan, & Ramiro, 2002). Childhood experiences of physical abuse in the context of home and family can lead to lifelong consequences for child health and development. Although the prevalence of CPA varies in different parts of the world, the consequences appear similar globally (United Nations Secretary-General's Study on Violence against Children, 2006). These consequences can be organized into four areas: physical, psychological, social, and behavioral (Herrenkohl & Russo, 2001; Tremblay et al., 2004). The distinct characteristics of these four areas are described below.

Physical Consequences

Physical health consequences of CPA range from minor to severe injuries or death (Boonma, 2004). Mild cutaneous injuries without lesions were the most commonly reported by Thai child victims (Kongkaew, 2001; Nitirat, 1997). Bruises (Auewattana, 1999; Kongkaew, 2001), abrasions (Chaiming, 2005; Nitirat, 1997), lacerated wounds, and other severe symptoms including burns, skeletal fractures, and death were also reported as consequences of CPA (Boonma, 2004). In addition to physical injuries, symptoms including headaches (Chaiming, 2005; Kongkaew, 2001), stomachaches, and convulsions (Kongkaew, 2001) have been reported in school aged and adolescence victims of CPA. Physical abuse in childhood not only results in

physical health problems but also is linked with a wide range of psychological, social, and behavioral consequences.

Psychological Consequences

Available literature has documented a variety of psychological consequences of CPA. Children who are physically abused by their parents tend to have many negative feelings including feeling they are no good, mistrust, alone and isolated, confused, ashamed, embarrassed, worried about abusing others, frightened, and angry (English, 1998; United Nations Secretary-General's Study on Violence against Children, 2006). All these feelings are commonly found and many physically abused children do not tell anyone about their feelings, as there may be no adult they can trust enough to talk to. Consistent with the findings of Thai studies which report that abusive behaviors of parents can lead the children to experience low self-esteem and mistrust (Kongkaew, 2001; Muenthaisong, 2002). As one possible explanation, when children are physically abused by people they love and trust in a place where they ought to feel safe like at home, they may never again feel safe or secure in the company of the parents who perpetrated the CPA. Nevertheless, the most commonly found a psychological consequence among Thai abused children is sadness (Chaiming, 2005; Krongyuth, 2001; Nitirat, 1997).

Moreover, child physical victimization is linked with an increased risk of depression (Suthamnirun, Kanjuen, Fouhirun, Sangkrajang, & Pethngam, 1998), and suicidality (Finzi, Ram, Shnit, Har-Even, Tyano, & Weizman, 2001), and the more severe the CPA, the higher the risk (Evan, Hawton, & Rodham, 2005; Thompson et al., 2005). Although the reported incidence of suicidal thoughts among Thai child victims

is low (7.6%), the seriousness of these consequences should not be underestimated because they are closely linked to severe mental illness and attempted suicide (Krongyuth, 2001). Furthermore, evidences supporting the association between CPA and posttraumatic stress disorder have also been provided by several studies (Ackerman, Newton, McPherson, Jones, & Dykman, 1998). Thus, it is clear that CPA directly leads to a number of psychological problems.

Social Consequences

CPA not only results in physical injuries and psychological problems in children but also leads to social difficulties. Physically abused children are more likely to have impaired relationships with peers when compared to non-abused children (Berenson & Anderson, 2006). Not only do physically abused children face challenges when interacting with peers, but they also have trouble building relationships with other people later in life, including intimate relationships in adulthood. Abusive families have been found to provide inadequate sources of information and emotional support which is necessary for establishing relationships with peers (Buehler, Krishnakumar, Anthony, Tittsworth, & Stone, 1994). In addition to this, children who are being victimized by CPA may develop the tendency to withdraw in order to protect themselves from harm or rejection in their social relationships (Salzinger, Feldman, Ng-Mak, Mojica, & Stockhammer, 2001). All these problems are commonly found and may develop personality disorders in the future (Finzi et al., 2003).

Behavioral Consequences

Along with physical, psychological, and social problems, behavioral consequences often appear among physically abused children. Aggressive behavior is the most common difficulty exhibited by physically abused children (Feldman, Salinger, Rosario, Alvarado, Carabello, & Hammer, 1995; Nomura & Chemtob, 2007; Thornberry, Ireland, & Smith, 2001). Additionally, the trauma from CPA affects children in their daily functioning and in their development. Problems found were difficulty in sleeping, having nightmares, bed-wetting, eating problems, lack of proper self-care, losing temper, hurting other people, and poor concentration (Voices From Care, 2008). Furthermore, physically abused preschoolers are more likely to show delayed language, cognitive, motor development, and playing skills as a consequence (Alessandri, 1991; Cicchetti & Toth, 1995). The literature also reports that experiences of physical abuse are related to academic problems at school (Nomura & Chemtob, 2007; Thornberry et al., 2001). School suspension, truancy, decline or change in school performance, and low academic achievement are reported as academic problems (Lansford, Miller-Johnson, Berlin, Dodge, Bates, & Pettit, 2007). In addition to academic problems, physically abused children often display delinquency (Kongkaew, 2001; Thornberry et al., 2001) and run away from home (Techakasem & Kolkijkovin, 2006). These behavioral problems can lead to further social problems such as juvenile crimes and becoming teenage parents (Lansford et al., 2007). The long term consequences can be devastating. Childhood experience of CPA has been linked to health risk behaviors such as alcohol consumption (Chaiming, 2005) and drug use (Lau et al., 2005). These health risk behaviors can continue into adulthood and over the long term may lead to

cancer, liver disease, chronic lung disease, obesity, and other chronic conditions (United Nations Secretary-General's Study on Violence against Children, 2006).

The impact of CPA may be influenced by a number of factors, including how long the CPA occurred, the degree of severity, and whether the child suffered from repeated CPA from the same person, or whether he or she is being re-victimized by multiple abusers (Hamilton & Browne, 1998). However, it seems that CPA can cause even little or much more negative consequences particularly, young children. Therefore, the earlier protection of children from CPA might reduce the negative consequences. Additionally, the causative factors of CPA should be considered in order to gain more understanding of how this problem occurs in order to prevent it.

Causal Theories of Child Abuse

The causes or etiology of child abuse are complex. Many theories and perspectives have been used to illuminate the causative factors of violence against children (Browne & Herbert, 1997; Glass et al., 2004). No single theory on its own provides complete explanation of why some individuals behave violently toward children (Belsky, 1993). However, WHO and ISPCAN (2006) have proposed a comprehensive framework as an ecological model for considering factors relevant to the cause of child abuse. The ecological model was used as an organizing structure for the presentation and critique of theories of child abuse. Within this model, child abuse is viewed within a system of risk factors interacting across four levels: (1) the ontogenic level (individual factors), (2) the microsystem level, (relationship factors), (3) the ecosystem level (community factors), and (4) the macrosystem level (societal

factors) (Belsky, 1993). The individual level emphasizes explanations of biological variables of parents and caregivers and why some of them perform violent acts toward their children, as well as emphasizing the biological variables of the children who are being abused (Milner & Dopke, 1997). The relationship level examines an individual's close social relationships that influence the individual's risk of both perpetrating and suffering abuse such as lack of parent-child interaction, domestic violence, family crisis, and breakdown of support in child rearing.

