

## Quantitative Research Manual Series

# GAGE BANGLADESH-DHAKA RESEARCH DESIGN AND SAMPLE

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# 1 Introduction

## 1.1 Gender and Adolescence: Global Evidence

Adolescence is a time of rapid physical, mental, and social change as individuals transition through puberty and into early adulthood. In scope and speed, these transformations are considered second only to those experienced in infancy and early childhood (Bundy et al., 2017).

Research focused on poverty alleviation and wellbeing improvements to date has largely focused on interventions to improve the outcomes of infants and young children, or the outcomes of adults, while comparatively little work has focused on adolescents (individuals aged 10-19). Yet, as a ‘critical period’ of development, adolescence is also a key window of opportunity for intervention (Bundy et al., 2017; Sheehan et al., 2017; Steinberg, 2015; UNFPA, 2014). Moreover, at 1.2 billion, the global adolescent population accounts for 16% of the world’s population, and much higher proportions in the Global South – especially in sub-Saharan Africa (23%), South Asia (19%), and the Middle East and North Africa (18%) (UNICEF 2016).

Gender and Adolescence: Global Evidence (GAGE) is a nine-year (2015-2024) research programme, funded by UK Aid from the UK Department for International Development (DFID), that seeks to combine longitudinal data collection and a mixed-methods approach to fill this information gap in sub-Saharan Africa, South Asia, and the Middle East and North Africa. In particular, GAGE seeks to understand the lives of adolescents in these particularly marginalized regions of the Global South, and to uncover ‘what works’ to support the development of their capabilities over the course of the second decade of life, when many of these individuals will go through key transitions such as finishing their education, starting to work, getting married and starting to have children.

GAGE’s starting point is that adolescent transitions shape girls’ and boys’ lives, but often in highly gendered ways, due to the prevailing norms in their socio-cultural environments. These norms – especially around sexuality – start to become more rigidly enforced and more consequential in early adolescence, forcing girls’ and boys’ trajectories to diverge as they approach adulthood. To fast-track social change, understanding and tailoring programme interventions that are informed by this divergence is key.

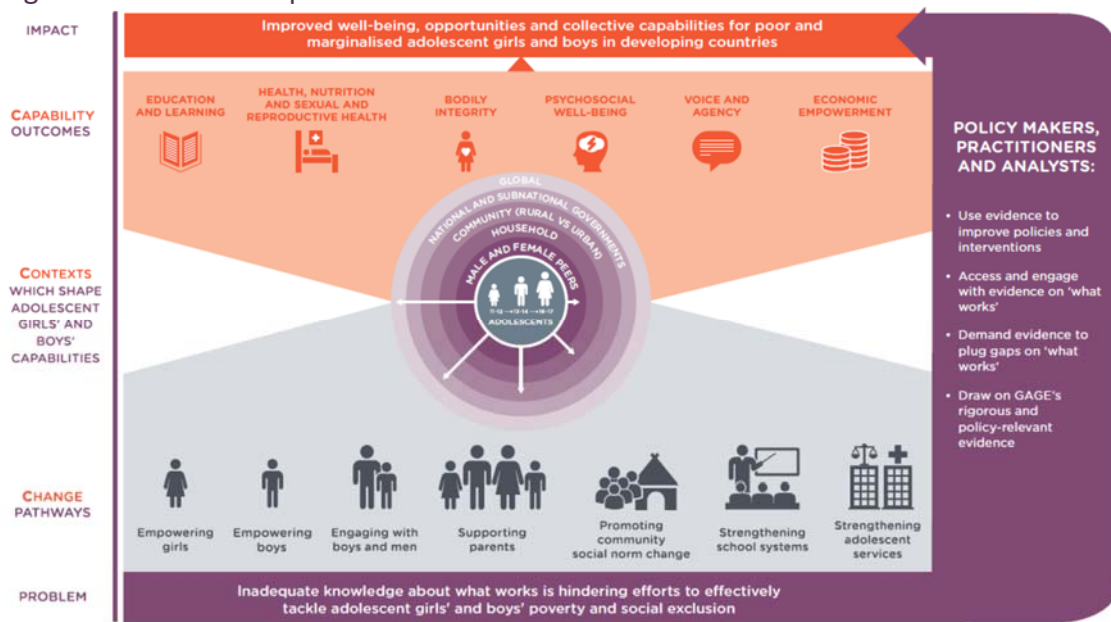
GAGE’s conceptual framework takes a holistic approach that pays careful attention to the interconnectedness of what we call ‘the 3 Cs’ – capabilities, change strategies and contexts – in order to understand what works to support adolescent girls’ and boys’ development and empowerment, now and in the future (see Figure 1). This framing draws on the three components of Pawson and Tilley’s (1997) approach to evaluation, which highlight the importance of outcomes, causal mechanisms and contexts – but we tailor it to the specific challenges of understanding what works in improving adolescent girls’ and boys’ capabilities.

