

Best of UNICEF Research 2018

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The Office of Research – Innocenti is UNICEF’s dedicated research centre. It undertakes research on emerging or current issues in order to inform the strategic directions, policies and programmes of UNICEF and its partners, shape global debates on child rights and development, and inform the global research and policy agenda for all children, and particularly for the most vulnerable.

Publications produced by the Office are contributions to a global debate on children and may not necessarily reflect UNICEF policies or approaches. The views expressed are those of the authors.

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The UNICEF Office of Research – Innocenti would like to thank all the country offices, regional offices, National Committees and HQ Divisions that participated in the *Best of UNICEF Research 2018*. Special thanks go to the external panel and to the Office of Research – Innocenti staff who reviewed the submissions, to Scriptoria Sustainable Development Communications for writing the summaries, to Patricia Arquerro Caballero who coordinated the project, to Alessandra Ipince, *Best of UNICEF Research* Intern 2018, and to Sarah Marchant who managed production.

Foreword

The Office of Research – Innocenti is pleased once again to showcase a collection of the best research undertaken or supported by UNICEF staff and offices around the world.

The ‘Best of UNICEF Research’ exercise has become eagerly anticipated throughout the organization. Staff in country offices particularly welcome the spotlight on work that helps to shape practice, programming and policy for children around the world.

As evidence of this engagement, the number of submissions which come from all parts of UNICEF, including National Committees continues to rise, as does the diversity of topics and methods. This year our highlighted research projects were selected from 104 eligible submissions. All regions were represented, as were most major areas of UNICEF programming. While fields such as health, nutrition, education and water, sanitation and hygiene (WASH) have generally been strong areas of evidence generation for UNICEF, it is encouraging to see child protection – a relatively under-developed field of research – showing prominently in the submitted projects, as well as an increase in cross-sectoral research.

UNICEF’s 2018–2021 Strategic Plan commits the organization to using evidence to achieve its ambitious results for children. In this context, the Best of UNICEF Research is one of the ways the Office of Research – Innocenti provides entry points for discussion on the relevance of good quality, ethical research to programming and practice.

The research pieces presented here examine questions about children’s lives that range from the positive effects of female teachers, the long-term disadvantage of experiencing a drought during childhood, the impact of growing up in the shadow of violence, and the challenges of addressing social norms around harmful practices. The projects demonstrate some imaginative use of quantitative, qualitative and mixed methods, innovative approaches including meteorological models (see Ethiopia)

and blood tests (see Mali) and participatory methods of engaging with young people (see Thailand and Ethiopia).

Above all, several projects illustrate the distinctive advantage of undertaking research within an organization with global programmatic and policy reach, in partnership with academic and policy institutions. Some projects start from the context or reality on the ground, responding to the immediate programming challenges of UNICEF staff and partners; initial research on such issues may go on to shape the research agendas of others and contribute to building a body of evidence on neglected issues. Other projects examine the breadth of academic work on a topic, synthesizing and translating findings in a way that informs better programming and drives change for children. Others depend on the access afforded by UNICEF’s programmatic presence to implement the research, or are undertaken in close collaboration with government partners that can lead to shaping policy and practice at scale.

I conclude by congratulating all those whose work is represented in this publication, and acknowledge and thank the much larger number of staff and partners whose high-quality research was submitted to us this year but could not be included. I especially thank our external review panel who gave generously of their time and expertise and provided excellent feedback on the projects; and the staff at Innocenti who lead this initiative and undertook the huge task of reviewing the large number of submissions.

Once again, all of us at Innocenti hope the work of our UNICEF colleagues and their partners continues to inspire and inform us all in our work for children. As always, we welcome your feedback and suggestions.

Sarah Cook
Director,
UNICEF Office of Research – Innocenti, Florence
October 2018



For every child, answers

ABOUT THE BEST OF UNICEF RESEARCH

The Best of UNICEF Research was initiated in 2013 by UNICEF’s Office of Research – Innocenti to highlight research undertaken or supported by UNICEF offices worldwide. It aims to draw attention to a vital part of UNICEF’s work that contributes to shifting policy agendas and has a high potential to impact programmes and policies for the benefit of children.

Eligibility and assessment criteria

All UNICEF offices, including country and regional offices, headquarters and National Committees (but excluding the Office of Research – Innocenti), are invited to submit research outputs undertaken or commissioned by UNICEF and completed within the last two years, which meet UNICEF’s definition of research as follows:

“.. the systematic process of the collection and analysis of data and information, in order to generate new knowledge, to answer a specific question or to test a hypothesis. Its methodology must be sufficiently documented to permit assessment and replication. Research at UNICEF should examine relevant issues and yield evidence for better programme and policy advice.”

UNICEF Policy on Research, CF/EXD/2016-003,
19 April 2016

Submissions are assessed on the basis of: originality; relevance of the topic; conceptualization; methodology; clarity and appeal of presentation; ethical standards; and potential for impact.

Review process

- Internal review: Each submission is reviewed by two Innocenti staff, overseen by a coordinating group to ensure consistency in scoring. A shortlist of the 12 top-ranked submissions are sent for external review.
- External panel assessment: A panel of international experts with significant academic and policy experience and good knowledge of UNICEF review the final submissions, provide comments and recommend up to three pieces for additional special recognition.

Final selection

All 12 finalists are featured in the report. Those selected for special recognition are recognized at an award ceremony during UNICEF’s annual meeting of Data, Research, Evaluation, Analytics and Monitoring (DREAM) specialists. Here, members of the research teams are invited to present their findings to peers as examples of the value that research can bring to UNICEF policy and programming.

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Nigeria

Just how much do girls in northern Nigeria gain from having female teachers?



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Thailand

Why are adolescents in Thailand not learning enough about sex?



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AFGHANISTAN

Understanding threats to polio vaccine commitment among caregivers in high-priority areas of Afghanistan: A polling study

Gillian K. SteelFisher, Robert J. Blendon, Sherine Guirguis, William Lodge II, Hannah Caporello, Vincent Petit, Michael Coleman, Matthew R. Williams, Sardar Mohammad Parwiz, Melissa Corkum, Scott Gardner, Eran N. Ben-Porath

EDITORIAL INSIGHT

This piece offers an insight into polio vaccine uptake through the determining role of caregivers. Moving beyond a strictly medical approach, the paper uncovers core issues that influence the decision-making processes of parents and other caregivers, including the role of community support. A well-thought-through and comprehensive methodology with a large sample and high response rate, and honest documentation of research limitations, add great value to its findings. All reviewers welcomed researchers' concern for the security and safety of fieldworkers and participants. Two formal ethical reviews were undertaken and thoughtful discussions on consent, gender and cultural norms, confidentiality and security risks, took place.

Why do some Afghan parents say 'no' to polio drops?

The delivery of oral vaccines to children has almost eradicated polio from the world. A global effort to reach zero polio cases has come close to success, as it has united parents and other caregivers with healthcare professionals in a shared commitment to protecting children's health. In Afghanistan, one of the few countries where the disease persists, vaccinators travel from door to door to administer polio drops. This strategy has ended polio in certain countries – yet in Afghanistan, some caregivers are reluctant to accept the drops for their children.

Seeking a better understanding of this reluctance, researchers from UNICEF and the Harvard T.H. Chan School of Public Health designed a survey of Afghan caregivers to analyse their commitment to polio vaccination. Their findings – published in the peer-reviewed journal *Lancet Infectious Diseases* – provide insights into the knowledge, attitudes and experiences that underlie caregivers' decisions, and show how surveys can inform the elimination of disease.

WHY WAS THE RESEARCH DONE? BARRIERS TO VACCINE ACCEPTANCE

In door-to-door campaigns, vaccinators ask parents and other caregivers to accept the polio vaccine several times each year until their child is 5 years old. In Afghanistan, there are many reasons why a caregiver may turn away a vaccinator. They might have concerns about the safety of the vaccine. They might have heard rumours about the vaccine that have spread through the country, or heard negative opinions from neighbours or community leaders. Caregivers might not know much about the disease and how serious it can be, or they may have had previous bad experiences with vaccination campaigns.

The ongoing national polio campaign needs to operate with an understanding of these concerns, and of the underlying socio-cultural factors that will determine its success or failure.

HOW WAS THE RESEARCH DONE? ENSURING SECURITY AND A BALANCED SAMPLE

Researchers designed a survey of caregivers of children under 5 in close consultation with a local organization, the Opinion Research Center of Afghanistan (ORCA). The survey targeted districts thought to have the highest risk of polio transmission, although security concerns prevented access to Helmand and six districts within Nangarhar, Kunar and Kandahar.

To move quickly and minimize risks to interviewers and participants, the survey planners limited interviews to 15 in each settlement. They arrived at these through a rigorous stratified sampling technique and cluster design, ultimately visiting houses along a random route starting from one of several major landmarks on a list. This was an effective method of sampling in settlements where houses are not enumerated.

INTERVIEWING THE CAREGIVERS

Face-to-face interviews were conducted with a sample of caregivers of children under 5 years of age. Most interviewees were parents, but some were other adults in the household with responsibility for decisions about a child's health. The interviews were carried out in a local language, Pashto, by an interviewer of the same gender as the caregiver and from the same province.

The questionnaire had 55 questions covering the caregiver's intention of accepting polio drops for their child and their views on five possible 'threats' to accepting them. The survey was informed by the experiences of those working in the country's polio eradication programme, as well as by past studies

looking at barriers to acceptance of polio and other vaccines. ORCA advised on considerations of cultural norms, and the questionnaire was first tested with caregivers and further refined before the full survey took place. The researchers analysed the responses using a series of statistical techniques that ensured the findings were reflective of the population in the right proportions.

WHAT ARE THE FINDINGS AND WHAT DO THEY MEAN? SOME 21 PER CENT OF CAREGIVERS ARE NOT COMMITTED TO VACCINATION

Of the 2,025 caregivers interviewed, only the 1,980 who declared that they were aware of polio were included in the analysis. Of these, 79 per cent were committed to accepting the vaccine every time it was offered until their child was 5 years old (Table 1). To capture their reluctance, the remaining 21 per cent who said they would only accept the vaccine sometimes were classified as 'uncommitted'.

TABLE 1: RESPONSES TO SURVEY QUESTION – DO YOU INTEND TO ACCEPT POLIO DROPS FOR YOUR CHILD?	
Every time they are offered until the child is 5	79%
Most times they are offered	13%
Just a few of the times they are offered	8%
Just once	0%
Never	0%

21% recorded as 'uncommitted'

The data showed that caregivers' intentions were linked to their knowledge of and attitudes towards the disease, the vaccine itself (OPV), and the vaccination programme. Commitment did not, however, differ much on the basis of the caregivers' sex, age or literacy, the number of children in their household, or the age of the child to be vaccinated.

FACTS, RUMOURS AND TRUST ALL MATTER

Caregivers who were not 'very concerned' about their child contracting polio and those who did not believe the disease would be 'very serious' for them were less likely to commit to vaccination (Figure 1). Lack of knowledge or misunderstanding of polio were not always associated with a lack of commitment. Knowing that polio causes permanent paralysis was found to make no difference to commitment, whereas caregivers who knew that polio can spread through contaminated food and water were more often committed than those without this knowledge.

Rumours about the polio vaccine hamper vaccination efforts. Specifically, three rumours were linked to lack of commitment to the vaccine. A fear that the drops themselves are 'very likely' to cause polio was associated with a low level of commitment, as was a belief in false rumours that the vaccine is not halal or can give a child HIV/AIDS. Not all rumours appeared

to sway commitment: the belief that the drops could sterilize children, or that they were made with urine or blood, were not associated with lack of commitment.

Finally, lack of trust in the organizations believed to be behind the campaigns, as well as lack of trust in vaccinators, and the lack of belief that vaccinators care 'a great deal' about their child, were shown to be associated with lack of commitment to the vaccine. Respondents were much less likely to be committed if they did not trust vaccinators 'a great deal' than if they did. In contrast, perceptions of vaccinators' knowledge did not appear to be related. Perceived lack of support for vaccines among prominent community members was associated with a lack of commitment. Caregivers who reported that religious leaders in their neighbourhood did not believe giving the vaccine to neighbourhood children is a 'very good idea' were significantly less likely to be committed. Similarly, believing the same of neighbours was important.

FIGURE 1: THE COMPLEX LINKS BETWEEN CONCERN, KNOWLEDGE OF SPECIFIC ISSUES AND COMMITMENT TO VACCINATION (N = NUMBER OF CAREGIVERS WHO RESPONDED BY RELEVANT CATEGORY)

Are you concerned or not concerned that [your child] may get sick with polio this year?



Of those who answered not very concerned (n=802), 33% were uncommitted



Of those who answered very concerned (n=1,178), 15% were uncommitted

What are the ways [child] could get sick with polio? From food that has been contaminated by faeces that has polio virus in it



Of those who answered is not a way or don't know (n=927), 31% were uncommitted

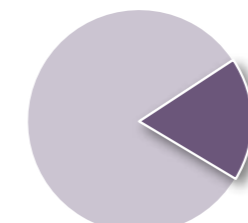


Of those who answered is a way (n=1,053), 14% were uncommitted

If [your child] were to get sick with polio, would that sickness be serious or not serious?



Of those who answered not very serious (n=248), 41% were uncommitted



Of those who answered very serious (n=1,732), 18% were uncommitted



Of those who answered is not a way or don't know (n=706), 41% were uncommitted



Of those who answered is a way (n=1,274), 14% were uncommitted

Source: Developed on the basis of tables contained in the full report



Vaccinators mark each house visited to indicate number of vaccinated children inside.

EMERGING IMPACTS

This research is part of a larger collaboration between UNICEF and the Harvard Opinion Research Program, and part of an ongoing series of polls to support the Global Polio Eradication Initiative in its goal of eradicating polio worldwide. The findings, together with results from polls conducted in Pakistan, Nigeria, Somalia, the Democratic Republic of Congo and India, have helped lay the foundation for a global polio communications strategy.

The results of this survey have already been used to inform UNICEF work in Afghanistan, including its strategic Communication for Development (C4D) activities. The findings were discussed in a collaborative workshop involving the UNICEF and Harvard teams and more than a dozen members of the Afghanistan Ministry of Public Health, as well as partner organizations including the World Health Organization. The results have also been formally shared at regional meetings and with other country offices and organizations. To advance the global dialogue around the social demand for eradication, findings were also presented in a podcast series to accompany the paper published in the *Lancet Infectious Diseases*.

NEXT STEPS

The survey has highlighted, first and foremost, that trust is a critical factor in polio vaccine acceptance. Trust may be built when local organizations take a lead in polio campaigns. These vaccinators should receive training that goes beyond the practicalities of administering vaccines to cover effective communication with caregivers.

The survey also suggests that not all knowledge influences caregivers, but some appears to – such as the understanding that polio is transmitted through food and water. Future research should seek to explain in further detail why certain types of knowledge may motivate caregivers to accept vaccines. In the meantime, communication efforts can be designed to fit local cultural norms (particularly around religious acceptance), focus on providing facts about transmission, and share positive messages that counteract rumours and strengthen community support for vaccination.

As the effort to end polio proceeds, the lessons learned from this survey can be extended through further research to other childhood vaccination initiatives. Wherever children depend on the commitment of their caregivers to receive vaccinations, those caregivers are an integral part of a programme's success, and their voices should be heard.

For full details of research methods and findings, link to the full report

[www.thelancet.com/journals/laninf/article/PIIS1473-3099\(17\)30397-3/fulltext](http://www.thelancet.com/journals/laninf/article/PIIS1473-3099(17)30397-3/fulltext)



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BRAZIL

Lives interrupted: Adolescent homicides in Fortaleza and in six municipalities in the state of Ceará

UNICEF Brazil, Legislative Assembly of the State of Ceará, Government of the State of Ceará

EDITORIAL INSIGHT

The report was commended by external and internal reviewers for its pioneering approach to interviewing the families of recent homicide victims in high-risk neighbourhoods: “A brave and compelling study that offers an innovative and captivating way of conducting and presenting research.” The originality of the report was noted, including its engaging structure and use of storytelling to present the evidence based on individual victims’ stories, effectively contextualizing and bringing the findings to life. The objectives of the study are clearly stated and well presented, and the methodology well articulated, with robust analysis. Its potential for socio-economic and political impact and its strength as an advocacy tool, are impressive.

Why are adolescents murdered in Brazilian cities?

Brazil has one of the highest homicide rates in the world. Adolescents between the ages of 12 and 18 are at greater risk of murder than any other cause of death. In Brazilian cities, nearly 4 in every 1,000 young residents are murdered before the age of 19. The daily toll of these homicides rose six-fold between 1980 and 2014; it now surpasses 30 murders per day and shows no signs of slowing.

UNICEF Brazil, working with the legislative assembly and government of the Brazilian state of Ceará, tackled the challenge of collecting information about young murder victims in dangerous city outskirts to discover why the lives of so many adolescents are brutally cut short. Their survey of victims’ families in seven municipalities in Ceará found that the adolescents murdered were generally black, poor and lived in the most violent neighbourhoods. The evidence gathered is helping municipalities take steps to make the most dangerous neighbourhoods safer.

WHY WAS THE RESEARCH DONE?

In Fortaleza, the state capital of Ceará and home to 2.6 million people, over 10 adolescents in every 1,000 were murdered in 2014, more than in any of the other 26 state capitals. In 2015, 817 young people were killed. Adolescent homicides are usually concentrated in the most vulnerable areas in a few cities. In Fortaleza, 44 per cent of the murders occurred in 17 (of the city’s 119) neighbourhoods.

Lack of information means that policies that try to help young people who are vulnerable to crime and violence are ineffective. Without an understanding of the situations that face teenagers in big cities and of how those young people struggle to survive, efforts to

protect them largely fail. Researchers set out to learn why young people are so likely to be murdered, in order to underpin preventive action.

HOW WAS THE RESEARCH DONE? DETAILED EXAMINATION OF DEATH CERTIFICATES

Researchers compiled data on the age, sex, race, religion and documentation of adolescents aged between 12 and 18 years who had been murdered in 2015 in the seven municipalities of Ceará. To do so, they examined the death certificates provided by health secretariats, from which information was also gleaned to identify the families of 418 young victims.

SURVEYING VICTIMS' FAMILIES

The researchers then devised a questionnaire and pre-tested its 139 questions, before rolling it out in the seven municipalities. An ethics committee vetted the questionnaire to protect the identity of families and the information they would provide, trained the surveyors and tracked the progress of the survey. Because of the dangers that the interviewers and interviewees would likely face, the team cleared the survey plan with UN security and the Ceará public safety authorities.

The surveyors interviewed just over half of the victims' families: 37 per cent had moved away, while 9 per cent declined an interview, often fearing for their safety. Besides conducting interviews with the 224 available and willing families, the researchers organized 11 public hearings involving 1,638 people as opportunities for other members of the community to express their views. They also arranged four focus-group discussions representing families, social and health workers, teachers and law enforcement officers.

TELLING THE VICTIMS' STORIES

The researchers used a storytelling research method to supplement their quantitative findings with more complex depictions of the issues surrounding the deaths. Piecing together the life histories of six adolescents was an important part of the study. The storytelling grounded the findings in a complete picture of young lives, and challenged misconceptions around the personalities and backgrounds of murder victims.

THE 12 CRITICAL RISK FACTORS

Common experiences of victims:

- Teenage mother
- Murdered friends
- Not in school
- Experimented with drugs
- Informal work from a young age

Larger factors:

- Access to guns and ammunition
- Urban segregation
- Police intimidation and aggression
- Few murders reported and few murderers convicted
- Inadequate remedial services
- Media coverage of violence
- Violent neighbourhoods

WHAT ARE THE FINDINGS AND WHAT DO THEY MEAN?

The trauma of murder persists through generations. Suffering, fear and a deep feeling of injustice oppress the families of young people who have died violent deaths.

THERE IS NOT ONE RISK FACTOR, BUT MANY

The study found 12 critical risk factors that increase the risk of adolescents being murdered. For example, young people from poor, uneducated families who had dropped out of school and taken informal jobs before the age of 14 were more at risk, as were those who had been threatened, had experienced conflict in their communities, had access to firearms or had been sentenced for breaking the law. Adolescents with these experiences are more likely to be murdered than are other adolescents in the same ethnic group with similar income and education.

VICTIMS ARE TYPICAL ADOLESCENTS

Raul,¹ a tattooed 18-year-old bearing the scars of leprosy, beaten and shot by police while seeing his 13-year-old girlfriend home, was typical of the young victims. Most victims were black or brown, male, 17 years of age on average and lived in impoverished neighbourhoods (Figure 1). Many had a girlfriend or boyfriend; a few had children of their own.