Not only are factors at the individual and relationship level related to child abuse but community and society level factors are also linked to this problem. Factors at the community level relate to the setting in which social relationship take place-such as neighborhoods, workplace, and schools- and the particular characteristics of those setting that can contribute to child abuse. For instance, poverty and lack of available community resources such as housing, family support services and employment agencies (Runyan et al., 2002). These limitations along with higher unemployment levels and poverty restrict opportunities for individuals to meet their needs. When a community contributes to higher stress levels in individuals, aggressive or violent behaviors can occur. At the society level, the focus is on factors that can contribute to the incidence of child abuse based on beliefs, values, and rules of the broader culture in which the individual, family, and community operate such as use of harsh physical punishment, economic inequalities, the absence of social welfare, safety nets, and the legal and policy frameworks for child protection. These factors all have an indirect but substantial impact on the risk of child abuse (United Nations Secretary-General's Study on Violence against Children, 2006). Recently, Thai society has been showing increased concern with children rights and protections, especially child abuse

(Thailand's Act on Child Protection, 2003). However, children are not legally protected from physical punishment at home although they are protected in school. The absence of physical punishment prohibitions at home increase the likelihood that it will be commonly used in child rearing.

Overall, this framework provides guidance for understanding of the comprehensiveness of theories that have been proposed of child abuse. Prevention programs intended to employ this multidimensional perspective are likely to involve concepts such as individual, relationship, community, and society factors. Other perspectives including biological, sociological, and psychological theories were also incorporated as causal theories for explaining causes of child abuse. Details in each theory are described as follows:

Biological Factors

Based on biological perspectives, child abuse and violence has been associated with human instinct, neurophysiologic and hormonal factors, and alcohol and drug use.

Instinct. Instinct has been proposed as one cause that explains aggression. Aggression involves an instinctual system that generates its own source of aggressive energy independently of external stimulation (Bandura, 1973). According to this theory, aggression is viewed as a self-preservative ego instinct that is common to human being and serves important species preservation functions by favoring genes for strength and excessively preventing behaviors (Glass et al., 2004). When the instinctual aggressive drives are combined with goal-directed activity, the result can motivate behaviors designed to injure other persons. In turn, infliction of injury was assumed to reduce the aggressive drive (Bandura, 1973). Based on this explanation,

parents with stressful or harmful conditions are more likely to exhibit aggressive behaviors toward children in order to express or reduce their aggressive drive. However, instinct alone cannot fully explain why violence against children occurs and how to prevent it. The role of instinct is unidimensional, is based on individual view, and fails to consider social and cultural factors.

Neurophysiology. Substantial research has been conducted on animals to determine whether the mechanisms mediating aggression are localized in specific brain regions. The results show that subcortical structures, principally the hypothalamus and the limbic system, are involved in facilitating and inhibiting aggressive behavior (Bandura, 1973). Research has demonstrated that a history of head trauma is significantly more common in male perpetrators than those who remain nonviolent (Rosenbaum et al., 1994). In other words, parents who have had a brain injury or infection may show neurophysiological signs such as impairment of psychomotor and perceptual abilities which lead to irritability aggression and diminished emotional control and these may lead to increased physical and verbal aggression (Kavoussi, Armstead, & Cocaro, 1997). Parents who are subjected to these circumstances may exhibit violence against children. However, a neurophysiological perspective views child abuse as the result of a unicausal factor that is incomplete and does not take into considerations environmental factors. Such a theory does not clearly explain how the neurophysiological mechanism mediates aggressive acts and thus, has limited usefulness in conducting interventions and preventing child abuse.

Hormones. Androgens and testosterone have been linked to human assertiveness, dominance, and aggression. Results from one study showed that prisoners convicted of violent crimes had higher testosterone levels than those who committed nonviolent

crimes (Glass et al., 2004). Even though evidence suggests that aggressive offenders may have elevated testosterone levels, the use of testosterone-lowering agents has shown limited results in reducing aggressive behavior (Kavoussi et al., 1997). Notably, testosterone alone does not lead to aggressive behavior. This further indicates that aggressive behavior of individuals is influenced by multiple complex factors.

Alcohol and drug use. The use of alcohol and drugs is often associated with aggression (Bandura, 1973). Empirical studies also indicated that alcohol consumption correlated to child abuse problems (Chaiming, 2005; Nititrat, 1997). However, there is no general agreement on how alcohol consumption may promote violent behavior. The first view is that people may be more likely to commit a violent act when under the influence of alcohol than they would otherwise. The second view asserts that people use alcohol as an excuse for aberrant behavior. In our society, people believe that alcohol consumption may cause people to lose their inhibitions and/or to release violent tendencies, and thus users cannot be fully blamed for their action (Fagan, 1993).

Not only is alcohol consumption related to violence but substance abuse is also associated with child abuse (Chaffin, Kelleher, & Hollenberg, 1996; Wu et al., 2004). Substances in the blood can contribute to aggressive behavior by affecting the cognitive abilities of individuals. It is known that biological effects differ by drug type and amount of use. However, the effects of drugs on violent behavior appear to be associated with social, individual, and situational factors rather than neurophysiological causes (Gelles & Strauss, 1988 as cited in Glass et al., 2004). However, not much is known yet about the association between drugs and violence. It can be assumed that alcohol consumption and drug use are not direct cause of child abuse.

Overall, biological theories of abuse and aggression focus only on individual factors that result from instinctual drive, brain functioning, hormonal imbalance, and alcohol consumption and drug use. Such perspectives fail to consider family, community, and society factors of child abuse and thus, provide an incomplete explanation of child abuse.

Sociological Theories

Sociological theories attempt to explain how community and society factors such as cultural issues and social structures contribute to parents' abusive behaviors. Common theories include critical social theory, analysis of social economic status in terms of community and society, and examinations of cultural attitudes on child rearing.

Critical social theory. The key concepts of critical social theory that relate to child abuse are patriarchy or power imbalance. Patriarchy is thought to be significant role in founding and reproducing of violence (Crossley, 2005). In circumstances where parent-child relationships involve excessive control and afford a low status to children, increased violence against children is likely to occur (United Nations Secretary-General's Study on Violence against Children, 2006). There is an expectation that children are dependent and that parents have more power than their children and will exert control over them. As a means of control, parents may use physical force or physical punishment for reaching parental expectations which constitute children as objects for parent's pleasure. Moreover, the belief that children are their parents' property is posed to lead to child abuse (Gelles, 1980). For example, Thai children are expected to respect and submit to their parents and to older family members. This

represents a power imbalance between parents and children which can lead to inappropriate expressions of feelings and practices of physical punishment or CPA.

In addition to patriarchy, oppression is another concept within this theory that is associated with child abuse (Campbell & Bunting, 1991). Child abuse may be determined by the economic and social environment, including child welfare related public policies (Institute for Population and Social Research, 2009; Tauchen & Witte, 1995). Within this perspective, abusive parents and child victims are viewed as disadvantaged groups secondary to economic pressure, media, and social values in many societies. Within the Thai culture this may be found when Thai parents allow economics to dictate their behavior. When this occurs it can lead to excessive working along with economic pressure and thus more parental stress and fatigue. This creates the likelihood of using abusive behaviors among parents in response to stressful situations involving children (Phithakaramwong, 2001). Additionally, when parents work more, they have less time to interact with and nurture their children and to provide good role models in daily living. This can lead parents to face difficulties when evaluating, interpreting, and responding toward a child's behavior and their role as parent, contributing to the risk for physical harm. However, critical social theory does not explain variations among individuals of the some socioeconomic status and does not provide guidance for intervention.

