

Gender and adolescence

Why understanding adolescent capabilities,
change strategies and contexts matters

Second Edition

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Acronyms

CSO	Civil Society Organisation
FGM	Female Genital Mutilation
GAGE	Gender and Adolescence: Global Evidence
GBV	Gender Based Violence
HIV	Human Immunodeficiency Virus
HTP	Harmful Traditional Practice
ILO	International Labour Organisation
NGO	Non Governmental Organisation
SDG	Sustainable Development Goal
SRH	Sexual and Reproductive Health
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
WHO	World Health Organisation

Why a focus on gendered adolescence matters

Adolescence has powerful impacts on children's capabilities. This is in part because of the physical transformations wrought by puberty, which are considered second only to those experienced in infancy and early childhood in terms of their scope and speed, and in part because of how children's place in the family and broader community shifts as they approach maturity (Viner et al., 2015; Steinberg, 2015; Patton et al., 2012; UNICEF, 2011a). Given these pivotal life changes – and with a global adolescent population of more than 1.2 billion (UNICEF, 2011) – it is increasingly recognised by development community actors that adolescence represents a very important and unique opportunity to reap a triple dividend for adolescents now, for their adult trajectories and those of their children. Indeed, the years between 10 and 19 are increasingly seen as a critical window during which to accelerate progress against the effects of poverty, inequity

and discrimination and to foster positive development trajectories (Sheehan et al., 2017; USAID 2016) (see also Box 1).

Adolescent transitions shape both girls' and boys' lives, but often in highly gendered ways. Advancing understanding of these gendered dimensions of adolescent experiences is a core aim of The Gender and Adolescence: Global Evidence (GAGE) research programme. While our research will involve both girls and boys, we place a particular focus on the experiences and capability outcomes of girls because of the ways adolescent transitions more sharply curtail their capabilities. Over the course of the second decade of life, with timing and speed that not only varies between girls but also can be markedly asynchronous, even within individuals, girls are transformed by the production of sex hormones. In addition to the very obvious maturation their bodies undergo, as they grow taller

Box 1: The SDGs and adolescents

The Sustainable Development Goals (SDGs), building on the success of the Millennium Development Goals (MDGs), aim to direct nations' and donors' policy priorities between now and 2030, and drive the allocation of global financial and human resources. It is increasingly recognised that the SDGs will not be realised without critical interventions to support today's generation of adolescents (WHO, 2017; UNFPA, 2016). Whether or not we are able to achieve the goals will depend on how we impact the lives of adolescents today, and in turn, how they navigate this crucial life-stage between now and 2030, the target year for the goals.

The Goals have a number of adolescent-focused targets. For example:

- addressing the nutritional needs of adolescent girls (Target 2.2)
- ensuring universal access to sexual and reproductive health-care services (Target 3.7)
- ensuring that all girls and boys complete free, equitable and quality primary and secondary education (Target 4.1)
- eliminating all forms of violence against all girls (Target 5.2), including all harmful traditional practices (Target 5.3)
- ensuring sanitation and hygiene for girls (Target 6.2)
- achieving decent work for all young people (Target 8.5)
- providing access to safe and public spaces (Target 11.7)
- ensuring equal access to justice for all (Target 16.3) (UNSD, 2016).

While the SDGs, as compared to the MDGs, better reflect the rights and needs of adolescent girls, this alone is not enough to ensure that adolescents are adequately visibilised. GAGE is poised to make contributions to monitoring progress towards the Goals, ensuring that their 'leave no one behind' focus becomes reality. While the 17 Goals and 169 targets are now linked to 230 individual indicators, over half of those indicators lack 'acceptable country coverage, agreed-up methodologies, or both'. As the development of cutting-edge tools is one of GAGE's primary foci, the programme can help identify methodologies for measuring progress for girls.

and heavier, develop breasts and begin menstruating, the unseen cascade of hormones changes the way their brains function – not only moving them towards a greater capacity for analytic rather than concrete thought and making it possible for them to take on the perspectives of others but also making them evaluate risks differently and value their peers' opinions over those of adults (Crone and Dahl, 2012; Steinberg, 2015; WHO, 2014a; Goddings et al., 2014; Spear, 2013; Blakemore and Robbins, 2012; Romer, 2012; Breinbauer and Maddaleno, 2005). Within the confines of their cultural environments, they also begin to assert their autonomy and independence from their families (Zimmer-Gembeck and Collins, 2008; Fleming, 2005).

As girls enter and progress through adolescence, the gendered norms of their socio-cultural environments also begin to play a heightened role in shaping their trajectories, with the years of early adolescence found to be especially important because of the ways in which social norms¹ start to become both more rigidly enforced – especially by mothers in some contexts² (Basu and Acharya, 2016; Basu et al., 2016) – and more personally salient (McCarthy et al., 2016; Kågesten et al., 2016; John et al., 2016; Mmari et al., 2016). Indeed, emerging research suggests that the years between 10 and 14 may be a 'sensitive period' for sociocultural processing (Fuhrmann et al., 2015; Blakemore and Mills, 2014; Crone and Dahl, 2012). Critically for girls in the Global South, the years of early adolescence, rather

than expanding their worlds – as is common for boys and for girls in the Global North – often see them made smaller as they have to leave comparatively free childhoods and are forced down the gendered adult pathways of their local environments (Marcus and Harper, 2015; Watson, 2015; Watson and Harper, 2013). Girls who have begun to aspire to a world different from those of their mothers and their grandmothers find as their bodies evidence maturity that they are too often required to leave school and marry, abandoning not only their educational and occupational plans but also mobility and friendships (Kyomuhendo Bantebya et al., 2013, 2014; Ghimire and Samuels, 2013, 2014; Tefera et al., 2013; Jones et al. 2013, 2014a, 2014b, 2015a, 2016b). Pressures related to domestic and care work burdens, sexual purity and family honour and heightened risks of sexual and gender-based violence combine to limit girls' possibilities in ways that often have lifelong consequences (see discussion below).

After decades during which the concept of adolescence was largely seen as a Western luxury with little applicability in the Global South, recent advances in neuroscience (see Box 2) have helped generate new ways of thinking about the transition between childhood and adulthood. Not only do we increasingly understand that puberty has impacts that reach far beyond visible sexual characteristics, but also we have come to appreciate that there is more uniformity of experience than we might

Box 2: The neuroscience of adolescence

Adolescence has long been viewed as a time during which children effectively lose their minds – engaging in impulsive and risky behaviours at rates far higher than their younger and older peers. Models seeking to explain sensation-seeking behaviour have traditionally focused on the relatively faster maturation of the subcortical affective (emotional) areas of the brain compared with the frontal cortical brain (rational) areas. Recent neuroscience, however, has not born this theory out and has instead begun to concentrate on the interaction of adolescents' cognitive, affective and social processing. It has found, for example, that the threats and rewards that adolescents consider most salient are social and that adolescents who have strong friendships are less sensitive to later experiences of social rejection. There is also evidence that adolescents' brains are uniquely sensitive to memory formation. Taken together, these new insights open possibilities for designing interventions that provide adolescents with relevant learning experiences that help them optimise their development by providing them with the motivation they need to make smart decisions and helping them develop the emotional insulation that can buffer them from future stress.

Sources: Crone and Dahl (2012); Fuhrmann et al. (2015)

- 1 Some authors prefer the term 'gender norms' as they believe it better highlights power differentials between women and men and girls and boys. Given the context of GAGE's work, we prefer the more general term 'social norms'.
- 2 While mothers have been found responsible for enforcing social norms on a day-to-day basis, in some contexts fathers and other male relatives are the ultimate enforcers through acts such as honour killings (Kulozycki and Windle, 2011; Kulwicki, 2009).

previously have expected. That said, it is also increasingly clear there are marked differences between ages, contexts and gendered realities that are poorly understood in terms of how they affect the formation of girls' unique identities and capabilities. Focusing on these differences enables the development community (including policymakers, practitioners and communities) to not only better support

the immediate needs of adolescents, thus improving their quality of life during a critical phase of life, but also to contribute to shaping girls' capacity to aspire to a better life for the future – which is an investment that global evidence underscores will pay off across generations as girls mature into empowered adult women (e.g. Wodon et al., 2017).

GAGE's conceptual framework: The 3 Cs framing

Informed by the emerging evidence base on adolescent wellbeing and development, 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' development and empowerment – now and in the future (see Figure 1.1). This framing draws on the three components of Pawson and Tilley's (1997) approach to evaluation, which highlights the importance of outcomes, causal mechanisms and contexts – but we tailor it to the specific challenges of understanding what works in improving adolescent girls' capabilities.

The first building block of our 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 Marta 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'. At its core is a sense of competence and purposive agency: it goes beyond a focus on a fixed bundle of external assets, instead emphasising investment in an individual's skills, knowledge and voice. Importantly, the approach can encompass relevant investments in girls with diverse trajectories, including the most marginalised and 'hardest to reach' such as those who are disabled or are already mothers.

GAGE's focus on capabilities is also rooted in the UN Convention on the Rights of the Child's recognition of child rights and emphasises investments in the person as a whole, including bodily integrity and autonomy; social connectedness; access to, control over and use of assets; development of skills and knowledge; and ability to

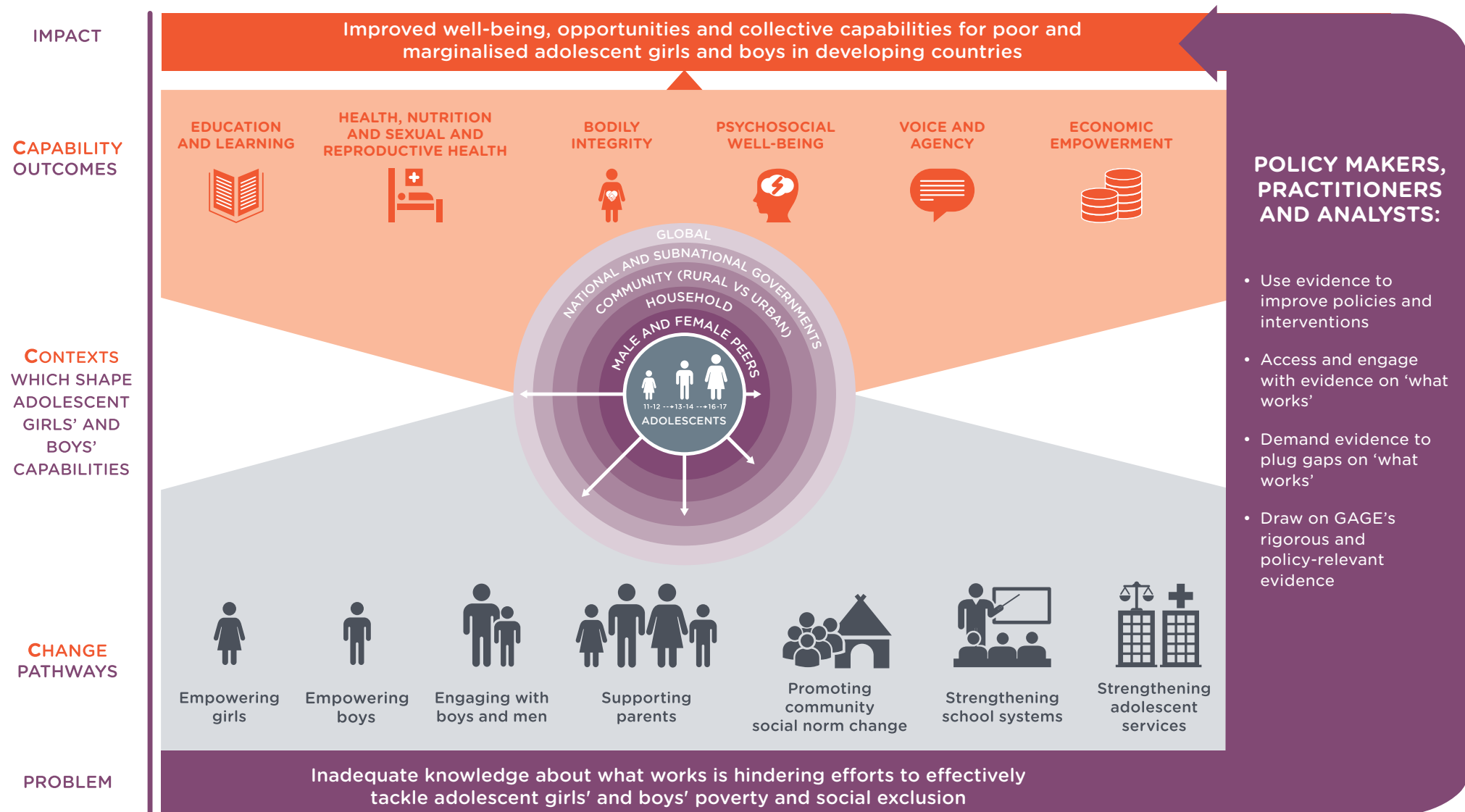
express voice. It also helps us capture the dynamic nature of adolescence, during which girls' capabilities emerge. It recognises that 11-year-old girls need preparation for the changes their bodies are about to undergo and are often best reached through play; 15 year olds are struggling with how to manage awakening sexuality and balance biological and social imperatives; and 19 year olds are often functional adults who need pathways to work and parenting classes of their own.