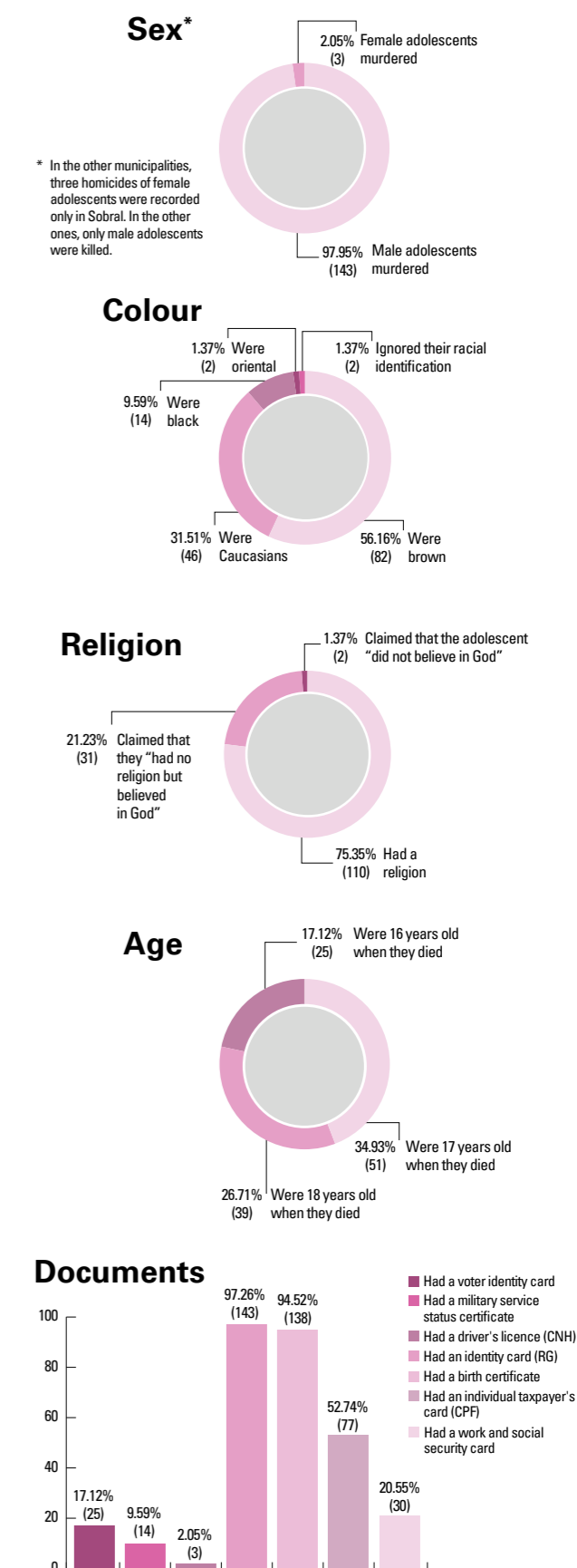
Vitória, a 17-year-old who lived with her parents, was shot by her jealous boyfriend while nursing her baby son. In a community accustomed to violence and where inequality, racism, machismo and firearms are rife, no one reported the murder. Like Vitória, over 70 per cent of adolescents murdered in Fortaleza were raised by their families and lived with their parents.

Female victims often became mothers in their early teens – as did many of the adolescents' mothers before them. Some 8 in 10 of the victims had been raised by their mothers alone, often sharing cramped living space with grandparents, uncles and cousins and surviving on their mothers' temporary, low-paying jobs. Half of the victims' mothers and almost as many of their fathers had never finished primary school, and few had completed high school. Financial support from *Bolsa Família*, a social protection programme that covers two thirds of the families interviewed, had failed to counter this cycle of teenage pregnancy, poverty and poor schooling.

"When John died, he had killed 14 people. Looking at his story, I see how fragile his relationships were. That boy didn't belong to his family, to his neighbourhood, to his community. He didn't belong to anybody."

Director of a socio-educational centre in Fortaleza

FIGURE 1: PROFILE OF 146 ADOLESCENTS MURDERED IN FORTALEZA



Source: Page 9 of full report

EDUCATION, LEGAL AND HEALTHCARE SYSTEMS FAIL ADOLESCENTS

Antônio, abandoned by his mother and raised by his grandmother, started work when he was 6 years old. With little schooling, he never learned to read or write. When he was stoned to death, he was only 12 years old and was still unable to recognize all his colours and letters. The motive was never established. According to some, he had witnessed a fight between two gangs. Others said he was involved in drugs. Those who knew him, though, denied this and described him as just “a working, active boy” with an ordinary childhood: “He used to fly kites, play marbles, play soccer, dance, play make-believe as a salesman and builder. He was reserved and didn’t talk to others outside our family.”

Over 70 per cent of the adolescents murdered in 2015 in the seven municipalities had been out of school for at least six months. Children quit school for many reasons – to work, to care for siblings, or simply because of lost documents or missed enrolment deadlines. Keeping students in school is an ongoing challenge.

“Can you imagine what it’s like to grow up believing this is ‘normal’, that it’s something that happens every day?”

Claudio Marques, Homicide Division,
Civil Police Department

Many healthcare workers, besides not having the skills to deal with adolescents, are afraid of them. Drug abuse – marijuana, alcohol and cigarettes – is common. There are few facilities and professionals to help adolescents who suffer mental trauma stemming from the effects of violence. Likewise, except in one municipality, projects to engage young residents are uncommon. Those that do exist often involve rules and punishments that dissuade rather than encourage.

Families seldom seek the help of safety and support programmes, such as the Guardianship Council and Social Assistance Referral Centre. Of the 146 families in Fortaleza that the researchers visited, only one in four had sought support or counselling.

Daily needs are more pressing, and for many adolescents in poor urban areas this means earning their own living from an early age. Only 4 of the 224 young victims covered by the survey had never worked. With few openings for training or apprenticeships, however, most opportunities to earn are precarious and poorly paid.

DETENTION AND NON-CUSTODIAL PUNISHMENTS MAKE THINGS WORSE

Almost half of the adolescents murdered in Fortaleza had been detained or required to do community service. Their punishments, sometimes only tenuously linked to their offences, seemed to make them more, rather than less, vulnerable. Managing non-custodial sentences is given over more and more to ill-equipped municipalities. Visits to offenders are infrequent, meaning that chances to prevent adolescents spiralling into trouble are missed.

“It all happened very quickly. He experienced it all at once. In only one year, he became involved with bad friends, dropped out of school, got into fights, robbed people, used drugs, was placed under socio-educational measures and was murdered.”

Mother of a victim

ILLEGAL GUNS AND FEW CONVICTIONS ESCALATE VIOLENCE

Clashes among drug dealers and other criminals, crimes of passion, misunderstandings and territorial claims are among the leading causes of adolescent murders. Carlos, a poor black teenager, was shot by the ex-husband of his girlfriend as he sat on the pavement one evening chatting to a cousin. Like Carlos, half the victims died within 500 metres of their homes.

Only 3 per cent of juvenile murder cases in Fortaleza in the five years to 2016 resulted in a conviction. In communities where violence is the norm, distrust of the criminal justice system and fear of retaliation mean that families seldom press charges. Almost half the victims covered by the survey had been threatened, but only four had sought help. Policing that should keep danger at bay is more often intimidating and aggressive. In Ceará, many of the illegal guns seized by police somehow end up back in the hands of criminals, and so the cycle goes on.

EMERGING IMPACTS

Early results of the survey were presented to Ceará’s legislative assembly in 2016, along with an urgent message: some 8,000 other adolescents in the state were vulnerable to murder if rapid prevention measures were not taken. The Ceará State Committee for the Prevention of Adolescent Homicides immediately organized meetings to consider the evidence gathered by the study.

In Ceará, municipalities are now issuing regular bulletins on the murder of adolescents and guidelines for institutions and organizations tasked with providing support to victims’ families. Fortaleza, the Brazilian city with the highest adolescent homicide rate, has established a special committee on the prevention of adolescent homicides that has allocated US\$800,000 for prevention programmes. Fortaleza also played host to 10 Brazilian states to discuss the recommendations of the survey. Farther afield, Rio de Janeiro and São Paulo are following suit.

RECOMMENDATIONS FOR PREVENTING ADOLESCENT HOMICIDES

- Support bereaved families
- Expand social programmes in violent urban areas
- Control guns and ammunition
- Bring down school dropout rates
- Help young people get proper jobs
- Train police in child rights
- Investigate murders and prosecute murderers

Findings were also discussed in public schools and communities. The survey recommendations were widely disseminated via Facebook, and 2,000 communication kits containing key findings were distributed to municipal managers, libraries and various violence research groups throughout Brazil.

NEXT STEPS

Discussion among representatives of a range of institutions has produced seven key recommendations.

Social and economic marginalization places adolescents at risk in numerous ways. One area for future research is to look for evidence of approaches that successfully protect children from violence and crime. Another will be to tally the costs and benefits to municipalities of policies to protect children.

For full details of research methods and findings, link to the full report

www.unicef.org/brazil/pt/br_lives_interrupted.pdf

¹ Names have been changed to protect identities.



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CHINA

What could cognitive capital mean for China's children?

Douglas J. Noble, Kathryn Martin, Lisa Qin, Pia Britto, Margo O'Sullivan, Jillian Popkins, Ron Pouwels, Robert W. Scherpbier, Rana Flowers

EDITORIAL INSIGHT

An original and ground-breaking report, with high potential for impact and uptake by UNICEF and others globally, facilitated by its good use of evidence-based linkages to the Sustainable Development Goals. The external panel noted that "the proposed early childhood development package around nurturing care is well founded and returns on investments in cognitive capital formation can be a game-changer in China and emerging middle-income countries", by offering a framework to synthesize multi-sectoral efforts into an integrated approach to policy and programming in China and abroad. The internal panel also highlighted the article's strong conceptualization and clear presentation.

What dividends could investment in children's early years deliver for China?

Between birth and the age of 5, children's brains grow rapidly. At this stage, they begin to develop the foundation on which they will build intellectual skills to acquire and understand knowledge, form beliefs and attitudes, and make decisions. From this perspective, early childhood interventions in nutrition, health, education, child protection and social welfare systems – all of which help optimize brain development – represent investments in human potential that will pay off in decades to come. A UNICEF review of global research into childhood development provides a compelling argument for China to build 'cognitive capital', which could also deliver economic dividends in the future by investing in children's early years.

The review was triggered by the Chinese Government's need to address the challenges it faces as it moves from a middle- to a high-income country, including inequity, economic slowdown and an ageing population. UNICEF researchers reviewed evidence on the benefits of early childhood interventions and the emerging concept of cognitive capital to suggest ways in which the government could boost the contribution that every person makes to the economy and the well-being of the country. The findings, and the proposals made for the way forward, have influenced the government's evolving approach to children's development and how this links to the country's mid-term vision for social and economic development.

WHY WAS THE RESEARCH DONE? PLANNING FOR THE FUTURE

China has seen unprecedented growth in recent decades and today boasts the world's second-largest economy. Nevertheless, like many other countries it now faces the challenge to maintain growth targets and resolve entrenched inequalities, with children significantly affected, along with growing numbers of elderly dependants. UNICEF wanted to make the case that prioritizing investment in children was an essential policy priority for China to meet growth targets based on an increasingly productive workforce, in the context of high levels of labour dependency. Key to this is the cognitive capital accumulated by investing in human brain development. By nurturing children in their early years, governments can bank a range of cognitive assets (such as skills in systematically applied thought processes), which society can draw on and benefit from once these individuals grow up. Or to put it another way, well-fed and well-cared-for children grow up to be smarter and more productive members of society. Investing in brain development upholds child rights, and builds cognitive capital which could contribute to nation-building and future economic growth.

A NARROW WINDOW OF OPPORTUNITY

The idea that cognitive capital can most efficiently be developed in early childhood is related to the amazing spurt of development that a child's brain undergoes in the early years of life, when nerve cells (neurons) in the brain develop very rapidly. Moreover, the brain's development is so rapid in young children that it reaches 90 per cent of its final weight between the ages of 3 and 6 years.

*“Today, cognitive capital cements
the foundations of the wealth
of nations.”*

M. Samson, 'Cognitive capital: Investing in children to generate sustainable growth', 2016

HARNESSING THE FULL POTENTIAL OF CHILDREN IN CHINA MEANS TACKLING INEQUITIES

- 7.1 per cent of rural children are poor
- In 2014, rural children under 5 were more than twice as likely to die as urban children under 5
- In 2013, children's enrolment in three-year pre-primary schools stood at nearly 50 per cent in some provinces, despite rising to 67.5 per cent nationally

This means that the window of opportunity for optimizing brain development is fairly narrow and that children's early years have a profound impact on their future health and well-being, and in turn on a country's socio-economic development. Rapid early neural development also means that the right interventions at the right time can offset certain deprivations, such as those associated with poverty. Continued investment throughout childhood and adolescence can consolidate gains in the early years and may mitigate, or even rectify, the impact from earlier negative exposures.

GATHERING EVIDENCE

One reason UNICEF undertook this review was that the concept of cognitive capital had not yet been defined in a way that was useful in China. The UNICEF team therefore wanted to relate the concept to policies directing support and services for children in China. UNICEF focused on early childhood because as growth slows, and after decades of investment, the Government of China is increasingly interested in knowing where the biggest returns on public investment come from.

Another aim of the review was to bring together wide-ranging scientific evidence to support the benefits of such early positive interventions. Now that evidence has been gathered, the UNICEF approach is allowing teams to go beyond the concept and describe how early childhood interventions can ensure all children are reaching their developmental milestones, which is a foundation for healthier economies.

HOW WAS THE RESEARCH DONE? LITERATURE REVIEW

The team reviewed research on childhood development spanning several decades. The aim was to explore the evidence base to support the hypothesis that brain development and individual performance could be optimized through a multidimensional approach that provides very young children with decent nutrition, health, education, child protection and social welfare. To ensure objectivity and scientific rigour, as well as to communicate the findings widely, the research was published in the peer-reviewed journal *PsyCh* – the journal of the Institute of Psychology, Chinese Academy of Sciences.

DEFINING COGNITIVE CAPITAL FOR THE CHINESE CONTEXT

Once they had reviewed the research, the UNICEF team redefined cognitive capital in a way that could be usefully applied in China – describing it as “the equitable investment of resources in interventions that maximize optimal brain development in children, realize children's rights and contribute to future economic growth”. This aligns with the country's approach to social and economic development. It also reiterates a point that UNICEF underscores: investment in children's early development must take a multidimensional approach, to provide an ‘integrated framework’ of adequate nutrition, health, education, child protection and social protection.

IDENTIFYING GAPS IN INFORMATION

Existing data on education and health financing in China show wide geographical variation and inequity, but there is a lack of research on the access, costs and impacts of good quality services in childhood, which are necessary for future economic growth. In other sectors, such as child protection, data are missing. The review team highlighted some of these gaps for future attention.

WHAT ARE THE FINDINGS AND WHAT DO THEY MEAN?





BENEFITS OF EARLY CHILDHOOD DEVELOPMENT INTERVENTIONS

The review team focused on economic analyses undertaken by other research groups between 2007 and 2016. This provided evidence that the returns are highest in human capital (ranging from 7 per cent to 10 per cent) during the first three years of a child's life, when brain development is maximal.

Research has also shown that when disadvantaged children are supported by high-quality programmes between birth and age 5, the return on investment can be as high as 13 per cent. Researchers also noted that adults who benefited from comprehensive public nutrition initiatives when they were children earned around 11.3 per cent more than those who did not receive such interventions.

THE ROLE OF SOCIAL PROTECTION PROGRAMMES

Research into social protection programmes was also reviewed. The evidence gathered showed that such approaches lessen vulnerability in households, resulting in parents and caregivers being better able to nurture cognitive capital by, for example, educating children and keeping them healthy and well nourished (see Figure 1). This is particularly relevant to rural Chinese children (whose poor health and malnourishment can delay their cognitive and intellectual development) and to children left behind when their parents seek work away from home.

FIGURE 1: EXAMPLES OF RETURN ON INVESTMENTS		
Sector	Intervention	Return on investment
 Health	Promoting immunization	For every US\$1 invested in promoting immunization, returns are up to \$60
	Breastfeeding	Investments in breastfeeding may increase world gross national income by at least 0.49%, or \$302 billion a year
 Nutrition	Comprehensive public nutrition	Adults who benefited in childhood from comprehensive public nutrition earn about 11.3% more than those who did not
	Reducing malnutrition	For every \$1 invested in reducing malnutrition, returns are up to \$45
 Child protection	Preventing and responding to violence against children	Exposure to violence diminishing children's ability to reason, plan, think and communicate can lead to productivity losses that may cost China 1.7% of its gross domestic product
 Education	High-quality early childhood education for disadvantaged children	Every dollar invested in high-quality early childhood education for disadvantaged children can deliver a return of 7–13%

Source: Page 157 of full report

NEGATIVE FACTORS FOR COGNITIVE DEVELOPMENT

The researchers also looked at several shortfalls that can limit children's development. One piece of research reviewed, for example, showed that failing to protect children against violence may cost China up to 1.7 per cent of its gross domestic product. And although research has established that breastfeeding is associated with enhanced brain development, and investment in breastfeeding may increase world gross national income by 0.49 per cent or US\$302 billion per year, the necessary investments in health, education and advocacy have not been sufficient. Addressing these factors could make a real contribution to cognitive capital.

EMERGING IMPACTS

This widely disseminated paper has spurred interest at a high level in the Chinese Government about the benefits of investing more in policies for child development, with the cognitive capital concept linking to sustainable economic growth and children's rights. For example, the UNICEF paper was included in a

review of research on social mobility which informed the Nineteenth Communist Party Congress – the most important event in the country's political calendar. As a result, UNICEF China was asked to support the National Development and Reform Commission, China's macroeconomic management agency with responsibility for formulating social and economic policy, to develop a comprehensive set of policies to promote early child development, as a way to promote the quality of the labour force in the next generation.

Based on these foundations, UNICEF is continuing to engage strongly with the government and other agencies to call for including investments in services aimed at improvement in early childhood development and well-being in the government's economic planning.

In Beijing in May 2017, over 100 people from Chinese ministries, universities and national and international agencies held a high-level meeting to discuss the main areas to improve cognitive capital for children in China.



“Cognitive capital cannot be mined or traded but rather must be carefully cultivated by the most forward-looking of policies. Investments in children, particularly in the earliest years, yield dividends that not only realize human rights but also slay today's giants of inequality, deprivation and economic stagnation. These investments help pave the way to an economic prosperity characterized by the achievement of human potential.”

M. Samson, 'Cognitive capital: Investing in children to generate sustainable growth', 2016

This UNICEF research, together with the research of other groups that it builds on, provides evidence of the value of development programmes targeting very young children. Beyond China, the research has potential for global uptake and further work within UNICEF and other organizations. In this way, children's cognitive development and countries' sustainable growth will come to be viewed as one and the same

issue. Governments need to invest more and find policies that close the gaps for children's developmental outcomes at every stage of child development – this paper has contributed to the conversation on practical strategies to promote and uphold child rights in the context of well-recognized national demographic, social and economic challenges. Expanding child development initiatives now (and so investing in cognitive capital) will ensure that children benefit today, and nations benefit in the future.

NEXT STEPS

There is still a lack of contextualized research in China on interventions in childhood and economic growth, including a lack of impact and cost-benefit studies. A China-specific review of interventions that offer the highest return on investment and that have a rights orientation could help drive the research and policy agenda in this area. Further research on how the brain develops in childhood will expand on the potential of early childhood development as an investment for the future, coupled with a need to also explore the potential of investments in the 'second decade' of adolescence.

For full details of research methods and findings, link to the full report

www.unicef.cn/en/uploadfile/2017/1207/20171207114939473.pdf



EGYPT

Understanding child multidimensional poverty in Egypt

Bilal Kiswani, Luigi Peter Ragno, Marisa Foraci, Shantanu Gupta,
Lina Nabarawy, Leonardo Menchini

EDITORIAL INSIGHT

This piece was rated strongly for its robust conceptualization and methodology, and persuasive evidence for the need to study and address poverty as a multidimensional issue. The use of a life-cycle approach, with a focus on the child as the unit of analysis, was extremely effective in providing a clear overview of the diverse experiences of deprivation. The reviewers praised the inclusion of national stakeholders in a design process that enabled the collaborative definition of indicators and dimensions for analysis. Conducting assessments that are visibly linked to existing national cash transfer policies and programmes, and to the Sustainable Development Goals, further enhances its potential for uptake.

What does it really mean to grow up poor in Egypt?

Millions of Egyptian families live below the national poverty line,¹ as understood in terms of household expenditure. The latest survey, from 2015, showed 27.8 per cent of Egyptians to be poor – more than 24 million people, compared to 11 million in 2000. Yet these measures do not capture the full experience of living in poverty, which is not just about a lack of money. It includes the lack of many other things, such as access to water, health care, decent housing, information and protection.

In 2017, researchers from UNICEF Egypt, the Ministry of Social Solidarity and the Central Agency for Public Mobilization and Statistics applied the UNICEF Multiple Overlapping Deprivation Analysis (MODA) methodology to measure eight different dimensions of children's deprivation and well-being in Egypt. These dimensions were based on access to piped water, improved sanitation, adequate space in the home, information and communication devices, maternal health care, nutrition, school attendance and protection from physical violence. When the researchers combined all of these, they found that 3 in 10 children were deprived in two or more dimensions, qualifying as 'multidimensionally poor'. Their report forms a detailed picture of the different faces of poverty, providing the government with a wealth of information with which to tackle poverty from all sides.

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WHY WAS THE RESEARCH DONE?

With a young population – more than half under the age of 20 – the burden of poverty has fallen heavily on Egyptian children. Rates of stunting (when children are unusually short for their age because of chronic malnutrition, among other factors) are high in the under-five age group. Obesity, too, has emerged as a significant consequence of poor nutrition for children of all ages.

