

Parents' perceptions and practices toward child drowning prevention: A qualitative approach.

Amornrat Ngamsuoy* and Wanpen Songkham

Faculty of Nursing, Chiang Mai University, Thailand

Abstract

Background: Child drowning is the critical public health problem across the world. Although Thailand has learned from experiences of developed nations, Thai parents may encounter huge challenge on reducing risks of child accidental drowning. We therefore aimed to understand Thai parents' perceptions and practices of their child drowning prevention in and around their home. **Methods:** A qualitative study was conducted amongst seven parental Mother/Father couples from a municipality of one Thai province. All participants consented to take part in the study through 50 minute in-depth individual interviews, providing a wide range of data. Thematic analysis was undertaken and brings about three main themes relating to their perceptions and practices. **Results:** The perceptions and practices of 14 participants are expressed in three themes and three sub themes. The results show that parents' awareness and practices towards child drowning prevention were inadequate. Parents often taught and supervised the child to keep safety from drowning. However, the participants also revealed the requirement of education support need from health professionals. **Conclusion:** Participants illuminated their understanding and daily behavior regarding child drowning prevention based on their perceptions and experiences. The findings can be valuable contribution to inform paediatric nursing curriculum, child healthcare practice, child health policy in Thailand and beyond.

Keywords: Child drowning prevention, Parents' perception, Parents' practice, Qualitative approach.

Accepted on May 13, 2020

Introduction

Drowning is a major public health problem and a leading cause of death of a child worldwide [1,2] and in Thailand. [3-9] Child Safety Promotion and Injury Prevention Research Center From 2000 to 2018, Thai children under the age of 15 years died from drowning, up to 22,700 per year. In children aged 1-4 years, the rate of drowning deaths is up to more than 10.0 per cent of 100,000 children in the same age group. Drowning in young children often occurs at home and around the neighborhood as a child living with parents or caregivers. According to the development of children at this age are curiously and fond of surrounding exploration. However, they cannot care themselves and carelessly [8]. They also have inadequate of vigilance and awareness toward the hazard. Therefore, if the children are careless, an unintentional accident would simply happen to the child [6,10-12].

In relation to the child drowning, the Bureau of Non Communicable Disease, Thailand Ministry of Public Health [7] points out that "Male children are higher drowned mortality rate of approximately twice than female and leading to death from drowning. The highest rates of drowning are from natural water sources, 9.4 percent, followed by the swimming pool, 6.9 percent, tub or bucket with 4.6 percent. In the Northeast of Thailand has highest the death rates, followed by the Central, South and North regions. The most critical period is occurred on weekends (Saturday and Sunday) and holidays between 12:00 A.M. and 5:59 P.M."

Thailand Ministry of Public Health [6] has implemented a program to prevent drowning among children since 2006, starting with the collection of statistical data from various data bases and research, both in Thailand and abroad. The review and data analysis evidently show that drowning is the first leading cause of child death in Thailand. Especially, during periods of flooding, Songkran and Loy Kra-thong festivals. Raising awareness of the issue to the public and operations in both the public and private sectors have been efficiently carried out. The critical situation reiterated the fact that drowning is a preventable accident. In order to effectively alleviate this crisis incidence, the Ministry of Public Health [7] has established a specific committee to provide the policy, goals, and guidelines for child drowning prevention. This project aims to reduce the mortality rate of drowning among children under 15-year to less than 6.5% (770 cases) per 100,000 populations in 2015. However, the child drowning mortality rate was still high with average of 21.9% [7]. Respectively, the recent childhood drowning prevention program has been commenced by the Bureau of Non Communicable Disease, Thailand Ministry of Public Health in 2018 through the project entitled "Merit Maker" [7]. However, the harmful situation of childhood accidental drowning has still been existed continuously. According to current evidence of the Bureau of Non Communicable Disease, Thailand Ministry of Public Health [8], there was an increase mortality rate of 11.4% in children aged 5-9 years in 2017 and a number of 140 drowned injuries amongst age of 0-2 year.