The second building block of our conceptual framework is context dependency. Our 3 C's framework situates girls ecologically and recognises not only that adolescent girls at different stages in the life-course face different needs and constraints, but that these are also highly dependent on girls' contexts at family or household, community, state and global levels.

The third and final building block of our conceptual framework acknowledges that girls' contextual realities will not only modify the pathways through which they develop their capabilities but also determine the change strategies that can be employed to improve their capability outcomes. Our ecological approach emphasises that, in order to nurture transformative change in girls' capabilities and broader well-being, potential change strategies must simultaneously invest in integrated intervention approaches at different levels, weaving together policies and programming that support girls, their families and their communities while also working to effect system-level change.

In short, the GAGE conceptual framework offers an analytical approach to unpack how the capability outcomes of different groups of adolescent girls – in comparison to those of their male peers – are shaped by the causal mechanisms embedded in different change strategies, which are in turn mediated through specific local, national and global context dynamics.

Figure 1: GAGE 3 Cs conceptual framework



Capabilities outcomes and challenges

GAGE's framework posits two levels of final, multidimensional outcomes: those that relate to individual girls' capabilities and those related to what Kabeer (2003) calls their 'collective capabilities'.

1. Individual capabilities

The capabilities approach emphasises investments in girls as a whole, whereby girls are supported to develop the functioning ('being and doing') that provides them with the freedom to choose the kind of life they value (what Sen terms a 'capability set') (Sen, 2004; Unterhalter, 2003; Nussbaum, 1997). In addition to recognising the importance of physical, economic and educational competencies, a capabilities approach highlights the centrality of girls' psychosocial well-being and their ability to exercise agency and voice in terms of setting and achieving their own goals. GAGE's focus on capabilities is especially well suited to capturing the dynamic nature of adolescence and the ways in which it expands or limits girls' ability to realise their full adult potential and to transit out of poverty sustainably.

In the discussion on individual capability domains below we discuss six key capabilities and the dimensions of these that are of particular concern for young people during the second decade of life. Our discussion highlights capability challenges in general, as well as gender-specific vulnerabilities and disparities for adolescent girls and boys. The latter are highlighted in purple and teal text boxes, respectively, and seek to draw attention to the importance of using a gender and intersectional lens to explore adolescent experiences. In order to bring the complex realities of adolescent girls' lived realities across each capability domain alive, we also highlight illustrative examples in orange textboxes from our formative qualitative research.

2. Collective capabilities

The idea of 'collective capabilities' draws on the work of Amartya Sen but seeks to address what some critiques have argued is an over-emphasis on individuals, and insufficient focus on the factors that shape the capacity of groups of marginalised people to overcome

marginalisation (Stewart and Deneulin 2002; Stewart 2005; Ibrahim 2006; Shove 2010).

A focus on 'collective capabilities' means looking more at what is necessary to help groups of people to work together towards shared goals of empowerment and capability expansion. These benefits accrue not just to individuals, or those who are part of the immediate group which may be involved in activities, but to all who are marginalised by the norms that are being worked against (Ibrahim 2006). In terms of GAGE, a collective capabilities approach would entail challenging and transforming the social status of adolescents as a group, beyond efforts to empower individual adolescents.

For collective capabilities to be expanded, certain conditions are necessary. Relationships of trust and reciprocity within a group are vital to turning ideas and discussions into action. A collective learning process must happen, which results in common shared goals being defined and pursued (Pahl-Wostl 2006; Pelenc, Bazile & Ceruti 2015). And at a structural and institutional level, there must be opportunities for collective agency to be exercised, enabling collective capabilities to be 'scaled up' in order to trigger broader transformation. This requires support not just within the group seeking change, but from other actors and stakeholders, both in the immediate community and more broadly.

Some examples of the application of 'collective capabilities' in practice are found in the literature on social movements. In the case of Nijera Kori in Bangladesh, the NGO is taking a 'radical capabilities approach' focused on strengthening the individual knowledge and awareness of social justice issues among poor men and women (Kabeer and Sulaiman 2015). The consciousness they developed was fundamental to the positive outcomes in areas such as gender inequality, which men become equally involved in efforts to challenge. However, as in this case, the burgeoning research on collective capabilities predominantly focuses on microfinance institutions



Members of a dance group in Rangamati, Bangladesh © Nathalie Bertrams/2019

and economic development (Sanyal 2009; Kabeer and Sulaiman 2015; Ibrahim 2017).

Because of the academics working in this field, and because it is a reasonably new area of study, most work has focused on India and Bangladesh. There is a notable absence of collective capabilities literature that looks at lower and middle-income countries in regions such as Africa and the Middle East. The existing literature also tends to centre on adults, ignoring the significant youth bulge in lower and middle-income countries and the importance of supporting the participation of young people in determining the futures of their countries. Outside of Naila Kabeer's research on Nijera Kori, there is also little work focusing on the gendered dimensions of collective capabilities, despite gender inequality being a significant obstacle to women's collective empowerment. There is some research on disability from a capabilities perspective which explores collective action as complementary to expanding capability sets for individuals (Dubois and Trani 2009; Bellanca et al 2011; Trani et al 2015); however, researchers have thus far not addressed how displacement through forced migration might be incorporated into work on collective social change.

Within GAGE, the idea of collective capabilities has mainly been used to increase the visibility of adolescents' needs at the national level and draw attention to their specific needs. These needs are often obscured within agendas that focus on either children or women, a limitation which international development organisations have recently begun to address through 'girl-centred' programming. A 'collective capabilities' approach can enhance this emerging focus on girls when it is used to inform participatory approaches to work with adolescents. Through a '3 Cs' approach, processes of conscientisation, conciliation and collaboration are central to expanding collective capabilities (Ibrahim 2017). Adolescents can be supported through the process of conscientisation about inequality, finding ways to (re)concile individual and community goals, and collaborate with various other actors and stakeholders to make positive changes together.

Capability domains

As a result of the physical, emotional, cognitive and social changes that girls experience over the course of adolescence, threats to their capabilities become both

broader and deeper – as does the importance of working with them to tackle these threats. In this next section we outline six broad capability domains, the challenges that adolescents in the Global South face in achieving these, and the positive capability outcomes against which our research will assess progress over time. For more details on the sub-outcomes we will measure, please see Annex

1. In doing so, we also recognise that understandings and experiences of adolescence evolve over time and can vary significantly across locations (see discussion on contexts below) and can be shaped significantly through girls' own strengths and resilience that contribute to overcoming the challenges they face (see discussion on change strategies below).

Education and learning

This capability domain focuses on the services and support adolescents have to acquire the cognitive skills and knowledge they need in order to engage with and make good decisions in a rapidly changing world.

Challenges adolescent girls face regarding education and learning

Girls have made tremendous progress over the past generation in terms of both their access to education and their schooling outcomes. However, in most Southern countries they continue to be disadvantaged in terms of:

- Access – with girls still more likely to be out of school than boys and especially blocked from pursuing non-traditional fields;

- Substantive access – with even in-school girls lacking access to the quality education that is necessary to achieve longer-term gender-equitable outcomes;
- Transitions – with girls in most Southern countries more likely to be pushed off track than boys by events such as national exams and movement between school levels. (see Box 3).

Education and learning capability outcomes that would support adolescent girls' development trajectories

As part of its focus on what works, GAGE research will assess the following aspects of adolescents' education and learning outcomes: whether younger adolescent girls are regularly attending schools that provide age- appropriate and gender-responsive quality education, have access to the resources and services they need for a positive school experience, have the time to complete their homework, and have educational outcomes sufficient to guarantee continued access to school (e.g. passing scores on national exams). Our research will explore whether they have confidence in their own ability to learn and are beginning to set longer- term goals for themselves with regard to education and occupation. Similarly, we will assess older girls' access to secondary school and vocational training and whether they are honing their longer-term objectives, realistically balancing personal aspirations and local reality.

Box 3: Shaima: My determination and persistence have grown up with me

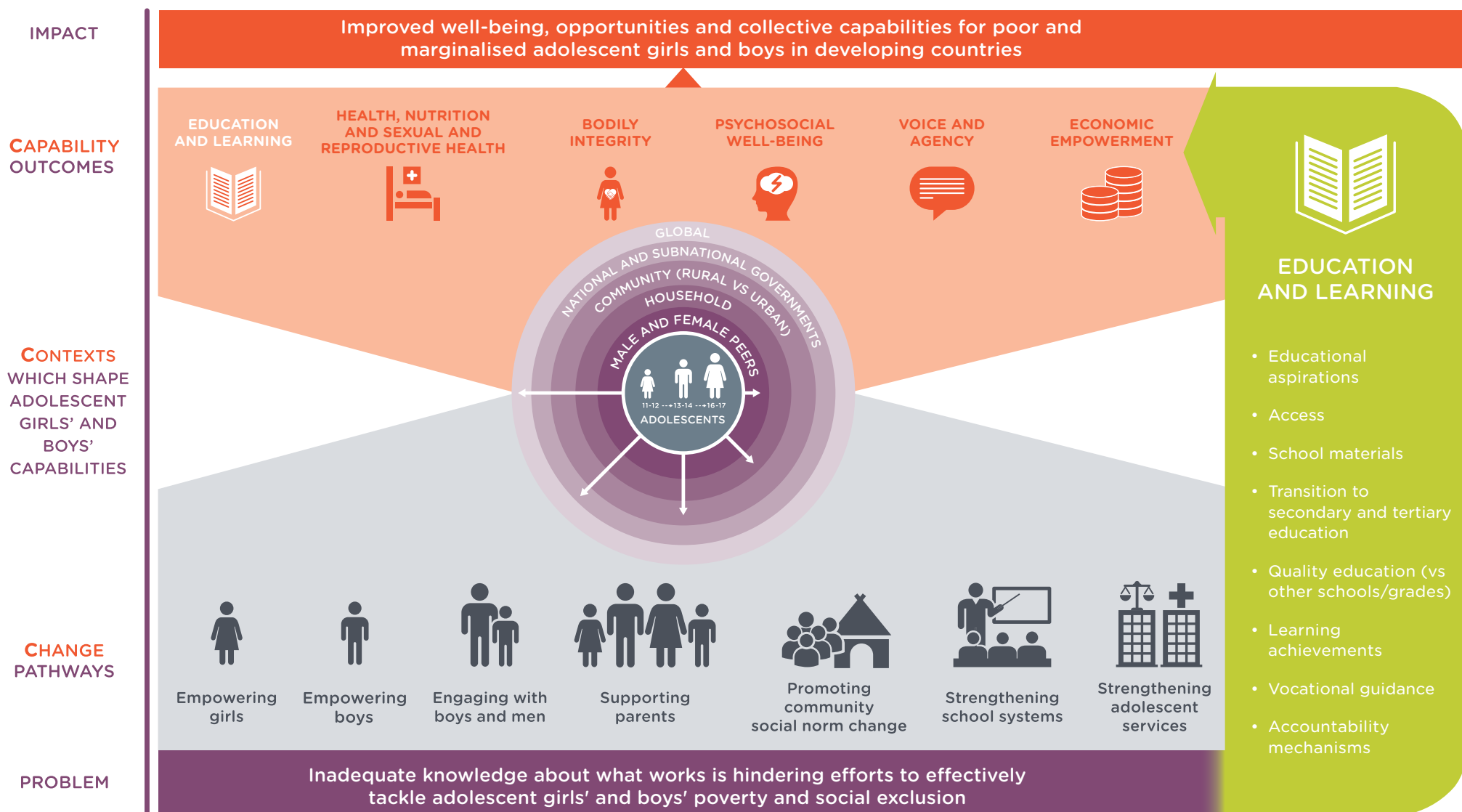
My name is Shaima.* I am a 19-year-old girl from Gaza, which is very rural and poor. I have been quadriplegic since birth. I have faced many struggles that at times have seemed too much. However, as I have grown up, my determination and persistence have grown up too.