The Government of Egypt is directing numerous efforts towards reversing the rise of poverty. The country's Sustainable Development Strategy, Egypt Vision 2030, states its commitment to addressing poverty and achieving social justice, and includes the aim of giving all children access to a high-quality health system by 2030. Programmes are under way to establish a national social protection system, to enable vulnerable families to invest in their children and to break the intergenerational cycle of poverty.

To secure a better life for Egyptian children, and a better future for Egypt, these programmes need to embrace all the issues that affect children's well-being; they also need to be aware of how these issues interact. That is why government authorities decided to work with UNICEF to gain a better understanding of the nature of child deprivation in Egypt.

HOW CAN MULTIDIMENSIONAL POVERTY BE MEASURED?

UNICEF has developed a methodology called MODA. This provides a window onto how children of different ages and in different areas experience deprivation in several key ways that – separately and cumulatively – affect their ability to survive and develop. MODA is a tool that brings together different types of data from a range of sources, using a methodology that is capable of being widely adapted across age groups, regions and contexts.

“Globally and regionally, the study of poverty has shifted away from traditional approaches that evaluated poverty solely on the basis of monetary measures ... This National MODA report provides an integral reference to better address child poverty in all its forms.”

General AbouBakr ElGendy,
Former Head of the Egyptian Central Agency for
Public Mobilization and Statistics

HOW WAS THE RESEARCH DONE? ADAPTING MODA FOR USE IN EGYPT









The team consulted national stakeholders in order to tailor MODA for use in Egypt, as well as to help drive their engagement. Stakeholders included academics and representatives from the National Council for Childhood and Motherhood, the Ministry of Planning, Monitoring and Administrative Reform, the Ministry of Health and Population, the National Nutrition Institute, the Ministry of Finance, the World Food Programme, the United Nations Resident Coordinator Office and the European Union.

The stakeholders chose to focus on eight dimensions of child well-being (Figure 1), for which they developed a set of indicators for the different deprivations within each dimension. Half of the dimensions were characteristics of the household in which a child lived, while the other half focused on the child as an individual. The dimensions could be examined separately for children in both urban and rural settings and in the three age categories.

COLLECTIVE DECISIONS ON DATA COLLECTION

Stakeholders agreed that the data should be taken from the latest round of the Egypt Demographic and Health Survey of 2014. This was chosen as it provides the most comprehensive, accurate and internationally comparable data on social indicators. Using a life-cycle approach, they then divided children into three age groups: 0–4, 5–11 and 12–17 years of age. This enabled them to look at irreversible effects of multidimensional poverty in early childhood, primary school age and adolescence.

FIGURE 1: MODA DEPRIVATION INDICATORS FOR EGYPT

Dimension	Indicator of deprivation
 Water	Household of the child does not have access to piped water in the dwelling, yard or plot
 Sanitation	Household of the child does not have access to an improved sanitation facility, or is sharing with another household
 Housing	Household of the child with four or more members sleeping in a bedroom
 Information	Household of the child does not have at least one information device (TV, radio, computer) and one communication device (fixed phone, cell phone)
 Health	Age 0–4: Child's mother did not receive regular care during pregnancy, or the birth was not assisted by a skilled health provider
 Nutrition	Age 0–4: Child suffers moderate or severe stunting and/or is obese Age 5–17: Child suffers moderate or severe thinness or is obese
 Education	Age 6–11: Child does not attend primary school, or is two or more grades behind the age-appropriate grade Age 12–17: Child does not attend secondary school
 Protection	Child suffers severe physical punishment

Source: Developed on the basis of information contained in the full report

WHAT ARE THE FINDINGS AND WHAT DO THEY MEAN? MULTIDIMENSIONAL POVERTY IS COMMONPLACE

The analysis found that around 10 million Egyptian children were deprived in two or more dimensions. Of these, 3 million faced more intense forms of poverty: they were deprived in three or more ways at once. This could mean, for example, that a child had dropped out of school and was living in an overcrowded house with no clean water – a formidable set of disadvantages for any child.

Children under 5 years of age were the most deprived of all, with 37 per cent multidimensionally poor. This compared with 27.2 per cent of primary-school-age children and 23.8 per cent of adolescents over 11.

At all ages, the most common single form of deprivation was a lack of protection from physical violence (Figure 2): 4 in 10 children were subjected to severe physical punishment from a caregiver.





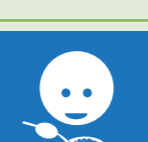


RISK FACTORS CAN PREDICT MULTIPLE DEPRIVATIONS

A statistical, logistic regression analysis of the data provided important insights into the factors that make a child more likely to be multidimensionally poor. Children from low-income households, those whose parents have little or no formal education, and those with three or more siblings all face a higher chance of multiple deprivations.

RURAL CHILDREN ARE THE MOST DEPRIVED

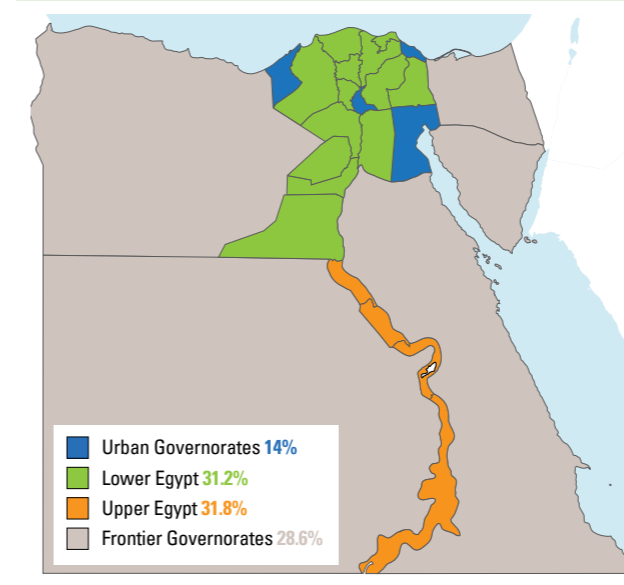
Close to 80 per cent of multidimensionally poor children lived in rural areas. Here, more than 42 per cent of children under 5 suffered multiple deprivations; in cities, the rate was only 24 per cent. Of the regions, rural Upper Egypt recorded the highest poverty rate (Figure 3), with almost half of children under 5 and a third of older children classified as multidimensionally poor.

FIGURE 2: THE MOST COMMON DIMENSIONS OF POVERTY VARY BY AGE, BUT VIOLENCE IS ALWAYS PRESENT

Children under 5:	
	Exposure to physical violence
	Lack of access to health
	Poor nutrition
Children aged 5 to 11:	
	Exposure to physical violence
	Inadequate housing
	Poor nutrition
Children aged 12 to 17:	
	Exposure to physical violence
	Lack of access to education
	Inadequate housing

Source: Developed on the basis of information contained in the full report

FIGURE 3: PERCENTAGE OF CHILDREN WHO ARE MULTIDimensionALLY POOR IN FOUR REGIONS OF EGYPT



Source: Page 3 of the Report Highlights

EMERGING IMPACTS

Publication of the research team's report in December 2017 brought child deprivation to the forefront of poverty discussions in Egypt, not least among those stakeholders involved in tailoring the MODA tool to the country's needs. The findings equipped the Government of Egypt with a nuanced, evidence-driven understanding of the dimensions of child poverty. The MODA analysis provided the comprehensive information that is required for the development of effective policies targeting the causes of poverty, as well as the multidimensional measures that will be needed to monitor progress on the Egyptian Sustainable Development Strategy and global Sustainable Development Goal 1 – end poverty in all its forms everywhere. At the same time, the report was also presented at a regional Arab League event on multidimensional poverty, thus stimulating broader interest across the region.

NEXT STEPS

The report demonstrates most urgently the need for a policy response to help children in Egypt. The three main forms of early childhood deprivation – in protection, health and nutrition – need to be addressed by a set of integrated measures focusing on early childhood development.

The researchers call for a national action plan to address malnutrition and counterbalance its effect on child poverty. Their findings also point to the potential of programmes that target households at different socio-economic levels and in different geographical areas, where multidimensional poverty varies widely.

In particular, the report has shown just how widespread violence against children is in Egypt. The authors recommended a systemic response to address the underlying causes of violence, as well as to prevent it. While the stakeholders who participated in the research formulation chose severe physical punishment as the indicator for the dimension of protection, they also stressed that no form of violence is tolerable. They call for more work to be done to end other forms of violence, exploitation and abuse, including child labour, female genital mutilation, and early marriage and pregnancy. These, too, will need to be mitigated before Egypt can truly overcome child poverty.

For full details of research methods and findings, link to the full report

www.unicef.org/egypt/reports/understanding-child-multidimensional-poverty-egypt

¹ In 2015, the lower poverty line was set at 5,784 Egyptian pounds (EGP) per person per year (about US\$800 at 2015 exchange rates).



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ETHIOPIA

Generation El Niño: Long-term impacts on children's well-being

Oxford Policy Management, the Horn Economic and Social Policy Institute

EDITORIAL INSIGHT

Reviewers praised this report for its engaging and strategic analysis of the long-term and holistic impact of drought on children's well-being. Though the findings are not necessarily novel, it offers updated and well-triangulated evidence on immediate impacts and the coping strategies of local families and communities. By joining children's voices and their personal experiences of drought to updated scientific evidence from multiple sources, the team has made a welcome contribution to the literature and has provided a valuable input to the UNICEF agenda on disaster risk management. Ethical considerations are well integrated into the research design. The cross-sectoral approach, resulting in distinct recommendations for each of UNICEF's key areas, is a valuable and practical tool.

Does drought in Ethiopia leave a lasting mark on children's lives?

In 2015–2016 an El Niño episode caused significant drought across large parts of eastern, southern and central Ethiopia, leading to widespread crop failure, emergency sales of land and livestock, and food insecurity for the communities that live there. The return of the rains is not the end of the problem. Acute malnutrition, interrupted schooling and exposure to conflicts and violence – all of which are immediate impacts of drought – can affect children's capabilities and well-being for the rest of their lives.

In the year following the El Niño episode, UNICEF Ethiopia commissioned a research project, undertaken by Oxford Policy Management and the Horn Economic and Social Policy Institute, to understand how the drought had affected children. The immediate hardships of the dry years were clear, and still fresh in children's minds; however, the researchers had an eye on the longer view. Through qualitative research, they showed how such a disaster can trigger a decline in livelihoods that threatens the resilience of families and affects children's long-term development. The research fills a recognized gap in evidence regarding the long-term effects of drought on child well-being.

WHY WAS THE RESEARCH DONE? A LONG-TERM PERSPECTIVE IS NEEDED

During and after the humanitarian mobilization in response to the El Niño event, donors commissioned a number of rapid assessments of the short-term impacts of the drought and the efficacy of the response. To understand the longer-term impacts of drought on children, UNICEF Ethiopia and its partners planned to explore the relationship between:

- The immediate impacts of the drought on children

- The coping strategies adopted by households in response to those impacts
- The forms of external support available to them
- How the 2015–2016 El Niño event is likely to influence the long-term well-being of children.

“Drought is lack of access to food, it is absenteeism from school, shortage of grain from home and buying food from market, it means shortage of water, it means lack of rain, it is eating only once a day.”

Young child in the Southern Nations, Nationalities and Peoples region

DROUGHT EPISODES WILL BE MORE FREQUENT IN FUTURE

Climate-change models predict that persistent drought episodes on the scale of those seen in 2015 and 2016 will become more frequent in Ethiopia in the future, placing millions of children at risk. If policies and programmes are to help set children on positive development trajectories, it is critical that they should integrate children’s needs and aspirations into the framework of resilience building.

“I fear for the drought to return back. I am afraid that my aspiration will be discontinued by the decision of my parents. I fear my parents will marry me and discontinue my education.”

Older girl, Afar

HOW WAS THE RESEARCH DONE? BUILDING A FRAMEWORK OF CAPABILITIES AND RESILIENCE

The team anchored its research on two theoretical approaches that are often used to understand well-being, but are less often combined. The first, ‘capabilities’, examines how people achieve well-being – not only through material resources, such as money and food, but also through non-material conditions (such as their position in a community); possibilities (such as of employment); agency to live the life they value; abilities (such as those gained from education); and the external context within which these are all applied.¹ The second approach, ‘resilience’, describes the capacity of people (or states or communities) to mediate the impacts of hazards, stresses and shocks (such as climate events) without compromising long-term prospects for development. In the researchers’ framework, children and their households drew upon their capabilities to be resilient to the drought. This, in turn, had consequences for how the children could develop their capabilities for adult life.

GATHERING QUALITATIVE DATA FOR THE FULL PICTURE

Guided by the framework and research questions, researchers gathered and synthesized data from across five drought-impacted regions of Ethiopia: Afar, Amhara, Oromia, Southern Nations, Nationalities and Peoples (SNNP) and Tigray. Qualitative methods were used to explore the dynamics within households that shaped children’s experiences of the drought. This involved household case studies, focus-group discussions with children and adults (Table 1), and interviews with key informants at the community, regional and federal levels.

Data were collected from a total of 649 respondents. Focus groups were run separately for children from 7–12 and 13–18 years of age to investigate the different lived experiences of younger and older children. In all, 275 children took part in these groups, with equal representation of girls and boys. Participatory methods were used in research with both children and adults.

TABLE 1: PARTICIPATORY METHODS UTILIZED IN FOCUS GROUPS AND HOUSEHOLD CASE STUDIES

Adults	
Livelihoods matrix analysis	Mapping livelihoods by distributing a pile of beans across activities and then ranking their risk and reliability on a scale. This enabled analysis of the impact of the drought on livelihood options and results, and the effects on the local economy.
Community timeline mapping	Mapping a community timeline around major events within the life of the community, encompassing shocks and disasters, infrastructure developments, weather patterns, etc. To help with subsequent discussion, the timeline was anchored to the time-specific El Niño event.
Children	
Balloon and stones	Exploring characteristics of well-being and ill-being, including how different factors are experienced and their relative importance in children’s lives.
Body mapping	Exploring characteristics of well-being and ill-being, including how these are experienced physically and emotionally, as well as the possible causes and how support can be provided to overcome difficulties.
Life-course timeline	Exploring past, current and future life situation and events which have shaped experiences of well-being and ill-being. Brings a temporal dimension and considers events that have had an impact on well-being and also how that well-being might be impacted in future.

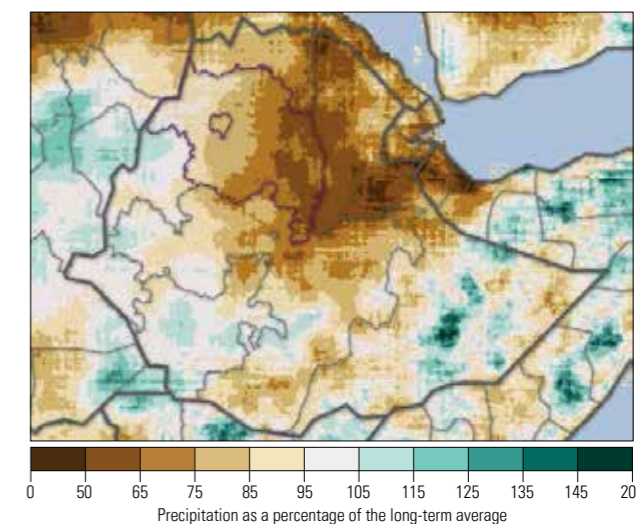
TELLING THE STORY OF THE DROUGHT

To put the research findings into context, the team drew information from a secondary data analysis, a literature review, and mapping and review of existing policies and programmes. These methods provided information on the meteorology of the 2015–2016 El Niño event (Figure 1), the humanitarian crisis that developed and the response that ensued. Importantly, it also informed the analysis of how the episode could affect children in the long term.

WHAT ARE THE FINDINGS AND WHAT DO THEY MEAN? CHILDREN EXPERIENCED IMMEDIATE IMPACTS FROM EL NIÑO

Unsurprisingly, crop failure due to the drought immediately reduced the amount of food and cash available to families (Figure 2). This affected the frequency, size and dietary diversity of children’s meals, while chronic hunger had an impact on children’s attendance and performance at school. Water for drinking and domestic uses was less available, leaving children thirsty and uncomfortable, with dry, cracked and itchy skin.

FIGURE 1: PRECIPITATION IN 2015 COMPARED TO AVERAGE

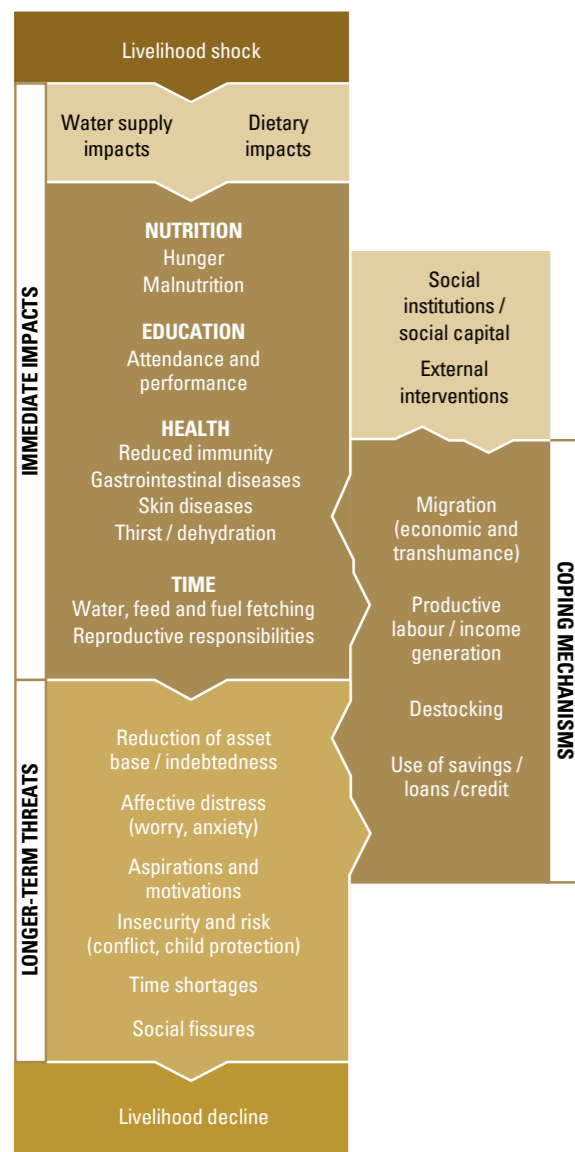


Source: Page 10 of the full report

“Sometimes I go to school without breakfast. When there is school feeding, I eat at school.”

Girl, aged 10

FIGURE 2: OVERVIEW OF IMMEDIATE IMPACTS, COPING STRATEGIES AND LONGER-TERM IMPACTS OF DROUGHT ON CHILDREN'S WELL-BEING



Source: Adapted from Figure 3, page 23 of the full report

IMMEDIATE COPING STRATEGIES CAN HAVE AN IMPACT ON LIVELIHOODS IN THE LONGER TERM

Households that were unable to maintain their livelihoods used negative coping strategies to survive, such as taking children out of school and sending them away to seek work – often far away from home. Older boys travelled as far as the cities of the Persian Gulf in search of sources of income; but even younger boys in the 7–12 age group left to seek work. Other household members, charged with finding pasture and water,

walked far greater distances than would normally be required, as these resources became scarce. Since water collection is chiefly the job of women and girls, they were exposed to potential abuse and left many young children alone at home for long periods.

Strategies like these can threaten families' unity, children's safety and communities' social capital. And, when households are forced to employ such strategies, it may be difficult to reverse them. Some households have been unable to recover their livelihoods since the 2015–2016 El Niño drought event, making them less resilient to future shocks, climatic or otherwise. With no cushion against future crises, these households and their children are increasingly vulnerable. External support that protects livelihoods therefore has the potential to build resilience alongside immediate coping mechanisms.

LONG-TERM WELL-BEING IS AT STAKE

Many of the children surveyed had dreams and aspirations that centred on being able to escape the hardships of their existing life. They wished to move to cities to get 'white-collar' jobs or to train as doctors and teachers, so that they could return to serve their communities. In the wake of drought, however, children felt disempowered about their future life course as a result of some of the strategies that households had been forced to employ. A year or more after the drought, they still worried about future droughts. Feelings of sadness and depression were particularly expressed by children who had dropped out of school.

"I feel frustration and hopelessness. The weather is not promising even today. I'm not married. I don't feel part of this community. My hope to travel and work in Saudi is damaged. Thinking about the future is difficult for me."
Older boy in Amhara

Many children who leave school to work – primarily older boys – never return. In contrast, older girls, always in danger of having to leave school in order to marry, may be given a reprieve during a drought. This is simply because their families cannot spare the resources for a wedding. Marriages resume after the drought, however, inhibiting girls' life choices and educational opportunities.

SOCIAL CAPITAL AND SOLIDARITY ARE CRUCIAL

Social capital was important in enabling households to cope with and recover from drought. Many of those interviewed described living within clan-based societies, where households are expected to help one another. They emphasized the importance of these strong social networks in instilling solidarity in the face of adversity. Unfortunately, they also perceived that social capital had weakened, as the reduced resources from drought put immense strain on relationships. At worst, the same sense of clan solidarity could end in conflict.