Although Chiang Mai is classified as a moderate-risk area

[6], but the prevention of drowning in young children is a substantial matter that needs to be implemented concretely and effectively, particularly in high risk area like Muang-kaew sub-district region, which occurred death children from drowning by 2 years [13]. Moreover, the most of campaigns on accidental drowning prevention would be arranged according to the public water reservoirs in communities. However, the recognition studies reveal effectiveness of practice of parents toward child supervision at home, therefore drowning preventing implementation is focused on this project. Perceptions and practices of parents to prevent drowning in young children both in and around the home are essential knowledge for health care providers particularly. Pediatric Nurses and public health providers need to concern the perceptions and practices of parents to prevent drowning in young children from through recognizing the importance of education and research. In order to catch up this important information to the application in the development of health services to enhance the health and safety in young children, which can serve to the main idea of Thailand strong country? The results of this research probably are beneficial for providing the policy-driven project, and practically bring about the child safety goal of WHO and national health policies. The principle of parenthood [14] was the basis of this study, both father and mother give a birth their child and take responsibility for the child's health and quality of life with the love and warmth, stability and security. Furthermore, according to the basic principles of children's rights, the parents are therefore the most important person to recognize and take actions the effective accidental drowning prevention in and around the home for young children and maintain their health status across Thailand. The perceptions and practices of Thai parents regarding child drowning prevention has not been evidently declared. The purpose of the study was to address the knowledge gap through developing an in-depth, qualitative understanding of child home accidental drowning prevention behavior in a group of Thai parents.

Materials and Methods

Study area, sampling procedures and data collection

This exploration was a descriptive qualitative research employing semi-structured interviews. Participants were eligible for inclusion if they were parents of children aged 1-4 year who have lived at home within 100 meter away from the public water reservoirs at Muang-kaew Municipality area. Purposive sampling was carried out for reach of a maximum variation sample [15]. An effort was made to recruit parental couples across risk area of childhood accidental drowning.

Prior to the in-depth interviews, demographic data of participants was collected employing short questionnaires. Questionnaires devised by the researcher were context relevant for participants, as regard of simple Likert measurement scales and open-closed questions. They collected relevant personal and social data, such as childcare activities, home environment, access to water reservoirs, occupation, and education. In-depth semi-structured interviews with interview guide were individually conducted at participants' home to gather saturated data through a suitable exploratory technique [15]. In-depth interviews were

then undertaken using a series of open questions focused on the perceptions and practices of parents regarding drowning prevention in young children. The researchers both have experiences of child health promotion and injury prevention, designed the interview guide. The main focus of the interview questions included perceptions and practices regarding health promotion and drowning prevention in young children. Former data collection process, the lead researcher conducted two practice interviews with 2 parents of young children living in Mae Rim Municipality to test the interview questions and to ensure interview guide reliability and credibility.

The potential participants were invited to be taken part in the study at their home based on geographic information of Muang-kaew Municipality. Both father and mother were individually queried for their permission to be contacted by the lead researcher and to join an interview after reading information sheet and signing informed consent. Fourteen interviews were independently carried out by the lead researcher as interviewer over four months between October 2015 and February 2016 in quiet and private settings within parents' home areas which is convenient to participants. The interview process was undertaken 50 minutes long. Fourteen interviews were digitally audio-recorded and note taking of the lead researcher after the participants' consent. The interviews terminated when data saturation happened.

Data analysis

The interviews were transcribed verbatim, and translated from Thai to English by a researcher, then translated back into Thai by another researcher to check the content accuracy of translation. The data were thematically analyzed [16], which was inductive approach to identify themes to emerge from the raw data. The first step, both researchers independently read the interview transcripts several times to gain overall impression. Secondly, we generated initial codes referring to the most basic elements of the raw data that can be appraised in a meaningful procedure. We paid attention to ensure that repeated patterns within the data were noted for the later phases. Another step, we identified a set of subthemes and organized these under main themes. We then reviewed the themes, identified the essence of each theme, and entitled each accordingly. Finally, we made data analysis and selected information examples from the transcripts to underpin each theme.

Ethical considerations

Ethical approval was obtained from the Faculty of Nursing, Chiang Mai University. Prior to the research, participants were informed of the study purposes and processes, verified anonymity and confidentially by verbal communication and information sheet, respectively informed consent written.