The first building block of GAGE’s conceptual framework are capability outcomes. Championed originally by Amartya Sen (1984; 2004), and nuanced to better capture complex gender dynamics at intra-household and societal levels by Martha Nussbaum (2011) and Naila Kabeer (2003), the capabilities approach has evolved as a broad normative framework exploring the kinds of assets (economic, human, political, emotional and social) that expand the capacity of individuals to achieve valued ways of ‘doing and being’. Importantly, the approach can encompass relevant investments in girls and boys with diverse trajectories, including the most marginalised and ‘hardest to reach’ such as those who are disabled or are already mothers.

The second building block of GAGE’s conceptual framework is context dependency. The 3 Cs framework situates girls and boys ecologically, and that their capability outcomes are highly dependent on family or household, community, state and global contexts.

The third and final building block of GAGE’s conceptual framework acknowledges that girls’ and boys’ contextual realities can be mediated by a range of change strategies including: empowering individual adolescents, supporting parents, engaging with men and boys, sensitizing community leader, enhancing adolescent-responsive services and addressing system level deficits.

Figure 1: GAGE conceptual framework



Stemming from this conceptual framework, there are three sets of questions that are central to GAGE’s research. They focus on: (1) adolescent experiences and the ways in which these are gendered and also differ according to adolescents’ economic, social and geographical positioning; (2) the ways in which programmes and services address adolescent vulnerabilities and support the development of their full capabilities; and (3) the strengths and weaknesses of programme design and implementation in terms of ensuring programme efficacy, scale and sustainability. GAGE baseline research focuses primarily on the first two questions, while the third question will be explored in more detail in later years of the programme. The extent to and manner in which these questions will be answered across GAGE countries will vary. This document will focus on the GAGE Bangladesh-Dhaka research.

## 1.2 GAGE Bangladesh-Dhaka

### 1.3 Background to this document

The GAGE Quantitative Research Manual Series introduces the GAGE quantitative research programme in each GAGE country, provides details on how the GAGE sample was chosen and how data collection proceeded, and describes the quantitative data available for prospective data users. The current document describes the GAGE research programme in Bangladesh-Dhaka, including detailed information on the selection of research sites and the research sample. Companion manuals for Bangladesh-Dhaka will describe details of the data collection and provide detailed notes for usage of data.

## 2 GAGE Bangladesh-Dhaka research sites

The three study sites chosen for GAGE baseline study in Dhaka are two slum areas, communities A and C (peri-urban) and one low income settlement, community B. These locations were chosen to capture variation in the duration and stability of the settlements, access to health and education services, and, location in the city. These factors were considered because of their important impact on the lives of adolescents.

Community A, is peripheral to Dhaka. It is a newly urbanized areas near an industrial area. This slum is very stable, as the land (101 acres) is leased from the government. It is a big slum with 8400 households and 37000 people living there. Access to health and education services are better than in the other sites; for example, there is a Government high school, 14 private schools, and a 300 bed hospital nearby. Perhaps, for this reason, several NGOs have recently ended activities. This means that there are fewer clubs and other programmes for adolescents than in the centrally located communities.

Community C is situated in central Dhaka and is a well-developed and stable slum with 3000 households. It was initially a rehabilitation camp temporary settlement provided by the government on government land for people who lost their homes and livelihoods due to river erosion; however, it became a permanent settlement over time and is built on leased land from the government. It has one NGO school, two BRAC Schools, and one government school, and many NGOs work there. Adolescents reported getting vaccinations and other free health services from the Urban Health Service and the Urban Primary Healthcare Services Delivery Project. Most people have legal electricity and gas connections, although people living in the inner area of the slum use illegal electricity connections. Good quality roads exist through the slum.

Community B is also located in central Dhaka, but is a small, private slum on privately owned land with 300 households in compounds. There is a high level of in and out migration and limited access to services – one NGO run primary school and one high school, no other NGOs or healthcare facilities apart from one sexual and reproductive health care service, and a hospital 3 km away. Community B has electricity but no access to gas after the illegal gas lines were disconnected. The quality of the roads are poor. Child work is more prevalent in in community B than the other sites. This community is separated from the city and facilities, such as hospitals, by a main road, which is difficult to cross.

### 3 GAGE Bangladesh-Dhaka research sample

The GAGE Bangladesh-Dhaka quantitative research sample includes 780 adolescent boys and girls, along with their caregivers and communities. The sample includes two age cohorts: a younger cohort of individuals aged 10–12 years at the time of data collection and an older cohort of individuals aged 15–17 years at the time of data collection. In addition to the quantitative research, more in-depth qualitative interviews were conducted with 36 adolescents across the three sites.