My disability has made it difficult for me to get an education. The director at my secondary school initially refused to accept me, because the school has three floors and no lift system for my wheelchair. I insisted and my father adapted the school building himself. Even then school was a struggle. I often arrived very late because of difficulties with transportation. Because I use a wheelchair, drivers don't pick me up, they just ignore me at the taxi stations.

Even worse was when other children teased me and refused to be near me because of my disability. At school, I felt as if I was not a full human being. I cried many times because I got no support from the other students and my teachers. I got good grades, despite the struggle I faced on a daily basis.

**Names have been changed*

Figure 2: Education and learning



Box 4: Educational challenges facing adolescent girls

According to the World Bank (2016), across all low- and middle-income countries girls are now more likely than boys to survive to the last year of primary education (73.7% versus 71.4% in 2012). Indeed, this pattern holds true even in low-income countries (56.1% versus 54.2%) and across all regions of the world (ibid). In most low-income countries, however, girls' early advantage evaporates with the transition to secondary school – especially for the poorest girls. Across all low-income countries, 32% of girls of lower-secondary age are out of school, compared with only 29.4% of boys. Similarly, while 37.4% of girls ultimately complete lower secondary school, 41.8% of boys do so. Overall, only 46.9% of secondary students in low-income countries are girls. While there is regional variation, with girls in East Asia and the Pacific, for example, actually more likely to complete lower secondary than boys (92.7% versus 89.3) and girls in Sub-Saharan Africa especially disadvantaged (34% of girls versus 41.8% of boys completing lower secondary), the prevailing pattern in the Global South is for adolescence to flatten girls' educational trajectories more than those of boys – especially for those from the most disadvantaged households (UNESCO, 2016). There is also evidence that gains in enrolment may be hiding other forms of parental underinvestment in girls' education. In India, for example, boys are now significantly more likely than girls to have access to the private English-language education that produces better educational and occupational outcomes (Nanda et al., 2014; Dercon and Singh, 2013).

There are many reasons for girls' uptake of schooling shifting with adolescence. For example, with girls more at risk of sexual- and gender-based violence as their bodies mature, families keep them home to not only protect them from violence but also ensure they remain the sexually pure signifiers of family honour that traditional gender norms require (Tefera et al.,

2013; Islam, 2012; Jones et al., 2015a; 2016b; Ghimire and Samuels, 2014, 2014). Furthermore, even where adolescent girls are permitted to enrol in school, their attendance can suffer because their care-related burdens tend to grow as they become more capable of substituting their own labour for that of their mothers (Nanda et al., 2013). In Rwanda, for example, while young adolescent girls (age 10–14) spend about four hours more each week on domestic tasks than do boys (17 hours versus 13 hours), by later adolescence (age 15–19) the gap grows to six hours (21 hours versus 15 hours) (NISR, 2012). Similarly, in Ethiopia, while 78% of younger girls and 52% of younger boys engage in unpaid domestic labour, for those between the ages of 15 and 29 rates radically diverge – to 91% versus 48% (CSA, 2014). The cost of school also impacts adolescent girls' school enrolment and attendance. Among the poorest rural households in Tanzania, for example, Alcott et al. (2016b) found 80% of girls had been sent home because they could not pay school fees.

Furthermore, even where girls' enrolment rates continue to rise, their substantive access to quality education continues to lag (Vaughan, 2016; Calder and Huda, 2013). In some countries, high teacher absenteeism and growing student-to-teacher ratios mean enrolment does not translate into teaching – or even that children's educational outcomes are worsening (Transparency International, 2013; Woldehanna and Pankhurst, 2014). Lloyd (2009), for example, notes that the quality of education in many developing countries is so poor that over half young women (currently aged 20–24) who completed third grade remain functionally illiterate. Indeed, in the African countries included in her sample, fewer than 50% of young women had achieved literacy at the end of Grade 5. Vaughan (2016) adds that gender-insensitive curricula, teachers' differential treatment of girls and boys and educational systems also limit girls' substantive access, ultimately preventing them from translating their cognitive and academic gains into broader empowerment (see also Murphy-Graham, 2009; Durrani, 2008; Stromquist, 2006).

Adolescent girls are also particularly likely to have limited access to the fields of study that would ultimately result in more lucrative employment. At secondary and tertiary levels they remain largely excluded from science, technology, engineering and mathematics fields. This pattern holds true for technical and vocational training as well. Not only do girls overall have less access to employment-oriented training, but also, where they do have access, they tend to be cloistered into more 'traditional' fields, such as hairdressing (Vaughan, 2016; UNESCO, 2012a; Kabeer, 2009).

Box 5: Educational challenges facing adolescent boys

- Boys are more likely to enter school late, repeat grades and leave school early.
- Boys are more likely to have poor learning outcomes; while gender learning gaps in science and mathematics are narrowing, the gender gap in reading skills is widening in favour of girls.
- Poverty and the need to contribute to household income in line with traditional masculine norms along with poor school environments and lack of role models are key factors for boys' underachievement.

There has been significant progress in promoting girls' education and gender parity over the last 15 years. However, while girls face a disproportionate disadvantage and account for most out-of-school children and adolescents, boys' needs have sometimes been overlooked in policies and interventions. In several contexts, boys are likely to have lower levels of both educational participation, and learning outcomes and skills. It is increasingly recognised that gender equality in education will not be achieved if boys' disadvantage remains unaddressed (UNESCO, 2018).

Data suggests that boys face greater risks of entering school late, repeating grades and leaving school early (UIS, 2012). For instance, in 2013, 52% of Ethiopian boys aged 12 were over-age for grade in school compared with 13% of girls (Woldehanna and Pankhurst, 2014). Globally, 26% of boys (vs. 20% of girls) drop out of primary education and are also more likely to drop out of upper-secondary education (UNESCO, 2015). In 2016, 31 million boys of lower-secondary school age and 71 million male youth of upper-secondary school age were out of school (UIS, 2018).

Gender disparities at the expense of boys are observed in enrolment and completion. In 2016, 6% of countries had a disparity at the expense of boys in primary enrolment, 17% in lower secondary and 45% in upper secondary (UNESCO, 2018). Girls face greater disadvantage in low-income countries, but boys account for most out-of-school adolescents and youth of lower and upper-secondary school age in lower- and upper-middle income countries (UIS, 2018).

Educational disadvantage has been tackled more quickly for girls than for boys. Since the late 1990s, fewer boys have been completing primary, secondary and post-secondary education in Latin America and the Caribbean. In southern Africa, boys are traditionally taken out of school early to herd cattle. In other regions, reversals in gender gaps have occurred or have widened. For instance, in the Gambia, Nepal, Bangladesh and Rwanda, fewer adolescent boys are now enrolled in lower secondary education (UNESCO, 2018 and 2015).

Boys are also more likely than girls to have poor academic performance, which is a strong predictor of leaving school early with worse employment outcomes in adult life. Gender gaps in mathematics and science are narrowing, but the learning gap in favour of girls in reading skills has increased (UNESCO, 2015). In 2012, 15-year-old boys accounted for six out of ten students who failed to attain a baseline level of proficiency in reading, mathematics and science in the Program for International Student Assessment (PISA) exercise.

Boys' disadvantage in education is closely linked to socioeconomic status, location and ethnicity (Jha et al., 2012). Belonging to a low-income household leads to boys' under-participation and then under-performance (Jha and Pouezevara, 2016). Poverty intersecting with rural location and ethnic minority status increases boys' disadvantage (Jha and Pouezevara, 2016). Refugee status also increase boys' risk of not completing their education. For instance, adolescent boys in low-income Syrian refugee households are at higher risk of dropping out of school than girls as they have considerable earning potential and opportunities (Abu Hamad et al., 2017; UNICEF, 2016b).

Apart from the need to contribute to household income, attitudes towards education and available employment opportunities interact with gender norms and roles (UNESCO, 2015). Traditional gender norms and expectations undervalue boys' academic achievement in many contexts. Low-income boys are socialised into the 'men as providers' role and start working earlier than girls. As they grow older and become more aware of their 'real life' chances, adolescent boys are more likely to focus on work.

The school environment also contributes to boys' disengagement and underachievement. Teachers' gendered expectations and differential treatment combined with poor teaching methods often fail to engage vulnerable male students (Jha and Pouezevara, 2016; Jha et al., 2012). Moreover, violent disciplinary methods by teachers and bullying from peers can increase the likelihood of dropout or poor performance (UNESCO, 2018; 2015).

Bodily integrity

This capability domain focuses on adolescent girls' freedom and protection from gender-based violence including child marriage, harmful traditional practices, and other forms of coercion.

Challenges adolescent girls face regarding bodily autonomy and integrity

While girls in many Southern countries are at risk of violence from early childhood – beginning before birth in countries with strong son preference – the second decade of life amplifies the threats that girls face (see also Box 6). Depending on context, adolescent girls are faced with high odds of:

- Child marriage – which is most often forced by fathers and other adult family members but is sometimes 'freely' chosen;
- Female genital mutilation/cutting and other harmful traditional practices, often arranged by mothers and other adult family members;
- Sexual and gender-based violence at the hands of romantic partners and other family members as well as community members.

Bodily integrity capability outcomes that would support adolescent girls' development trajectories

While acknowledging that risks to girls' bodies vary tremendously by context, GAGE research will assess whether both younger and older girls have the knowledge, skills, resources, and support to resist child and forced marriage and harmful traditional practices carried out on girls' bodies. It will also assess their ability and support to protect themselves from the broader age-based abuse and sexual and gender-based violence that is meted out within their own households, schools, communities and other institutions. Additionally, we will examine whether older girls also have tools to protect themselves within sexual relationships.

Box 6: Gelila: Trapped in an early marriage to a priest

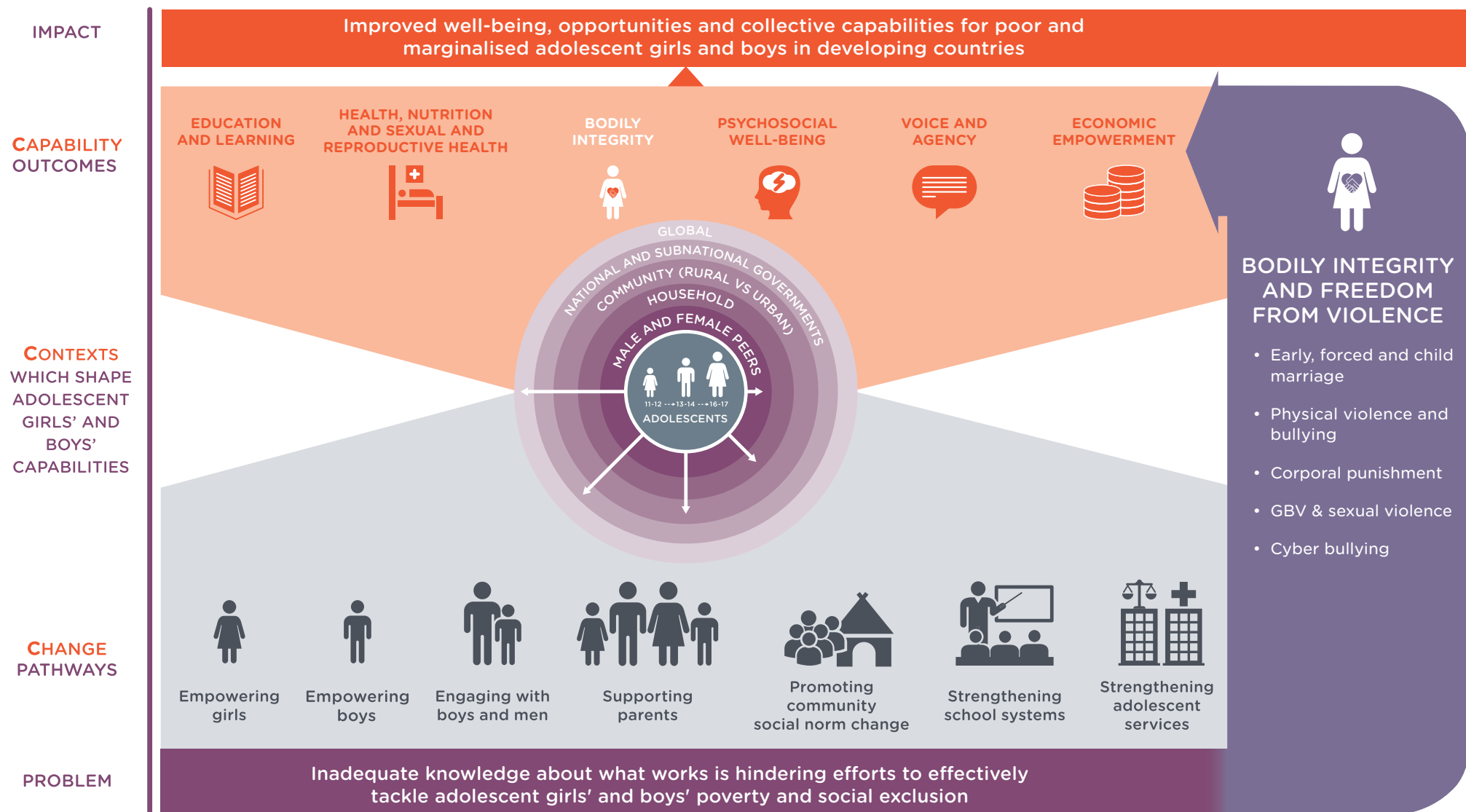
My name is Gelila.* I am a 13-year-old married girl currently in 5th grade. I was promised in marriage at the age of 1 to a priest. He is old and I am not happy in my marriage. I am stuck because my husband would lose his priesthood if he divorced me.