Rigor

Regarding trustworthiness, inter-triangulation method was applied by the qualitative researcher. The lead researcher as interviewer asked participants questions and observed home environment during interviews to confirm validation of the interview situation. Member check was used during and after the interviews to clarify participants' perceptions and validate

the interpretations of their intended meanings [17]. To enhance credibility, two experts checked the two practice interviews. After the interviews, the participants' check was performed to verify the credibility of the data. Two bilingual researchers independently analyzed the data employing the similar thematic analysis strategy. The emergent themes were respectively collated and was correctly checked by qualitative research and pediatric nursing experts. The transferability was also established by both researchers. The discussion started after the consensus themes and subthemes was achieved and assured by the participants' check [18].

Results

The 14 participants ranged in age from 26 to 41 years and were all living with their young children in home (Table 1) within 100 meter away from public water reservoirs at Muang-kaew Municipality area, Mae Rim District, Chiang Mai Province (Table 2). The perceptions and practices of participants are expressed in three themes as follows: (1) Uncertainty, (2) Simply practice, and (3) Unaccompanied method.

Theme 1: Uncertainty

The findings revealed three main elements toward inadequacy of childhood accidental drowning prevention are as follows.

Subtheme 1: Insufficient cognition

Most participants revealed their knowledge regarding child drowning risk and prevention is at fair and good level. They also pointed out inadequacy of parents' supervision is the main cause of childhood accidental drowning. The following extracted quotes indicated that real participation is required.

“Accidental drowning is that it is parental carelessness, negligence seems to be aware of this point. When the child swims or gets close to water reservoir, the lack of close guarding provided by caregivers. The key problem is an insufficiency of parents’ supervision.” (F2)

However, many participants stated they have perceived the causes of child accidental drowning from intentional actions and naughty playing behaviors of the child, as the below quotes:

“The accident was caused by intentional or unintentional behavior. The child may fall without supervision. The toys may be dropped into water reservoir while walking to home and the child gets close and fall down into water.” (M1)

Subtheme 2: Insufficient awareness

Although every home of participants located quite near public water reservoirs, such as river and canal without surrounding fence; however, most participants reported their home are still safe for child drowning at medium (60%-80%) and high (80%-100%) level. They confirmed their child was taught and the child is obedient:

“I think I have adequate prevention, I have limited her playing boundary only in the home. She was obedient and would not get close to water reservoir.” (M7)

Most parents indicated that childhood drowning prevention is important and every parent should concern; however, they

Table 1. Demographic characteristics of the parents in the study.

Element	F1	M1	F2	M2	F3	M3	F4	M4	F5	M5	F6	M6	F7	M7
Age (years)	36	28	35	28	30	29	39	39	34	34	41	33	26	29
Education	Bachelor Degree	Bachelor Degree	Diploma	Bachelor Degree	Diploma	Bachelor Degree	Primary School	High School	Diploma	Bachelor Degree	Primary School	High School	High School	Bachelor Degree
Occupation	Employee	Self-employed	Employee	Government officer	Employee	Self-employed	Farmer	Farmer	Employee	Employee	Employee	Employee	Self-employed	Self-employed
Self-reported perception of child home injury prevention	Excellent	Fair	Good	Fair	Excellent	Excellent	Good	Good	Fair	Fair	Fair	Fair	Excellent	Fair
Family members in household	5 (1 child, 1 teenager, 3 adults)	3 teenagers, 1 adult	6 (2 children, 4 adults)	4 adults	5 (1 child, 4 adults)	4 adults	8 (2 children, 1 teenager, 5 adults)	5 teenagers, 1 adult	6 (2 children, 4 adults)	4 adults	7 (2 children, 4 adults)	2 teenagers, 4 adults	3 (1 child, 2 adults) Grandmother (7 am-10 pm)	2 adults
Number of children aged 1-4	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Gender & ages of children	Girl: 1 year 10 months	Boy: 3 years 5 months Girl: 5 months	Boy: 3 years 5 months Girl: 5 months	Boy: 3 years 4 months	Boy: 3 years 4 months	Boy: 3 years 4 months	Boy 1: 4 years Boy 2: 6 months	Boy 1: 4 years Boy 2: 6 months	Girl 1: 7 years 1 month Girl 2: 1 year 7 month	1 year 7 month	Boy1: 10 years Boy2: 4 years 4 months	10 years 4 months	Girl: 2 years 1 month	Girl: 2 years 1 month
Previous history of home injury (each child)	Girl: 5 slip/tip/fall	Boy: 20 slip/tip/fall, 3 dog bites	Boy: 20 slip/tip/fall, 3 dog bites	Boy: 1 slip/tip/fall	Boy: 1 slip/tip/fall	Boy: 1 slip/tip/fall	Boy: 1 – 20 slip/tip/fall	Boy: 1 – 20 slip/tip/fall	Girl: 1 – 20 slip/tip/fall Girl: 2 – 20 slip/tip/fall	20 slip/tip/fall	20 slip/tip/fall	20 slip/tip/fall	20 slip/tip/fall	20 slip/tip/fall

Table 2. Home details of the parents in the study.

