Investigating the context and impact of fatal and non-fatal drowning in India, identifying approaches to prevention

Lukaszyk C\textsuperscript{1}, Jagnoor J\textsuperscript{1}, Nguyen H\textsuperscript{1}, Ivers RQ\textsuperscript{1,2}

1. The George Institute for Global Health, University of New South Wales
2. School of Nursing and Midwifery, Flinders University, Australia
Background

• ~372,000 drowning deaths occur globally each year
• More than 90% of these deaths occur in low- and middle-income countries (LMICs)
• Despite this, accurate data on drowning burden is unavailable for many LMICs
Project aims

1. To investigate the context and social impact of fatal and non-fatal drowning in India

2. To explore enablers and barriers to implementing drowning prevention initiatives in India

3. To identify promising drowning prevention interventions for feasible implementation/upscale
Literature review

Aim: To examine the burden and risk factors for fatal and non-fatal drowning in India.

Methods: Systematic search of 19 electronic databases and 19 national and global, institutional, organisational and government sources of Indian injury data.
Literature review

Aim: To examine the burden and risk factors for fatal and non-fatal drowning in India.

Methods: Systematic search of 19 electronic databases and 19 national and global, institutional, organisational and government sources of Indian injury data.

National data sources reported between 1,348 and 53,978 drowning deaths per year.

Data sources reporting non-fatal drowning presented different outcome measures.

Key risk factors for drowning:

- Male gender
- Young age (0-5 years)
- Living in North Eastern India
Literature review

Number of fatal and non-fatal drowning cases reported by the National Crime Records Bureau India for 2014
Methods

Study sites:
1. West Bengal – partnering with the Child In Need Institute (CINI)
2. Lower Assam – partnering with the Jhai Foundation

Study participants:
• Household heads
• Community leaders
• Parents
• Children

Data collection methods:
• In-depth interviews x 28
• Focus group discussions x 10
• Observations/guided observations x 6
Preliminary results: West Bengal

1. Beliefs

   “I have a fear in my mind, I hope Allah will not do anything.”

2. Supervision

   “I also have many grandchildren, I always watch them, but still, in poor family, suppose I’ve got to work in the market, [it’s] something I have to do, should I not do the work?”

3. Treatment

   “The activities were continued for a pretty long time by massaging by oil. The local doctor was also called but he advised them to take the baby to a better place.”
Preliminary results: West Bengal

1. Beliefs

“I have a fear in my mind, I hope Allah will not do anything.”

2. Supervision

3. Treatment
Preliminary results: West Bengal

1. Beliefs

2. Supervision

“I also have many grandchildren, I always watch them, but still, in poor family, suppose I’ve got to work in the market, [it’s] something I have to do, should I not do the work?”

3. Treatment
Preliminary results: West Bengal

1. Beliefs

2. Supervision

3. Treatment

“The activities were continued for a pretty long time by massaging by oil. The local doctor was also called but he advised them to take the baby to a better place.”
Preliminary results: Assam

1. Ongoing lack of security

"Today we are here. But within a month we might not be here. The water might take us away to some other place. We cannot live in the same place for too long."

2. Community cohesion

"We become guests with families across the river on the mainland. Families and people from the other side keep a tab on us and our safety, and invite to stay in their place."

3. Needs for preparedness not met

"The high platform that government has built for the livestock safety, we are not allowed to go there."
Preliminary results: Assam

1. Ongoing lack of security

   “Today we are here. But within a month we might not be here. The water might take us away to some other place. We cannot live in the same place for too long.”

2. Community cohesion

3. Needs for preparedness not met
Preliminary results: Assam

1. Ongoing lack of security

"Today we are here. But within a month we might not be here. The water might take us away to some other place. We cannot live in the same place for too long."

2. Community cohesion

“We become guests with families across the river on the mainland. Families and people from the other side keep a tab on us and our safety, and invite to stay in their place.”

3. Needs for preparedness not met
Preliminary results: Assam

1. Ongoing lack of security

“Today we are here. But within a month we might not be here. The water might take us away to some other place. We cannot live in the same place for too long.”

2. Community cohesion

“We become guests with families across the river on the mainland. Families and people from the other side keep a tab on us and our safety, and invite to stay in their place.”

3. Needs for preparedness not met

“The high platform that government has built for the livestock safety, we are not allowed to go there.”
Discussion

Potential approaches towards drowning reduction

West Bengal:
• Increase awareness on drowning
• Improve child supervision practices

Assam:
• Invest into community disaster resilience rather than response
Conclusions

• Drowning is a little understood issue in India, despite available data suggesting drowning rates are high

• Priority risk factors for drowning differ between states

• Further work is required to investigate feasible and sustainable approaches to drowning prevention