I know that girls should not get married before the age of 18, as I have heard it on television in my neighbour's house. I know that when girls get married early they are unlikely to live a peaceful life.

I only want to begin life with my husband after I get employed. Even if my family insist on me living with him now, I would not accept it. I don't want to drop out of school, I will finish my education.

**Names have been changed*

Figure 3: Bodily integrity and freedom from violence



Box 7: Bodily integrity challenges facing adolescent girls

Child marriage remains a significant threat for adolescent girls in many Southern countries. One-third of girls in developing countries are married before the age of 18 and nearly 10% are married before the age of 15, with girls from the poorest and least-educated families especially at risk (ICRW, 2016). Rates in some countries are far higher. In Bangladesh, 66% of girls are married as children and in Nepal and Ethiopia more than 40% are married before adulthood (ibid.). Furthermore, while child marriage is on the decline in most contexts, there is evidence that it is becoming more common in some conflict-affected areas, as families struggle to balance the twin demands of economic security and girls' safety, and rape and forcible 'marriage' is used as a weapon of war (Girls Not Brides, 2016; WRC, 2016). Among Syrian refugees in Jordan, for example, rates of registered child marriage jumped from 12% to 32% between 2011 and 2014 (UNICEF, 2014b).

Where female genital mutilation/cutting and other harmful traditional practices are associated with rites of passage or child marriage, adolescent girls are at further risk (UNICEF, 2016a). In Egypt it is estimated that 80% of girls between the ages of 15 and 19 have been cut (28 too many, 2016), usually in early adolescence (UNICEF, 2014a). Similarly, in Malawi, girls as young as 10 are forcibly initiated into sex by men known as 'hyenas' who are paid to 'turn them into women' (Ahmed, 2014; Tonthola, 2016).

Research has found that adolescent girls are especially vulnerable to sexual and gender-based violence, including – when they are in relationships – intimate partner violence. Indeed, of women who have been sexually victimised, most were victimised the first time during adolescence (UNICEF, 2014a). Rates of victimisation are staggeringly high: about one in five older adolescent girls (age 15–19) in Cameroon, DRC and Uganda, for example, have experienced forced sex (ibid.) and 87% of Bangladeshi girls between the ages of 10 and 18 have experienced 'eve teasing' (BNWLA 2010 survey, cited in Islam, 2012). Indeed, although there are obvious challenges surrounding reported violence versus experienced violence, research suggests that in some countries sexual and gender-based violence has been markedly worse in recent years as social controls on women and girls have relaxed and they have begun to move out of their households and into school and employment in greater numbers. While many families believe child marriage is the best way to protect their daughters from violence, statistics suggest otherwise. In Nepal, 44% of the perpetrators of violence against adolescent girls are husbands or partners (UNICEF, 2014a) and in Ethiopia Erulkar (2013) found that the youngest brides were significantly more likely to experience violence at the hands of their husbands than their older peers, in part because they have had less time to develop the voice and agency that will allow them to negotiate and resist and in part because they are the most likely to be married to men who are significantly older than they are. Girls in conflict-affected areas are also highly vulnerable to sexual and gender-based violence.

Adolescent girls' own decision-making in some cases heightens their vulnerability to violence. Driven by the cognitive changes mentioned above, which encourage sensation-seeking and risk-taking but make planning and emotional control challenging (Steinberg, 2015; WHO, 2014a), girls in some contexts engage in variety of risky behaviours, including sexual relationships with not only age mates but also the older 'sugar daddies' uniquely positioned to exploit them (Kyomuhendo Bantebya et al., 2013, 2014; Silberschmidt and Rasch, 2001). In Uganda, for example, research has found that girls are involved in sexual relationships at ever earlier ages, in part because they want money (Kyomuhendo Bantebya et al., 2013, 2014), and that nearly 13% of 15–19-year-old girls have engaged in cross-generational sex outside of marriage (Amin et al., 2013).

While adolescent girls are undeniably victims in this context, as most are using the relationships to mitigate acute poverty and in all cases they are children in need of protection rather than exploitation, Silberschmidt and Rasch (2001), working in Tanzania, observe that adolescent girls are also 'active social agents' – albeit with minimal understanding of longer-term consequences, made worse by the taboos and policy decisions that surround sexual and reproductive health education in many contexts (see also Parkes, 2016; Hallman et al., 2016).

Source: <http://www.cgdev.org/blog/230-indicators-approv-agenda>

Box 8: Bodily integrity challenges facing adolescent boys

- Boys are at greater risk than girls of corporal punishment, bullying and physical violence from peers.
- Boys are at high risk of dying from road traffic accidents and homicide.
- Adherence to masculine norms about toughness and aggression along with peer pressure threaten boys' bodily integrity.
- Boys are also vulnerable to sexual violence and exploitation but very little is known about it.

Adolescent boys are vulnerable to bodily integrity challenges ranging from physical violence to accidents, sexual abuse and trafficking. Studies have noted that the greater freedom that adolescent boys enjoy compared with girls expose them to more bodily integrity risks. In addition, masculine ideals emphasising aggression and toughness along with peer pressure to conform to them encourage risk-taking behaviours (Kagesten et al., 2016). Neuroscience findings on adolescent brain development have also confirmed a tendency among adolescents for sensation-seeking and risk-taking associated with immediate rewards and gaining peer acceptance, respect and admiration, even if this leads to harmful behaviours (UNICEF Innocenti, 2017).

Boys are at greater risk of corporal punishment by family members at home and teachers in school (Know Violence in Childhood, 2017; Pinheiro, 2006). Boys in institutional settings may also face frequent physical abuse by staff members (Know Violence in Childhood, 2017). Corporal punishment of boys appears to be more frequent and harsher than that of girls either due to the perception that boys need to toughen up or because they are perceived to be tough and undisciplined and thus in need of such punishment (Pinheiro, 2006).

Boys are also more vulnerable than girls to bullying. According to a review of 145 countries, nearly 39% of boys and 36% of girls aged 11–15 reported being bullied (UNESCO, 2019). Boys belonging to ethnic minorities may be more vulnerable – evidence indicates that boys of indigenous or African descent in Brazil are more affected (Know Violence in Childhood, 2017). Boys who do not conform to masculine sexual ideals and are perceived to act in feminine ways also face greater risk of bullying and other forms of peer violence (UNICEF, 2017; Kagesten et al., 2016).

Physical violence from peers is a greater threat to boys than girls. For instance, in Jordan 51% of boys aged 13–15 reported having been physically attacked during the past 12 months compared with 26% of their female peers (UNICEF, 2012b). Physical and verbal aggression is often perceived as part of boys' socialisation, preparing them to become 'real men' in line with gender norms that emphasise aggression and dominance (Know Violence in Childhood, 2017; Pinheiro, 2006).

Low-income adolescent boys are also at risk of joining gangs, participating in violence and being killed. The average age for entry into gangs is 13, and reasons for joining include economic need and emotional support (UNICEF, 2012b; Pinheiro, 2006). Adolescent boys are at greater risk of assault and violent death in all regions, with the global homicide rate among boys aged 10–19 four times higher than that of girls (UNICEF, 2017). The highest estimated homicide rates occur in Latin America and the Caribbean, followed by West and Central Africa. Risk of homicide increases with other factors such as race: in Brazil, adolescent boys of African descent are nearly three times more likely to die a violent death than white boys.

Although rates of sexual violence against girls are generally higher, adolescent boys are also vulnerable to sexual violence and exploitation. However, the scale of the problem remains unknown and existing data is scarce (UNICEF, 2017; Frederick, 2010). Boys living and working on the street, those with disabilities, boys belonging to ethnic minorities, and those affected by conflict and natural disasters are among those most at risk (Frederick, 2010). Sexual exploitation of boys takes different forms. In South Asia, adolescent boys in popular tourist destinations are vulnerable to sexual exploitation by both older men and women. In other regions, traditional cultural practices of warlords and military commanders using boys for their entertainment and as sexual partners survive (Frederick, 2010).

Boys are also trafficked for sexual or labour exploitation. Globally, in 2016, 50% of boys were trafficked for forced labour, 27% for sexual exploitation and 23% for other forms of exploitation such as begging, forced criminal activities and child soldiering (UNODC, 2018a). Large numbers of boys are trafficked in sub-Saharan Africa, especially in West Africa, where the majority of detected trafficked victims are under the age of 18 (UNODC, 2018a).

Conflict is another factor endangering the lives of boys. Analysis of age-specific mortality data for the Global Burden of Disease study in 2016 showed that although mortality rates for adolescents decreased in most regions between 2000 and 2016, this age group also showed large increases as a result of conflict, especially for younger adolescent girls in Syria, and for older adolescent boys in Syria, Yemen, Iraq and Libya (Murray et al., 2017).

Health, nutrition, and sexual and reproductive health

This capability domain is concerned with adolescent knowledge and awareness about their bodies and how to keep healthy. This includes access to the knowledge, supplies and services needed to manage menstruation and protect themselves from sexually transmitted infections and unplanned pregnancy.

Challenges adolescent girls face regarding their health and nutrition

Outside of countries with a strong son preference, where girls' nutrition and physical health can be compromised from birth, threats to girls' physical capabilities emerge and grow in adolescence (see Box 9) Specifically, adolescent girls' vulnerability grows in relationship to their:

- Nutritional status – given that while their bodies are growing quickly they lack access to nutrient-dense foods, especially iron-rich foods after they begin menstruation. This is particularly dangerous where adolescent pregnancy is common;
- Menstrual practices – given that taboos often preclude knowledge and practice of safe sanitation;
- Reproductive and sexual health – given the risk of pregnancy and sexually transmitted infections and their difficulty in accessing health care.

Physical and reproductive health and nutrition capability outcomes that would support adolescent girls' development trajectories

GAGE research will explore the extent to which girls of all ages have equitable access to nutritious food and quality health care when they need it. It will also ask whether girls are able to hygienically manage menstruation without shame or fear—focusing on the younger girls who have been largely ignored by existent research. Because girls' access to sexual and reproductive health care tends to be especially limited, largely owing to social norms, key questions will consider whether girls have physical and social access to youth-friendly services that can provide them with the more explicit information on sexuality they need in order to make smart choices and protect themselves. GAGE will also assess girls' access to maternity-related care.