Home Safety Risks/ protective factors	Home 1	Home 2	Home 3	Home 4	Home 5	Home 6	Home 7
Rest room	2	3	2	3	2	2	2
Toilet room/type	3/Flush toilet bowl	3/Flush toilet bowl	4	3	2	2	2
Kitchen room	1	1	1	2	2	2	1
Fish pond	0	1	1	0	1	0	1
Swimming Pool	0	0	0	0	0	0	0
Fence/gate	1	1	1	1	1	0	1
Pool/pond fence	0	0	0	0	0	0	0
Toilet door	3	3	4	3	2	2	2
Water tank with lid	1	1	0	1	0	1	1
Public water pool	0	0	0	0	0	0	0
Public canal	1	1	1	1	1	1	1
River	0	0	1	0	0	0	0
Life ring/Life jacket	0	1	1	0	0	0	0
Location of home	<ul style="list-style-type: none"> On alley of public village Near the canal 7-8 m 	<ul style="list-style-type: none"> On the road of public village Away from the canal 100 m 	<ul style="list-style-type: none"> On alley of public village Near the canal 100 m Near the river 600 m 	<ul style="list-style-type: none"> On alley of public village House's fence close to the canal 	<ul style="list-style-type: none"> On alley of public village House's fence close to the canal 	<ul style="list-style-type: none"> On alley of public village near the canal 100 m 	<ul style="list-style-type: none"> On alley of public village near the canal 50 m
Child care activities	<ul style="list-style-type: none"> Monitoring Teaching/ suggestion Being role model 	<ul style="list-style-type: none"> Bathing Feeding Teaching homework 	<ul style="list-style-type: none"> Bathing Feeding 	<ul style="list-style-type: none"> Bathing Feeding Teaching play safely/ accident prevention 	<ul style="list-style-type: none"> Bathing Dressed up Feeding Teaching homework 	<ul style="list-style-type: none"> Bathing Dressed up Feeding Playing with life skills Teaching homework/ Send to school 	<ul style="list-style-type: none"> Bathing Dressed up Feeding Playing with Teaching accident prevention/self-help

asserted they did not pay much attention on searching and learning this issue:

"I watched news about child drowning via medias, such as television and internet, I have never learnt how to prevent child drowning. (M6)

Moreover, some participants did not pay attention to learn about child drowning prevention, as example quotes:

"Parents do not need to know much information about child drowning prevention, just think by themselves because this knowledge is not contained in book." (F3)

Subtheme 3: Insufficient prevention

Many participants expressed that they did not recognise how to assess the risk points of child drowning in the home and how to prevent child drowning effectively, such as teaching about harmful sources, limitation of playing boundary, and close supervision:

"I and my wife had never assess risk points of child accidental drowning in and around home. I just inhibit children to get close the water reservoir. We really needed to be trained as regards of child drowning prevention. We did not provide water safety devices at home, such as the lids of jar and tub." (F5)

Theme 2: Simply practice

The parental behavior to prevent drowning accidents in young children was revealed by all parental couples in the study. Every interview transcription revealed common actions regarding childhood drowning injury prevention, as follows: child supervision, teaching discipline, and limitation of playing boundary:

"I keep an eye on her while playing in the home; if I am absent I asked my mom to take care of her." (M4)

"I teach the child not to get close the water reservoir. I often provide toys for the child to play to distraction. The kid will not pay attention to play with water." (F7)

Theme 3: Unaccompanied method

Most participants displayed their needs for more information regarding child drowning prevention from experts and healthcare professionals, as example quotes:

"I need some healthcare professionals and village health volunteers come to train how to prevent it. Parent may be trained together about how to prevent childhood drowning and some other accident." (F6)

