

In-depth study on drowning in young children (In the Integrated Drowning Prevention Project, 2021)

The phenomenological study titled “In-depth study on drowning in young children” (In the Integrated Drowning Prevention Project, 2021) has the main objectives as follows: 1) to understand the in-depth causes of drowning among children under the age below 5 years old (young children); 2) to identify risk factors for drowning in children under 5 years old (young children); and 3) to make recommendations on measures to prevent drowning incident for children under 5 years old (young children).

On database, this research study has used two key initial databases, namely 1) Data on deaths from causes of drowning among children under 5 years old in 2018 gathered by the Ministry of Interior which the Injury Prevention Division, Department of Disease Control, Ministry of Public Health acts as coordinator in accessing to the database. 2) Data from news in digital media. The research team then screened news of drowning incidents of young children under 5 years old between the year 2019-2021 to prepare a list of incident areas and people who appear to involve in news events.

On access to and collection of case study/incident data, the research team contacted the relevant government agencies according to the list of incident areas, namely the district office, municipal office Subdistrict Administrative Organization (SAO) and Tambon Health Promoting Hospital to request contact information with community leaders (e. g. subdistrict headmen, village headmen, etc.) and then conducted an in-depth telephone interview² with community leaders and staff of Tambon Health Promoting Hospital that is the area of the incident with an interview form to seek reasonable and accurate answers to the questions. In addition, the research team was contacted for further interviews in case of reference made to the others who shared the similar experience (in form of data collection by "Word-of-mouth referral" or Snowball Sampling Technique).

The first round of data collection period commenced on May 1 to August 5, 2021 and the second round was during September 1-14, 2021. The research team have collected case studies of children under 5 years old who died from drowning in total of 40 cases/incidents, number of children under 5 years old who died in total of 41,

number of incident areas in total of 26 provinces from 5 regions of Thailand. The details were classified according to the year of the incident occurred.

On protection of family rights in case study, it was due to the fact that this research study is an issue that deemed “ Sensitive ” which can cause a significant psychological impact on the parent or primary caregiver of a child who has died from drowning. The research team therefore has realized the importance of this point to and been cautious of the negative effects on the respondents' feelings. Therefore, before collecting data for each case study, the assessment on the appropriateness and possibility has been made in communicating with the deceased child's family by consulting with community leaders. The research team were advised not to contact their families directly but should obtain the data through other close contacts who also went through the experience such as community leaders, relatives and neighbors, etc.

On data analysis and presentation, the research team has used the content analysis method to reflect the narratives and sentiments of those who perceived or experience the event, and use the Haddon Matrix Risk Factor Analysis Table to classify and correlate three periods of child drowning events into 3 phases, namely prior to the event (Pre-event), during the event (Event), and after the event (post-event).

• Results

Based on the Haddon Matrix risk factor analysis and classification of risk factors, causes and contributions to child drowning incidents. The results of the study by age group were summarized as follows.

Age group 0-2 years old (18 case studies)

On the main caregivers, it was found that 50.0 percent (9) of the children had the primary caregivers, namely father and mother. and was the joint care between parents and grandparents or grandparent's 27.8 percent (5) divorced/separated parents Therefore, only the father or mother was the primary caregiver, 44.4 percent (8) their parents left it with their grandparents or grandparents to take care of them, and 5.5percent (1) were orphaned or neglected to be taken care of by their relatives.

On the family status, 50.0 percent (9) were poor, 44.4 percent (8) had moderate status. However, only one family was in good economic status.

On the education level of the main caregivers, 50.0 percent (9) had primary education. There are similar graduates of lower secondary and high school at both levels, and only one family had a bachelor's degree.

On children's drowning incidents, many case studies had multiple causes. However, when categorizing the causes, the behavioral characteristics of the main caregivers and other factors were found in 4th rank, 66.7 percent (12). Parents were doing other tasks/housework (careless) 22.2 percent (4), falling asleep (the children waked up first and walked out), caregivers had more than one child under 5 years old to take care, and 16.7percent (3) caregivers left the child alone. Moreover, other contributing factors were also found, including pets, toys, flooding, and the main caretaker was absent., parents left the child with someone else on the day of the accident and elderly caregivers were forgetful.

On the water sources in which drowning incident occurred, the top 3 fatalities were 33.3 percent at water sources or containers inside the house. (Water tank/fish tank/water tank) followed by 22.2 percent (4) The pond/pool of the house/ditch next to the house (with a distance of not more than 30 meters from the house), while the third place was a river / natural canal, while other water sources were a pond / a community pond (public) at 16.7 percent (3), Although, the one-child who died in flooded water with flowing currents.

