

Reassessing the Relationship Between Clean Water and Better Sanitation and Child Mortality: Implications for Sustainable Development Goals

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Abstract

This study looked at how increased sanitation and access to clean water affected children's mortality in five South Asian nations using data from the Demographic and Health Surveys. Only behind Sub-Saharan Africa does South Asia have the second-highest number of public health emergencies related to the use of unclean water and sanitation. According to logistic regression models, access to better water and sanitation, particularly in the post-neonatal era, is strongly linked to a decreased likelihood of child death. The risk of child mortality is decreased by higher parental educational attainment and household wealth, however the combined household wealth and place of residence variable showed that children living in urban regions had a higher mortality risk than those living in rural areas. These results highlight the significance of having access to clean water and better sanitation to lower the number of children dying from infections caused by contaminated water. Additionally, they advocate for more study into how access to clean water and better sanitation help the world reduce child mortality, particularly in light of the Sustainable Development Goals of the United Nations.

Keywords: Water and Sanitation • Child mortality • Sustainable development goals

Introduction

Globally, almost one in four people lacked access to clean water in 2020, and nearly one in two did not have better sanitation [1]. International organisations have acknowledged the possibility of preventing and/or reducing illnesses brought on by contaminated water and inadequate sanitation. These groups have since expanded access to better water and sanitation infrastructure. For instance, the Millennium Development Goals (MDGs) and Sustainable Development Goals (SDGs) are two objectives the United Nations (UN) set for global development during fifteen years (SDGs) [2]. The World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) launched a Joint Monitoring Programme (JMP) for water supply and hygiene, a decade earlier, in 1990. It was started to measure and report on the development of clean drinking water, Sanitation, and Hygiene (WASH). 84 countries today have more than 99% access to basic safe drinking water services, and 62 have more than 99% access to basic sanitation services because of international and national investments in improving water quality and providing securely managed sanitation facilities. Along with the aforementioned initiatives, the SDGs have established the following goals:

1) Goal 6 (SDG.6): Clean Water and Sanitation.

2) By 2030, all people will have equitable access to clean drinking water that is both inexpensive and available.

3) By 2030, all people will have access to appropriate sanitation that is both equitable and cheap, and open defecation will be eliminated.

The SDG.6 objective may not be met by 2030 [3]. If access to clean water and sanitation continues to improve at the current rate. Researchers examining the standard of Sub-Saharan Africa and South Asia are two important places where research on water and sanitation and how it affects public health has been concentrated. Five South Asian nations with low to intermediate per capita incomes were included in this study. Afghanistan, Bangladesh, Nepal, Pakistan, and the Maldives were all taken into account. These are listed as the second-worst region for inadequate water and sanitation facilities. First, South Asian nations have had difficulty advancing water and sanitation, in part. Notwithstanding tremendous development in recent years, their susceptibility to natural and man-made disasters years [4]. The four poorest nations in South Asia, according to the classification, are Afghanistan, Pakistan, Bangladesh, and Nepal, which, notwithstanding the considerable improvement in the standard of upkeep and further investment, water and sanitation nevertheless confront difficulties. Despite improvements in access to these services for the Maldives, serious levels of water deterioration caused by excessive salinity and contaminated water have been reached. Due to the Maldives' geographic susceptibility to climate-related calamities and hazards such as drought, flooding, excessive precipitation, and a rise in sea level, the risk to the water sector is considerably higher. Additionally, despite the fact that about 40% of the urban population in South Asian nations lives in slums, many of them have little to no access to proper sanitation systems and clean water [5]. The range for having no access to clean drinking water and better sanitation overall for our five chosen nations.

Discussion

In this study, we focused on specific age groups of children under the age of five and investigated the direct effect of water and sanitation facilities on the likelihood of a child dying in a family. The findings demonstrate that children under the age of five in various age groups benefited significantly from better access to drinking water and sanitary facilities. Reduced death rates for neonates reached 13.8%, and for post-neonatal kids, they were much higher at 24%. This result complements earlier research that highlighted how water and sanitation have a stronger influence on post-neonatal child mortality than on neonatal children. The literature explains that increased post-neonatal children who are exposed to diarrhea-related infections have less benefit from nursing, consume more water for feeding and food preparation, and are more likely to learn to crawl. However, after adjusting for fundamental demographic factors, the quality of water and sanitation facilities for infants aged 12 months-59 months did not significantly affect the likelihood of fatality. Unexpectedly, this trend deviates from prior research that emphasised child death rates as the main outcome variables in relation to the standard of water sources and sanitation infrastructure.

Conclusion

The risk of child mortality is directly correlated with the quality of drinking water and sanitation, according to this study. Our study, which relied on data from the DHS of five South Asian nations-Afghanistan, Bangladesh, the Maldives, Nepal, and Pakistan shows that access to better water and sanitation is crucial for lowering avoidable child fatalities, particularly among post-neonatal children. The risk of child mortality is influenced by several demographic factors, most notably parental educational achievement, family wealth, and site of residence, in addition to the direct effects of water and sanitation. Additionally, this study has confirmed the significance of straightforward access to better water supply and sanitary conditions to lower child death rates. The advantages go well beyond raising children's chances of surviving and being healthy; they may also improve the living conditions of other age groups and communities, particularly in less developed nations and areas. Numerous lives have been improved as a result of the worldwide effort to expand access to better water and sanitation, but more work still needs to be done.

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