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Introduction

Drowning is a leading cause of injury death among children aged less than 15 years worldwide. The majority of drowning deaths (97%) occur in Low and Middle Income Countries (LMIC). Drowning continues as a significant cause of childhood death in Asia [1-3]. Almost all drowning deaths occur in less developed and developing countries, including Thailand [4-10]. According to the Thai National Injury Survey in 2004, it was estimated that about 2,600 Thai children younger than 18 drown each year. Rural children between 1 and 17 years are almost 5 times more likely to drown than their urban counterparts.

This is generally attributed to higher exposure in rural areas to aquatic environments and rural children's inclination towards higher risk-taking activity. Males are more than twice as likely as females to drown. Most drownings in Thailand occur in natural water bodies such as ponds, ditches, lakes, rivers or the sea which account for 76 percent of drowning. Rivers are the most cited places where children drown [10]. In a developed country, it is recommended to provide swimming lessons in children at an age of four to prevent drowning [11].

Several methods have been recommended to prevent child drowning: increasing supervision, limiting exposure to bodies of water, equipping boats with flotation devices and providing swimming lessons [12-15]. Specific prevention strategies should be matched to appropriate age groups. Teaching swimming to increase survival skills in water is recommended for school aged children. Moran and Stanley reported the participation in formal swimming lessons was associated with a reduction in the risk of drowning [16].

In the search for risk factors of injuries, parental factors have long been identified as an important aspect for investigation since children are normally in the care of their parents. Many studies have been conducted in the area of parental factors and childhood injuries internationally, and these studies concentrated on parental perception, attitude, and supervisions [17-19]. However, the related issues of parental belief in the drowning risk, child's swimming skill

***Corresponding author:** Orapin Laosee, ASEAN Institute for Health Development, Mahidol University, 25/25 Phutthamonthon, Salaya, Nakorn Pathom 73170, Thailand; Tel: 662-441-9040-3 ext.43; Fax: 662-441-9044; E-mail: Orapin.las@mahidol.ac.th

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having at least one child who could swim were considered to have a child able to swim. The top five selected barriers were reported in this study. Comparisons of barriers of developing swimming skills for different guardians of child's swimming skills were made using Fisher's exact test, with a p-value <0.05 considered statistically significant.

Results

The descriptive statistics revealed that three-quarters of the respondents were female; the median age was 44 years. About half (53%) had a primary school education. The descriptive statistics revealed that 4

a serious problem. Regarding to the benefits of swimming skill, the majority of guardians perceived swimming skill to be beneficial skill for their children as swimming is a life skill, decreases drowning risk, and is necessary in particular professional careers (Table 3).

In terms of barriers to increase swimming skills, there were statistical difference between perceptions of guardians who have a child who could swim and those who could not. Guardians of an unable to swim child reported significantly higher proportion of barriers (Table 4).

Discussion

In the guardians' view, a child should learn to swim at age seven. This is revealed a misperception among guardians. The Thai Ministry of Public Health recommends that children should be able to swim at the age of five. Similarly, the American Academy of Pediatrics (AAP) has recommended swimming lessons for most children 4 years and older and some children at younger ages depending on exposure risk and developmental readiness [21,22]. In fact, young children