Socioeconomic status in community and society. Theoretical frameworks have associated child maltreatment with socioeconomic status. Multiple research studies have found consistent and strong evidence of a relationship between income and reports of child abuse (Brown, Cohen, Johnson, & Salzinger, 1998; Chaffin et al., 1996; Roditti, 2005; Runyan et al., 2002). More specifically, low income plays a

substantially more important role in regard to parental violence in single-parent families than in two-parent families (Berger, 2005). Low income or poverty impacts routine and medical care, the quality of the caregiving environment, and to a lesser extent, spanking behavior (Berger, 2004). In addition to this, low income has been associated with improper housing and impairment of the development of healthy parent-child interactions (Wolfe, 1999). The availability of resources and standards of care in a community are thought to diminish child abuse. For example, community service centers, such as ones for counseling and employment, are thought to reduce the occurrence of abuse because these centers will provide opportunities for people to seek essential resources. However such frameworks fail to consider individual factors of child and parents thus provide little guidance for CPA intervention.

Cultural attitudes toward child rearing and disciplining. Cultural norms and values fostering violence against children have been hypothesized to affect child rearing attitudes and practices (Runyan et al., 2002). Physical punishment in child rearing is generally acceptable and often used in Thai society (Muenthaisong, 2002) and elsewhere (Bitensky, 1998; Vittrup et al., 2006). Moreover, according to the notions of "spare the rod and spoil the child" or "give them an inch and they will take a mile" is endorsed the use of physical punishment for child disciplining. With respect to Thai culture, children are expected to be quiet, polite, submissive, and not question the commands of parents or older family members (Nanthamongkolchai et al., 2004). This is congruent with the study of Phuphaibul and colleagues (2005) on parental expectation, beliefs, child rearing practice and the development of preschoolers. They found that most Thai parents believed that children should do what their parents told them to do and 93% of preschool children were hit by parents and others for punishment.

In addition to this, corporal punishment is not prohibited in Thai family, but it is prohibited in schools. It is, however, still permitted in some official institutions such as the Observation and Protection Center (Thailand's Act on Child Protection, 2003). These cultural attitudes in child rearing increase children's vulnerability. Moreover, according to Thai cultural norms and values, the family is within the private sphere. As such neighbors who are not family members cannot be involved or report suspected victims of child abuse. Even though the cultural norms provide an understanding of how violent behaviors fit in certain cultures, they do not offer any solutions about how to change specific behaviors of individuals or groups (Glass et al., 2004). This contributes to some of the difficulty in preventing child abuse.

Overall, sociological theories attribute child abuse to social values, power imbalances between children and adults, low socioeconomic status of community and society, and cultural attitudes toward child rearing and disciplining. Causal explanations under these theories may contribute to prevention and other interventions to stop violence against children on a broad level in the form of legal registrations and national campaigns to ban violence against children. However, these theories do not sufficiently focus on variations among individual parents or children to guide interventions.

Psychological Theories

Psychological theories of violence are varied and commonly employed in explaining causes of violence (Bandura, 1973; Glass et al., 2004). Among the theories that attempt to explain aggressive behavior in individuals, social learning theory/social cognitive theory and social information processing model are among those most commonly mentioned in the literature review.

Social learning theory. Social learning theory [SLT] has been used to explain human aggression (Bandura, 1973). Within SLT, aggression and violence are viewed as learned behaviors that may be considered adaptive or destructive depending on the situation (Glass et al., 2004). Over time, social learning theorists added more emphasis on cognitive processes to account for observational learning and this led to a re-labeling by Bandura as social cognitive theory [SCT] in 1986. According to SCT, the acquisition of aggressive behavior can be learned through modeling and observational learning, by direct experience and environment. Performance is determined by both internal and external stimulators (Bandura, 1973). Within the context of this theory, it is proposed that parents who have experienced violent and abusive childhoods are more likely to become abusers than parents who have experienced little or no abuse during their childhood (Maker, Shah, & Agha, 2005).

SCT theorizes that parents who were subjected to abuse as children may have come to accept these behaviors as common practices. Such individuals are considered likely users of aggressive or abusive parenting strategies modeled on their own childhood experiences. The strength of SCT comes from the inclusion of environmental influences and the influences of exposure on violent behaviors. However, this theory has limited ability to describe the cause of child abuse. Social cognitive theory is unable to describe the direct causal link of child abuse (Glass et al., 2004). Even though SLT or SCT provides more comprehensive explanation than biological and sociological theories, they are still inadequate to explain the cause of child abuse, causal relationship, and do not take into account the social, cultural, and environmental conditions that may influence or mediate violence or aggression.

Social information processing model. The social information processing [SIP] model, another cognitive-behavioral framework, is used to explain human behaviors including aggression (Dodge & Coie, 1987). Cognitive-behavioral models have been widely used in child abuse and intervention research (Azar, 1986). In an attempt to specify a cognitive-behavioral explanation of CPA, Milner (1993; 2000) has proposed the social information processing [SIP] model of child physical abuse [CPA]. This model attempts to explain how parental cognitions may be related to each other and how cognitive activities may be impacted by their personality factors and by events from other ecological levels (Milner, 2000). Within the SIP model of CPA, cognitive processes of parents are believed to have an impact on the risk of verbal and physical aggression directed at their children (Milner, 1993). In addition, this model assumes that distorted, biased, and inaccurate preexisting parental schemata impact perceptions, evaluations and interpretations of children's behavior. This, in turn, can contribute to inappropriate parental responses including CPA (Milner, 2000).

The components of the SIP model of CPA consist of preexisting schemata, three cognitive processing stages, and a fourth cognitive- behavioral stage of response execution (Milner, 2000). The three cognitive stages include perceptions of social behavior; interpretations and evaluations; and information integration and response selection activities. The cognitive behavioral stage involves response implementation and monitoring processes. Preexisting schemata are thought to influence each component of the model with automatic and controlled processes used to describe the manner in which components of the model interact (Milner, 2000). Moreover, preexisting schemata and cognitive activities at one or more of the first three cognitive processing stages

are believed to mediate events at the response implementation and monitoring stage. The details of this model are described as below:

Preexisting schemata. Preexisting schemata represent information structures that exist prior to the processing of new information. Specifically, preexisting schemata refers to knowledge structures that contain generalized representations regarding the co-occurrence and/or sequencing of perceptions, interpretations, and behaviors (Milner, 2000). This model assumes that abuse is related to preexisting schemata. That is, the preexisting schemata influence parental perceptions, evaluations, integrations, and response selection as well as behaviors (Milner, 1993; 2000). Preexisting schemata can be conceptualized into cognitive and affective types. Cognitive schemata are viewed as prior knowledge or beliefs of individuals while affective schemata are thought to consist of emotions that were experienced during previous events and are associated with specific beliefs (Milner, 2003). According to the SIP model of CPA, abusive parents are believed to hold more inaccurate and biased preexisting cognitive schemata such as knowledge of child development and attitudes in child rearing. These all impact the ways they perceive, evaluate, integrate, and respond to information related to children.