Box 9: Chantal: Taking charge of her future

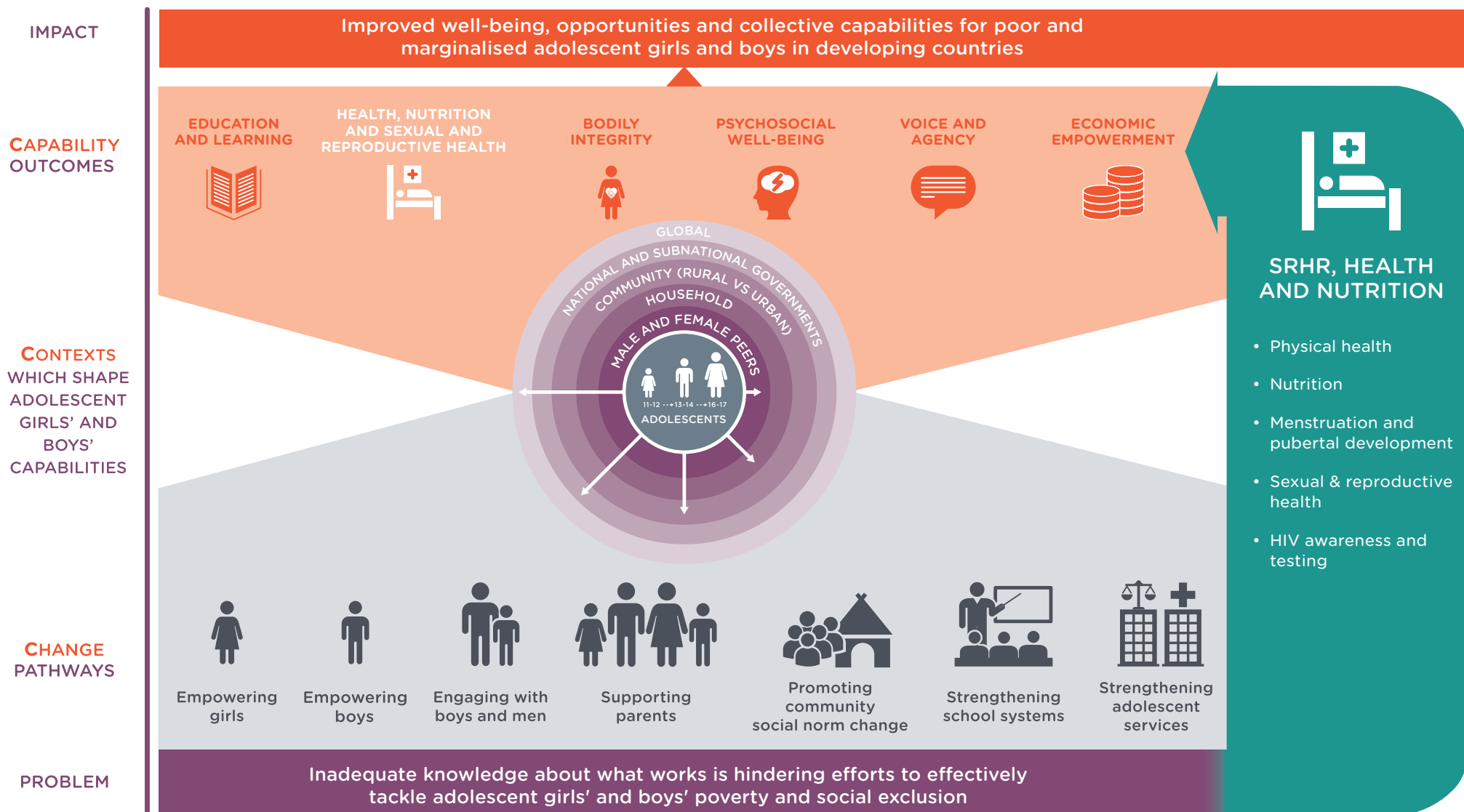
My name is Chantal.* I am 15-years-old, from Rwanda's rural Nyaruguru District. I live in a mud-brick house, with my mother and five siblings. My family is very poor, but I am working hard to keep my options for the future open. My house is simple, we do not have running water or electricity, and sometimes we do not have enough to eat.

I am happy growing up. I am really pleased I now have breasts. In my culture that makes me beautiful and mature. I have spoken to my friends about puberty and I look forward to my first period.

I think about many possibilities for my future. I would like to go to university and become a doctor. However, if it is not possible, then I would like to run my own small business. I would also like to get married and have children. I would like to have a boy first because girls can bring trouble, like early pregnancy – while boys can support the family.

**Names have been changed*

Figure 4: Health, nutrition and sexual and reproductive health



Box 10: Physical health and nutrition challenges facing adolescent girls

Given that about 45% of skeletal mass and 15% of final adult height are gained during adolescence, girls' nutritional disadvantages can be exacerbated during adolescence – especially where they lack access to protein and micronutrients (Thurnham, 2013). In Ethiopia, for example, research has found that adolescent girls have poorer diets than boys (Roba

et al., 2015) and that girls aged 13–17 years are more likely than boys to report being food-insecure, especially in severely food-insecure households and even when comparing sibling pairs (Hadley et al., 2008). The nutritional status of married girls, whose bodies are often expected to support pregnancy and lactation regardless of their age or physical condition, is especially problematic (Thurnham, 2013). Many begin pregnancy under-weight and with micronutrient deficiencies (especially anaemia) and then see their own bodies further compromised by foetal growth imperatives (ibid.).

Adolescent girls face other health risks with puberty as well. For example, where menstrual practices remain shrouded in secrecy – and girls have no access to sanitary supplies – they can be at risk of infection from unhygienically managed

menstruation (Tarhane and Kasulkar, 2015; Pandey, 2014; Dasgupta and Sarkar, 2008; El-Gilany et al., 2005). Similarly, while the global adolescent fertility rate has been declining for decades, plunging from 86.5/1000 in 1960 to 44.8/1000 in 2014, rates of early childbearing remain high in many low-income countries, reaching a high of 204/1000 in Niger (World Bank, 2016). Despite progress, pregnancy- and birth-related complications remain a leading cause of death for adolescent girls (WHO, 2014b). Disadvantaged by both biology, which leaves females more susceptible than males, and social norms that preclude negotiation about sex and contraception, adolescent girls are also uniquely vulnerable to sexually transmitted infection – again especially where the adolescent penchant for experimentation and risk-taking collides with culture (AVERT, 2016). Indeed, in eastern and southern Africa, girls account for 80% of all new HIV infections in adolescents and HIV/AIDS is the number one cause of death for girls aged 15–19 (Fleischman and Peck, 2015).

Adolescent girls' physical capabilities are further limited by the reality that many do not have control over their own health care (WHO, 2012; UNICEF, 2011a; UNAIDS, 2014). Not only is their access controlled by gatekeepers including parents, husbands and in-laws, who, owing to cultural taboos, often fail to ensure girls have even rudimentary education about sexual and reproductive health (Bray and Dawes, 2016), but also many communities lack youth-friendly health services (WHO, 2012; Pathfinder, 2012; Tylee et al., 2007). In some cases, barriers are practical, with clinics too far from where adolescents live or costs that are out of reach. In other cases, barriers are social, leaving unmarried girls to face provider stigma regarding their sexuality and married girls to face disapproval regarding their fertility choices (ibid.). Furthermore, because adolescents are typically embarrassed by their bodies and their sexuality, in some cases, even when care itself is of high quality, adolescents are simply too embarrassed to seek it out (WHO, 2012; UNICEF, 2011a).

Box 11: Physical health and nutrition challenges facing adolescent boys

- Boys are more likely than girls to engage in risky behaviours with harmful health outcomes.
- Boys often have limited access to sexual and reproductive health information and services.
- Boys have higher rates than girls of alcohol, tobacco and drug use.
- Boys have higher obesity rates, are also affected by body image concerns and can develop harmful eating behaviours.

While the reproductive health of girls has rightly dominated the global adolescent health and development agenda, adolescent boys are also vulnerable to risk factors and health problems with adverse consequences that persist throughout adulthood. Evidence shows that boys are more likely than girls to engage in harmful behaviours such as unprotected and risky sexual activity, early and heavy drinking, and smoking and illicit drug use, and are less likely to seek healthcare (Amin et al., 2018; Patton et al., 2018).

Boys and girls start exploring their sexuality in adolescence, but boys often start engaging in sexual intercourse with limited or no knowledge of accurate sexual and reproductive health (SRH) information. Adolescents in LMICs, especially in rural settings, have limited knowledge of SRH and STI problems, while poor accessibility, lack of confidentiality and stigma from health service providers further discourage them from seeking help (Newton-Levinson et al., 2016). In countries with high rates of HIV infection less than half of older adolescent boys and girls have a basic understanding of HIV. Data also shows that while most people living with HIV in sub-Saharan Africa are women, more men are dying due to higher treatment coverage among women.

Adolescent boys are often socialised to feel compelled to engage in sexual activity to satisfy their 'uncontrollable' sexual drive and 'conquer' many girls as a proof of their manhood. Boys who fail to demonstrate heterosexual prowess may be ridiculed and insulted (Kagesten et al., 2016), and research has identified an association between risky sexual behaviours and adherence to traditional masculine norms promoting toughness, competition, sexual prowess and dominance over women (Ragonese et al., 2019).

Globally, more than a quarter of older adolescents are current drinkers. Prevalence of harmful alcohol use among youth aged 15–24 is especially high among male youth. For instance, the prevalence of heavy drinking among older adolescent boys is 30% in the Americas and the Western Pacific region compared to 6% of girls in both regions (WHO, 2018). Alcohol consumption is a demonstration of masculinity in many contexts and is also linked to decreasing inhibitions, increasing risk taking and encouraging sexual activity among boys. Use of alcohol and drugs are leading risk factors for loss of healthy life years among older adolescent boys – in particular, alcohol was identified as the leading health risk factor for boys aged 15–19 in the 2013 Global Burden of Disease study (WHO, 2017).

While alcohol is the most commonly used substance, tobacco is usually the first substance used by adolescents. Globally, one in five boys aged 13–15 uses tobacco compared to one in 10 girls of that age. Adolescents from low-income groups tend to have higher rates of tobacco use. Overall, there are differences between countries and regions – 60% of adolescents aged 13–15 in Lebanon reported tobacco use in the past 30 days (UNESCO et al., 2017).

Adolescence is also a critical risk period for the initiation of drug use. Adolescent boys aged 13–15 are more likely than girls to report using drugs (UNICEF, 2012b), and do so either in recreational contexts to enhance excitement or in difficult conditions to cope with stress and adversity. In some settings, local drug substances have a long tradition of use, as is the case with khat in East Africa (UNODC, 2018). Drug use is also linked to traditional masculine norms; low-income boys in South America display their toughness through heavy drug use (Kagesten et al., 2016).

Malnutrition – both undernutrition and obesity – continues to affect adolescent boys and girls in many LMICs (UNICEF, 2012b). Over the past four decades, adolescent body weight has increased globally and in most regions. In particular, the rise in mean body-mass index (BMI) has accelerated for both boys and girls aged 5 to 19 in East and South Asia and for boys in South-East Asia. Between 1975 and 2016, the global prevalence of obesity also increased from 0.7% to nearly 6% for girls (50 million), and from 0.9% to nearly 8% for boys (74 million).

Though evidence suggest girls tend to be more concerned with body image, boys may also experience these concerns, which increase as adolescents move from early to older adolescence. Many boys develop body dissatisfaction and engage in harmful eating behaviours in an effort to achieve the desired muscular and slim appearance equated with masculinity. In Jordan, a study found that 37% of older adolescent boys reported inappropriate weight management strategies such as smoking or self-induced vomiting (Al-Kloub et al., 2019).

Psychosocial well-being

This capability domain is concerned with adolescents' sense of self and ability to set their own goals and demonstrate resilience in the face of setbacks. It recognises the importance of both internal emotional capacity and external social support.

Challenges adolescent girls face regarding their psychosocial well-being

Adolescence is a time of heightened psychosocial vulnerability, with half of all mental illnesses beginning by age 14 and neuropsychiatric disorders the leading cause of disability in adolescence (1.6). Adolescent girls are more likely than their younger peers or their male age mates to show signs of mental health disorders, especially anxiety and depression (WHO, 2014a). Girls are especially at risk because:

- As demands on their time grow they have ever less opportunity explore their own interests and identities;
- They face increasing social isolation as their bodies mature, with many removed from school, deprived of their friends, and confined to their homes – especially after marriage;
- Oestrogen increases the stress response that contributes to depression and anxiety;
- In conflict-affected contexts they often face heightened risks of sexual and gender-based violence and resulting psychosocial trauma;

- There are also emerging challenges with regard to rapidly expanding exposure to digital environments in the absence of adequate adult guidance.