EMERGING IMPACTS

Based on their findings, the researchers proposed two sets of recommendations for policy and programming responses to future droughts. One set urges responders to recognize and support households' resilience to drought and, in particular, to find ways of linking emergency aid to longer-term development efforts that build capabilities. The other set seeks to inform the effective delivery of emergency responses with much greater regard for children's needs.

As the final report was only published in 2018, the uptake of these recommendations is only just beginning, and the subsequent impact is only now being assessed. UNICEF published an accessible policy brief based on the report, and the results were shared in February 2018 at the Child Research Policy Forum of the Ethiopian Ministry of Women and Children Affairs. The participants at this well-attended forum acknowledged the report's relevance to policies and programmes with a focus on children and resilience.

NEXT STEPS

This research highlights how policies and programmes that seek to build the resilience of communities should take account of children's contexts, realities and perspectives. Nevertheless, the evidence base for

informing decision making remains sparse. The authors identify five key areas of research that should be considered a priority:

- There needs to be a better understanding of child migration and whether it is a positive or a negative coping strategy in the context of persistent drought. If the long-term consequences for well-being are understood, then appropriate interventions can be implemented.
- The situation and needs of child migrants in urban areas need to be better understood, so that urban social and economic policy can incorporate a child focus.
- While this research revealed that drought has important implications for children's emotional states, further research is needed to understand how these emotional responses play out and condition children's perspectives and decisions.
- A review should be carried out of the high-level strategies and programmes in place to address disaster risk management, poverty reduction, food security and economic development. Identifying synergies and contradictions across these strategies and programmes will support decisions around how to implement interventions that reinforce each other.
- A comparative analysis of the administrative areas in Ethiopia would help to identify areas that are more conducive to resilience building than others.

For full details of research methods and findings, link to the full report

www.unicef.org/ethiopia/UNICEFGenerationElNiño_FinalReport_Web.pdf

¹ See Sen, Amartya (2001). *Development as freedom* (2nd ed.). Oxford New York: Oxford University Press.



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EUROPE AND CENTRAL ASIA

Making the connection – Intimate partner violence and violence against children in Eastern Europe and Central Asia

UNICEF Europe and Central Asia (ECA) Regional Office/Gender and Child Protection and UNFPA Eastern Europe and Central Asia (EECA) Regional Office/Gender and Strategic Partnerships

EDITORIAL INSIGHT

This report was selected for its rigorous and systematic methodology and clear policy recommendations. Decisions regarding the data selection and the rationale behind the analysis are thoroughly described, and there is a clear understanding of any limitations. The review covers a highly relevant association between violence against women and violence against children. By addressing this enormously consequential literature gap for the region, the research makes the case that a joint effort to eliminate these forms of violence will be more efficient and effective.

Violence against women and children: Can the cycle be broken?

Global evidence has demonstrated overlaps in the causes, consequences and co-occurrence of violence against children and intimate partner violence. Intimate partner violence, which includes physical, sexual and emotional abuse and controlling behaviours by an intimate partner, is the most common form of violence experienced by women worldwide. In Eastern Europe and Central Asia, where both forms of violence are prevalent, there has been limited analysis of the links between them.

In 2017, researchers from UNICEF, the United Nations Population Fund (UNFPA) and the Equality Institute traced the invisible lines between these two forms of violence in seven countries of Eastern Europe and Central Asia. Following a systematic analysis of evidence, the researchers underscored the need to view both forms of violence as overlapping issues with common risk factors. Recognizing that both forms of violence often coexist in the same household, and that children who experience or witness violence in their homes are likely to carry this legacy into the next generation, are starting points for tackling such violence.

WHY WAS THE RESEARCH DONE? A DIVIDED UNDERSTANDING OF VIOLENCE

Because intimate partner violence and violence against children are often seen as separate problems, efforts to combat them tend to involve different agencies, separate sources of funding, and different theories on how and why they occur. This is the case throughout Eastern Europe and Central Asia.

Women report high rates of violence by their husbands and partners, which may be physical, sexual, psychological or economic – for example, withholding or taking money. Many children experience violent discipline, abuse and neglect, while also witnessing the abuse of their mothers. Knowing how one form of violence affects the other, how the experiences of women and children overlap, and what factors increase or decrease the risk of violence will help to maximize prevention and response.

“Work to address [intimate partner violence] or [violence against children] often occurs separately, or in silos ... However, global evidence demonstrates overlaps in the causes, consequences and co-occurrence of both types of violence.”

Researcher

HOW WAS THE RESEARCH DONE? COLLECTING THE EVIDENCE

Researchers collected raw datasets, published survey reports and other information from 21 countries across Eastern Europe and Central Asia and undertook a secondary analysis of data and a desk-based literature review. As countries measured intimate partner violence

using different definitions and had different approaches to sampling (all of which makes statistical comparison and broader comparative analysis difficult), the team focused on those countries where the most comparable data were available: Albania, Belarus, Kazakhstan, the Kyrgyz Republic, Moldova, Turkey and Ukraine.

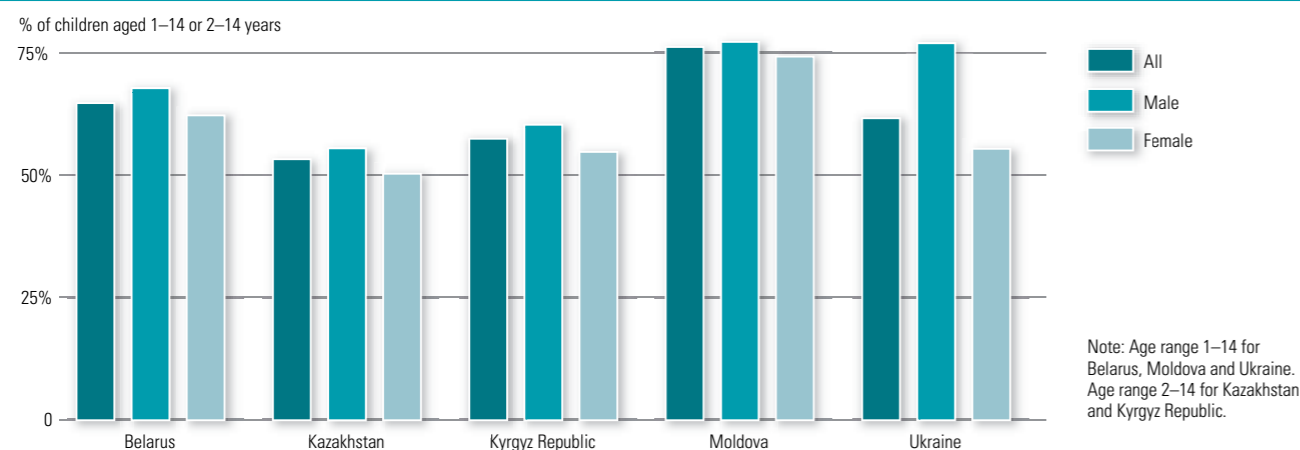
DETERMINING TRENDS AND PATTERNS

The researchers reviewed the data from the seven countries to identify major trends and patterns in the prevalence of violence against women and children, the causes and consequences of both, and factors potentially determining the risk of individuals being victims or perpetrators of violence. A wider literature review framed the regional findings in a global context.

WHAT ARE THE FINDINGS AND WHAT DO THEY MEAN? COUNTRIES SHARE COMMON PROBLEMS IN DIFFERENT MEASURE

The team found evidence of intimate partner violence and violence against children in all the countries studied, but noted considerable differences between them. In Turkey, for instance, 37.5 per cent of women who were (or had been) married or with a partner reported that they had experienced physical or sexual violence at some point in their lives. In contrast, in Ukraine the figure was 15 per cent. In Moldova, 76 per cent of children aged 1–14 years had experienced some form of violent discipline. In Kazakhstan, the figure was 52.7 per cent (Figure 1).

FIGURE 1: PERCENTAGE OF CHILDREN AGED 2–14 WHO HAVE EXPERIENCED VIOLENT DISCIPLINE WITHIN THE PREVIOUS MONTH



Source: Graph 7 page 33 of full report

TYPES OF VIOLENCE INCLUDED IN THE ANALYSIS

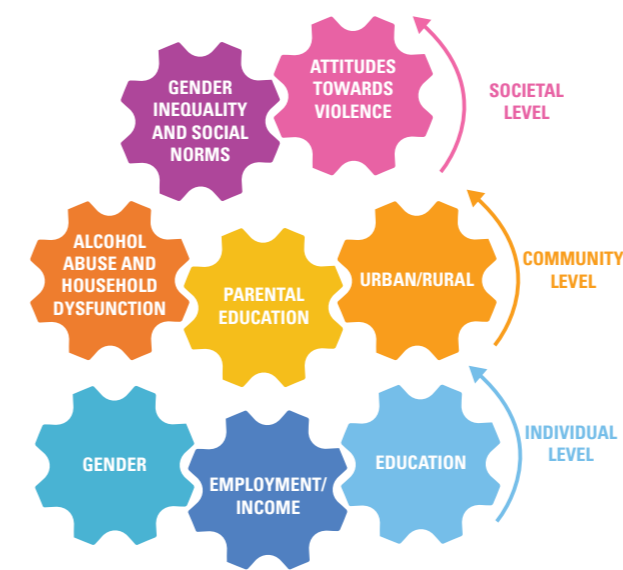
Women

- Physical or sexual violence
- Psychological abuse
- Physical violence during pregnancy
- Economic violence (withholding money for daily or household expenses, taking money earned)

Children

- Violent discipline
- Psychological aggression
- Child abuse or neglect (physical, sexual, emotional)
- Household dysfunction (abuse of mother, alcohol abuse, incarceration of a household member)
- Child marriage (before age 18)

FIGURE 2: RISK AND PROTECTIVE FACTORS FOR VIOLENCE AGAINST CHILDREN AND INTIMATE PARTNER VIOLENCE IN THE ECA REGION



Source: Developed on the basis of information contained in the original full report

UNDERLYING FACTORS INFLUENCE BOTH FORMS OF VIOLENCE

The evidence gathered supported the idea that intimate partner violence and violence against children have common underlying factors (Figure 2); some of these increase the risk of violence, while others reduce it.

The researchers identified gender inequality, social norms and society’s attitude to violence as factors associated with an increased risk of violence. For example, violence against women and children is more common in societies where men and boys are valued more highly than women and girls, and where violence is seen as a normal part of life. Some women and men in all the countries assessed believe it is acceptable for a husband to beat his wife in some circumstances, particularly if she neglects her children.

Research showed that boys and girls experience different forms of violence. For example, the review found that boys are more likely than girls to endure harsh physical punishment – which may be linked to a belief that this is needed to raise ‘tough’ boys; on the other hand, girls were more likely to be married before the age of 18. The fact that types of violence vary by gender among children also indicates a differential exposure of boys and girls to violence and reflects wider gender inequality.



Alcohol abuse and household dysfunction were identified as factors creating high-risk environments for both women and children. Children were less at risk of violence when their parents had higher levels of education. On the other hand, better-educated women were still at risk of violence from their partners. The researchers linked this to findings from other countries where women have low status in society, and where men often see women’s education as a challenge to their power.

VIOLENCE INEVITABLY HAS CONSEQUENCES

The researchers reported that women who were victims of intimate partner violence suffered physical injuries, as well as negative effects on their general and mental health. It also impaired their ability to work and care for children.

“Exposure to [intimate partner violence] can have a devastating impact on women’s health, well-being and ability to function in society. [Intimate partner violence] not only affects individual women, but it also affects their families, communities and countries.”

Researcher

Intimate partner violence hurts children, too. In Turkey, the women affected were more likely to report that their children had frequent nightmares, wet the bed, acted withdrawn or showed aggression. Moreover,



the evidence suggested that children who witness their mothers being abused are more likely to indulge in harmful behaviours, such as smoking, abusing alcohol and taking drugs when they reach adolescence and young adulthood.

Individuals in Albania and Turkey who were victims of violence as children also reported harmful health behaviours in young adulthood. In Albania, these young people were more likely to engage in bullying and physical fighting, and the young women were more likely to report unwanted pregnancy.

FAMILIES EXHIBIT CYCLES OF VIOLENCE

This research supports other global evidence suggesting that intimate partner violence and violence against children often occur in the same household. For instance, among young people in Turkey who reported that their mothers had been abused, 49.1 per cent had been physically abused themselves before the age of 18, 41.4 per cent had been sexually abused, 44.4 per cent had been emotionally abused and 43.5 per cent had been emotionally neglected.

The evidence also confirms a global finding that exposure to abuse during childhood can predict exposure to violence as an adult, either as a victim or as a perpetrator. Adults who were exposed to violence as children were more likely to abuse their own children and to experience or perpetrate intimate partner violence. Women who had witnessed the abuse of their mothers and who had been victims of intimate partner violence themselves reported the highest rates of using physical violence against their children.

Overall, this review confirms that intimate partner violence and violence against children are linked and that the cycle of violence is often perpetuated from one generation to the next.



EMERGING IMPACTS

The research findings provide important information about barriers to equal rights and empowerment for women and girls. To address the issues of violence against women and children, an integrated approach is needed to tackle the common risk factors and pathways connecting them. Importantly, reducing the prevalence of intimate partner violence should reduce the likelihood of violence for future generations.

The research has informed UNICEF child protection and early child development programming in the region. This includes recognizing the effects of intimate partner violence on infants and young children who are almost entirely dependent on primary caregivers (and their health and mental well-being) for their survival, growth, development and protection.

Intimate partner violence and violence against children are both obstacles to achieving many of the Sustainable Development Goals (SDGs). They are particularly central to SDG 5, which calls for gender equality, and SDG 16, which aims at reducing all forms of violence. As such, the results of this research should contribute to advocacy in SDG-related processes and consultations at an international level.

Key findings from the research were presented at the Commission on the Status of Women held in New York in March 2018 and are also being widely disseminated in UNICEF and UNFPA country offices to help inform planning and advocacy efforts. In addition to informing national programmes and policies for preventing and responding to violence, this research helps appreciate the costs of violence to society. The findings from the study are also integral to support for implementation of the Istanbul Convention regionally, as well as the 2018 regional conference: Turning policies into action: Eliminating violence against women and girls in Central Asia.

NEXT STEPS

The researchers conclude by providing a ‘blueprint’ for an integrated approach to future research, policy, legislation and interventions. They identify three priority areas where action could help reduce the levels of both forms of violence:

- **Investment in early childhood development:** promote early childhood development interventions that aim to involve both mothers and fathers in creating nurturing, violence-free households, and support the recognition and reporting of incidents.
- **Recognition of the co-occurrence of multiple forms of violence and intergenerational transmission of violence:** increase access for women and children to complementary, comprehensive, multi-sector services and care, in order to break the cycle of violent behaviour being passed from parent to child.
- **Changing attitudes and norms around violence:** address gender inequality to reduce exposure to different forms of gendered violence experienced by young men/boys and young women/girls, and use better diagnosis to inform change in social attitudes that normalize violence.

For full details of research methods and findings, link to the full report

www.unicef.org/eca/reports/making-connection

GLOBAL

Quality improvement initiatives for hospitalized small and sick newborns in low- and middle-income countries: A systematic review

Nabila Zaka, Emma C. Alexander, Logan Manikam, Irena C.F. Norman, Melika Akhbari, Sarah Moxon, Pavani Kalluri Ram, Georgina Murphy, Mike English, Susan Niermeyer, Luwei Pearson



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EDITORIAL INSIGHT

This systematic review was commended by internal and external reviewers for its comprehensive and well-conceptualized analysis. With clearly defined objectives and a global scope of over 8,000 studies, of which 254 were reviewed in full in order to explore quality-assured solutions, the paper offers distinct and relevant policy recommendations that will be valuable in reducing maternal and neonatal mortality in different health systems around the globe. Limitations in terms of both methodology and findings were clearly documented. This piece of research also highlights the added value of evidence synthesis approaches and the importance of open-access publishing.

How can hospitals with small budgets improve care for newborns?

In hospitals all over the world, neonatal intensive care units provide special support to infants in their first month of life. While advanced technologies and treatments are available for premature, small or sick newborns, they are not always available in every country. As a result, more than 98.5 per cent of the estimated 2.6 million newborns who died in 2016 were in low- and middle-income countries.

Recognizing that improving care for hospitalized newborns is an urgent policy priority, researchers reviewed existing evidence from individual hospitals and health systems in low- and middle-income countries around the world. They sought insight into what proactive improvements have been made in quality of care, how these have helped newborns survive and recover, and what factors have aided or hindered success. Their work displays the power of a systematic review to piece together individual institutional experiences into a global picture of hard-won improvements and persistent challenges – a picture that can be used to strengthen the ability of healthcare initiatives to care for newborns in the future.

WHY WAS THE RESEARCH DONE? NEWBORNS FACE THE GREATEST RISKS

Newborns face greater risks in the first 28 days of life than at any other time in their first five years. Low-birth-weight infants are especially vulnerable to infections and disorders of the heart, lungs and brain, which can be fatal or lead to lifelong health consequences.

In high-income countries, 3 out of every 1,000 newborns die within their first month of life; in low- and middle-income countries, the rate is 20 per 1,000. There is a clear divide in the quality of care that hospitals can provide, particularly in their neonatal intensive care units. *The Lancet's Every Newborn Series* estimates that increased coverage and improvements in care around the time of birth could avert 71 per cent of newborn deaths.

QUALITY-IMPROVEMENT STRATEGIES ARE KEY

Many routes to better care fall into the category of 'quality improvement': strategies that aim to change how providers behave and how care is organized. These initiatives can involve anything – from distributing reference materials among hospital staff to enacting national regulations. In this way, they help care providers to prevent infections, use antibiotics and oxygen safely, promote breastfeeding and bonding with parents, and adhere to humane and baby-friendly hospital care.

Work to improve quality of care is often low cost and tailored to health systems with limited resources. However, the majority of such interventions in low- and middle-income countries have been community based rather than hospital based – leaving plenty of scope to improve hospital care.

GETTING STRATEGIC ABOUT QUALITY OF CARE

In 2017, UNICEF and the World Health Organization (WHO) launched a Quality of Care Network, focusing on maternal, newborn and child health. In combination with ongoing efforts to improve standards of paediatric care, this network seeks to boost the energy with which countries address gaps in quality of care for hospitalized newborns. The area of in-patient newborn care has not been a focus of quality care standards so far, due to lack of consolidated evidence.

However, in striving to be truly strategic in its approach to improving newborn care, where should a hospital (or a country's hospital network) begin? This was the question that motivated the first systematic attempt to specifically examine quality-improvement initiatives for hospitalized newborns in low- and middle-income countries. Past reviews have focused more broadly on maternal and child care as a whole, or more narrowly on specific types of interventions. Others have included countries at all income levels. This research took a different approach by comparing the experiences of carers in relation to improved quality of service both in neonatal intensive care units and in other units with a similar focus. This was done across low- and middle-income countries, where such improvements hold the greatest promise of lives saved.

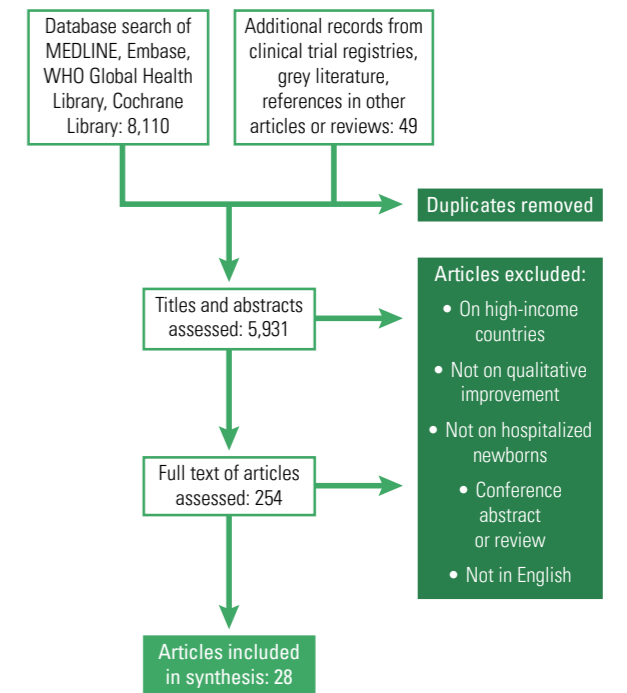


HOW WAS THE RESEARCH DONE? SYSTEMATIC REVIEW OF EVIDENCE

The team, drawn from UNICEF and six UK and US universities, conducted their review in 2017 and published their results in the peer-reviewed journal *Implementation Science*. In reviewing the literature already available, the researchers selected only publications from 2000 onwards, in order to keep up with the often-rapid pace of change in developing health systems. They also excluded papers that presented self-assessed or patient-satisfaction outcomes, keeping the focus on clinical objectives. Two independent researchers used Cochrane Risk of Bias tools to quality appraise the studies, with arbitration provided by a third researcher, if required.