Furthermore, many participants need safe guarding device supports from government sector, such as installation of fence and wall around every public water reservoir:

"I have had request that the Council should build the dam before the child reaches to the canal. They said they did not provide it because of preserving big trees around the canal for reducing high temperature during Songkran festival. The municipal staff also needs to take responsibilities as regard of child drowning prevention within community. The canal without safeguard fence can cause accidental drowning in young children" (F3)

Discussion

Uncertainty

The social world of parents' daily life as empirical materials was gathered through individual written expression for entering the research process from inside the interpretive parental background [17]. In order to understand the essence of parental behavior for child drowning prevention, the key information on each parent provides an interesting introduction to the findings based on the ethical principle of fulfilling respect for participants [19].

Both fathers and mothers were the most important child caregivers in family who probably spent the longest time with young children and also have the complete authority to take action on child health promotion and child drowning prevention practices [20]. Therefore, although recruiting parental couples in data collection process was a challenge it was important both fathers and mothers of young children took part in this study. The fourteen participants who willingly participated in the study consisted of seven parental couples both fathers and mothers of young children from eight family homes. All parental couples were in charge in their households and lived with their children and extended families such as parents, relatives and housekeepers [21].

Study data suggested the participants took responsibility as nurturing parents in order to take care of their young children focused on three major commitments, as regard of: care, preventing diseases and injuries; control, providing secure boundaries; and development, promoting physical and psychological child health in keeping with other previously discussed literature on parenting [22,23]. They evidently brought up their young children with love and care, being democratic, warm and reasonable, in the form of authoritative parenting style [24,25].

Socio-economic status is the most important factor which impacts parenting as regard of the risk to child health [26,27]. Although this study was not about the influence of income inequalities on behavior, it did appear that family economic status was one of the factors affecting parental behavior for childhood drowning prevention in keeping with other relevant studies in Thailand [28]; this was particularly clear in relation to buying home safety products. Apart from the use of child care services, most of young children were supervised by the respondents and/or by other caregivers every day, such as parents and relatives who lived in their home.

Factors such as age, education, skills and experience of parents also influence parental behavior [29]. These factors were clear from the data in this study. Every parent was an adult of working age, with the age range of 26-41-years-old in fathers and 28-39 years-old in mothers. Most participants had attained Bachelor degree level of education and had permanent work. All participants revealed that they perform child rearing and caring as best as possible, based on their experiences and socioeconomic status of their families, focusing on promoting growth and development, whilst paying little conscious attention to child drowning prevention for their young children.

Although several parents perceived that they had high and medium level of knowledge as regard of child drowning injury prevention; however, they did not often concern and practice child drowning prevention at home. In addition, a low level of knowledge was represented among over half of all mothers. This can lead to inadequate child drowning prevention practice of parents. There is no research in Thailand or even across the world specifically exploring mothers' knowledge in relation to childhood drowning prevention, therefore a further research study is needed to focus just on mothers as key caregivers in the household. Parental couples' incomes varied from high, medium and low levels. Some parents could access the internet at their workplaces; but they had never used it for searching the knowledge and information regarding childhood drowning prevention. Moreover, only a few parents found information about general child rearing from some books and magazines. None, therefore, experienced much concern about reducing the possible risks of child accidental drowning injury in and around their home.

Simply practice

According to parental home backgrounds, all families lived near public water reservoirs within 100 meter, such as river and canal; however, every public water reservoir was not surrounded by safe fence and gate. Limitation of economic status and lack of government financial supportive system may be the main reasons of this issue. Moreover, some parental homes also had fish ponds and buckets without the strong lids. These evidences explicit an inadequacy of child drowning prevention both in and around the home. The parental perceptions and their drowning prevention practice were revealed through the individual face-to-face interviews at their homes. Data from all parents suggested they simply performed drowning preventive behaviors for young children, as regard of limitation playing boundary of the child, close supervision, safeguarding, education and skills development of the child and recommendations to family members. Importantly, only few parents pointed out that they closely took care of their children by monitoring to reach them all the time; while others just kept an eye on them and some of them often asked grandparents to supervise their children instead.