In addition to inaccurate or biased preexisting cognitive schemata influencing parental information processing, negative affective schemata also affect this process. Affective schemata refer to emotions that operate inside or outside of awareness (Miner, 2000). Specifically, negative affective schemata are believed to increase the risk of aggressive behavior including anger, hostility, or depression (Milner, 2000). These negative states may moderate child-related perceptions. That is, parents who have negative affective states might more often evaluate their child's behavior as

inappropriate or uncontrollable by parents and warranting punishment. Conversely, parents who have positive affective states are warm, empathetic, and better prepared to understand their child's behavior. Thus, they are less likely to commit CPA (Milner, 2000). Therefore, it can be concluded that preexisting schemata play a crucial role in parental information processing.

Stage 1: Perceptions of social behavior. This stage is the input or encoding information stage. This model proposes that abusive parents have deficits, biases, and errors in their perceptions of their children's behavior as compared to nonabusive parents (Milner, 2000). Within this model, parental perceptions refer to the parent's degree of attention to and awareness of social stimuli. This model views perceptions of abusive parents according to three criteria (Milner, 2003). First, physically abusive parents are less attentive to and are less aware of their children's behavior. Second, abusive parents engage in selective attention that is congruent with their preexisting schemata. Third, parental perceptions toward children's behaviors are impacted by their negative affective schemata such as anxiety, distress, and depression (Milner, 2000). This model assumes that physically abusive parents are more distressed from child and non-child-related events compared to non abusive parents (Milner, 1993). However, the exact role of stress on encoding is not known (Milner, 2000).

Stage 2: Interpretations and evaluations. This stage of this model proposes that physically abusive parents display differences in interpretations and evaluations of their children's behaviors as compared to non-abusive parents (Milner, 1993; 2000). This stage can occur automatically and without intention or deliberation (Milner, 2000). Abusive mothers, when compared to non abusive mothers, evaluated conventional and personal transgressions as more wrong, used more physical and verbal force,

expected less compliance from their own children, and appraised their own disciplinary responses as less appropriate (Caselles & Milner, 2000). Additionally, interpretations and expectations of abusive parents are thought to become more biased when they experience negative affect (Milner, 2000). Researcher has supported this view that high risk versus low risk mothers are differentially responsive to stressful situations and differ in their interpretations for negative child behaviors and in their expectations of future child compliance (Dopke & Milner, 2000).

Stage 3: Information integration and response selection. This stage involves a complex cognitive process including integrating available information for response selection. Abusive parents fail or are unable to adequately integrate child-related information for response selection that are likely to use more physical punishment and less reasoning in their disciplinary strategies (Milner, 2000). Furthermore, this stage is not different from other stages that are impacted by parental distress and negative affective states. Thus, the response selection process will be limited and the options will be determined by the parent's ability to generate child management strategies (Milner, 2003). As predicted, research revealed that high-risk mothers experienced more stress in their parenting role, reported higher levels of negative affect and greater use of coercive acts than low-risk mothers (Dopke et al., 2003). Additionally, parents who have stress showed high abuse potential related to inappropriate expectations of child behavior, negative interpretations, and negative responses to child behavior (Schellenbach et al., 1991).

Stage 4: Response implementation and monitoring. This stage involves the parent's ability to implement appropriate parenting skills, including the ability to monitor and modify parenting behavior (Milner, 2000; 2003). According to Milner

(1993), when compared to non-abusive and low-risk parents, high-risk and physically abusive parents are thought to lack well-developed skills and/or abilities to implement adequate child-directed responses. Examples include a lower ability to monitor and to modify their responses (Milner, 2000).

Automatic and controlled processing. In all stages of cognitive process are regulated by automatic and controlled processing (Milner, 2000). Automatic processing is viewed as a cognitive process that occurs outside of awareness (Schneider & Shiffrin, 1977). This processing occurs in parallel to other processes and once initiated it generally continues until completion (Milner, 2003). By comparison, controlled processing takes place in awareness and requires substantial attention (Miner, 1993). Controlled processing is thought to enhance an appropriate behavioral response resulting from increased efforts at integrating information and/or implementing and monitoring a response (Milner, 2000). However, both automatic and controlled processing events can occur within and between the stages in the model. If controlled processing is used, it is assumed that the parent will more likely be able to reduce the influence of biased preexisting schemata, to use mitigating information, and to respond appropriately (Milner, 2003).

Overall, the SIP model of CPA provides descriptions in stages from preexisting schemata to response implementation and monitoring. It reveals that there are bi-directional relationships both within and between the stages. The strength of the SIP model of CPA is that it clearly explains parental cognitive processes in ways that make cognitive interventions possible. Furthermore, this model considers personal and environmental factors such as stress and their effects on parents that may influence or mediate violence against children and thus, provides a conclusive

explanation of CPA. In addition, this model emphasizes individual factors relating to parents that are mostly associated with CPA (Milner & Dopke, 1997). Therefore, the SIP model of CPA seems to be appropriate for guiding intervention of CPA. However, to be properly understood, the descriptions of abusive parents' characteristics should be considered as only one part of a much broader perspective.

Factors Influencing Child Physical Abuse

There are multifaceted factors linked to CPA. Given that no single factor has been adequately contributing to CPA. Based on the literature and empirical studies, factors influencing CPA can be organized following three domains; parents, children, and environment. Details of each factor are described as below:

Parental Factors

Parents are the most common perpetrators in cases of CPA (U.S. Department of Health and Human Services, 2007; United Nations Secretary-General's Study on Violence against Children, 2006) since they are primarily raising their children. Parental factors can be explained according to three main factors; biological, cognitive and affective, and behavioral.

Biological factors. Two types of biological risk factors, psychophysiological and neuropsychological, are mentioned in the literature (Milner & Dopke, 1997). Psychophysiological factors refer to hyperactivity traits of parents. Child abusers have been reported to display more physiological reactivity to child-related stimuli

such as heightening response to infant crying (Wolfe, Fairbank, Kelly, & Bradlyn, 1983). This may account for some of the difficulty in tolerating stress, and is supported by studies using child stimuli. The findings from several studies indicate that abusive parents, when compared with non-abusive parents, show greater changes in skin conductance during presentations of stressful scenes (Disbrow, Doerr, & Caulfield, 1977), yet they did not show a difference in heart rate between stressful and non-stressful conditions (Wolfe et al., 1983). Available data suggests that when compared with low-risk mothers, high-risk mothers are more physically reactive to stressful non-child-related stimuli (Casanova, Domanic, McCanne, & Milner, 1992). Although evidence tends to support the view that individuals at high-risk for committing acts of physical abusive are more reactive to a variety of stimuli, the role of increased physiological reactivity as a contributor to CPA is unknown.

Neuropsychological factors involve neuropsychological and cognitive deficits such as episodic dysfunction and minimal brain dysfunction (Milner & Dopke, 1997). Nayak and Milner (1998) found that high-risk compared with low-risk mothers showed differences in conceptual ability, cognitive flexibility, and problem-solving ability. These limitations are thought to reduce mother's ability to understand children's behaviors and generate appropriate child management strategies (Milner, 1993). When mothers have limited cognition skills in response to child behavior, the likelihood of CPA may increase.