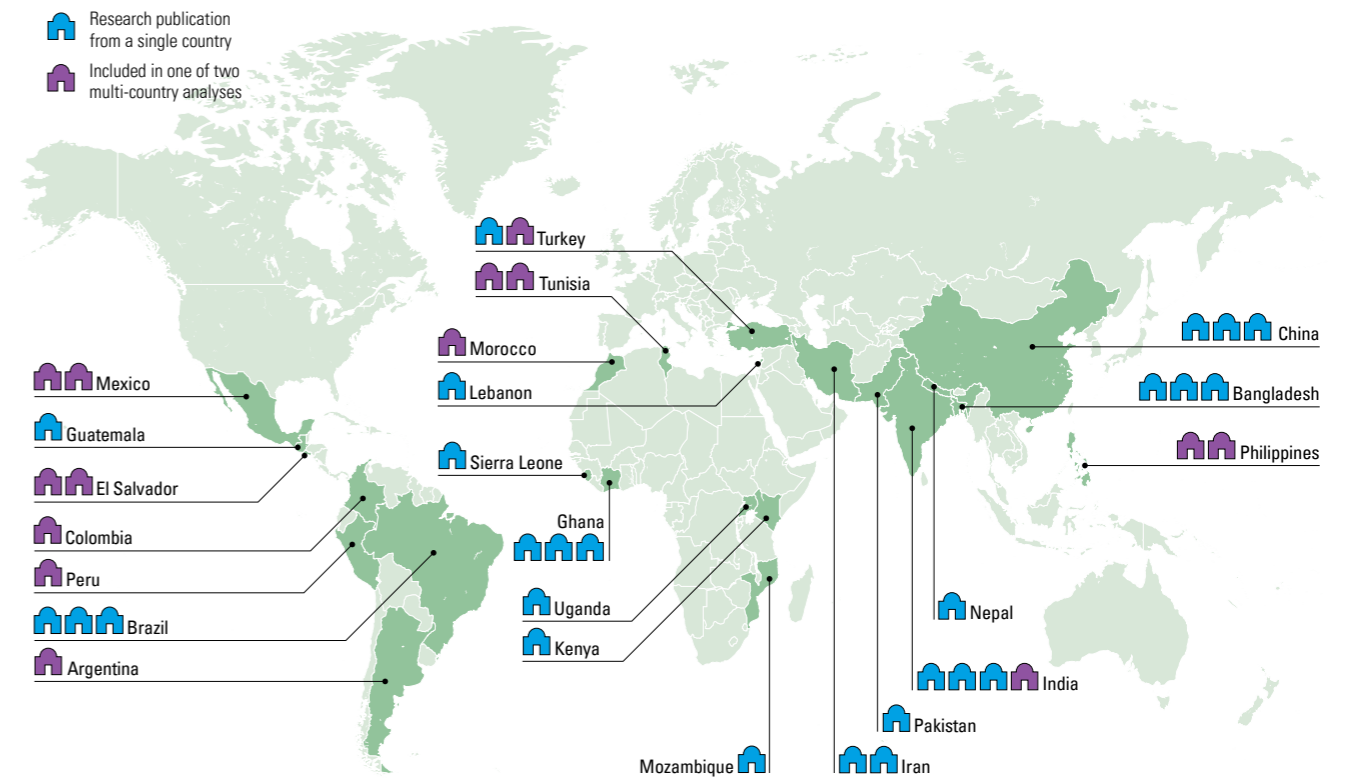
Out of an initial 8,159 papers, ultimately 28 were included (Figure 1). These specifically reported on quality improvements in hospital newborn care in 23 low- or middle-income countries, and covered 65,642 participants. The final number of studies included is a common level of reduction in systematic review methodology (Figure 2).

FIGURE 1: HOW THE TEAM FOUND 28 PUBLICATIONS IN 8,159 SEARCH RESULTS



Source: Figure 1, page 4 of full report

FIGURE 2: EVIDENCE FROM 23 COUNTRIES AND A TOTAL OF 65,642 PARTICIPANTS



Source: Developed on the basis of information contained in the full report

ANALYSING SELECTED PUBLICATIONS

The team reviewed the papers to identify: approaches that had been tried to improve quality of care; the kinds of outcomes that were measured; and what acted as a barrier to implementation of quality-improvement initiatives and what promoted such initiatives.

WHAT ARE THE FINDINGS AND WHAT DO THEY MEAN?

IN-SERVICE TRAINING IS THE TOP CHOICE

The 28 research publications reviewed consisted of 25 controlled before-and-after studies, one randomized controlled trial and two (non-randomized) interventions. Most of the publications reported on interventions at the hospital or district level, with only a few digging down to the patient-provider level (where they mainly focused on distribution of materials). Only two explored regulation and task-shifting solutions at the national level.

Twenty of the publications reported on staff training – which is often delivered along with other improvements, such as an infection-control bundle introduced in 10 countries to fight ventilator-associated pneumonia. Another frequent approach was ‘service organization’, which could involve anything from the introduction of new record-keeping systems to (as in a case from Turkey) giving patients and families their own individual rooms (Table 1).

SUCCESS SHOWS IN SURVIVAL, SHORTER HOSPITAL STAYS AND FEWER INFECTIONS

Given the high rates of death among newborns in low- and middle-income countries, it is not surprising that mortality was the outcome most frequently measured (as assessed by 16 publications). Half of the publications which used this measure showed statistically significant decreases in mortality after quality improvements. Another 10 publications assessed interventions based on length of hospital admission (since better quality of care should allow infants to go home more quickly). Of these, four reported a significant decrease in length of stay, while one showed a significant increase. Eight papers measured sepsis rates, with three reporting a significant decrease; and nine measured specific infections, with seven showing a significant decrease in rates, but one showing an increase.

SUCCESS FACTORS FROM HOSPITALS AROUND THE WORLD

- **Karachi, Pakistan:** Survival increased from 65 per cent to 84 per cent after the creation of a stepdown (intermediate care) unit, which got mothers involved earlier in the care of their at-risk infants. Average length of stay in neonatal intensive care fell from 34 to 16 days.
- **Niterói, Brazil:** A new antibiotic protocol, supervised by two neonatologists in charge of the clinical routine, reduced mortality from 20.9 per cent to 4.4 per cent.
- **Shanghai, China:** Mortality decreased from 12 per cent to 7 per cent after a package of interventions, including STABLE (Sugar, Temperature, Airway, Blood pressure, Lab work and Emotional support) education for staff.
- **Tehran, Iran:** In a controlled trial, average length of stay in a neonatal intensive care unit was 6.96 days for a family-centred care group, versus 12.96 days for the control group.

TABLE 1: SUBTYPES OF INTERVENTIONS FOUND IN THE REVIEW

Subtype	Reported in articles
In-service training	20
Service organization	9
Distribution of referencing materials to providers	8
Continuous quality improvement	7
Feedback	6
Strengthening facility infrastructure	6
Care coordination	5
Supervision	5
Decision support	2
Regulation and governance	1
Task shifting	1

CONSISTENT FACTORS THAT HELP OR HINDER QUALITY IMPROVEMENT

Some of the publications reported informally on promoters and barriers to quality improvement (through staff feedback, for instance). This was an important source to learn from. Such factors were classified at either the local level (individual to a particular hospital or location) or the system level (likely to influence hospitals and locations more widely) (Table 2).

EMERGING IMPACTS

This team’s synthesis used already-existing research findings both to fill a gap in global knowledge and to strengthen public advocacy around the issue of small and sick newborn care in low- and middle-income countries. Health systems need this kind of consolidated evidence to inform quality of care standards for newborns in hospitals. This is an issue that is in the spotlight, thanks to the launch of the Quality of Care Network by UNICEF and the WHO.

Another benefit of the review is that it has provided the impetus needed for global partners to develop a call for action – published under the title *Survive and Thrive: Transforming Healthcare for Every Small and Sick Newborn*. The review has also contributed to the development of a global situation assessment tool that has already been adopted by eight countries, and in which more have expressed interest.

NEXT STEPS

Hospitalized newborns in low- and middle-income countries face a high level of risk, and as such they should be among the prime beneficiaries of quality of care interventions and investments. The review highlights the fact that action is needed to provide the resources to strengthen research into improvements in quality of care for small and sick newborns, as well as to ensure that outcomes and costs are documented and lessons learned. Although the 28 papers synthesized in the review provide a substantial body of evidence to guide quality-improvement initiatives, more learning is needed.

The review has also set some ground rules for what future evaluations of quality improvement in newborn care should look like. Research is needed at both the micro (patient-provider) level and the macro (above

TABLE 2: QUALITY IMPROVEMENT: PROMOTERS AND BARRIERS REPORTED IN LOW- AND MIDDLE-INCOME COUNTRIES

Promoters at the local level	Barriers at the local level
■ Motivated key individuals, such as nursing supervisors	■ Over-burdened staff
■ Local champions	■ Insufficient equipment (low paper supplies, no computerized records)
Promoters at the system level	Barriers at the system level
■ High-quality national data	■ Increasing demand for hospital services
■ Structured community relationships	■ Lack of funds for medicines
■ Help from non-governmental organizations and health ministries	■ Staff turnover and redistribution

regional and across health system) level, for example. More generally, researchers also need to apply different experimental designs, while paying due attention to the statistical significance of data gathered. And more thought needs to be given to how barriers to and promoters of care can be directly explored. Finally, the way in which outcomes are measured needs to be standardized across research worldwide – as this would allow larger research syntheses in the future, and more quantitative analysis.

“The paper identifies important gaps in practice, making practical recommendations to service providers about effective meso-level interventions to prevent child deaths and improve health.”

Internal reviewer

For full details of research methods and findings, link to the full report

<https://implementationscience.biomedcentral.com/articles/10.1186/s13012-018-0712-2>



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INDONESIA

Children in Indonesia: An analysis of poverty, mobility, and multidimensional deprivation

Bjorn Gelders, Tareq Abu-El-Haj (Development Pathways), UNICEF Indonesia

EDITORIAL INSIGHT

Reviewers rated this report very highly for its rigorous methodology, its large sample size and its microsimulation approach involving three possible policy scenarios, which served to strengthen its policy relevance. With clearly defined objectives and excellent use of visual aids throughout the report, the piece presents an easy-to-follow narrative that effectively conveys children's relative positions of poverty and offers a deeper view of deprivation and its different dimensions.

Can universal child grants help end multidimensional poverty in Indonesia?

United Nations Sustainable Development Goal 1, which calls on governments to end poverty by 2030, recognizes that poverty is a multidimensional issue and places an obligation on countries to track indicators of both monetary and non-financial dimensions of well-being. It also emphasizes the important role of national social protection systems in addressing poverty and vulnerability.

In 2016, the Government of Indonesia classified 13.3 per cent of the country's children – nearly 11.3 million individuals – as living below the national poverty line. Suspecting that this figure was an underestimate, researchers from UNICEF Indonesia and the Indonesian Central Bureau of Statistics (BPS) analysed comprehensive survey data to develop a broader and more nuanced understanding of childhood deprivation. Using UNICEF's Multiple Overlapping Deprivation Analysis (MODA) methodology, they looked beyond monetary poverty to conclude that a much greater percentage of children in Indonesia are indeed affected by multidimensional poverty and deprivation. Researchers further analysed the extent to which a national policy of universal child grants – unconditional cash transfers to all families with children – could help to ameliorate child poverty and safeguard children's well-being and development. The research findings show the value of designing policies based on a more rigorous understanding of the different dimensions of poverty.

WHY WAS THE RESEARCH DONE? POVERTY LINES ARE SIMPLE, BUT POVERTY IS COMPLEX

Many governments measure child poverty using one number every year: the percentage of children living below a national poverty line, as defined by the money their household spends. Using this method, a family may or may not be considered poor, depending on precisely where the poverty line is drawn and on their circumstances in a specific year (circumstances which often change). A family might escape official poverty classifications one year but be classified as poor the next.

In addition, child well-being cannot be fully understood using a single financial poverty measure. Other dimensions of well-being need to be considered, such as whether a child is well fed, attends school or lives in a safe home environment. These can be analysed using the MODA methodology, which identifies one or more indicators of each dimension in statistical data. Children deprived in two or more dimensions are classified as 'multidimensionally poor'.

THE NEED TO MEASURE, UNDERSTAND AND ACT

The better to understand child poverty in Indonesia and address its far-reaching impacts, the researchers shaped their analysis around three main goals:

1. Integrating measures of child poverty and multidimensional deprivation in national statistics to make it easier to track progress towards the Sustainable Development Goal on poverty
2. Developing an in-depth understanding of child poverty, the better to inform public policy
3. Creating a simulation of alternative social protection policy options, including assessing the potential benefits of universal cash grants for households with children.

HOW WAS THE RESEARCH DONE? CHOOSING FINANCIAL THRESHOLDS TO MEASURE POVERTY

With technical support from the consultancy firm Development Pathways, the research team analysed data from a 2016 BPS survey of 291,414 households. This contained data on more than 1.1 million people, including 380,562 children aged under 18. The dataset was used to review a number of financial metrics – beginning with household expenditure as a measure of child welfare.

At the time of the research, the national poverty line in Indonesia was set at 354,386 Indonesian rupiah (IDR) in monthly expenditure per person. To gain a more comprehensive picture and to enable comparisons with other countries, the researchers reviewed this alongside three alternative poverty indicators: the World Bank's international threshold for extreme poverty of US\$1.90 per day (equivalent to IDR 288,132 per month); the international threshold for moderate and severe poverty of \$3.10 per day (IDR 470,110 per month); and a 'vulnerability' line of twice the national poverty line (IDR 708,772 per month).

CAPTURING ECONOMIC MOBILITY

The researchers also analysed a series of longitudinal survey interviews that BPS had conducted annually with the same 10,000 households over a five-year period. This allowed the researchers to assess how poverty levels and welfare can vary within a family over a number of years.

MEASURING MULTIPLE DIMENSIONS OF WELL-BEING

The team used MODA to analyse the multidimensional nature of child deprivation. Researchers selected 15 indicators to measure six dimensions of child well-being: food and nutrition, health, education, shelter, basic utilities and child protection.

For example, deprivation in relation to shelter was defined as living in a house with an area of 7.2 square metres or less per household member, or with a floor made of unimproved materials, such as packed earth. Deprivation in terms of protection was recorded if a child (under 18) lacked a birth certificate, was engaged in labour during the week before the study, or was a married girl under 18.

SIMULATING UNIVERSAL CHILD GRANTS

Finally, the researchers looked at how social protection measures – specifically universal child grants (UCGs) – could be used to tackle child poverty in Indonesia. They built a series of computerized microsimulations to demonstrate the potential effect of universal, unconditional cash transfers on child well-being in the country. The microsimulations were based on a hypothetical monthly grant of IDR 200,000 delivered for every child in the country within a certain age range. They simulated these multiple times using three different age ranges for eligible children: 0–4 years, 0–6 years and 0–17 years.

WHAT ARE THE FINDINGS AND WHAT DO THEY MEAN? POVERTY IS PERSASIVE

Analysis of the data produced a revealing picture of child poverty in Indonesia (see Figure 1). The findings included the following:

- One child in three can be classified as living in extreme or moderate poverty, according to international standards.
- Children are more exposed to poverty than adults: they make up 40.2 per cent of Indonesians below the official poverty line, even though they account for only 32.8 per cent of the general population.
- Poverty rates vary across the country: in some provinces around a third of children fall below the official poverty line, while in others the figure is less than 6 per cent.
- Children in agricultural households are the most likely to be poor.
- Girls and boys face the same poverty risk, but children in female-headed households tend to be worse off.
- Poverty is more complex and volatile than is commonly believed, with many Indonesian children experiencing temporary episodes of poverty.

FIGURE 1: THE PERCENTAGE OF CHILDREN LIVING IN POVERTY IN INDONESIA VARIES GREATLY BY PROVINCE



Source: Figure 2.3, page 12 of full report

A HOUSEHOLD'S ECONOMIC SITUATION CAN CHANGE RAPIDLY

The researchers found that four out of five children in Indonesia lived in households that experienced economic ups and downs. While the official Indonesian child poverty rate in 2016 was 13.3 per cent, double that figure experienced at least one year below the national poverty line between 2011 and 2015.

The data showed that, on average, around 25 per cent of those who move above the national poverty line fall back a year later – which means that there is no fixed group of children that policy interventions can easily target. Identifying this challenge was a crucial first step in the process of advising on appropriate social protection programmes that better recognize these dynamics.

BEYOND MONETARY POVERTY, NEARLY ALL INDONESIAN CHILDREN FACE DEPRIVATIONS

Almost 90 per cent of children surveyed in 2016 experienced deprivation in at least one dimension of child well-being, while 65 per cent were deprived in two or more dimensions and were therefore classified as multidimensionally poor.

The main determining factors for deprivation were the child's age, the educational level of adults in the household, household size, and monthly expenditure per person. There was not, however, a strong link between monetary poverty and deprivations in other dimensions of well-being.

If the number of children living below the national poverty line is combined with the number of children who live above it and yet still suffer two or more non-monetary dimensions of deprivation, then 67 per cent of all Indonesian children can be considered poor and/or deprived. By any measure, these are children whose needs are not being met.

SEEING POVERTY IN MULTIPLE DIMENSIONS

- More than half of all Indonesian children were classified as multidimensionally deprived despite living in households above the national poverty line.
- Indonesian children are more likely to experience deprivation in basic utilities (57 per cent), health (53 per cent), food and nutrition (34 per cent), education (30 per cent), protection (20 per cent) and shelter (20 per cent).
- Children under 5 years of age experience more dimensions of deprivation than older children. This is particularly true of health, where basic vaccination coverage and health insurance are insufficient.
- Rural children are more deprived than urban children in all dimensions except nutrition.

UNIVERSAL CHILD GRANTS ARE A VIABLE ANSWER

Microsimulations revealed that cash transfers would provide a sizeable boost to family income. They would raise the purchasing power of the average household by between 9 and 13 per cent, depending on the age-range criteria for the grant, and the poorest families would benefit the most. Such an approach would result in poverty levels dropping sharply among eligible children. In fact, the most inclusive scenario (providing grants for children aged 0–17 years) would reduce the national child poverty rate from 13.3 per cent to only 3 per cent (Table 1). The researchers suggest that the additional household spending this is likely to trigger would contribute to the local economy, with positive ripple effects across Indonesia as a whole. The simulation also projected that the country's level of inequality would decrease by 2.1 per cent or more.

Such a programme would cost the country roughly US\$14.6 billion – 1.6 per cent of its gross domestic product. This cost would decrease over time, as the child population has already reached its peak and families have begun to have fewer children.

TABLE 1: SIMULATION PROJECTIONS FOR POVERTY REDUCTION THROUGH UNIVERSAL CHILD GRANTS

	UCG 0–4 years	UCG 0–6 years	UCG 0–17 years
Percentage of children below the national poverty line			
Pre-transfer	14.3%	14.2%	13.3%
Post-transfer	7.7%	6.8%	3.0%
Percentage of children below the vulnerability line (double the national poverty line)			
Pre-transfer	58.5%	58.3%	57.1%
Post-transfer	54.0%	53.1%	48.9%

Source: Adapted from table 5.2, page 43 of full report

EMERGING IMPACTS

As the first in-depth analysis of child poverty and vulnerability in Indonesia using data from the 2016 National Socio-Economic Survey and a strong application of the MODA methodology, this research has increased government awareness that child poverty and deprivation are more widespread and complex than previously recognized. At the same time, the report offers specific guidance on a potential social protection policy response in the model of universal child grants.

The research also provided UNICEF Indonesia with an excellent opportunity to collaborate closely with the Indonesian Government, helping to strengthen government capacity in relation to child poverty measurement through hands-on technical support and training workshops. UNICEF Indonesia will continue in this collaborative role to explore alternative policies and actions that will reduce the vulnerability of children.

“The study's results serve as an important evidence base upon which UNICEF will work with and support the government to explore alternative policies and actions to tackle and reduce child poverty and vulnerability in the country.”

Researcher

NEXT STEPS

The results have significant implications for the design of social protection systems and the way that programmes should be targeted. For instance, the analysis undertaken to review the movements of people in and out of poverty over time challenge the assumptions behind 'graduation' programmes, which often view transitions out of poverty as a linear process. In Indonesia, and in many other countries struggling with persistent child poverty, further research is needed on how broad efforts to support the well-being of all children can end cycles of poverty and deprivation.

For full details of research methods and findings, link to the full report

www.developmentpathways.co.uk/wp-content/uploads/2018/05/Child-Poverty-in-Indonesia-Final-with-cover-1.pdf



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KENYA

Female genital mutilation/cutting and child marriage among the Rendille, Maasai, Pokot, Samburu and Somali communities in Kenya

UNICEF Kenya

EDITORIAL INSIGHT

Reviewers rated this research highly across all assessment criteria. They considered the research well thought out and well executed by the mostly local team. The main strength is its comprehensive, integrated mixed-methods approach, which allows for thoughtful discussion of gender, ethnic and religious issues. The research was commended for its exploration of local perceptions, including the views of young people, and for understanding, rather than condemning the practice. The ethical issues, mitigation strategies and research limitations described offer valuable insights for UNICEF programmes and research.

Where next in the campaign against female genital mutilation/cutting and child marriage in Kenya?

The United Nations Sustainable Development Goals have set a target to eliminate practices that harm women and girls, such as underage marriage and female genital mutilation and cutting (FGM/C), by the year 2030. In Kenya, a reduction in cutting – from 41 per cent of girls aged 15–19 in 1984 to 11 per cent in 2014 – makes this target appear within reach (Figure 1). Yet among ethnic communities in pastoral areas of the northeast, cutting and underage marriage are still deeply entrenched.