Sample recruitment, as well as baseline quantitative and qualitative data collection, was conducted during 2017-2018. Recruitment is described in more detail below. Table 1 provides a summary of the GAGE quantitative research sample as of mid-2019.<sup>1</sup>

Table 1: GAGE Bangladesh-Dhaka quantitative research sample

	Full Sample	Quantitative Random Sample	Qualitative Nodal Adolescents	Adolescents with Disabilities	Early Marriage Adolescents
Community A	306	296	12	75	7
Community B	180	174	12	16	6
Community C	294	293	12	22	12
<b>Totals</b>	<b>780</b>	<b>763</b>	<b>36</b>	<b>113</b>	<b>25</b>

*Notes:* Note that a subset of the qualitative nodal adolescents, the adolescents with disabilities, and the early marriage adolescents are also part of the quantitative random sample. Thus, due to this overlap, the last four columns will not sum to the first column.

The initial randomly selected target sample was 798 adolescents, with 300 each from communities C and A, and 198 from community B. There were total 17 randomly selected disabled sample in the initial 798 sample from the listing data. Based on the scarcity and mismatch of the sample of adolescents with disabilities, 18 additional adolescents with disabilities were added to the sample through purposeful sampling. Altogether, the total target quantitative sample size was 816. Two additional extra nodal adolescents were later added by the qualitative team. The total sample sizes indicated in Table 1 reflect the final sample of consenting households.

#### 3.1 Quantitative random sample

##### 3.1.1 Household census

Across all GAGE research sites, adolescents eligible to be included in the quantitative random sample were identified through a household census (listing). The listing entailed visiting all private dwellings in the selected research site according to a pre-defined protocol, inquiring as to whether there were any adolescents in the GAGE-eligible age group (10-12 or 15-17 years old) living in the home. Where the response was negative, the enumerator simply moved on to the next household after carefully noting which household had been visited. Where the response was affirmative, information on the name, age, gender, and physical disability status of that adolescent were collected, as well as some contact information for the household. Where no household member could be located, information on the household was collected from a nearby neighbour or from

<sup>1</sup> There is interest among GAGE researchers to expand particular elements of the GAGE quantitative research sample, in particular through including more particularly marginalized youth (adolescents with disabilities, those who have been married prior to the age of 18, and others). Thus, the sample will likely expand slightly during Round 2 data collection, slated to be undertaken in late 2019 and early 2020.

another knowledgeable member of the settlement. Once the listing activity was complete within the GAGE research site, the listing information was sent back to the research office for processing and sample selection.

Because of the variations in the size and structure of the three research sites, the protocol of how to choose which and how many households to list varied slightly across locations. In what follows, we provide details on household listing and adolescent random sample selection for each type of site. Details of these procedures are outlined in the Listing Protocol in Appendix A.

### 3.1.2 Random sampling from household census data

The GAGE Quantitative Random Sample was drawn from the household census data collected in each of the research sites. Once the listing was complete, the population of households for consideration in the study was restricted to only those households that had at least one eligible adolescent. If the household had more than one eligible adolescent, one adolescent was randomly selected to be the designated eligible.

Across all sites, the GAGE research sample was drawn from the list of eligible adolescents using a random number generator in STATA, after first blocking on age group (young/older cohort) and gender of adolescent. A replacement list was also created at the same time, so that individuals who refused or were otherwise unable to participate in the GAGE study could be replaced with another randomly selected peer from their community. Again, due to variation in the structure of the three settlements, the procedures of the random sample varied slightly by location. This is detailed in the Sampling Protocol in Appendix B.

The original GAGE quantitative random sample thus included 798 adolescents. After accounting for replacements, 780 individuals were included in the final sample. Replacements households were used in the following cases: (a) refusal on the part of the adolescent to participate, (b) refusal by a parent/guardian to allow the adolescent to participate, (c) adolescent was found to be out of the 10-12 year old age range at the recruitment visit, (d) adolescent was found to be a gender other than what was noted during the census exercise, (e) adolescent was found to be deceased or severely disabled/ill (in a way that would not permit them to participate in the survey) at the recruitment visit, and (f) adolescent had migrated from the area at the time of the recruitment visit (and was not expected to return during data collection period). The refusal rate was low, at approximately 1% of the original random sample.

## 3.2 Purposely selected individuals

Given GAGE's strong focus on vulnerable adolescents, in line with the 'leave no one behind' agenda, the GAGE quantitative research sample additionally includes adolescents who are especially disadvantaged, such as those with disabilities, and married, separated and divorced adolescents. While some of these individuals were located through the household census activity and entered the quantitative random sample, others were purposely selected to be part of the overarching GAGE quantitative research sample. Youth with disabilities can be marginalized in their communities, and adolescents who married or had children young may be hidden from outsiders. In an effort to overcome the stigma, discrimination and/or invisibility that such young people often face in their communities, we utilized both a census-style door-to-door listing and the assistance of key community stakeholders who work with marginalized youth in order to locate these individuals (Muz et al, 2019). Table 2 provides numbers adolescents from each of these marginalized groups that are included in the GAGE research sample as of mid-2019.<sup>2</sup>

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<sup>2</sup> The GAGE research team intends to recruit additional marginalized youth in the Round 2 data collection during late 2019-early 2020. Additional sample will be described in the Round 2 research manuals.