Overall, biological factors of parents have been considered as mediators of CPA and involve psychophysiological and neuropsychological factors. However, such factors are not substantial risk factors for CPA. Factors influencing abusive behaviors of parents are also related to cognitive and affective factors.

Cognitive and affective factors. Many contemporary models of aggression posit a role for cognitive and affective factors as mediators of CPA (Azar & Weinzierl, 2005; Haskett et al., 2003). Among parental cognitive and affective factors, parental attitudes toward child rearing are thought to be important contributors to CPA or potential for CPA. Many aspects of parental attitudes that mediate abusive behaviors of parents are mentioned in child abuse literature and empirical studies (Cowen, 2001; Jackson et al., 1999). The roles of each aspect of parental attitudes are addressed in the following sections:

1. Negative perceptions of child development and behavior. Negative perceptions about children have been strongly linked with abusive mothers (Caselles & Milner, 2000). Parents who physically abuse their children are reported to be less aware of their children's behavior, which leads to an incorrect understanding of their children and is subsequently accompanied by inappropriate parental responses (Milner, 1993). Parents' lack of awareness is thought to be manifested in several ways such as viewing children's behavior as more problematic and having less ability to perceive children's emotional states. This conclusion is supported by the findings of Ateah and Durrant's (2005) study which found that abusive parents have more negative views of their children and report more problematic behavior in their children.

2. Unrealistic expectations of child behaviors. Another factor that has been identified as a possible contributor to CPA is inappropriate parental expectations related to child development and behavior (Azar, Robinson, Hekimian, & Twentyman, 1984). That is, physically abusive parents tend to express high expectations of child behaviors that are substantially beyond the child's developmental ability as compared to non-abusive mothers. When children do not reach their mother' expectations, children

will be blamed and harm will be inflicted. When these responses are overdone, CPA may occur.

3. Lack of empathy. Research indicates that a lack of empathy is a significant variable in risk assessment for potentially abusive parents (Rosenstein, 1995). Parents who exhibit an absence of empathy are thought to be limited in their ability to appreciate the perspective of the child, to understand what might have prompted the child's actions, to understand that children often act impulsively, and to consider cause and effect relationships before engaging in behavior that may lead to abusive responses (Wiehe, 2003). Abusive or high-risk parents are more likely to express lower feelings of warmth, compassion, concern for others (Perez-Albeniz & De Paul, 2003), and less empathy for children (Francis & Wolfe, 2008). On the other hand, they also report increased in distress and hostility toward crying infants (Milner, Halsey, & Fultz, 1995).

4. Use and value of physical punishment. Another cognitive and affective variable that has been linked to CPA is parental use of physical punishment. Research has shown that parents with positive attitudes toward physical punishment or acceptance of it as a normative practice are more likely to use physical punishment in disciplining a child (Ateah & Durrant, 2005; Combs-Orme & Cain, 2008; Qasem, Mustafa, Kazem, & Shah, 1998; Tang, 2006; Vittrup et al., 2006). When parents approved of physical punishment as an effective means in disciplining children, negative outcomes, such as physical harm or injury to the child, were commonly found (Gershoff, 2002).

5. Parental stress. Parents with high levels of stress may be at increased risk for a variety of types of child maltreatment including CPA (Cruch & Behl, 2001;

Whipple & Webster-Stratton, 1991). Specifically, research has clearly indicated that parental stress is a predictive factor of CPA (Rodriguez & Green, 1997). Under high stress conditions, high stress levels of parents may interact with parental perceptions of child behavior to produce more negative responses, including physically abusive behavior (Schellenbach et al., 1991). Parental stress may stem from a number of sources including parent-related factors as well as child behavior. However, stress relating to the parents' sense of competence appears to be a particularly important variable moderating child related stressors and abuse potential (Holden & Banez, 1996).

6. Mental illness. Parents who suffer from some form of mental illness may be at increased risk for parental problems. Research has demonstrated that abusive parents have high levels of frustration, feelings of insecurity, depression, anxiety, hostility (Francis & Wolfe, 2008; Whipple & Webster-Straton, 1991) and other mental health problems (Brown et al., 1998; Chaffin et al., 1996). For example, the depressed mood of a mother may result in decreased effectiveness in handing situations requiring discipline. These limitations may contribute to a higher incidence of aggressive behaviors toward a child.

7. Childhood history of physical abuse. Parents may physically abuse their children if they have received or observed physical abuse during their childhood, or as a result of the effects of other adverse social interactions in their family of origin (Bandura, 1973). Researchers have found that parents who experienced harsh physical punishment as children or witnessed violence in their own family are more likely to physically abuse a child than those who had grown up in nonviolent families (Maker et al., 2005; Rodriguez & Price, 2004).

Overall, negative parental perceptions, unrealistic expectations toward their child behaviors, lack of empathy, use and value of physical punishment, parental stress, mental illness, and childhood history of physical abuse have been found as potential factors of parents contributing CPA. Nevertheless, cognitive and affective factors are not considered to completely explain CPA. Parental factors influencing their abusive behaviors are also associated with behavioral factors.

Behavioral factors. Parent-child relationships, problem-solving skills and substance abuse and alcohol consumption are commonly mentioned in the literature as behavioral factors linked to CPA. The details of each factor are explained below.

1. Problematic parent-child relationships. Parents who have poor or negative verbal and tactile relationships with their children are likely to be abusive parents. When there is too little bonding, both child and parent may not understand the needs of each other. Additionally, abusive parents exhibit increased rates of negative parental behaviors including more command and more punitive behaviors (Dolz, Cerezo, & Milner, 1997). Consequently, parent-child conflict and violence against children are more likely to occur.

2. Poor problem-solving skills. Parents who have poor problem-solving skills are at risk to be abusive since they are unable to generate alternative solutions in child rearing situations and other problems in their life. This results in considerable frustration and may contribute to deviant behaviors including aggression (Azar et al., 1984) and inconsistencies in responding to their children (Cantos, Neale, O'Leary, & Gaines, 1997).

3. Parents with substance abuse and alcohol consumption problems. The relationships between alcohol consumption, drug use, and child abuse have been

studied extensively (Chaffin et al., 1996; Roditti, 2005; Wu et al., 2004). Thai parents with alcohol consumption problems are more likely to be abusers than those without problem drinking behavior (Kovinda, 2007; Krongyuth, 2001; Nitirat, 1997; Ussavaphark et al., 2008). Likewise, studies in other countries have shown that parents with alcohol and drug problems are more likely to use physical violence against their children (Whipple & Webster-Straton, 1991).

Behavioral factors affecting abusive behaviors of parents include problematic parent-child relationships, poor problem solving skills, and addictive behaviors. The nature of each behavioral factor contributes to CPA were described. Nevertheless, factors influencing CPA are not limited to parental factors in aspects of biological, cognitive and affective, and behavioral. Factors of children are also mentioned in the literature.

Children Factors

Forms of child abuse to which a child will be exposed vary according to age, gender, number of children in the household, and patterns of child growth and development. Data suggests that infants and young children are most likely to be physically victimized by parents and other family members because of their dependence on adult caregivers and limited independent social interactions outside the home (United Nations Secretary-General's Study on Violence against Children, 2006). Wolfner and Gelles (1993) found that children under the age of 6 were more likely to be physically abused by family members than older children. Gender also plays a key role, as boys and girls are at different risks for different kinds of abuse. In particular,

boys are more likely to suffer from CPA than girls (Tang, 2006). Furthermore, the number of children in a household is also associated with CPA. Families with five of more children are more likely to use physical punishment (Wolfner & Gelles, 1993).