UNICEF Kenya commissioned research to establish the extent and drivers of FGM/C and underage marriage in five ethnic communities in Kenya; to explore the attitudes and beliefs underlying these practices and how these may be evolving; and to assess the influence of cross-border interactions. The findings will drive further education and communication efforts to end these practices.

WHY WAS THE RESEARCH DONE?

FGM/C and child marriage violate the rights of girls and women and are a manifestation of gender discrimination. Typically, cutting is upheld by deep-

rooted social norms or religious beliefs which see it as fundamental to bringing up girls properly, boosting their marriage prospects and preserving the honour of families and girls.

PROGRESS IN ABANDONING FGM/C IS GOOD BUT UNEVEN

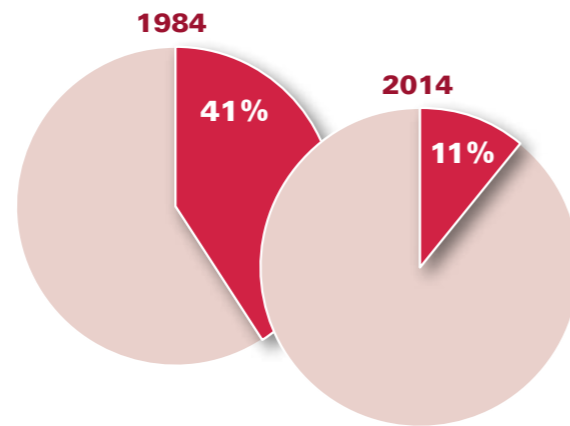
The last 25 years have seen a surge in the campaign against FGM/C and child marriage. Kenya has made great progress in discouraging these practices, but the pace of change across the country and among ethnic and religious groups is uneven (Figure 2). FGM/C and child marriage particularly persist among five ethnic communities: the Maasai, Pokot, Rendille, Samburu and Somali pastoralists on the borders of Tanzania, Uganda, Kenya, Ethiopia and Somalia, respectively. These are ethnic communities that share cultures and that intermarry.

FGM/C and child marriage have a negative impact on education – low primary and secondary school enrolment rates, high dropout rates, poor primary to secondary transition rates and high illiteracy rates. They also result in poor health outcomes – poor reproductive health and increased rates of HIV infection. FGM/C has cost implications for health and education services and negatively impact the economic development of low-income families, their communities and the country's resulting gross domestic product.

HOW WAS THE RESEARCH DONE?

The research involved a desk review of information on FGM/C and child marriage in Kenya, followed by household surveys of the Maasai, Pokot, Rendille,

FIGURE 1: DECLINE IN FEMALE GENITAL MUTILATION AND CUTTING 1984–2014 IN KENYAN GIRLS AGED 15–19



Source: Developed on the basis of information contained in the full report

FIGURE 1: Samburu and Somali in six areas (Garissa, Wajir South, Kajiado Central, Marsabit, Samburu and West Pokot) between December 2016 and March 2017. The research team designed and pre-tested the survey to ensure that it met ethical standards and would deliver statistically reliable results. Systematic and random sampling identified 6,100 households to survey. In all, the team interviewed 6,648 individuals: 1,357 boys and men aged 15–49 and 5,291 girls and women aged 10–49. Another 133 interviews sought the views and opinions of border communities.

To gather in-depth information and put the survey data in context, the team arranged 24 focus-group discussions (single sex to allow sensitive topics to be discussed freely) and sought the views of 71 individuals, who provided a range of perspectives.

These were representatives of county and national governments, community-based organizations, non-governmental organizations (NGOs), faith-based organizations and community leaders. To validate the results, the team shared the findings with the communities that took part.

WHAT ARE THE FINDINGS AND WHAT DO THEY MEAN?

Although the research indicated widespread recognition that FGM/C and child marriage are illegal, knowledge of the health and social risks was generally limited. Even when parents did know of the harm these practices can cause to girls' health (bleeding, difficult childbirth, infection, pain and even death) and development (dropping out of school), the cultural norms perpetuating the practices were powerful and persistent.

“Our culture as Maasai still remains the same. We do circumcise children, both boys and girls, though girls’ circumcision has diminished in the recent past ... during our time, girls’ circumcision was mandatory. It wasn’t an option unlike now when girls choose whether or not to get cut.”

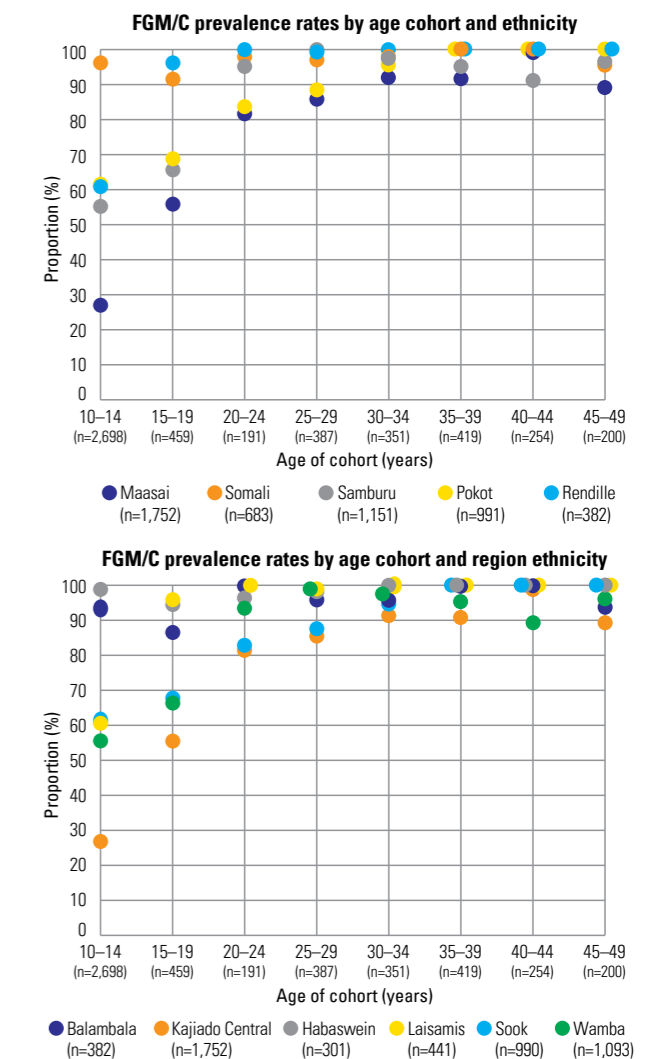
Female, 33, Kajiado Central

A key factor in the downward trend in FGM/C among Maasai seems to be that girls have more say, because they have become more knowledgeable about FGM/C. Anecdotal evidence suggested that enrolling girls in school is linked to fewer cases of child marriage and FGM/C.

MAIN MOTIVES FOR FEMALE GENITAL MUTILATION/CUTTING: MARRIAGE, CULTURE, HYGIENE AND RELIGION

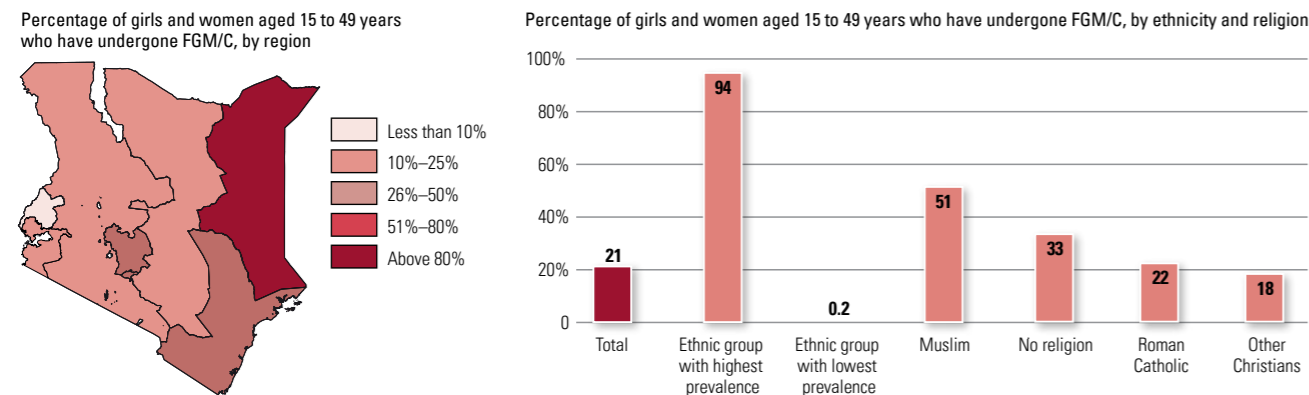
The importance of the main motives for FGM/C – marriageability (keeping girls sexually pure until marriage), social acceptance, personal hygiene, enhanced attractiveness if cut and religious identity – varied across the ethnic groups. Among Somali

FIGURE 3: PREVALENCE OF FGM/C AMONG GIRLS AND WOMEN BY AGE GROUP ETHNICITY AND SUB-COUNTY (N=4,959)



Source: Extracted from the results in Table 4, page 7 of the full report

FIGURE 2: FEMALE GENITAL MUTILATION/CUTTING IN KENYA, 2016



Source: Kenya Statistical Profile on Female Genital Mutilation/Cutting 2016

FGM/C IS NEARLY TWICE AS COMMON IN SOME ETHNIC GROUPS AS IN OTHERS

As expected, the survey found that some ethnic groups engage in FGM/C more than others (Figure 3). The prevalence of FGM/C ranged from 96 per cent among Somali girls and women, 78 per cent among Rendille, 74 per cent among Pokot and 72 per cent among Samburu to 51 per cent among Maasai.

Analysis of FGM/C among girls and women showed little to no change in the prevalence rates among the Somali and Rendille over the past 40 years, a steady decline over the past 30 years among the Pokot, and a sharp decline over the past 20 years among the Maasai and the Samburu.

(Balambala and Habaswein), personal hygiene and marriageability were the most important, whereas communities in Samburu (Wamba), Pokot (West Pokot) and Rendille (Laisamis) considered marriageability and social acceptance most important. Overall, the perceived rewards (recognition, approval, marriageability) far outweighed the penalties (condemnation, ridicule, ostracism).

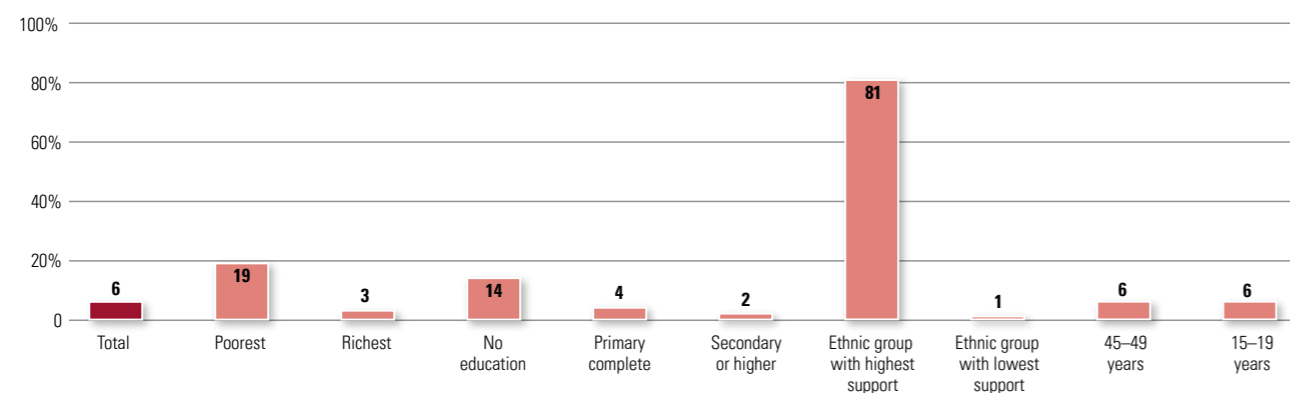
“We practise [FGM/C] ... our culture nowadays allows girls to go to school and if they don’t want to be circumcised it is okay; also if the man wants to marry them without them being circumcised it is also fine.”

Female, 36, Wamba (Maasai)

DIMINISHING LINKS BETWEEN FGM/C AND MARRIAGEABILITY

Over 60 per cent of those surveyed gave cross-border intermarriage between ethnic communities as the main reason for FGM/C. But the cause and effect relationship between FGM/C and marriage is diminishing, mainly because state agencies and NGOs, with the 2011 law prohibiting FGM/C and child marriage behind them, are ramping up their efforts to educate communities about the negative consequences (Figure 4).

FIGURE 4: PERCENTAGE OF GIRLS AND WOMEN AGED 15 TO 49 YEARS WHO HAVE HEARD ABOUT FGM/C AND THINK THE PRACTICE SHOULD CONTINUE, BY WEALTH QUINTILE, EDUCATION, ETHNICITY AND AGE



Source: Kenya Statistical Profile on Female Genital Mutilation/Cutting 2016

TENSION BETWEEN MAINTAINING TRADITION AND UPHOLDING THE LAW

Virtually everyone surveyed, including those tasked with upholding the law, cited tradition as the main reason for FGM/C. Fathers, as the head of the household, have the final say – especially on cutting girls to improve their marriage prospects. But support for FGM/C was lower (40 per cent) among younger than among older men (61–70 per cent). This means that it is important to educate men about the negative effects of FGM/C, for example through community leaders and community groups. Chiefs, village elders, teachers and religious leaders are the people most often consulted about FGM/C and child marriage, and they need to be won over. Since child marriage can often be driven by poverty, group saving and loan schemes to kick-start income-generating activities for men could alleviate the need to marry a child for gain.

“... by now some men are regretting why they married circumcised girls since uncircumcised girls do not get complications during birth.”

Male, 40, Sook

Deeper analysis showed close links between FGM/C and religion. The practice permeates Muslim communities (95 per cent), but it is also present to a lesser extent among Protestants (65 per cent) and Catholics (69 per cent).

CHILD MARRIAGE PERSISTS BUT IS DECLINING

The survey data for women aged 20–24 showed that child marriage (before the age of 18) among ethnic communities ranged from 17 per cent among Samburu to 64 per cent among Pokot, despite broad awareness of the law banning it, the health risks and social consequences. Among men aged 20–24, child marriage was far less common than among women of the same age: it ranged from zero among Samburu to 38 per cent among Pokot.

As with FGM/C, the survey found that the prevalence of and the motivations for child marriage varied across areas and ethnic communities. Common reasons given were to secure a higher bride price and because fathers insist on maintaining tradition. Shared culture across borders, mainly intermarriage, may exert indirect influence. Hardship and poverty were also mentioned as reasons for underage marriage, along with peer pressure from married girls and women (“other girls are doing it”).

However, group discussions indicated that child marriage is declining because of fear of arrest (a reason given by 63 per cent), better information about the consequences (18 per cent) and support from community leaders (8 per cent). Survey data showed that less than a third of the girls and women surveyed now believe that girls will be married before they are 18 years old. Those supporting the abandonment of child marriage said that they recognized the value of educating girls (by ensuring that they did not drop out of school) and protecting their health and rights. Evidence from Sook, Wamba and Kajjado Central suggested that boosting school attendance could have a major influence on preventing child marriage.

EMERGING IMPACTS

The research findings are helping to adapt the ongoing United Nations Joint Programme to combat FGM/C, led by UNICEF, the UN Population Fund (UNFPA) and the Government of Kenya. The partners are paying more attention to encouraging healthcare staff – who may collude in FGM/C to shift to prevention.

Children’s clubs and activities that aim to change the attitudes of boys and men and to devise alternative

THE WAY FORWARD: COMMUNICATE, EDUCATE, ENGAGE, CAMPAIGN

Communicate – tailor communication strategies to offer information specifically designed for different groups, to help them see that social expectations about cutting are no longer valid

- **Educate** – engage schools by helping teachers equip pupils with accurate information about FGM/C and child marriage and the consequences of those practices.
- **Engage** – channel men’s power as influencers and enforcers in efforts to combat FGM/C and child marriage.
- **Campaign** – identify spokespersons to advocate against FGM/C and child marriage among peer groups.

rites of passage for girls are playing a role in building support for abandoning FGM/C and child marriage. Organizing school clubs, arranging teacher training and forging links between schools and those responsible for child protection (such as the police, provincial administrations and rescue centres) are helping to fill gaps in knowledge. In a move to explain its findings to young people, a child-friendly version of the report has been produced.

NEXT STEPS

The research concludes that support for abandoning FGM/C and child marriage increases with increasing levels of education. Thus, along with communication campaigns to reach specific audiences, such as teachers and men in the ethnic groups studied, the role of education in bolstering efforts to accelerate abandonment of the practices cannot be overemphasized. Moreover, the persistence of FGM/C, despite average-to-good levels of awareness that Kenyan law prohibits FGM/C, points to the need to strengthen institutions tasked with enforcement.

For full details of research methods and findings, link to the full report

<http://uni.cf/2E7m5JN>



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MALI

The impact of school water, sanitation, and hygiene improvements on infectious disease using serum antibody detection

Anna N. Chard, Victoria Trinies, Delynn M. Moss, Howard H. Chang, Seydou Doumbia, Patrick J. Lammie, Matthew C. Freeman

EDITORIAL INSIGHT

Both internal and external reviewers commended this paper's innovative approach. Its aim of finding a new, more reliable method to measure the impact of WASH interventions using biomarkers rather than self-reported health assessments and stool tests is a highly relevant and novel contribution to the literature. By proving that these tests offer a low-cost and objective measure of disease with which to accurately evaluate WASH interventions, while also enabling the detection of multiple pathogens, the research shows strong potential for impact in WASH programming and evaluation in low-resource settings.

Does improving water, sanitation and hygiene in Malian schools reduce disease among pupils?

Diarrhoea caused by enteric, or intestinal, diseases is one of the leading causes of illness and death in children in developing countries. Access to safe water, sanitation and hygiene (WASH) is a prerequisite for health. In areas with limited resources, however, collecting accurate biological data to demonstrate the impact of WASH interventions on diarrhoea can be labour intensive, expensive and logistically challenging.

A field study in Mali, carried out by a university and government agency team from Mali and the United States of America, has shown that improving access to WASH in schools helps to reduce pupils' exposure to enteric pathogens. The research also demonstrates that detecting antibodies in dried blood spots using a commercially available laboratory procedure called a multiplex assay was a feasible way of assessing exposure to disease in low-resource settings. The research, published in the peer-reviewed journal *PLoS Neglected Tropical Diseases*, helps to strengthen the case for WASH interventions in schools as an effective way of improving children's health.

WHY WAS THE RESEARCH DONE? STRENGTHENING EVIDENCE, OVERCOMING LIMITATIONS

Research has shown that household access to improved WASH facilities reduces infectious diseases in children and adolescents. Although it seems plausible to suggest that WASH interventions in schools would have a similar effect, recent evidence to support this has been mixed.

“Increasing access to microbiologically safe drinking water, availability of soap and water and promotion of hand hygiene, and use of sanitation facilities that safely contain faeces are all strategies for stopping enteric disease transmission along the faecal-oral route.”

Researcher

Self-reported diarrhoea, which is commonly used in WASH evaluations, is prone to bias. Utilizing standardized, accurate and repeatable techniques to gather and interpret data, and applying them in different settings, would help to overcome some of the limitations of current approaches.

With this in mind, researchers set out to investigate whether it was possible to use a multiplex assay – a technique that is commonly used to assess drug treatment programmes or to diagnose and monitor disease – to analyse antibodies in children’s blood samples and ultimately evaluate the impact of school WASH interventions on infectious diseases in children. The researchers also applied a novel statistical method to analyse the data they collected to see if it could improve statistical power and make results more generalizable.

CHALLENGES TO COLLECTING ACCURATE BIOLOGICAL DATA IN LOW-RESOURCE SETTINGS

- Collecting samples (i.e., stool samples) may require **multiple visits** to a community.
- Samples may need **transporting to a laboratory** under specific conditions (perhaps cooled or frozen).
- Some assessment methods need **specialist equipment and personnel**.
- Conventional tests may **lack sensitivity** for many pathogens.
- **Variability** between studies can make comparisons difficult.
- Asking participants to self-report symptoms of diarrhoea can result in **recall and social desirability biases**.

HOW WAS THE RESEARCH DONE? COLLECTING BLOOD SAMPLES

The pupils taking part in the research attended schools that were involved in a much larger project to assess the impact of school-based WASH interventions in 900 schools in the Bamako Capital District and the Koulikoro, Mopti and Sikasso regions of Mali. In 2014, the researchers collected capillary blood samples from 20 randomly selected pupils in 21 schools that had benefited from WASH interventions and 21 schools that had not.

Blood samples were taken from a single prick of the fingertip of each pupil, with six drops of blood being collected onto a filter paper wheel and allowed to dry. These were stored at ambient temperatures for one to three months before being sent to a laboratory at the Centers for Disease Control and Prevention in the United States for analysis.

The team also interviewed the pupils about their access to WASH at home and about any absences from school or recent illnesses. Children’s responses about WASH at home were classified using an index score ranging from 0 to 3, with a score of 3 meaning maximum access to household WASH, namely an improved water source, a sanitation facility and soap for handwashing. The researchers took this index score into account when comparing pupils from schools that had benefited from WASH interventions with those from schools that had not.

