

Safe haven effect of anchals – Preventing drowning in early childhood

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Introduction

The four-year-long injury prevention project implemented in Bangladesh, known as PRECISE has shown that the majority of drowning occurs in early childhood with the peak age in the second year of life. Other information on child drowning such as the Bangladesh Health and Injury Survey confirms that most drowning occurs in very early childhood, and is associated with difficulty in supervising very young children while caretakers attend to the necessary domestic work in and around the home. The PRECISE project developed a village-based crèche that provided adult supervision from 9am to 1pm for children between 18 months and five years. An active surveillance system allowed the evaluation of the crèche for drowning prevention.

Methods

A cohort study was conducted to examine the protection from drowning provided to children attending the crèches. Children 18 months through five years old who attended the crèches since 2006 through September 2010 made up the crèche cohort. Their survival over the same time period was compared to an age- and sex-matched cohort of control children who did not attend the crèches. Survival differences were determined using Kaplan Meier and Cox Proportional Hazards analyses.

Results

The crèche cohort was made up of 11,501 children who were graduates or current attendees with sufficient exposure times and known survival status as of Sept 30, 2010. The control cohort was made up of 11,501 children matched on age and sex with the crèche children. Results of the Kaplan Meier and Cox Proportional Hazards analyses showed a substantial, statistically significant protective effect from drowning for crèche attendance. Additionally, the analyses showed a substantial protective effect from other causes of fatal injury as well. Detailed results will be presented at the conference.

Conclusions

The safe haven effect of the crèche is robust. When only looking at the time period when children were physically in the crèche, no drowning occurred in the crèche cohort which prevents the efficacy from being calculated using the current survival information. The analysis is continuing with longer follow-up times to provide additional risk exposure information. The protective effect extended beyond the crèche hours, continuing in the hours that the children were at home during crèche days, and throughout the days where the crèche was not held (holidays and weekend). This extended protective effect was substantial and effective in preventing drowning in children in rural villages in Bangladesh.

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