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## Appendix A: GAGE Bangladesh-Dhaka Listing Protocol

We will work in three locations around Dhaka. These three locations have different structures so our listing protocol will be slightly different in each location.

### Community A:

Community A was too large to list in its entirety, so was divided into 8 blocks - 3 blocks are big (block 3, 4 and 5), and 5 blocks are smaller (block 1, 2, 6, 7 and 8). Block 1, 2 and 3 are closer to the roads. Table A1 presents this breakdown

**Table A1: Community A Block Type**

	Blocks closer to highway	Middle	Blocks farther from highway
Small block	1, 2	----	6,7,8
Big block	3	4,5	----

We randomly selected one block from blocks 1 and 2 (block 1 was chosen), and we randomly selected one from blocks, 6, 7 and 8 (block 8 was chosen). We assume these two blocks will give us approximately 1000 HHs. We will then randomly selected one block from blocks 3, 4, and 5 (block 5 was chosen). One of these big blocs will give 1000-2000HHs. Before the teams enter community A, the research team will give them exact blocks that they will survey (so the research team will do the lottery and give the block names to teams).

1. An advance team will go and list out all galis in the selected blocks. This will be done on 28<sup>th</sup> Nov.
2. We will assign 3 teams to community A. Two teams will work on the big block. One team will start with one small block and move to the other small block after finishing the first one. All households within a block need to be listed.
3. Three supervisors will compile total list of HHs completed at the end of each day and check how many are still needed to visit to complete 3000HHs.
4. We will complete the listing of these 3 selected blocks. Again, this may be slightly higher/lower than 3000.

### Community B:

Community B has smaller private slums.

1. An advance team will go and list out slums in the surroundings of the community B neighborhoods, which will give us at least 2000HHs.
2. Two teams will work here, and each team will be given the list of private slums that they have to work in. Additional slums will be listed as reserve slums in case they do not reach 2000HH in the original list.
3. Two supervisors will compile total list of HHs completed at the end of each day and check how many are still needed to visit to complete 2000HHs.
4. The teams will complete the full list of original slums.
5. We listed all slums in community B.

### Community C:

1. An advance team will go and list out all galis. This will be done on 28<sup>th</sup> Nov.
2. 3 teams will work here; each team will have designated galis to cover. They will know this before entering the slum.
3. All households within a gali has to be listed.
4. 3 supervisors will compile total list of HHs completed at the end of each day and check how many are still needed to visit to complete 3000HHs.
5. The team will list all of community C, even if slightly more or slightly less than 3000HHs.

## Appendix B: GAGE Bangladesh-Dhaka Sampling Protocol

Households were sampled to be in the main sample and the replacement sample by the following procedure.

First, we created a complete list of candidate adolescents by:

1. Limiting listing data to eligible households (households with at least one 10-12 year old or 15-17 year old)
2. Dropping HH who were indicated would be difficult or impossible to sample.
3. Classifying eligible adolescents in the listing data as (1) young cohort male, (2) young cohort female, (3) old cohort male, (4) old cohort female
4. Randomly ordering households using the runiform() function in STATA
5. Selecting a single eligible adolescent from each household to be candidates for the final sample
6. Randomly selecting households from each slum according to the following procedures.

### Community A:

1. Block randomization is employed to select 100 households from each listed block (1, 5, and 8), 25 adolescents from each age-gender category.
  - a. In total 300 adolescents were selected by block randomization within category
  - b. Remaining adolescents in each block kept as replacements
2. 42 Young cohort households with an adult male were randomly selected for an adult male interview.

### Community B:

1. There are 10 blocks in Community B. Households were selected by block randomization, with 35 percent of households being selected from each block, equal proportion coming from each adolescent category
  - a. In total 198 adolescents were selected
  - b. Remaining adolescents in each block kept as replacements
2. 4 Young cohort households with an adult male are randomly selected for survey per block. This resulted in 36 AM interview households.

### Community C:

1. All households in the slum were pooled and 75 adolescents were selected from each of the four categories.
  - a. In total 300 adolescents were selected by random order within each category
  - b. Remaining adolescents were left as replacements
2. 40 Young cohort households with an adult male were randomly selected for an adult male interview

Sample weights are included in the data to account for this sampling strategy.

*Gender and Adolescence: Global Evidence (GAGE) is a nine-year longitudinal research programme building knowledge on good-practice programmes and policies that support adolescent girls in the Global South to reach their full potential.*

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