Drowning Prevention in Barisal: A Community-based Swimming Intervention

Submitted to
Professor Barnali Chakraborty
Course: Public Health Information, Education & Communication

Submitted by
Md. Tarek Hasan
NSU ID: 251605080

Date: April 9, 2025

Problem Statement

Drowning is a significant yet neglected public health issue. In terms of unintentional injury mortality worldwide, it ranked as number three cause with more than 90% of drowning deaths happening in low- and middle-income countries (WHO, 2014). In Bangladesh, around 1900 people from all ages drown every year, where children are 77% (less than 18 years), meaning over 40 children drown every day, according to the Center for Injury Prevention and Research, Bangladesh (Hossain et al., 2022). More specifically, children in Barisal (aged 1-4 years) suffered the highest fatal drowning rate at 262.2 per 100,000 population (Project Bhasa, 2021). Among factors that are responsible for drowning includes the lack of swimming ability (WHO, 2014).

Objectives

Objectives define what needs to change to improve the condition of drowning. These are outlined below in a logical framework.

Goal

We wanted to reduce the problem of drowning by teaching children basic and necessary swimming skills in Barisal division. This was our overall goal.

Outcome

In terms of outcome, our selected children (aged 1-5 years) learnt how to swim in the water. Mainly, we taught them freestyle swimming lesson because that was easy and enjoyable. Additionally, their confidence level grew significantly so that they were able to float in the water efficiently.

Output

In terms of output, we wanted to achieve that all the 100 children would learn how to swim. That is the reason why we first selected 100 children from Patuakhali region of Barisal division. Then we provided them freestyle swimming training lessons. Our desired output was 100 out of 100 children because swimming is a lifesaving skill that can prevent them from drowning, and intuitively we did not want that any of our student failed to learn how to swim efficiently. So, our output was to ensure that all 100 children knew how to swim at the end of our swimming intervention program.

Activities

We designed a swimming program strategically. The duration of this program was 3 months form January 2025 to March 2025. We thought that this time frame was balanced in terms of both our point of view and the student's point of view. For this program, we chose the Patuakhali Government College Pond because it was shallow so that our selected children did not drown and because this pond was available for public use. In addition, the water in this pond was not harmful.

Per week we took 2 classes and gave them simple swimming exercises for the rest of the week so that they could practice with the supervision of their parents at home. This exercise helped them solidify their swimming skills.

Our swimming program team initially taught them how to float of their back, how to hold breath underwater, and a simple kind of propulsion such as leg kicking. If they fell into water, we encouraged them by saying that do not panic, try to float, and whenever needed call for help. Then we taught them how to move hands one by one for making strokes, how to synchronize the leg kicks with hand strokes, and how to rotate side by side for smooth freestyle.

Inputs

To implement our program efficiently, we needed the appropriate resources. So, we bought swimming materials such as caps, googles, swimwear, jackets, kick boards, inflatable rings. We hired a training team consisting four people. I and another teammate taught the basic swimming lesson, third teammate observed the swimming activity, and fourth teammate kept record of performance of our participants.

Children learn best through play and visuals. So, we provided them small life jackets or inflatable rings, kick boards made from local materials such as coconut husk floats, waterproof posters with water safety tips such as "Don't play near water alone"

Monitoring

We monitored the process, technical soundness, assumptions and financial conditions of our intervention program.

During implementation of our swimming intervention, we measured, recorded, collected, and analyzed data on a continuous basis to detect any deviation from the actual plan and to take corrective measures. For example, when giving swimming lessons one of our plans was to ensure that children are learning how to synchronize hand strokes with leg kicks. We saw that some children were deviated from this plan, so we took corrective measures by grouping these children and giving them more time for internalizing the synchronization of hand strokes with leg kicks.

Another plan was to ensure that children learn how to float in the water. We saw some children struggle with floating in the water during hand strokes and leg kick synchronizations. So, we categorized them in a group and one of our swim instructors gave them lesson one to one basis so that they can implement how to float in the water while synchronization.

Our assumption was that during the whole three months period Patuakhali Government College Pond would be available for us. And we met our assumption by communicating and taking permission with the College Principal.

Our initial budget was 70 thousand BDT to ensure that the program ran smoothly, but after one months we had to hire 3 more swim instructors so needed another 30 thousand BDT for their remuneration. Our team collected this total 1 lakh BDT from the parents of the participants.

Evaluation Plan

We evaluated our swimming intervention program strategically to see whether it worked or not as per our expectation.

First of all, at the base line we took a preliminary test to see how many of them know at least how to float in the water, and we saw that none of them out of 100 enrolled children knew how to float in the water, let alone basic swimming.

Secondly, during our intervention period of three months, we periodically assessed them once in a month to see their improvements on floating in the water, on hand strokes and leg kick synchronization and on smoothly covering 100 meters with their basic freestyle swimming techniques. In the first months, we saw that only 12 children passed our assessment. So armed with this evaluative feedback, we redesigned some aspect of our swimming intervention program such as we recruited 3 more trained swim instructor from Barisal Swimming Academy. Then after two months, 65 children passed our assessment test. We were excited by seeing this huge improvement and decided to stick with this newly revised plan because this worked.

And finally, a moment of satisfaction came: after 3 months all 100 enrolled children learned how to float in the water and learned basic freestyle swimming techniques that helped them to cover at least 100 meters distance. With this end line information, we found that we achieved our output 100 percent.

We knew that, considering their age, they learnt one vital life skill – freestyle swimming – that would help them to avoid drowning. And we were hopeful that as they grew older, they would help their friends how to swim which was the spillover effects of our swimming intervention program.

Initially, from Project Basa study in 2018 we found that fatal drowning rate of children in Barisal division was 262.2 per 100,000 population. And, after the completion of our program which produced 100 little swimming champs who not only knew how to swim but also taught their friends swimming. In another imaginary study (*note: for my assignment topic, imaginary study is considered because I am designing a program but reported it in past settings to demonstrate all the components of your assignment which would not as vivid if written in the future settings*) in April 2025, we found that fatal drowning rate of children in Barisal division was 252 per 100,000 population, a net reduction of 3.9% from initial statistics. This was our overall goal achievement.

References

Hossain, M. J., et al. (2022). Child drownings in bangladesh: Need for action. *BMJ Paediatrics Open*, *6*(1). https://doi.org/10.1136/bmjpo-2022-001464

Project Bhasa. (2021). Project bhasa - ending the drowning epidemic in barishal division, bangladesh. https://georgeinstitute.org/our-impact/policy-statements-and-recommendations/project-bhasa-ending-the-drowning-epidemic-in

WHO. (2014). *Global report on drowning: Preventing a leading killer*. World Health Organization. https://iris.who.int/handle/10665/143893