Psychosocial well-being capability outcomes that would support adolescent girls' development trajectories

Given significant evidence gaps in the field of adolescent psychosocial wellbeing, GAGE researchers will explore the ways in – and extent to which – younger girls are emotionally supported to develop confidence in themselves and to feel valued within their families, households, schools and peer groups. It will also examine whether they have someone to whom they can turn with problems and have the time and space to develop and practise the social skills that foster voice. In the case of older girls, GAGE research will examine whether they are able to imagine and set goals for their own romantic relationships and then build relationships that are rooted in mutual respect and interdependence. Research will also examine whether the girls who are actively engaged in asserting their independence are supported by their families with appropriate boundaries – to keep them safe – and have access to trusted confidants outside of the family sphere.

Box 12: Jehan: Looking at life through a window

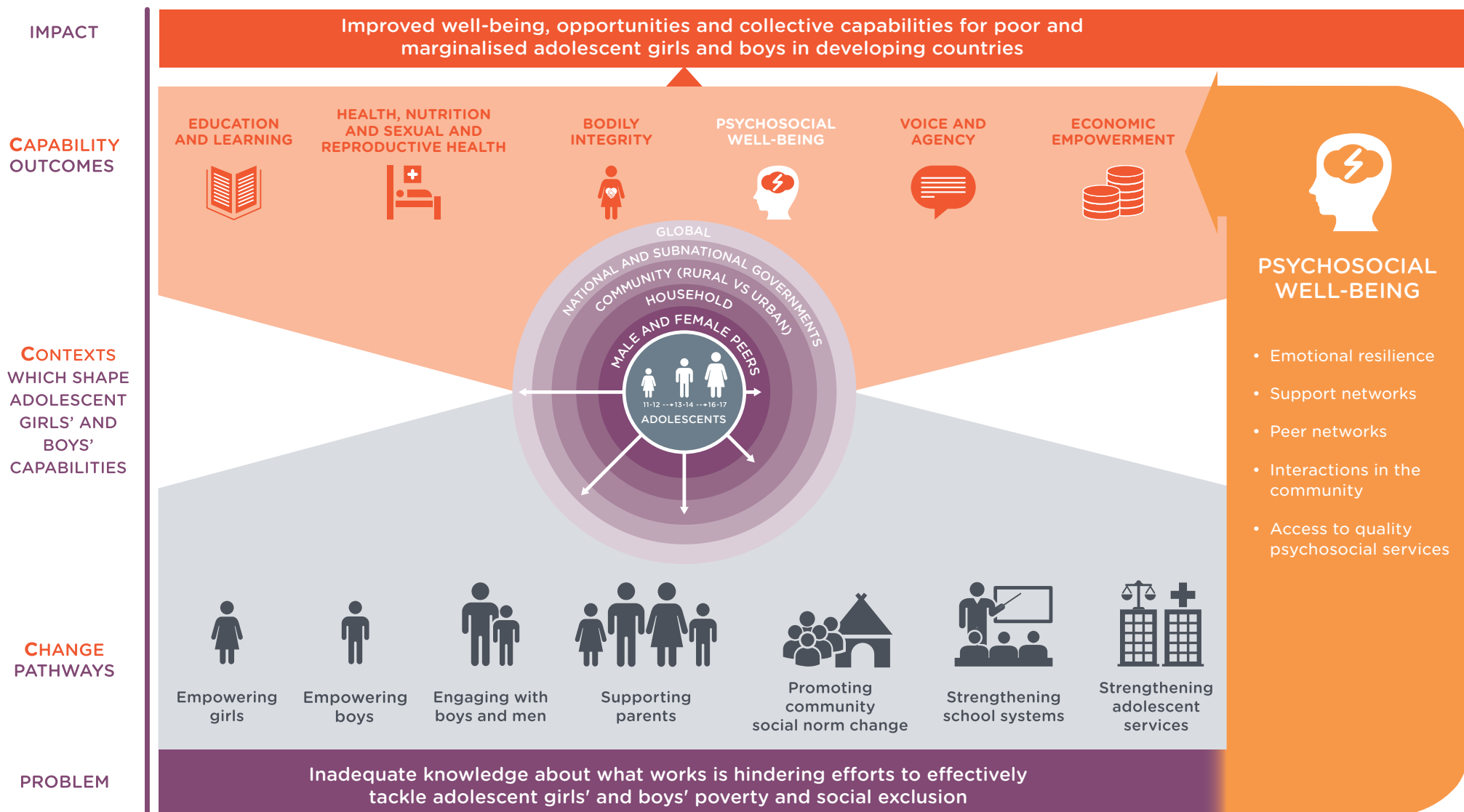
My name is Jehan.* I am a 18-year-old girl and live with my large extended family in a two-room house in Gaza. I was forced to leave school after Grade 8 to care for the younger children in my family. I spend my time trapped inside looking through windows with a lot of sorrow and sadness inside me.

My life has been miserable lately. It has revolved around work at home. Since I am not allowed outside without permission, there is little way for me to escape the housework.

I am hoping things might get better soon. I recently joined a literacy school, which helps girls like me that have dropped out of school to catch up. I know there is a long road in front of me. If I had a wish, I would like to become a journalist to earn money and to help oppressed people.

**Names have been changed*

Figure 5: Psychosocial well-being



Box 13: Psychosocial well-being challenges facing adolescent girls

By late adolescence (age 15–19) suicide is the number one cause of death for girls – with those in South East Asia having rates more than twice as high as their peers in other regions (WHO, 2014a). Social norms play a large role in girls' greater susceptibility to mental health problems. Even in childhood, they are less likely than boys to have the unstructured time to play and 'be' that is critical to the development of identity, self-esteem and broader well-being (Jones et al., 2014a, 2014b). Seen by their parents as more compliant and useful, they are burdened with the lion's share of chores and as a result are more likely to be socially isolated and deprived of opportunities to develop their own interests. Girls who are out of school or whose families have the highest care burden are particularly likely to lack peer socialisation (ibid.).

Adolescence all too often deepens this isolation, particularly in cultures where girls see their mobility restricted and especially where girls marry as children and are deprived of the daily support of their natal families (Jones et al., 2015a, 2015b; WHO, 2014a; Edmeades et al., 2014; Erulkar and Muthengi, 2009). Research in a variety of countries has found that young brides are particularly susceptible to mental health disorders and are among the most likely to attempt suicide, particularly if they find themselves pregnant before they are ready (Petroni et al., 2015; Amin, 2015; Ahmed et al., 2013; Gage, 2013). Sexual and gender-based violence has also been linked to girls' higher rates of depression and anxiety (WHO, 2014a; Garoma et al., 2008; Kohrt et al., 2008), with evidence that social media is opening up whole new venues for bullying girls in adolescence (UN Statistics Division, 2015; Broadband Commission, 2015). There is also evidence that biology plays a role in adolescent girls' vulnerability to mental health problems, especially mood disorders. While before puberty girls and boys are equally likely to suffer from anxiety and depression, by mid-adolescence girls are about twice as likely to suffer from them as boys – with incidence rates estimated in the 4–5% range (Thapar et al., 2012). Though causality is difficult to establish, it is thought that the hormonal changes that girls experience in adolescence render them more susceptible to both depression and anxiety because of the ways in which oestrogen increases the stress response – at the same time that girls are encountering increased levels of stress owing to their changing social realities (ibid.; Balzer et al., 2015; Wharton et al., 2012).

The psychosocial needs of adolescent girls living in fragile and conflict-affected areas are often particularly acute, given that they are disadvantaged by both age and gender and lack the resources and skills that would help them cope in day-to-day environments often rife with new dangers (Robles and Spindler, 2016; Falb et al., 2016). For example, a recent evaluation of adolescent Syrian refugees living in Jordan (UNICEF, 2014c) found that, compared with boys, girls between the ages of 12 and 17 felt less supported by their parents to attend school and less safe in their environments and overall had more emotional difficulties. Indeed, adolescent girls in Gaza highlighted the tension inherent in the notion of 'family support'. They felt their families' emphasis on their safety had too sharply limited their mobility and access to their friends, ultimately making them feel less valued (Samuels and Jones, 2015).

Box 14: Psychosocial well-being challenges faced by adolescent boys

- Boys are more likely than girls to develop behavioural disorders and die of suicide.
- Boys are often socialised to hide their feelings and to avoid seeking support in order not to lose face.
- Boys shouldering adult responsibilities or facing violence and displacement experience greater stress.

Mental health problems are a leading cause of the global burden of disease in adolescence and youth, with self-harm being globally the third leading cause of death among all adolescents in 2015 (WHO, 2017). Half of all mental illnesses start by age 14 and while girls and women are more likely to experience depression, anxiety and mood disorders, boys and men are more likely to suffer from behavioural disorders and schizophrenia with such variations being potentially due to different exposure to biological and environmental risk factors (Patel et al., 2007). Behavioural disorders particularly affect boys aged 10–14 in most regions. A recent study of young adolescents in 14 low-income urban communities across the world found that boys reported greater exposure to physical neglect, sexual abuse, violence victimisation and parental substance abuse, but compared to girls who showed higher risk for depression and rumination, boys tended to show poor behaviour regulation and aggression (Blum et al., 2019).

Self-harm – a term capturing both suicide attempts and non-suicidal self-injury – occurs largely among older adolescents, especially girls (WHO, 2017). Girls have higher rates of suicide ideation and attempts, but boys tend to complete suicide more (WHO, 2014c) and deaths from suicide are higher in adolescent boys and young men in most regions (Patton et al., 2018). In LMICs, the male to female ratio of suicide was 1.6:1 in 2012 with significant differences between regions and countries (WHO, 2014c).

Reliable data on the suicidal behaviour of youth in LMICs is scarce. An analysis of data of students aged 13–17 in 32 LMICs found that girls had higher prevalence of suicide ideation, which is a predictor of suicide. However, the prevalence among boys was also high – 16.2% vs. 12.2%. Africa had the highest prevalence: more than 1 in 5 adolescents with no identified gender differences. Moreover, correlations between suicidal ideation and mortality rates from self-harm were stronger among boys than girls (McKinnon et al., 2016).

Traditional masculine norms emphasising strength, self-sufficiency and control may discourage boys and young men from expressing their emotions or seeking psychological help (WHO, 2002). Boys are often socialised not to act like girls, thus to avoid behaving in ways typically associated with femininity, including showing emotions, admitting fear or frustration or crying and thus appearing weak (Kagesten et al., 2016). Recent research with young men aged 18–30 in Mexico found that more than 1 in 3 young men in Mexico agreed that a man who talks a lot about his worries, fears and problems does not deserve respect, and nearly half agreed that men should deal with their problems on their own without asking others for help. The study concluded that those who conform to traditional norms of not disclosing feelings of sadness or anxiety to avoid being perceived as weak, showed higher incidence of suicidal ideation (Heilman et al., 2017).

Particular groups of adolescent boys face greater vulnerabilities. Research with Syrian refugee youth in Jordan and Lebanon revealed the growing sense of hopelessness that many older boys feel. While not as isolated as girls, boys repeatedly spoke about broken social networks, missing friends from Syria, and facing humiliation when engaging in exploitative child labour or when being discriminated against or assaulted verbally and physically by host youth (Mercy Corps, 2014).

Having to shoulder adult responsibilities that they would not normally have had and provide for their households has also been identified as a key stressor. Increased levels of responsibility can lead to increased levels of stress for adolescents, while adolescents are characterised by increased sensitivity to feelings of embarrassment, humiliation and rejection (UNICEF Innocenti, 2017).

To cope with these daily challenges, Syrian adolescent boys reported withdrawal from social life, many noted that they avoid discussing their emotional problems with their parents for fear of overburdening them, and some said they resorted to smoking, stealing and beating others (Hassan et al., 2015). Research in Palestine has also revealed that confronted with limited livelihood opportunities, severe stress and hopelessness, young men use drugs as a temporary escape (Jones and Shaheen, 2012).

Voice and agency

This capability domain focuses on the ability of adolescent girls to meaningfully participate in household, school and community life – which are key to them developing the skills required for political participation in adulthood.