The patterns of child growth and development have also been found to make some children vulnerable to CPA. Low birth weight infants (Nomura & Chemtob, 2007), children with disabilities (Runyan et al., 2002) or those perceived by their parents as being different are more vulnerable to be physically abused in the home. These factors often contribute to a lack of bonding between mother and child. Lack of parent-child bonding may contribute to a scarcity of parental empathy which increases physical abuse potential (Wiehe, 1997). Not only physical problems but also cognitive, behavioral, and developmental problems increase the risk of CPA. Examples include low intelligence (Brown et al., 1998) and low grade point averages (Auewattana, 1999; Chaiming, 2005). Children with emotional or behavioral problems, such as children with difficult temperaments (Arharmsil & Deoisres, 2001), withdrawal or aggressive tendencies, and antisocial behavior are at risk of CPA. Researchers speculate that these behavioral problems may stimulate uncontrollable emotions in the parent, and thus, physically aggressive behaviors are more likely to occur. Additionally, children with low self-esteem were almost twice (95% CI=1.50-2.41) as likely to be physical abused than children with high self-esteem (Tanwattanakul et al., 2003). This reveals that there are several factors linked to CPA. However, the relationship between parents and child cannot alone determine the likelihood of physical abuse occurring, and some conflicting reports exist. For example, Chaiming's study (2005) showed that adoptive children were more vulnerable to be physically abused by their

parents than were biological offspring, while Nitirat (1997) found that biological children are more often abused as compared to those who are relatives or adopted.

In conclusion, children's factors have been implicated as a major factors triggering CPA. However, physical abuse may be influenced by environmental factors.

Environmental Factors

While violence in the home is found in all social and economic spheres, studies from a range of different settings show that low levels of parental education, lack of income, limited social support, and household overcrowding increase the risk of physical violence against children (Sariola & Uutela, 1992). Furthermore, social support may moderate the effects of stress and life events. As in the case of crisis or emergency, parents with low support within the marital relationship (Whipple & Webster-Stratton, 1991) and who lack resources within the family (Pavilaineu & Astedt-Kurki, 2003) have demonstrated a higher likelihood of committing physical abuse. In addition, poor relationships within families are more likely to be linked to abusive behavior than good relationships (Auewattana, 1999; Krongyuth, 2001; Nitirat, 1997). One possible explanation for this is that families with poor relationships rarely find support and cooperation for solving problems within the family. This contributes to family stress and increases the risks of abuse.

As another significant variable, poverty is commonly recognized to correlate with abuse (Brown et al., 1998; Chaffin et al., 1996; Roditti, 2005), although the relationship is not well understood. Many other factors are highly confounded with

poverty, including employment, education, and marital status (Whipple & Webster-Stratton, 1991). In addition to these factors, gender and age of the parents are related to CPA. More specifically, physical punishment of children by males tends to be harsher, and indeed, more physical injuries result from males than females (Wolfe, 1999). Additionally, researchers discovered that younger mothers are more likely to be perpetrators of CPA (Connelly & Straus, 1992). Single mothers are also more prone to abusive behaviors, especially when they have several children, because of the absence of a partner to contribute income, share parenting responsibilities, and temper difficulties with offspring (Berger, 2005).

In summary, a variety of factors have been considered as risk for CPA including parental, children, and environmental factors. The explanations of these factors in their possible roles in the occurrence of CPA have been described. However, evidence suggests that parental factors in term of parental attitudes toward child rearing are widely mentioned in the empirical studies as the contributing factors for CPA. Hence, this study focused on parental attitudes toward child rearing.

Child Physical Abuse Risk Assessment

Risk assessment is necessary to identify suspected child physical abusers and to evaluate the outcomes of CPA prevention and intervention programs. Risk assessment for CPA considers both parental and child risk. With regard to child risk, some demographic factors of children may help identify those who are at increased risk of CPA. Among these factors are children born prematurely, children with disabilities (Runyan et al., 2002), young children (Wofner & Gelles, 1993) and children with

difficult temperaments (Runyan et al., 2002). Although factors relating to the child may increase the occurrence of physical abuse, parental factors are considered to indicate a greater potential for CPA (Milner & Dopke, 1997). Therefore, the primary focus of this study is an intervention targeting parental risk for CPA.

Some studies determined a parent's degree of risk on the basis of income, levels of parental education, parental age, parental unemployment and the absence of social support (e.g. Peterson, Tremblay, Ewigman, & Saldana, 2003). Not only are the youngest, poorest, and economically frustrated parents the most likely to commit acts of physical abuse toward their children, parental cognitions or affections are also thought to be a significant contributor to CPA. In some studies, parents were identified as "at risk" for child abuse on the basis of self-report responses on scales measuring parental anger, parental attitude, and child abuse potential (e.g. Bugental et al., 2002). Among scales commonly used for child abuse screening, parental attitudes toward child rearing particularly favorable attitudes toward physical discipline and devalue children are thought to be a significant contributor to CPA (Jackson et al., 1999). The Adult-Adolescent Parenting Inventory [AAPI] or the Adult-Adolescent Parenting Inventory -2 [AAPI-2] are among the commonly used tools for assessing parenting attitudes (Briter & Reppucci, 1997; Cowen, 2001; Lutenbacher & Lynne, 1998; Palusci, Crum, Bliss, & Bavolek, 2008; Tiller, 1991). The AAPI-2 has 40 items and measures parental attitudes in five aspects: expectations of children, parental empathy toward children's needs, use and value of corporal punishment, parent-child family roles, and children's power and independence (Bavolek & Keene, 1999).

Another widely CPA screening device is the Child Abuse Potential [CAP] Inventory developed by Milner (1986). A number of studies on child physical abuse

or child abuse used the CAP inventory as the screening tool for the early identification of parents at risk of CPA or with child abuse potential (e.g. Fraser et al., 2000; Kolko, 1996). The CAP inventory is a self-report questionnaire and consists of 160 items, 77 of which constitute the abuse potential scale containing six subscales: distress, rigidity, unhappiness, problems with child and self, problems with family, and problems from others (Milner, 1986).

Measurements of risk for CPA are not only limited to parental and child assessments but also involve environmental evaluations. The frequently used tool for assessing environment is the Home Observation for Measurement of the Environment [HOME] Inventory developed by Caldwell and Bradley (1984) (e.g. Fraser et al., 2000; Huebner, 2002). The HOME inventory is a combination of observation and interview items designed to measure the quality of home environment.

Overall, the risk or benefit of using screening scales for CPA assessments is still debated. Furthermore, assessment research is plagued by numerous problems such as definitional inconsistencies, a lack of tested etiological models, and a lack of representative perpetrator groups that make the development of CPA assessment devices an unusually difficult endeavor (Milner, 1991). These difficulties reveal the limitations to the application of assessment instruments. However, this study employed the CAP inventory as the screening tool for participant enrollment. That is, parents who have abuse score of 166 or higher are identified as at risk or high potential for CPA.