On resuscitation (CPR) and emergency rescue to hospital for treatment, 66.7 percent (12) CPR had not been performed because the child was drowning for a long time and when the body was found dead already, 22.2 percent (4) CPR was performed by the rescue team, while CPR was performed by family/relative and community leader/neighbor at 1 case for each or 5.5 percent. It was also found that caregivers and neighbors attempted to help the child by shaking their bodies to remove the water, which was an inappropriate method accounted for 11.1 percent (2). It was noted that there were only two children who had the vital sign after the CPR team performed CPR. Therefore, the children were taken to the hospital for treatment. However, the children later died.

Age group 3-4 years old (22 case studies)

On the primary caregiver it has found that 59.1 percent (13) are children with parents followed by 45.5 percent (10) with grandpa or grandma as joint caregivers. As for those whose parents are divorced and orphaned or abandoned for custody are 9.1 percent (2) equally.

On family status 54.5 percent (12) are poor, 27.3 percent (6) are moderate and 18.2 percent (4) are in good economic status.

The level of education of the caregiver was found to have graduated from primary and junior high school similarly 36.4 percent (8) and 31.8 percent (7) respectively 27.3 percent (6) are from high school graduates and only 9.1 percent (2) have a bachelor's degree.

On the side of the child's drowning, the most common behavior is that supervisor performs other tasks/chores (negligence) 50.0 percent (11), leaving children alone 40.9 percent (9), caused by caregivers taking children to different areas or primary care assistants away 13.6 percent (2) equally. In addition, other causes include leaving children with others on the day of the attack, from natural disasters (floods with strong currents). Caregivers have more than one small child to care for, including 9.1 percent of children who require special care (sick/sleepwalking).

On the water sources of drowning incident, this age group often drowns in the water far from home by drowning in public ponds/public water park by up to 21.8 percent (7), with children following their handlers to the risky water source. Second is nature canals or rivers, 18.2 percent (4). There are 4.5 percent (1) of children who drown in plastic pools who do not experience drowning in this type of water source in groups of children aged 0-2 years.

On resuscitation (CPR) and hospitalization for treatment, 63.6 percent (14) no CPR are performed due to child drowning for a long time and when the child's body was found, the child already died. 31.8 percent (7) there are performed CPR by rescue team. However, no CPR has been reported by family/relatives and community leaders/neighbors. For children with vital signs after PR and hospitalization, there were 9.1 percent (2) percent, but the child later died.

For other found observations are as follows:

- Many case studies / events have children who witness events, but at the age that is not much different. Therefore, the child cannot clearly tell the situation, or in some cases the child is afraid of guilt, so he does not dare to tell the adult to know or tell it too late, causing the child to fall into the water/drown. He had to drown longer and eventually die.

- More than one drowning occurs, usually with children from the age of 5 to 7 who drown with young children, often during holidays where older children do not go to school persuading young children to play together and take them for a water.

- Age group 0-2 years, the cause of the drowning was unclear and questioned by members of the community. 2 case studies/events

- Age group 3-4 years old, the cause of drowning caused by a child with erratic condition on the day of the incident, the child was not sick, one of them, and a child with sleepwalking, which the family assumed may have caused the child to drown. However, this is incidents of this nature are not reported in the 0-2 age group.

- The primary caregivers and those closest to whom they encountered the incident or brought the child's body out of the water mostly did not know how. CPR to save lives is also available in person who tries to help in the wrong way by shaking the child to get water out of the body.

• Risk Factors for Drowning in Children Under 5 Years Old (Small Children)

Family characteristic factors, including family status, are contributing factors to the drowning of children, as well as the relevant behavior of parents/ caregivers, children, as well as environmental factors, all contributing to the drowning of young children.

Observations of factors related to the behavior of young child care people are an increased risk: cases where children's homes are located in kinship/neighbor groups. Caregivers often think that children/ grandchildren are with relatives or neighbors. Therefore, they don't look seriously when you don't see a kid at home. In addition, the child caregiver lacks an assessment of the risk of an unsafe environment, as shown in

the case of leaving the child to another person to care for and taking the child to a water attraction.

In addition, the area of environmental management in the house (residential). There are risks, such as no barriers to prevent children from walking outside the house themselves. Not locking the bathroom door Placing items that children can climb to open the door outside the house or lean down into a container with a small amount of water., including caregivers, lack of management of the environment around the house (pond/pool with no fence and no railings) and take children to water attractions.

Communities, communities, and government agencies involved also contributed to the formation of risk factors, including the lack of maintenance, fences around public wells/ponds to be strong and safe, and by not closing the manhole covers.

• Policy Suggestions

Since studies have shown that many young children die from drowning in home/territory water or not far from home, and incidents often occur while carers burp or take their eyes off children, families play an important role in preventing drowning of young children and helping them when they occur as follows

1. There should be a minimum safety standard in households with young children (children under 5 years old) and local authorities regularly monitor household compliance, such as having a playpen: creating safe spaces, etc.

Campaigns for safe education and practice, CPR and safe lifesaving techniques for parents' caregivers, children, and older children, as well as the general public, to be able to respond to drowning incidents in a timely manner and correctly.

Key Word: drowning in young children, drowning, Drowning Prevention