The final sample included 800 pupils aged between 4 and 17 years. The pupils in the different schools were similar in terms of age, sex, grade and their access to WASH facilities at a household level.

DETECTING ANTIBODIES

The researchers subjected the dried blood spots to a multiplex assay to detect antibodies present in them. This assay used microscopic beads coated with antigens from 17 different pathogens, which were exposed to a solution containing extracts from the dried blood spots. Any antibodies to the different pathogens that were present in the solution attached themselves to the antigens on the beads and were then detected by a machine.

STATISTICAL ANALYSIS

Once they had assessed the antibodies in the dried blood spots, the researchers used several different statistical approaches to analyse and validate their findings. These included factor analysis and latent variable development, which helped them to construct mathematical models to look for associations between WASH improvements and the prevalence of certain diseases.

WASH STRATEGIES TO REDUCE TRANSMISSION OF ENTERIC DISEASES IN AND AROUND SCHOOLS

- Increase access to and use of microbiologically safe drinking water and improved sanitation facilities.
- Provide water and soap for handwashing and promote hand hygiene.
- Conduct capacity building and behaviour change activities for all school stakeholders (children, teachers, parents, school management committee, Education Ministry staff, etc.).
- Engage the surrounding communities in WASH improvements to decrease health risks in children’s whole living environment.
- Improve national policies and monitoring systems related to WASH in schools.

PATHOGENS THAT COULD BE DETECTED IN THE DRIED BLOOD

- *Brugia malaya*
- *Campylobacter jejuni*
- Chikungunya
- *Chlamydia trachomatis*
- *Cryptosporidium parvum*
- Dengue
- *Entamoeba histolytica*
- *Escherichia coli*
- *Giardia intestinalis*
- Norovirus
- *Plasmodium* species
- *Salmonella* species
- *Schistosoma mansoni*
- *Taenia solium*
- *Vibrio cholerae*
- *Wuchereria bancrofti*
- Yellow fever

WHAT ARE THE FINDINGS AND WHAT DO THEY MEAN? WASH INTERVENTIONS BRING HEALTH BENEFITS

By analysing the antibodies present in the dried blood spots, the researchers found that exposure to enteric diseases transmitted through food or water or from person to person was significantly lower in pupils at schools that had benefited from WASH interventions than among pupils attending schools that had not.

This supports findings from the larger study of participating schools, which found that the likelihood of pupils reporting symptoms of diarrhoea was reduced by 29 per cent in schools that had benefited from WASH interventions, compared with schools that had not. Also, in schools that met all WASH targets, the likelihood of diarrhoea among pupils was reduced by 35 per cent, compared with schools that did not meet any WASH targets.

“Dried blood spots are a feasible measurement tool for the WASH field to provide objective evidence of disease.”

Researcher

No differences between schools were found when it came to exposure to diseases transmitted by animal vectors such as blood-feeding insects. This is not surprising, as WASH interventions are unlikely to have an effect on vectors like mosquitoes, which are more affected by environmental conditions. The lack of impact of WASH interventions on vector-borne diseases helps to validate the positive results for enteric diseases and the statistical methods used. The findings of this research support improvements to WASH facilities as a way of interrupting the transmission of enteric diseases in schools.

EXPLAINING FACTOR ANALYSIS AND LATENT VARIABLES

Factor analysis is a statistical technique commonly used in behavioural, health and life sciences. It allows researchers to investigate relationships between different variables in complex situations that cannot be measured directly.

The theory behind the technique is that multiple observed variables that show similar patterns of response are all associated with an underlying latent variable (i.e., one that cannot be measured directly). Factor analysis is used to reduce a large number of variables into a smaller number of new variables that are based on their association with a common latent variable.

In this piece of research, factor analysis was used to identify latent variables to represent different groups of antibody response. Three latent variables were identified, representing:

- Diseases transmitted by animal vectors such as mosquitoes
- Enteric diseases transmitted by food or water
- Enteric diseases transmitted from person to person.

These three latent variables were then used in a mathematical model to study the association between exposure to each group of diseases and WASH intervention status.

THE INNOVATIVE MEASUREMENT METHOD WAS A SUCCESS

The researchers also showed that collecting capillary blood samples in the form of dried blood spots can be achieved in a low-resource setting and is acceptable to children and their parents or guardians.

The multiplex assay technique offers several benefits. It allows the health impacts of WASH and other interventions to be measured in a more objective, reliable and systematic manner, meaning that results can be compared between studies. Also, because dried blood spots can be collected and transported easily and do not need to be stored in specialized conditions (i.e., refrigerated), they may provide a viable, cost-effective alternative to current biological methods of assessing exposure to WASH-related diseases.

Furthermore, because the assay can deal with multiple antigens simultaneously, additional diseases can be studied using the same blood samples at little extra cost. As such, the techniques studied in this research may offer a possible solution to affordable testing for many diseases, not just those associated with WASH.

FACTOR ANALYSIS IS A USEFUL APPROACH

Using factor analysis to help classify multiple antibody responses by latent variables is a novel way of handling antibody data, but the researchers showed that it can be a useful approach. Their mathematical model allowed multiple correlated disease response variables to be analysed together, rather than individually. Other, more traditional, statistical methods were used to check the novel approach, and these supported the findings of the latent model. Factor analysis helped identify common patterns of disease response, and the researchers suggest that, by focusing on the underlying factors affecting the measured results, other researchers may also be able to generalize their findings and improve their practical applicability.

“These results contribute to the growing body of evidence supporting the association between WASH in schools and reduced pupil diarrhoeal incidence and other poor health outcomes.”

Researcher

EMERGING IMPACTS

This innovative research demonstrates the positive impact that WASH interventions in schools can have on the health of pupils and the well-being of children. The research successfully applied the innovative measurement method as an objective way to assess health impacts of WASH and other development interventions.

NEXT STEPS

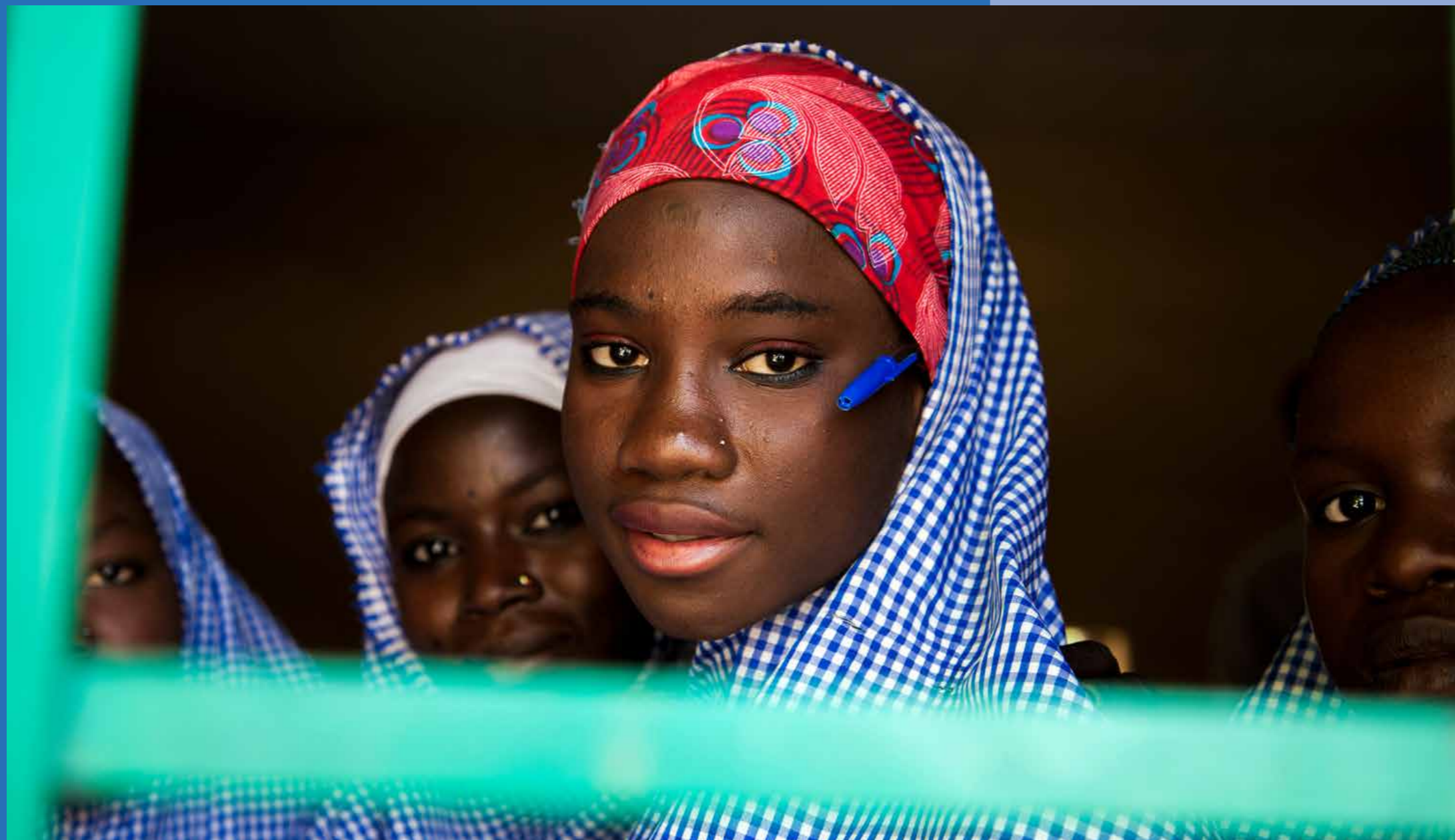
Analysis of additional data gathered during this research is providing valuable information about the effectiveness of other health-related initiatives in Mali, such as mass drug administration and vaccination programmes, as well as about the transmission of neglected tropical diseases and patterns of malaria transmission. This may provide future opportunities for collaboration between different sectors that share an interest in these issues.

More generally, the findings will help to establish new evidence-based best practices for collecting accurate biological evidence to measure the health impacts of WASH and other interventions.

Finally, the factor analysis technique can be considered as a way of complementing more conventional modelling techniques in future research projects that examine multiple and possibly linked disease outcomes.

For full details of research methods and findings, link to the full report

<https://journals.plos.org/plosntds/article?id=10.1371/journal.pntd.0006418>



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NIGERIA

What is the effect of female teachers on girls' enrolment and retention in northern Nigeria?

Anne Smiley, Wael Moussa, Emily B. Brown,
FHI 360 Education Policy and Data Center

EDITORIAL INSIGHT

This piece was shortlisted because of its highly relevant and timely research questions, which offer insight into what may determine girls' enrolment and success in school. Its potential for uptake and impact in Nigeria and other low- and middle-income countries is heightened by the level of detail of its analysis and its clear linkages to the context and the literature. Based on a mixed-methods approach that includes children's voices, the reviewers found the sampling and data to be clearly defined and well managed and the recommendations clearly presented. The internal reviewers also highlighted their appreciation of its frank and honest discussion of existing limitations involving the data and conceptual framework.

Just how much do girls in northern Nigeria gain from having female teachers?

Girls face cultural barriers to education throughout northern Nigeria. In this region, male teachers significantly outnumber female teachers, and even fewer female teachers are employed in rural schools. Researchers hypothesized that female role models for adolescent girls in the classroom could increase parents' willingness to send their girls to school, as well as improve the girls' educational outcomes.

Research carried out in 2016 and 2017 by the organization FHI 360 on behalf of UNICEF demonstrated the positive effects that women teachers have on the enrolment and education of girls. As well as providing a greater understanding of how female teachers boost the performance of female pupils, the research identified the challenges that keep many of these teachers from taking up positions in rural schools. As a result, the Nigerian state governments involved are taking steps to increase the number of qualified female teachers in schools across the region.

WHY WAS THE RESEARCH DONE? GIRLS EDUCATION PROJECT

Under its Girls Education Project (Phase 3), UNICEF aims to determine whether the presence of female role models (head teachers and teachers) in schools encourages parents to enrol their girls in education; whether their presence improves the retention of girls in school; whether being taught by female teachers improves the learning outcomes of both girls and boys;

THE SCALE OF THE ISSUE

- Eight states out of the nine studied have 26% or less of female representation among their teachers.
- Except for Ebonyi State, male pupils make up the clear majority of students.
- Female youth aged 15–24 average three years of schooling less than males in these states, and approximately six years less than the overall national average.

and what barriers contribute to the under-representation of female teachers in rural schools. The project has been running in five northern states of Nigeria since 2012, with funding from the United Kingdom Department for International Development.

LACK OF FUNDING IS NOT THE ONLY BARRIER TO TEACHING

The main purpose of the Girls Education Project was to increase the number of female teachers and to assign many of them as possible to posts in rural schools. One component focused on increasing the number of female teachers in northern Nigeria, by offering more than 7,800 women financial support to attend teacher training colleges. However, statistics show that a lack of funding is not the only barrier to women entering the teaching profession. The research was therefore undertaken to provide decision makers in the region with compelling evidence of the benefits of helping women to take up teaching posts in rural schools.

HOW WAS THE RESEARCH DONE? IDENTIFYING A KNOWLEDGE GAP

The research used a mixed-methods approach, drawing on data from secondary sources, supported by qualitative primary data in the form of key informant interviews and focus-group discussions with parents, pupils, teachers and head teachers.

Researchers reviewed existing evidence to identify the effects that female teachers have on the enrolment and retention of girls in schools – both generally and in northern Nigeria specifically. The literature reviewed covered five target states in northern Nigeria (Bauchi, Katsina, Niger, Sokoto and Zamfara), as well as some other countries in West Africa.

QUANTITATIVE RESEARCH: GATHERING DATA

Researchers analysed data from a Nigerian education management system covering the five targeted states. For comparison, the team included data for schools in three other northern states (Gombe, Kebbi and Taraba) and one southern Nigerian state (Ebonyi). Literacy and numeracy data gathered by a UNICEF-supported programme in Katsina and Zamfara were also used to evaluate the impact of female teachers on learning.

QUALITATIVE RESEARCH: EXPLORING PEOPLE'S OPINIONS

For a better interpretation of the findings of the quantitative analysis, qualitative data were collected from focus-group discussions and interviews with parents, pupils (both girls and boys), teachers and head teachers from 15 schools in Katsina, Niger and Zamfara. These participants provided their thoughts and opinions about female teachers.

WHAT ARE THE FINDINGS AND WHAT DO THEY MEAN?

FEMALE TEACHERS HAVE A POSITIVE EFFECT ON ENROLMENT

The quantitative analysis provided evidence that the presence of female teachers increased the enrolment of girls in schools, as comparisons between states showed that more girls were enrolled in schools in areas with more female teachers (Figure 1). More detailed statistical analysis demonstrated that both the presence and the proportion of female teachers increased the enrolment of girls.

MORE FEMALE TEACHERS ARE NEEDED, PARTICULARLY IN RURAL SCHOOLS

The research team identified differences between schools in rural and urban areas. For example, in rural areas (where 80 per cent of teachers were male) the researchers found that enrolment of girls was higher both when there was at least one female teacher in a school and when the proportion of female teachers was higher. The presence of a female head teacher, however, had little effect.

In urban areas, where 79 per cent of schools had at least one female teacher, the researchers found that the proportion of female teachers (rather than the presence of at least one female teacher) had the greatest impact on enrolment. This is possibly because

most urban schools already had at least one female teacher – and so the initial benefits associated with the presence of a female teacher had already been realized. In urban schools, the presence of a female head teacher increased the percentage of girls enrolled by 4.5 per cent.

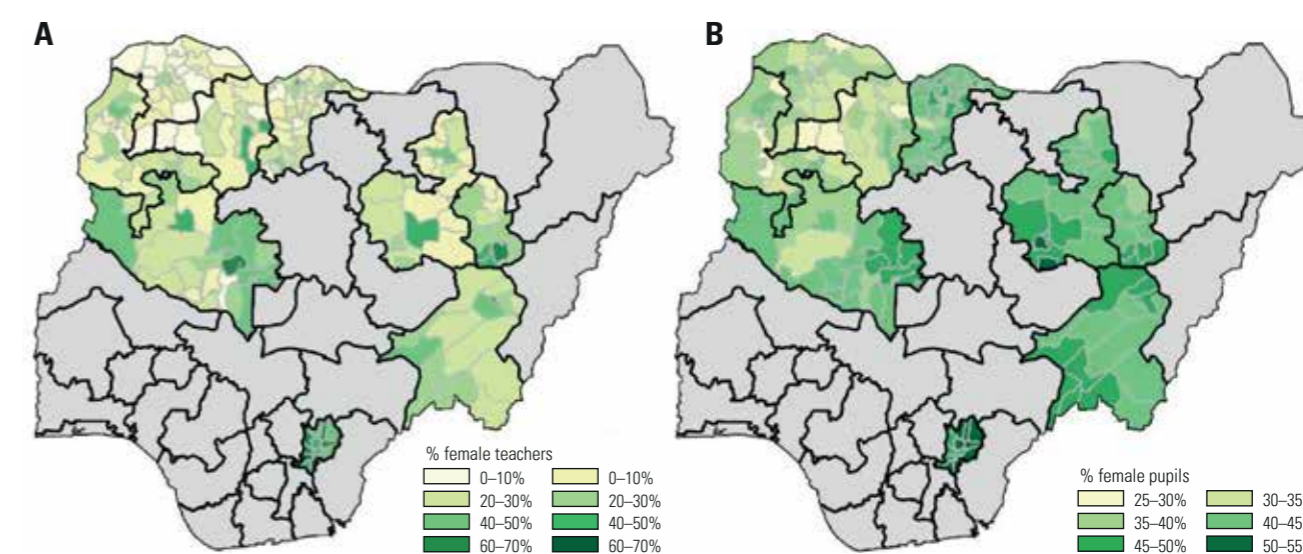
The researchers estimate that to achieve equality in enrolment (that is, a 50:50 split between boys and girls), an additional 3,775 female teachers will be needed across 4,225 urban schools; meanwhile 58,121 more female teachers will be needed in 17,576 rural schools.

FEMALE TEACHERS ARE IMPORTANT FOR GIRLS' PROGRESSION AND LEARNING

The research also found that the presence of a single female teacher had a positive effect on the progression of girls from one school grade to the next. More girls were shown to remain at school if that school had a female head teacher.

It was also found that the presence of female teachers improved the learning outcomes observed for both girls and boys. The researchers found, for example, that women teachers outperformed their male counterparts in improving their pupils' literacy and numeracy. However, the impact of a female teacher on girls was greater than on boys, particularly in terms of their reading ability.

FIGURE 1: GEOGRAPHICAL DISTRIBUTION OF (A) FEMALE TEACHERS AND (B) FEMALE PUPILS IN THE STATES INCLUDED IN THE STUDY



Source: Figures 2 and 3 of full report

COMMUNITIES PREFER FEMALE TEACHERS

Discussions with parents and pupils and interviews with teachers revealed widespread support for female teachers. Both mothers and fathers viewed female teachers as role models for their daughters (in terms of conduct and behaviour) and suggested that they could help prepare girls for womanhood. They also felt that female teachers provided safety and security.

“Female education is important. Their contribution in all sectors and in every profession is needed.”

Male parent

Girls preferred female teachers for the same reasons, also commenting that female teachers made them feel ‘comfortable’, ‘happy’ and ‘free’ and that they could relate to them better. It was also felt that female teachers supported girls in many ways that men could not, including in moral development, female hygiene and sanitation, sexual and reproductive health, and psychosocial support.

Both boys and girls felt that female teachers were generally more patient, encouraging and understanding than their male counterparts. For their part, male teachers acknowledged the importance of educating girls and were generally supportive of female teachers.

One of the clearest impacts revealed by the research was the ability of female teachers to mobilize communities to send girls to school. Parents and teachers both described how women can enter any house and talk with other women, enabling them to bring girls to school; male teachers may only enter homes that belong to them or their relatives.

“We go from house to house to advise and encourage parents to bring their children to school. We bring them close to us, as we take part in all their activities.”

Female teacher



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BARRIERS PREVENT WOMEN FROM TEACHING IN RURAL SCHOOLS

Interviews also provided an insight into why female teachers are under-represented in rural schools. The main barriers identified were:

- **A historical shortage of educated women**, leading to a shortage of educated girls becoming teachers (and other professionals).
- **A need for women to balance dual roles of caregiver and professional** and manage both family commitments and employment.
- **Transportation and mobility issues**, as women are often tied to their husbands’ employment in urban areas and may be reluctant or unable to go to work in remote rural locations or cannot afford to do so.
- **Lack of professional development and training opportunities**, as family commitments and an overall lack of mobility restrict women’s access to opportunities for professional development.

EMERGING IMPACTS

By clearly demonstrating the positive impacts that female teachers have, the research team’s findings have the potential to guide policies to increase the number of female teachers and optimize their role in the northern states and more widely in Nigeria.

In November 2017, UNICEF and FHI 360 hosted a Validation Workshop to share their initial results and policy recommendations and to gain stakeholder feedback at the individual state level. This generated valuable thinking on how to make a difference in each state. For example, stakeholders from Zamfara proposed that the state’s House of Assembly should pass a bill stipulating 30 per cent female participation in the education sector. The research team also recommended that legislation be developed across the region to ensure that women account for 30 per cent of those working in education management and governance at the classroom, school and state levels.