Challenges adolescent girls face in terms of exercising voice and agency

Constrained by both their age and their gender, girls in the Global South often have less voice and agency within their homes, schools and communities than boys (see Box 15). Girls' access to decision-making is restricted by:

- Their limited access to physical spaces as concerns about their safety and sexual purity grow, especially when they are removed from school or are married;
- Their increasing socialisation into docility and subservience as they are expected to demonstrate that they are 'good' girls;
- The lack of local role models who can demonstrate alternative day-to-day pathways for adolescent girls and young women.

Voice and agency capability outcomes that would support adolescent girls' development trajectories

GAGE research will examine whether younger girls are able to negotiate with their parents and other family members for outcomes that impact their lives – such as a more equitable distribution of household labour, input into broader household decisions, and time and access to public spaces for recreation and community participation. It will also examine whether they are active participants in the classroom and have access to age-appropriate information. In the case of older girls, research questions will include whether they are able to make more decisions within the household and are moving towards becoming the ultimate arbiters of their own futures (within safe limits that acknowledge adolescent cognition). GAGE will also consider whether they are developing a sense of themselves as members of a community, rather than merely their own families, and have access to school- and community-based venues for developing voice and agency.

Box 15: Reshma: Roles in village life

My names is Reshma*. I am a 16-year-old girl in 11th grade in school. I live with my mother and older brother in Nepal's Kapilvastu district.

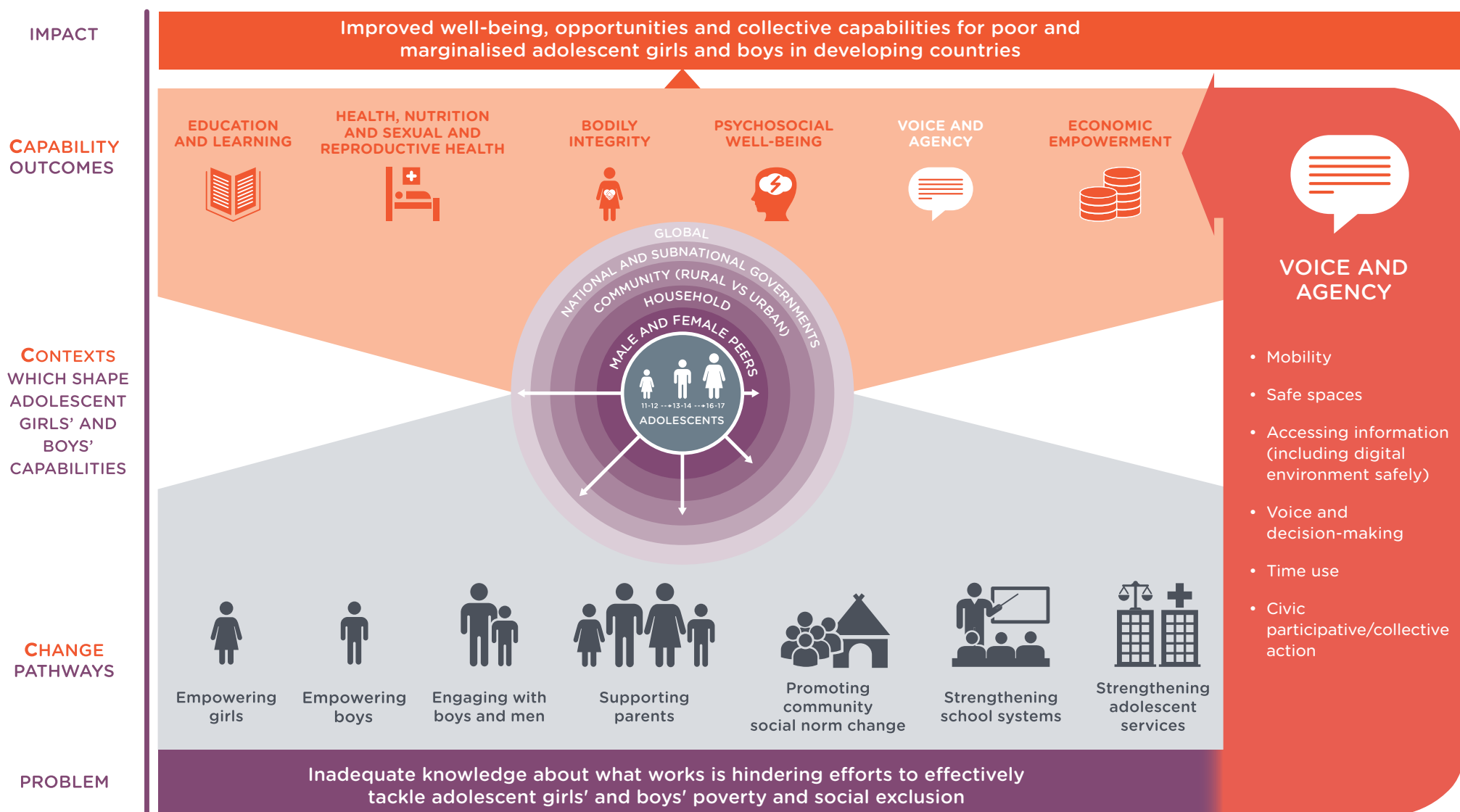
My mother is the village leader. She often holds many of the village's regular meetings in our home. She also has many other important positions. She is the secretary of the women's co-operative, sits on the water user committee, and is on my school management committee. My father has been abroad working. He is happy my mother is so involved in the village. He is proud of her.

I am a peer educator. Initially, my brother told my mother that he forbid me to do the programme. But my father stepped in and told my mother to let me go. I now run three sessions a week. I am also the president of the District Youth Club and the youth representative in the Ward Citizen Forum, a village level committee formed by the government.

The younger girls in the village are beginning to have more opportunities. I work hard to show other parents in the village that education does not mean that their girls will be spoilt. Everything is changing.

**Names have been changed*

Figure 6: Voice and agency



Box 16: Challenges relating to voice and agency for adolescent girls

While boys most often see their space for decision-making grow in adolescence, girls often see theirs shrink, especially when they are removed from school or are married (Mmari et al., 2016; Basu and Acharya, 2016; Hallman et al., 2014; WHO, 2014a). With the growing threat of sexual and gender-based violence, and increasing emphasis on their sexual purity as a signal of family honour, adolescent girls have access to fewer physical spaces than do boys of the same age, which in turn deprives them of opportunities to express their opinions and practise leadership skills (Ghimire and Samuels, 2013, 2014; Tefera et al., 2013; Jones et al., 2013, 2014a, 2014b; Adelson et al., 2016; Heissler, 2011).

Critically, however, even when they have relatively equitable access to physical spaces, as social norms that equate femininity and docility become more rigidly enforced during adolescence girls are often forced to cede voice and agency to others in their environments in order to be seen as 'good girls'. In Rwanda, for example, Calder and Huda (2013) found that because girls are socialised to meet social expectations and maintain a good reputation they felt they were less able to control their own lives. In Gaza, as noted above, parents' growing concerns about adolescent girls' safety left them with fewer options

for expressing, much less pursuing, their own needs and desires – leaving them feeling less valued even as they were more protected (Samuels and Jones, 2015). Similarly, in Nepal, while boys are expected to speak out and dominate, girls are expected to evidence increasing reserve as they prepare to become 'good wives' who are submissive and obedient to both their husbands and their in-laws (Ghimire and Samuels, 2014; Lundgren et al., 2013). The impact of this socialisation on girls' access to agency cannot be overstated. One study of more than 3,000 Bangladeshi adolescent girls found 70% had never participated in household decision-making and only 10% had seen their opinion acted upon (Rahman et al., 2007).

Girls' voice and agency is also sharply limited by the lack of role models they see in the world around them (Vaughan, 2016; Watson, 2015). Not only does women's political representation remain low – with women holding only 23% of seats in national parliaments and occupying only 17% of ministerial positions (UN Women, 2016) – but also even the day-to-day leaders that girls encounter are far more likely to be male. Teachers are a case in point. While the profession is heavily feminised in the Global North – a reality that admittedly causes its own problems – in many low-income countries female teachers remain comparatively rare. The result of long decades during which girls were denied their rights to a formal education, only about one-fourth of primary teachers in Côte d'Ivoire, DRC and Mali are female (UNESCO, 2016). In Liberia the rate is only 14%. Girls are especially unlikely to encounter female role models in secondary school. Across all low-income countries, only 22.8% of secondary teachers are female (ibid).



Adolescent girl in an informal rented settlement in Jordan © Nathalie Bertrams/2019

Box 17: Challenges relating to voice and agency for adolescent boys

- Boys often have to comply with parental decisions and respect traditional generational hierarchies.
- Boys in low-income settings struggling to achieve economic independence face a prolonged period of 'waithood' to transition into social adulthood.
- Some boys who feel excluded and disempowered in contexts characterised by repression, limited opportunities and injustice are vulnerable to engaging in political violence or joining violent extremist groups.

Adolescent boys typically enjoy greater mobility and agency than girls. However, in many cultures, they are also expected to respect adults and comply with parental decisions about their lives. For instance, only 23% of boys in Ethiopia did not need permission to leave the house and only 33% believed that parents respected their opinion on marriage (Population Council and UNFPA, 2010). In various low-income settings, boys have to leave school to support their families, with pressures increasing as boys get older (Crivello and van der Gaag, 2016).

In late adolescence, boys may find it harder than girls to achieve adulthood. Lack of quality education and limited economic opportunities prevent them from fulfilling their aspirations. In many LMICs, young men are expected to find stable employment, buy land or livestock and be financially secure in order to get married and start a family. Within a difficult economic context, boys are unable to reach social maturation which is equated with economic independence. For instance, poor boys in rural Ethiopia report struggling to earn a living and meet their socially prescribed adult roles, thus experiencing a prolonged transition to adulthood (Crivello and van der Gaag, 2016).

As governments overlook or fail to address the main challenges youth face, youth in several LMICs have engaged in civic action demanding change to address injustices and to improve the conditions of their lives and communities, for example through protests and demonstrations. However, when young people, especially boys, feel that their grievances are ignored or they are not allowed to participate meaningfully in decision-making that affects their lives, they may also resort to violent and extremist activities ranging from rioting to joining violent extremist groups (UN, 2016). A study of fighters with ISIS and other extremist groups found that one-fifth of the sample were adolescents; in another sample of former fighters in al-Shabaab (meaning 'The Youth') in East Africa, 86% joined when they were aged 15–29 (Sommers, 2019).

Several theories on radicalisation and violent extremism have been put forward to understand their drivers and supporting factors. These range from psychological analyses to theories emphasising economic and political factors such as inequality, injustice and poor governance (McCullough and Schomerus, 2017). Examining the factors of male youth vulnerability to recruitment, reports have often focused on the presence of a bulging male youth population in a context of limited economic opportunities, growing marginalisation and insecurity. This youth bulge is linked to the possibility of violence and civil unrest, but this assumption is based on little systematic evidence and has been difficult to prove. Only a small minority of youth engage in violence. Moreover, governments often provide limited support to young citizens in terms of quality education, economic and political opportunities, or social services.

Apart from these structural factors, the recruitment of boys and young men is facilitated by individual factors. Some youths join extremist groups motivated by economic gain, the prospect of adventure or social reward (Terre des hommes, 2018). Peer and family relationships appear to be instrumental in recruitment. Recruits cited a friend, family member or another influential person that connected them with the group and convinced them to join. On the other hand, youths without a group to belong to may be more vulnerable to recruitment; there is some evidence that migration to urban areas and living away from the family can render young men vulnerable to radicalisation in an effort to feel a sense of belonging and support (Terre des hommes, 2018; McCullough and Schomerus, 2017). Many extremist groups use modern communication techniques such as simple, inspiring but forceful language and videos posted on social media (Sommers, 2019), along with traditional networks operating at universities, religious communities and other social groups (UNDP, 2016).

A recent analysis paid attention to the role of masculine norms and the difficulties many young men face in meeting the cultural markers required to achieve adulthood in contexts characterised by exclusion, disempowerment and alienation. The prolonged childhood facing boys in many LMICs who are unable to realise their aspirations and meet social expectations and who have little voice, makes some young men more vulnerable to joining non-state violent extremist actors. Two key factors motivating them are a sense of relative deprivation (lack of perceived opportunities to meet expectations) along with feelings of political and social exclusion; and a sense of purpose in taking action and fighting for a common heroic cause, gaining honour and respect, having access to women and to an income, and living up to masculine ideals (Sommers, 2019).