Prevention of Child Physical Abuse

Presently, progressive efforts dealing with violence against children use a preventive approach (Bethea, 1999; United Nations Secretary-General's Study on Violence against children, 2006). Prevention of child abuse can take place at many different levels including individual, interpersonal, community, and society (WHO & ISPCAN, 2006). Initially, a distinction was made between primary, secondary, and tertiary prevention (Dahlberg & Krug, 2002). Primary prevention programs aim to prevent new cases of CPA by taking a universalistic approach toward entire populations. Secondary prevention programs identify and deliver services to a targeted subset of the population exhibiting key risk factors associated with the occurrence of CPA in order to reduce its prevalence rate. Tertiary prevention programs target groups in which CPA already occurs, in order to prevent long term consequences of abuse. However, even though the implementations of all three prevention approaches are based on a well-formulated plan to effectively respond to CPA problems, tertiary prevention is not able to prevent the traumatic consequences experienced by the victims. To date, the most efficient CPA prevention efforts include educating and training parents to prevent CPA during the earliest stages in a child's life and in an adult's parenting role (Guterman, 1997). Furthermore, prevention programs for high-risk parents may improve cost effectiveness by screening only those with the greatest needs (Wekerle & Wolfe, 1993).

In developed countries, interventions for CPA or child abuse prevention operate in a number of ways such as the Nurturing Program (Cowen, 2001), the Multilevel Selected Prevention Program (Peterson et al., 2003), the Project Safe Care (Gershater-

Molko, Lutzker, & Wesch, 2002), and the Systematic Training for Effective Parenting Program (Fennell & Fishel, 1998). An integrative review was conducted by Sawasdipanich (2007) for the period of January 1996 to December 2006 to analyze types of parent interventions which reduce parental risks or potential for CPA and/or improve parenting skills. This review was conducted using the PubMed, CINAHL, and PsyInfo databases. Inclusion criteria for this review included (1) intervention studies involving parent intervention through randomized control or clinical trials, experimental designs, or quasi-experimental designs, (2) published in English language journals, and (3) published between January 1996 and December 2006. Exclusion criteria for this review included: (1) intervention studies involving child and/or parent-child interventions, (2) unpublished studies and dissertations, and (3) studies for which full texts were unavailable.

Overall, 15 intervention studies met the inclusion criteria on parent intervention for CPA prevention. Among these are three different approaches according to the setting where the program was implemented; hospital-based intervention (Chaffin et al., 2004; Dias et al., 2005; Fennell & Fishel, 1998; Fetsh et al., 1999; Huebner, 2002), home-based intervention (Fraser et al., 2000; Gershater-Molko et al., 2002; Gershater-Molko, Lutzker, & Wesch, 2003; Gray, Spurway, & McClatchey, 2001; Old et al., 1997), and hospital plus home-based intervention (Bugental et al., 2002; Cowen, 2001; Eckenrode et al., 2000; Kolko, 1996; Perterson et al., 2003). Seven studies (46.6%) employed a randomized control trial design, and seven studies used a quasi-experimental design. Only one intervention employed an experimental design. With respect to theoretical underpinnings, one-third or 5 of the 15 studies used social learning theory or social cognitive theory for guiding intervention programs. The

explicit goal of most programs is to enhance parenting competency rather than to reduce the incidence of CPA. It reveals that theoretical framework used in previous interventions did not illuminate the cause of CPA. Moreover, most interventions target parents or primary caregivers of young to school-aged children.

Indicators or outcome measures of interventions can be grouped into proxy and direct measures. A small number of studies, 4 of the 15 studies, directly measure the incidence of CPA (Dias et al., 2005; Eckenrode et al., 2000; Gershater-Molko et al., 2002; Old et al., 1997). Most interventions have generally employed proxy measures and do not specifically focus on the reduction of CPA. Proxy measures include parental cognition, parental affection, parental behavior, and parental potential for CPA. Cognitive indicators focus on parental knowledge of child development (Fetsh et al., 1999; Perterson et al., 2003), parental attitudes toward child rearing (Chaffin et al., 2004; Cowen, 2001; Fennell & Fishel, 1998; Fetsh et al., 1999; Kolko, 1996; Perterson et al., 2003), and parental self-efficacy (Perterson et al., 2003) while affective indicators include parental stress (Chaffin et al., 2004; Fraser et al., 2000; Huebner, 2002), parental anxiety (Bugental et al., 2002), parental depression (Bugental et al., 2002). Behavioral indicators include parent-child interactions (Chaffin et al., 2004; Fetsh et al., 1999; Huebner, 2002) and parental anger management (Fetsh et al., 1999). Four studies used the parental potential for CPA (Bugental et al.. 2002; Fennell & Fishel, 1998; Fraser et al., 2000; Kolko, 1996). It demonstrates that most outcome measures of previous interventions are proxy measures rather than direct measure as the incidence of CPA.

Group education and/or individualized home visits are commonly used as preventive strategies in parent intervention for CPA prevention. Additionally, group

discussion, role play, modeling, exercise, and homework assignments are often employed as educational techniques in intervention programs. Overall, every study used more than one strategies in program implementation.

Regarding the duration of intervention, 6 of the 15 studies (40%) were conducted on a short term basis (< 6 months), 4 studies (26.6%) were conducted in an intermediate duration (6 - 12 months), and 5 studies (33.3%) were conducted over a long term period (> 12 months). Furthermore, 4 of the 15 studies (33.3%) had long term follow-up periods (> 1 year) (Fraser et al., 2000; Gershater-Molko et al., 2002; Olds et al., 1997; Perterson et al., 2003) and only one study had both short and long term follow-ups (Kolko, 1996). However, findings showed that studies using home visit demonstrated little evidence of improving parenting competency, reducing parenting stress (Fraser et al., 2000), or preventing child abuse (Olds et al., 1997). Meanwhile, hospital-based program or hospital plus home-based program showed more effectiveness in improving parental cognitive, affective, or skills as well as reducing risk or potential for CPA (Fennell & Fishel, 1998; Fetsh et al., 1999; Perterson et al., 2003). Possible explanations for the ineffectiveness of home visit programs are their complexities, inconsistent protocols, and poor quality of home visitations. Furthermore, the long duration of implementation and reassessment periods increase the likelihood of attrition and may contribute to program non-effectiveness (Olds et al., 1997).

In Thailand, the problem of CPA urgently needs attention from all sectors and professions. With respect to the legal responsible sector, the Thai Child Rights Protection Act (2003) explicitly defines child abuse and provides regulations for multidisciplinary teams in assisting, subsidizing, caring for, and transferring abused children in order to provide proper case management. Not only does the legal system

have a heightened awareness of child rights protection, but broader alliances and partnerships like a national policy for children have also been developed. For example, the Tenth National Economic and Social Development Plan 2007-2011 has given priority to child protection and child well-being promotion including prevention from violence, abuse, and exploitation (United Nations Children's Fund, 2006).

Furthermore, non-governmental organizations such as the Life Skills Development Foundation (2006) have made important contributions in promoting the rights of children. These examples show how Thai society has made considerable responses to the child abuse problem. Likewise, health care providers are expected to be involved in the prevention of CPA since they are responsible for providing services to its victims. In particular, nurses are among those health care professionals having the most contact with children and their families in hospitals and communities.