NEXT STEPS

Most immediately, UNICEF and other stakeholders are advocating for the deployment of more teachers trained through the UNICEF-supported Female Teacher Trainee Scholarship Scheme in rural schools of northern Nigeria. Key findings from the research are also being translated into local languages for school-based management committees to create awareness and create demand for necessary laws.

States that wish to bring female teachers into rural schools will have to make rural postings easier and more rewarding. This will require adequate pay and the support necessary for women to play the dual role of caregivers and professionals. Professional development opportunities will also need to reach rural schools.

With these and other long-term actions to make school better and safer for girls, the researchers are hopeful that northern Nigerian states can fix their historical imbalance. After all, many of the girls who are at school now will become the next generation of inspiring teachers.

For full details of research methods and findings, link to the full report

Not yet published- Please contact authors for further information.

THAILAND

Review of comprehensive sexuality education in Thailand

Mahidol University Faculty of Social Sciences and Humanities, UNICEF Thailand



EDITORIAL INSIGHT

External and internal reviewers rated this piece highly for its ambitious effort to integrate mixed methods, including creative data-collection exercises to assess adolescents' understanding of what they are taught in school about sexual and reproductive health. Quantitative and qualitative findings are very well integrated, as are the perspectives of different stakeholders, such as children, teachers and school directors. The use of alternative data-collection methods – including drawings – to gather further insights contributes to an engaging narrative that offers a highly detailed and in-depth picture of how comprehensive sexuality education is offered in schools and the challenges faced. Collaboration with the Government of Thailand means the potential to influence policy reform is high.

Why are adolescents in Thailand not learning enough about sex?

Sexuality education is supposed to equip students with the knowledge and skills they need to take charge of their own sexual relationships. It is this empowerment that, among its many other personal and societal benefits, brings about reductions in adolescent pregnancies and in the spread of sexually transmitted infections. So when a country like Thailand has a nationwide system of comprehensive sexuality education (CSE) but also high rates of adolescent pregnancy and high rates of HIV infection among young people, what has gone wrong?

Researchers from the Center for Health Policy Studies at Mahidol University, in collaboration with UNICEF, UNFPA, UNESCO, the Office of Basic Education, Vocational Education and the Ministry of Education, unpacked the individual components of CSE to demonstrate how Thai schools can improve their teaching about sexuality. The researchers engaged students and teachers through questionnaires, interviews, participatory discussions and drawing exercises to identify some significant gaps in the content and delivery of CSE. Importantly, they found that an overriding focus on pregnancy prevention has resulted in teaching about sexuality being conducted from a negative perspective, which has not given students the outlook they need to negotiate their sexual lives.

WHY WAS THE RESEARCH DONE?

Sexuality education has been part of the curriculum in Thailand since 1978. Yet despite the Ministry of Education's emphasis on teaching students how "to lead a happy and safe sexual life and to develop and maintain responsible and balanced relationships with others"; adolescent pregnancy and the spread of HIV are still causes for concern.

According to data from the Bureau of Reproductive Health, the adolescent birth rate is high in comparison to the standard birth rate: in 2014, 316 mothers aged 10–19 gave birth every day in Thailand. Meanwhile, according to the Joint United Nations Programme on HIV/AIDS (UNAIDS), around half of new HIV infections in the country affect young people aged 15–24. The challenge faced by the Government of Thailand and educational institutions is how to address this public health issue by providing students with CSE. The main purpose of this research was therefore to inform national policy on the prevention of adolescent pregnancies and on youth-friendly health services.

HOW WAS THE RESEARCH DONE?

Standard data-collection tools developed for the review of CSE in other countries were adapted for the Thai context and reviewed by a research steering committee which comprised technical experts, UNICEF, UNESCO, UNFPA, Path to Health, OBEC, OVEC, the Office of the Permanent Secretary, and the Center for Health Policy Studies at Mahidol University. A gender lens analysis was also consciously applied.

Over a seven-month period in 2015–2016, the researchers collected quantitative data from 373 general secondary schools and 25 vocational colleges in the six regions of Thailand. Two online surveys administered at schools also captured data from 692 teachers, parents/guardians and school directors and from 8,837 students aged 12–19.

FRAMEWORK OF COMPREHENSIVE SEXUALITY EDUCATION

UNESCO's International Technical Guidance on Sexuality Education underpins the research. It sets out six core content areas that should be included in any CSE curriculum:

1. Relationships
2. Values, attitudes and skills
3. Culture, society and human rights
4. Human development
5. Sexual behaviour
6. Sexual and reproductive health

VISUALIZING THE STUDENT PERSPECTIVE

When students were asked to depict what they learned in CSE classes, the topics they chose to draw revealed the same imbalances seen in other data sources. Images of reproductive organs were common, as were images of a classroom scene in which a teacher explains the anatomy. Pregnancy, condoms and the negative consequences of adolescent pregnancy were also recurring themes. In contrast, topics such as sexual consent, harassment, gender equity, and lesbian, gay, bisexual and transgender issues were conspicuously absent from students' pictures.

As windows into the complex experiences of adolescents, the drawings enabled the researchers to bring the data to life. The researchers note that the strength of this visual method lay in creating a sense of curiosity among the participants, prompting further questions and engagement with the issues, as well as reflecting the real take-home messages of CSE in Thailand.

Qualitative data (such as the opinions of individuals, drawings) were also captured via participatory interviews and focus-group discussions with students, teachers, school directors and others involved in developing and promoting CSE. In a novel research approach, students participating in focus-group discussions were first asked to draw their experiences of sexuality education. These drawings and the transcripts from conversations were then reviewed and statistically analysed.

WHAT ARE THE FINDINGS AND WHAT DO THEY MEAN? GAPS BETWEEN POLICY AND PRACTICE

The researchers found that policies and educational initiatives designed by the Government of Thailand and non-governmental organizations are making a difference. Investigations showed that sexuality education is taking place across the country's six regions, that diverse topics are covered and that awareness is increasing. The bigger picture, however, reveals inconsistencies in practice and large gaps between policy and reality.

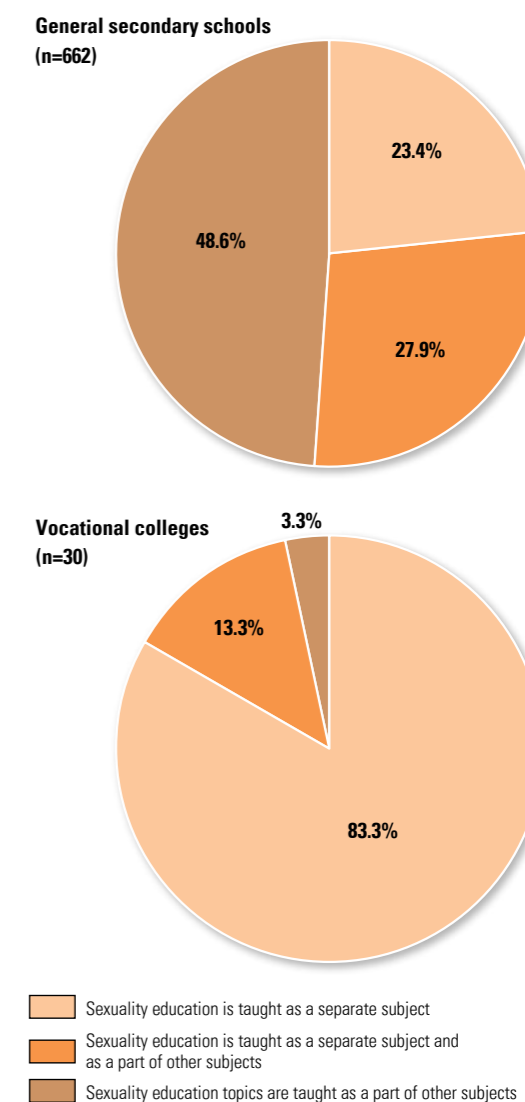
AN IMBALANCED FOCUS

The findings revealed major inconsistencies in how CSE is delivered in the public education system, especially with regard to the amount of time devoted to CSE overall and to the core content areas. Vocational colleges and regular schools produced some very different results, including in the availability of CSE as a separate subject (Figure 1).

The researchers were able to show that the overriding focus on adolescent pregnancies in Thailand means that the CSE agenda has become skewed, with teachers concentrating on reproductive issues, abstinence from sex, and contraception as a method of prevention. Thus, less time and attention are paid to teaching students about other topic areas, such as relationships, gender, rights and power, or sexual expression.

Despite a focus on pregnancy prevention, research findings indicated that many students did not have a good understanding of contraception and lacked the communication skills needed in their sexual lives – for example, to negotiate condom use with a partner.

FIGURE 1: TEACHERS' VIEWS OF HOW CSE IS TAUGHT IN THE CURRICULUM



Source: Adapted from table 3, page 7 of full report

“When students’ sexualities are beset with various risks, it is imperative that these risks be reduced by ensuring that sexuality education equips students with critical thinking skills and an ability to apply their lessons in their everyday lives.”

Researcher

BIASED PERSPECTIVES

On topics such as same-sex relationships and gender diversity, the data revealed that teachers impose a personal frame of reference, which is largely based on their own partial, stereotypical understanding of an issue. Contrary to the objectives of CSE, which calls for realistic and non-judgemental teaching, an overwhelmingly negative view of sexuality permeates the curriculum. In the words of one school nurse, “I try to speak in extreme terms to make the kids afraid.” Furthermore, as well as often teaching sexuality from a negative point of view, the development of students’ analytical or critical thinking skills related to sexuality is not promoted.

Sensitive topics, like abortion or safe sex between same-sex partners, are taught less frequently. And when abortion is covered, some teachers describe it as a ‘sin’, while others wrongly suggest that it is always illegal. At the same time, there are signs of CSE being positively implemented. For example, some teachers explained that they tried to teach students about safe abortion.

“I believe that every student is 100% mature enough and has enough capacity to make decisions about their lives. Our duty is only to cultivate them and provide them with information.”

Teacher in a vocational college

TRADE-OFFS IN TEACHING METHODS

The data revealed that lectures are used as the primary method of delivering CSE (94 per cent of teachers and 88 per cent of students noted this teaching method), resulting in far less focus on activities such as group discussion and problem solving (Table 1). This limited learning environment impedes students’ abilities to absorb and apply lessons in their everyday lives.

There appeared to be trade-offs in the choice of methods used: lectures could cover more modules and themes, as more creative teaching is also more time consuming. At the same time, this approach also reflected a lack of investment in teacher training. Half

of CSE teachers have not been trained in sexuality education, which means that they simply follow the textbook and draw on their own opinions. Notably, the researchers found that teachers who have received CSE training are more likely to use activity-based learning methods, which are in turn more likely to encourage student engagement.

DIFFERENCES OF OPINION

While teachers’ attitudes are not always perfectly aligned with the values of CSE, the researchers found that overall, they came closer than the attitudes of most students: many of the students expressed attitudes that are at odds with the CSE curriculum on power relations and sexual identity.

TABLE 1: METHODS TEACHERS USE TO TEACH CSE

Teaching method	Percentage of teachers reporting use
Lecturing	94%
Worksheets	68%
Classroom discussions	64%
Storytelling	62%
Brainstorming	59%
Small group work	59%
Video presentation	57%
Measuring students’ knowledge/exams	50%
Self-study, independent report writing	49%
Condom demonstrations	40%
Activities in which students ‘agree’ or ‘disagree’ with various statements and then discuss them in groups	31%
Problem-solving activities	26%
Role play	24%
Games	17%
Meeting and talking with experts	17%
Activities encouraging students to talk with parents about the topics studied	15%
Drama (including short plays)	10%
Hotlines or lines giving counselling on sexual issues	10%
Question boxes	6%
Visits to clinics (health services)	5%
Visits to stores selling condoms	3%

Source: Adapted from table 11, page 17 of full report

For example, 25–57 per cent of students of different ages, genders and educational contexts agreed with the statement that “In a family, men should always have more say than women over important decisions”; 13–50 per cent thought that “Sexual relations with someone of the same sex are wrong”. Both of these views were consistently higher amongst men than amongst women for all school groups, and 28–41 per cent thought “A husband has the right to hit his wife if she is unfaithful”, with female respondents in two of the school groups aligning with this view more than their male counterparts.

When it comes to gender equality and the rejection of domestic violence, the researchers found that female students in vocational institutions are more supportive of these views than are male students. In general, in secondary schools, many girls do not think that women should express themselves sexually.

The researchers suggest that the gap between teachers’ attitudes and those of students might be related to the lack of opportunities for discussion in class. A more engaging classroom dynamic might encourage more students to change their opinions.

LIMITATIONS OF THE RESEARCH

It should be noted that only general secondary and vocational institutions were included in this research. Primary and tertiary education students were not included, and only public schools (not private) were studied. Furthermore, CSE provision in areas where the majority of students or teachers belong to ethnic minority groups or religions other than Buddhism may differ from the overall picture provided by these findings.

EMERGING IMPACTS

Inspired by these findings, government agencies have created online learning and ‘edutainment’ delivery methods to encourage greater engagement among both students and teachers. This has attracted investment in the sex education of adolescents living in institutions and has prompted the creation of a steering committee for e-learning. There have been multiple policy dialogues and actions at various levels in collaboration with the Ministry of Education. This research has been referred to in many other areas and

presented by the research team in conferences both inside and outside the country.

The recommendations of the research informed implementation of the 2016 Teenage Pregnancy Prevention and Alleviation Act, which mandated educational institutions to provide age-appropriate sexuality education to approximately 8.9 million adolescents aged 10–19.

NEXT STEPS

The policy-related challenges identified prompted the researchers to make a range of recommendations at the national, local and school levels. At the national level, educational reform and support mechanisms are recommended to improve the delivery and efficiency of CSE. At the local and school levels, recommendations will influence policies on school priorities and curricula, training and teaching methods, and the role of school directors.

“To ensure that sexuality education in Thailand becomes truly comprehensive, policy makers at the ministry level need to pose questions about the general framework of sexuality education ... Educational institutions need to place more emphasis on teaching about equality, sexual rights and gender to cultivate attitudes that help to solve sexual problems at their roots.”

Researcher

For details of research methods and findings, link to the full report

www.unicef.org/thailand/reports/review-comprehensive-sexuality-education-thailand

Partners and funders

Full titles of original reports given here

The views expressed in the summary reports do not necessarily represent the views of the partners listed here

AFGHANISTAN: Understanding threats to polio vaccine commitment among caregivers in high-priority areas of

Afghanistan: A polling study

Harvard Opinion Research Program; UNICEF Afghanistan; UNICEF HQ; Ministry of Public Health of Government of the Islamic Republic of Afghanistan; the Global Polio Eradication Initiative; Opinion Research Center of Afghanistan; InterMedia, Global Polio Eradication Initiative

BRAZIL: Lives interrupted: Adolescent homicides in Fortaleza and in six municipalities in the state of Ceará

Ceará State Legislative Assembly; Ceará State Government; UNICEF Brazil, with the support of OCA Institute

CHINA: What could cognitive capital mean for China's children?

PsyCh Journal, Institute of Psychology; Chinese Academy of Sciences; UNICEF China

EUROPE AND CENTRAL ASIA: Making the connection – Intimate partner violence and violence against children in Eastern Europe and Central Asia

UNICEF and UNFPA Country Offices in Albania, Belarus, Kazakhstan, the Kyrgyz Republic, Moldova, Turkey and Ukraine; UNFPA Eastern Europe and Central Asia (EECA) Regional Office; UNICEF Europe and Central Asia (ECA) Regional Office; Equality Institute; Issue Based Coalition/Gender EECA: UN Women; WHO

EGYPT: Understanding child multidimensional poverty in Egypt

Ministry of Social Solidarity (MoSS); the Central Agency for Public Mobilization and Statistics (CAPMAS); UNICEF Egypt

ETHIOPIA: Generation El Niño: Long-term impacts on children's well-being

UNICEF Ethiopia

GLOBAL: Quality improvement initiatives for hospitalized small and sick newborns in low- and middle-income countries: A systematic review

King's College London GKT School of Medical Education; Centre for Maternal, Adolescent, Reproductive and Child Health (MARCH); and Department of Infectious Disease Epidemiology, London School of Hygiene and Tropical Medicine; Department of Epidemiology and Environmental Health; Office of Maternal and Child Health and Nutrition, USAID; Centre for Tropical Medicine and Global Health, Nuffield Department of Medicine Research Building, University of Oxford; Section of Neonatology, University of Colorado School of Medicine UNICEF Programme Division

INDONESIA: Children in Indonesia: An analysis of poverty, mobility, and multidimensional deprivation

Indonesia's Central Statistics Agency (BPS); Development Pathways; UNICEF Indonesia

KENYA: Female genital mutilation/cutting and child marriage among the Rendille, Maasai, Pokot, Samburu and Somali communities in Kenya

Ministry of Health; Ministry of Labour and Social Protection; Anti-FGM Board; Womankind Kenya; World Vision Kenya; UNFPA; UNICEF Kenya; the governments of Germany, Iceland, Ireland, Italy, Luxembourg, Norway, Sweden, United Kingdom; and the European Union

MALI: The impact of school water, sanitation, and hygiene improvements on infectious disease using serum antibody detection

Emory University, Rollins School of Public Health; United States Centers for Disease Control and Prevention; UNICEF Mali; CARE Mali; Oxfam GB; Save the Children US; WaterAid Mali; University of Sciences, Techniques and Technologies of Bamako, Mali; Dubai Cares

NIGERIA: What is the effect of female teachers on girls' enrolment and retention in Northern Nigeria?

FHI 360; UNICEF Nigeria; United Kingdom Department for International Development (DFID)

THAILAND: Review of comprehensive sexuality education in Thailand

Mahidol University Faculty of Social Sciences and Humanities; UNICEF Thailand; Ministry of Education; Office of Basic Education; Office of Vocational Education; UNESCO; UNFPA; UNICEF East and Asia Pacific Regional Office

External review panel biographies

Nicholas Alipui (Chair)

Nicholas Alipui is Senior Visiting Scholar at Yale University MacMillan Center for International and Area Studies and former Director and Senior Adviser on the Post-2015 Development Agenda and more recently Director of Programmes for UNICEF. He is an expert in child health and development, with over 30 years of experience in senior level management, strategic leadership, representation, government and partnership and inter-sectoral strategy. He has extensive experience in intergovernmental negotiations, child rights advocacy and programming in diverse country and regional settings with a special focus on Africa, East Asia and the Pacific, including serving as UNICEF Representative in Kenya and the Philippines and heading the Africa Section of the Programme Division. His experience also includes disaster/post-disaster, conflict/post-conflict analysis for prevention, reintegration and protection, and inter-agency activities, including vast field experience in the complex emergencies in Mozambique, Somalia and Angola.

Virginia Morrow

Virginia Morrow was Senior Research Officer/Associate Professor at the University of Oxford, and Deputy Director of Young Lives (www.younglives.org.uk) from 2011 to 2017, where she was embedded ethics lead. Her research has focused on children's work, sociological approaches to the study of childhood and children's rights, ethics and methods of social research with children, violence affecting children, children and 'social capital', and children's understandings of family. She has published extensively, and has been a member of numerous advisory groups, research ethics committees, and since 2015 has been a member of the European Research Council Executive Agency ethics panel. From 2006 to 2016 she was co-editor of *Childhood: A Journal of Global Child Research* and is currently Chair of Barnardo's Centre for Expertise in Child Sexual Abuse Research Ethics Committee. Virginia teaches on European Masters courses in Children's Rights at the University of Geneva, Switzerland and Potsdam University of Applied Sciences, Germany.

Aravinda Guntupalli

Aravinda Meera Guntupalli currently works as a Senior Lecturer in Public Health and is the Academic Lead for the Race Equality Charter at the Open University, UK. Her research focuses on health and nutritional inequalities across the life course in India, Bangladesh, Kenya and the UK using contemporary and historical data. Her recent work has explored the role of maternal characteristics, climate change, and socio-economic inequalities in shaping nutritional outcomes. Over the last 17 years, she has published in top-tier journals while holding academic positions at the International Institute for Population Sciences (India), the University of Tuebingen (Germany), the University of Southampton (UK), the MRC Lifecourse Epidemiology Unit (UK), and the Open University (UK). As the Centre for Ageing and Biographic Studies Lead, she engages in research and teaching that illustrates the role of the life-course perspective in achieving an active and healthy later life.

Eliya Zulu

Eliya Msiyaphazi Zulu is the Executive Director of the African Institute for Development Policy (AFIDEP), whose mission is to promote evidence-informed public policy making in Africa. He has extensive experience in research, capacity building and policy engagement on population change and sustainable development, urban poverty, reproductive, child and maternal health and has published 66 journal articles in these areas. He is leading a programme to support African governments to determine strategic investments to enable them to harness the Demographic Dividend. Zulu is the former President of the Union for African Population Studies, has served on many international development panels and given various keynote addresses, including at the UN General Assembly. Zulu holds a Ph.D. in Demography from the University of Pennsylvania; a Master's degree in Demography from the Australian National University, and a Bachelor's degree in Economics from the University of Malawi.

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