Although child characteristics and level of environmental risk are the main factors in unintentional child drowning injury, parental behaviors are also significant [30]. This is because parents are the key persons who probably spend the longest time with young children and also have the authority to take action on injury prevention in the home. According to Morrongiello et al. [31], the strategies for preventing drowning in and around the home for young children need the educational action of parents regarding control of reach of the drowning risks, supervision and coaching. Furthermore, the recent study of Morrongiello and McArthur [32] examining caregiver supervision practices in both parents and siblings, found that fathers and mothers showed the greatest similarity in supervising young children, whereas older siblings' supervision involved more inadequate practices and caused increasing risk of home injury in young children aged 1-5 years.

Unaccompanied method

Most parents expressed their perceptions in terms of the definition of child drowning incompletely. There was no parent who could answer the correct meaning of child drowning that "Drowning refers to an event in which a child's airway is submerged in liquid, leading to impairment to breathing. The outcome can be fatal or non-fatal, with some non-fatal drowning events leading to significant neurological damage." Parents mostly revealed an insufficiency of knowledge and practices toward child drowning prevention. They informed the requirements of rich information regarding child drowning prevention practice guide. These can lead to improve their behaviors on child drowning prevention.

The achievement of childhood home injury prevention has evidently not been reached in Thailand. The Child Safety Promotion and Injury Prevention Research Center of Thailand, a member of the international safe community network undertaken by the WHO collaborating center on community safe promotion, has attempted to enhance child accidental injury prevention and community safety through education and dissemination patterns for adults and young people across Thailand [33]. This organization has implemented a variety of programs for child accident prevention, focused on child public injury incidences, such as flood drowning, rather than home drowning injury. Moreover, it has also provided for people who took part in its training a series of media in its offices, such as websites, videos, booklets and leaflets on childhood injury prevention in various settings. Regarding home safety products, they have been manufactured and provided for sale in the form of a box set priced at 750 Baht (USD 22) available from this research center office. However, parents also needed safety devices support from government such as fence and gate of public water reservoirs. It can be seen that implementations for protecting young children from drowning still need to be developed significantly.

Limitations

In this study, participants were sampled from only one community setting; therefore, it is not explicit if the findings are transferable to other regions. However, the perceptions and practices of parents from one Municipality of Thailand may be significant not only in developing countries, but in developed nations with similar populations. Future research is required triangulation methods application, such as gathering data from other child caregivers or health professionals to gain rich information across a broader population.

Conclusion

Child health and safety promotion are the key commitments of global public health policy. Accidental drowning prevention in young children is an essential implementation serving child health promotion. This element is an important public health issue in the global context which matters very much to caregivers of children in each household, particularly the parents, who directly take responsibility for child health promotion and protection in and around the home. Protecting young children from drowning in and around the home requires the effective actions of parents to reduce the risks of child injuries and deaths, underpinned by

their supportive resources and family context. This qualitative research has provided an understanding of parents' perceptions of childhood drowning prevention, and their drowning prevention behaviors. The findings of the study have strongly evidenced that drowning could be preventable by parents and caregivers by developing their understanding, awareness, and supervision behaviors for unintentional drowning prevention in young children underlying with the changes in Thai national policy and in nursing education frameworks. This study can therefore be an essential contribution to the further development of evidence based parental behavior regarding child drowning prevention across Thailand.

Conflict of Interests

The authors report no conflict of interests.