Evidence suggests that intervention for parents with young children would be more profitable in preventing CPA and in reducing its negative outcomes in both the short and long run (United Nations Secretary-General's Study on Violence against Children, 2006). Nevertheless, there is a scarcity of intervention study targeting parent for CPA prevention in Thai society. Only Auemaneekul's study (2008) involved parents and revealed their concerns with child abuse problem and agreement for launching the child protection model in Northern Thai families. Therefore, CPA prevention interventions designed to target Thai parents who have young children can serve a valuable role Thai response to this problem.

As an initial effort to implement CPA prevention in Thailand, the purposes of this study were to improve parental attitudes toward child rearing and to decrease parental potential for CPA. A cognitive adjustment program was designed for Thai

parents of 1-6 year old children and implemented over a 3-month period. Throughout program implementation, the educational techniques consisted of discussion, value sharing, scenarios analyses, and homework assignments; and media included scenarios and videotaped presentations. Parental attitudes toward child rearing and potential for CPA were used as outcome evaluation of the intervention program.

Theoretical Framework

According to social cognitive theory, negative cognitions are thought to encourage aggressive habits over time because people's performance of a behavior is largely determined by their beliefs (Bandura, 1986). Changing abusive behaviors of parents should primarily emphasize their cognitions as a way to eventually elicit positive behaviors. Therefore, it is not surprising that the cognitive-behavioral approach, which focuses on reconstructing parental cognitions, has been widely proposed to guide interventions for treating and/or preventing CPA (Azar, 1997; Azar, Weinzierl, 2005; Bugental et al., 2002; Kolko, 1996). Among cognitive-behavioral approaches, the social information processing [SIP] model of child physical abuse [CPA] has been specifically developed to explain CPA (Milner, 2000). Hence, the SIP model of CPA was used as the theoretical framework of this study.

Cognitive Adjustment Program Based on the Social Information Processing Model of Child Physical Abuse

Cognitive-behavioral approach was employed to improve parents' cognitions, affections, and skills through cognitive adjustment program. The strategy for adjusting parental cognitions based on the social information processing [SIP] model of child physical abuse [CPA] (Milner, 2000). According to the SIP model of CPA, changing inaccurate preexisting schemata in term of parental attitudes can contribute to adjust inaccurate cognitive processes and inappropriate responses toward children's behavior of parents and result in potential for CPA. In this study, parents are likely to physically abuse their child if they hold bias parental attitudes toward child rearing and child abuse. This model assumes that biased and inaccurate parental attitudes toward child rearing impact parental perceptions, evaluations, and interpretations toward child rearing and child abuse. This, in turn, can contribute to inappropriate parental responses including potential for CPA. Evidence suggests that parenting behaviors, including those leading to CPA, can be prevented by adjusting parental cognitive processes and aimed at improving parental attitudes toward child rearing, and reducing potential for CPA. When parents improve their attitudes toward child rearing, they will hold appropriate cognitive process, positive perceptions, appropriate evaluations and interpretations toward child rearing and child abuse. Finally, parental ability to monitor and modify their parenting behaviors will be enhanced and thus abusive behaviors including potential for CPA will be minimized.

With regard to program implementation, the cognitive adjustment program promotes cognitive processes of parents which include increased parental perception

toward child rearing and child abuse, increased positive parental interpretation and evaluation toward child rearing and child abuse, increased parental integration and response selection toward child rearing, and increased parental ability to monitor and modify their behaviors. All those cognitive stages and a cognitive-behavioral stage are regulated by both automatic and controlled processing. As outcome of this process, parental potential for CPA will be reduced. The educational techniques consisting of discussion, value sharing, scenarios analyses, and homework assignments; and media including scenarios and videotaped presentations were used throughout program implementation. Parental attitudes toward child rearing and potential for CPA were used as outcomes of the cognitive adjustment program.

The conceptual framework is illustrated in figure 1. The framework introduces three components: the strategies used in the program, changes of parental cognitive process, and outcome of the program.

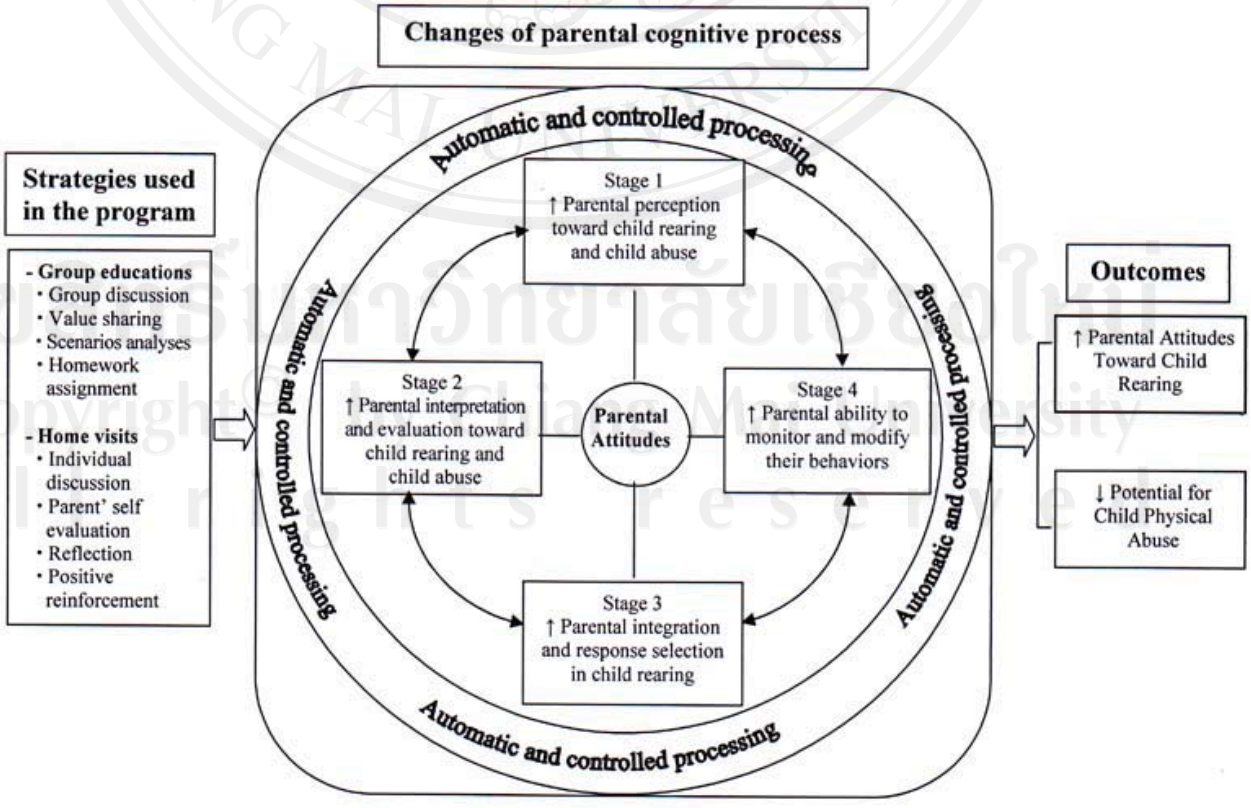

Figure 1. Conceptual framework of this study