References

- Whelpton A. Fact sheet: Children and drowning. World report on child injury prevention. Geneva: WHO & UNICEF, 2008.
- Taneja G, Beeck E, Brenner R.. World report on child injury prevention (pp. 59). In KO. Margie Peden, Joan Ozanne-Smith, Adnan A Hyder, Christine Branche, AKM Fazlur Rahman, Frederick Rivara, Kidist Bartolomeos (Eds) Switzerland: World Health Organization, 2008.
- Centers for Disease Control and Prevention. National Center for Injury Prevention and Control, Unintentional Drowning. Get the Facts, 2015.
- Sitthi-amorn C, Chaipayom O, Udomprasertgul V, et al. Child injury in Thailand: A report on the Thai national injury survey. Bangkok: Chulalongkorn University. 2006.
- Peden M, Oyegbite K, Ozanne-Smith J, et al. World report on child injury prevention. Geneva: WHO & UNICEF, 2008.
- Child Safety Promotion and Injury Prevention Research Center. Child death analysis, 2019.
- Ministry of Public Health. Strategic Plan for B.E. 2554-2563 (2011-2020), 2014.
- Bureau of Non Communicable Diseases. Child drowning situation in Thailand in 2017, 2018.
- Plitpolkarnpim A. Guidelines for safety promotion and injury prevention, The Royal College of Pediatricians of Thailand Pediatric Society of Thailand, Guideline Child Health Supervision (2nd ed.) Bangkok. Print Ann Morse Ltd, 2015.
- Irving L. Preventing unintentional injuries in children and young people under 15. *Journal of Community Practice*. 2011;84(3):36-38.
- Gielen AC, Wilson MEH, Faden R, et al. In-home injury prevention practices for infants and toddlers: The role of parental beliefs, barriers, and housing quality. *Health Education Quarterly*, 1995;22:85-95.
- Ayoub C, Pfeifer DA. Burns as a manifestation of child abuse and neglect; (cited 2017 June 1).
- Stone DH. Injury prevention in children: A primer for students and practitioners. Edinburgh: Dunedin Academic Press Ltd, 2011.
- Baan Donton Health Promotion Hospital. Report of child death from drowning in Muangkeaw Municipality area. Chiang Mai: Baan Donton Health Promotion Hospital, 2014.
- Laurence D. Family Values: Issues in Ethics, Society and the Family Belmont. California: Wadsworth; 1988.
- Coyne IT. Sampling in qualitative research. Purposeful and theoretical sampling: Merging or clear boundaries? *Journal of Advanced Nursing*, 1997;26:623-630.
- Braun V, Clarke V. Using thematic analysis in psychology, *Qualitative Research in Psychology*, 2006;3:77-101.
- Denzin NK, Lincoln YS. Introduction: The discipline and practice of qualitative research. In N. K. Denzin & Lincoln, Y.S. (Ed.), *The Sage handbook of qualitative research*. (4th ed.) London: Sage, 2009.
- Holloway I, Wheeler S. *Qualitative Research in Nursing and Health Care* (4th ed.), Oxford: Wiley-Blackwell, 2016.
- Fernandez CV, Kodish E, Weijer C. Informing study participants of research results: An ethical imperative. *The Institutional Review Board*, 2003;253:12-19.
- Algarvio S, Isabel L, Maroco J. Parental concerns' prevalence and socio-geographical variables in general parenting. *Journal of Child Health Care*, 2013;17(2):204-212.
- Hoghugh M. The importance of parenting in child health. *British Medical Journal*, 1998;316(7144):1545.
- Saklofske DH, Reynolds CR, Schwenn VL. *The oxford handbook of child psychological assessment*. Oxford: Oxford University Press, 2013.
- Baumrind D. The influence of parenting style on adolescent competence and substance use. *Journal of Early Adolescence*, 1991;11(1):56-95.
- Santrock JW. *A topical approach to life-span development* (3rd ed.). New York: McGraw-Hill, 2007.
- Marmot M. Social determinants of health inequalities. *Public Health Report*, 365, 2005.
- World health organization. Children and drowning, World report on child injury prevention, 2015.
- Child Safety Promotion and Injury Prevention Research Center. CDR: Child death review, 2007.
- Puckering C. Parenting in social and economic adversity, In M. L. Hoghugh, N. Ed. *Handbook of parenting* (pp. 39-54). Theory and research for practice. London: Sage, 2004.
- Bruce BS, Lake JP, Eden VA, et al. Children at risk of injury. *Journal of Pediatric Nursing*, 2004;19(2):121-127.
- Morrongiello BA, Ondejko L, Littlejohn A. Understanding toddlers' in-home injuries: Context, correlates, and determinants. *Journal of Pediatric Psychology*, 2004;29(6):415-431.

32. Morrongiello BA, McArthur BA. Parent supervision to prevent injuries. Center of Excellent for Early Childhood Development, 2010.

33. Child Safety Promotion and Injury Prevention Research Center (Producer). Home safety pack: Child's safety products. Bangkok: Mahidol University, 2014.

***Correspondence to:**

Amornrat Ngamsuoy
Faculty of Nursing,
Chiang Mai University,
110/406 Inthawaroros road,
Suthep district, Mueang,
Chiang Mai 50200, Thailand
Tel: 0925743909
E-mail: amornrat.ngamsuoy@cmu.ac.th