Economic empowerment

This capability domain focuses on whether adolescents are able to choose decent employment and access and maintain, in an age-appropriate manner, credit and control over their own incomes.

Challenges adolescent girls face in terms of achieving economic empowerment

- Adolescent girls in the Global South have fewer routes to economic empowerment than their male peers (see Box 18). Their pathways are frequently blocked by:
- Parental aspirations – and later personal aspirations – that centre on marriage and motherhood rather than education and employment;
- Educational outcomes that are still more limited – in scope and quality – than those of boys;
- Job markets that offer girls more limited employment options than boys;
- More limited access to the resource endowments (including land and assets), savings, credit and training programming that would help them create their own economic independence.

Economic empowerment capability outcomes that would support adolescent girls' development trajectories

GAGE research will explore whether younger girls are supported to aspire and are introduced, within the household, at school or in the community, to a range of possible occupations. As girls mature, the research will increasingly focus on whether adolescents are becoming more financially literate, have access to resource endowments – including land and agricultural assets, and are able to access the cash and credit options necessary to support them to develop their own incomes. GAGE will examine whether girls' vocational training is matched to local environments and avoids pigeon-holing them in gender-segregated occupations. As girls enter early adulthood, GAGE will explore whether the options open to them in adolescence ultimately helped them obtain decent work that – including self-employment – that pays a living wage without incurring risks of ill-health and violence.

Box 18: Mohammed: Looking ahead

My name is Mohammed.* I am a 17-year-old boy and for the last five years, since my family fled Syria for Jordan, I have been out of school and working to support my family.

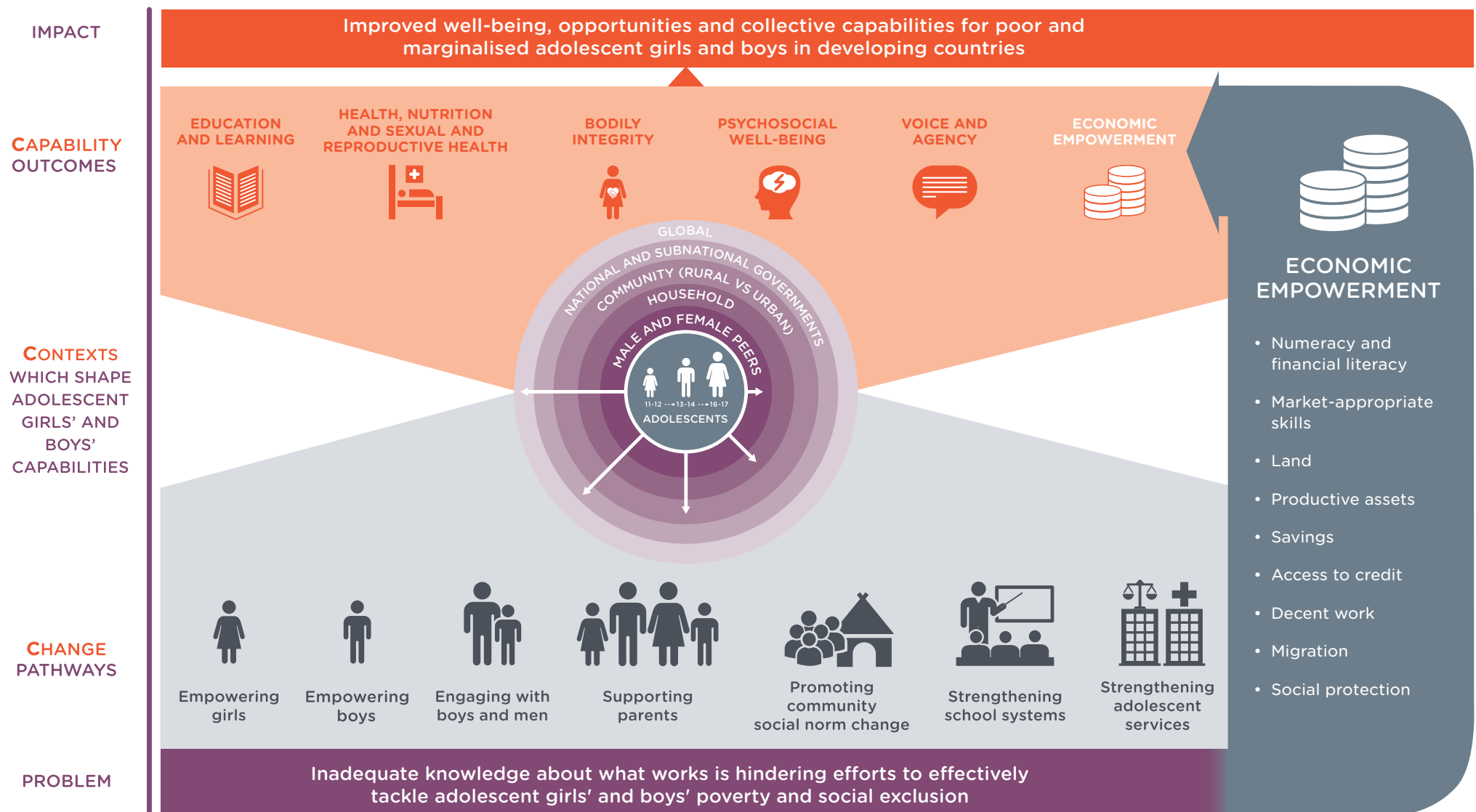
I work long days in the construction industry. I start work at 7:30 am and finish at 8 pm, six days a week.

My mother recently heard about an evening school for adolescents which allows students to study part-time for two years, to get a 10th grade certificate, and then eventually sit the national exam which would allow for university entrance. I am thrilled to have this opportunity. I loved school in Syria but I've had to prioritise other things here because of my family's situation and my responsibility for the household.

My salary might be cut, given that I will need to work fewer hours so that I can attend the classes. The next few years will be financially difficult for us because of this. My dream is to be an accountant so that I can take care of my father's business. He has a butcher's shop in Syria. We need a very good education to realise our career ambitions.

**Names have been changed*

Figure 7: Economic empowerment



Box 19: Economic empowerment challenges facing adolescent girls

In many Southern countries, driven by expectations that daughters will eventually become members of their marital families, the aspirations that parents hold for their daughters are markedly lower than those they hold for their sons. In early adolescence, girls begin to internalise these differences and lower their own aspirations to match those of their parents (Dercon and Singh, 2013; Nanda et al., 2014) – a process accelerated by the higher rates of exam failure in lower secondary school that result from their more limited time to study owing to heavy household work burdens. Girls' access to eventual economic empowerment is further restricted by the reality that in most low-income countries they have fewer options than their male peers for decently paid employment – or access to the credit they need to start their own businesses. Indeed, not only are girls and young women's unemployment rates significantly higher than those of their male peers (11.5% versus 9.3% for all low-income countries and 15.2% versus 12.8% for low- and middle- income countries in 2014) – especially in the Middle East and North Africa (47.5% versus 25.2%) (World Bank, 2016) – but also, where adolescent girls are employed, they are disproportionately likely to be confined to either agriculture or the informal labour market in general, and domestic work in particular (UN Women, 2015; Perrons, 2014; Nanda et al., 2013). While disaggregated data is only rarely collected, International Labour Organisation (ILO) (2013) estimates that, of the 17.2 million children engaged in domestic work in 2012, over 67% were girls. Indeed, its figures suggest that nearly 10% of all employed 15–17-year-old girls are working as domestics, risking daily exposure to not only exploitive work environments but also sexual and gender-based violence (ibid. ILO, 2016). Adolescent girls also have less access to assets, especially land, and to the financial and training opportunities that would enable them to grow their own incomes over time (leaving some vulnerable to transactional or survival sex, and/or to less than desirable marriage arrangements) (Vaughan, 2016; Girls Not Brides, 2016; Watson and Harper, 2013; Chiweshe, 2014; Mercy Corps, 2013; Bandiera et al., 2012).



Adolescent boys at school in Dire Dawa, Ethiopia © Nathalie Bertrams/2019

Box 20: Economic empowerment challenges facing adolescent boys

- Older adolescent boys with poor skills face disadvantage in labour markets, ending up in vulnerable employment and working poverty.
- Unemployment and underemployment do not allow boys to fulfil the traditional masculine ideal of provider and reach social adulthood.
- Boys are more likely to engage in child labour and hazardous labour, with crises such as conflict increasing their vulnerability.

Many adolescents in LMICs continue to lack access to education and training, have limited skills and competencies, and find themselves in vulnerable work in the informal economy. In 2012, UNESCO estimated that one-fifth of youth aged 15–24 in LMICs had not completed primary school and lacked the most basic skills (UNESCO, 2012b). Girls and young women are twice as likely as their male peers to be jobless and outside education (ILO, 2019). However, considerable numbers of boys and young men also face vulnerability and disadvantage in the labour markets and struggle to find decent employment in a context of low employment growth. In many cases, youth cannot afford not to engage in some income-generating activity, even if such work is dangerous and poorly paid. High rates of underemployment, vulnerable employment and working poverty characterise the working lives of many youths aged 15–24 in LMICs (UN, 2013). Lacking key skills, millions of youth, especially older adolescent boys and young men, have been trapped in working poverty; in 2017, more than 160 million young workers, including 101 million boys and men, were living in extreme and moderate poverty with the highest rates in sub-Saharan Africa (69%) and Southern Asia (54%) (ILO, 2017a).

Evidence from low-income settings notes the difficulties older adolescent boys have to find work, earn a living and achieve adulthood. While in many contexts social maturation for girls is still equated with marriage and motherhood, economic independence is the critical step to reach adulthood for boys. In rural Ethiopia, population growth, land shortage and insufficient job creation do not allow boys to realise their aspirations, earn money and secure a decent living to support both themselves and their families in line with social expectations and masculine ideals of the protector and provider (Crivello and van der Gaag, 2016).

Adolescent boys are also at greater risk than girls of engaging in child and hazardous labour. According to estimates, boys account for 58% of all children in child labour and 62% of all children in hazardous work. In 2016, there were more than 48 million boys aged 12–17 years in child labour, while nearly 34 million boys of that age were in hazardous work. The incidence of child labour is highest in low-income countries, in the sub-Saharan region, and among children from poor households. Boys are more likely to work in agriculture, including on the family farm, while girls dominate domestic work. It is possible that these figures underreport girls' involvement in less visible forms, yet boys appear to be more vulnerable and their vulnerability increases with age at the expense of their education (ILO, 2017b).

Work and schooling are often incompatible; even if they attend school, child labourers do not have the necessary time and energy to study, have poor performance and grade progression (ILO, 2017b). As they grow older, they finally drop out as the opportunity costs of staying in school increase (Crivello and van der Gaag, 2016). Additionally, child labourers experience various physical and emotional hazards linked to the type of work they perform: in Ethiopia, boys frequently mentioned the risk of accidents, injuries, exposure to harmful chemicals, and physical and verbal violence (Pankhurst et al., 2016).

In many contexts, adolescent boys in low-income families are expected to find paid work, which is considered a normal part of growing up, taking on responsibilities and learning useful skills. Pressure to work increases as boys get older and their ability to contribute to household incomes increases, while boys may feel a strong sense of obligation to help their families. In Mexico, young adolescents aligned themselves with traditional gender norms according to which boys should work and provide for their families (Kagesten et al., 2016).

Crises ranging from economic downturns to natural disasters and armed conflict increase child labour. There is a particularly strong correlation between child labour and conflict: the incidence of child labour in countries affected by armed conflict is 77% higher than the global average, while the incidence of hazardous work is 50% (ILO, 2017b). In Jordan, more than one in three Syrian refugee boys aged 9–17 are economically active; for 45% of working children, their low-paid and often exploitative and dangerous work represents between one-third and half of the monthly household income (UNICEF, 2016b).

Change strategies to support adolescent capabilities

While GAGE's primary focus is on adolescent girls, our ecological model recognises that helping girls flourish across capability domains requires diverse multi-faceted change strategies. One of the main gaps, however, in current approaches to reducing the threats facing adolescent girls and maximising their capabilities is a lack of attention to causal mechanisms; change processes are poorly understood and little attention has been paid a priori to either scalability or sequencing (Marcus, 2014; Fulu and Heise, 2015). The dearth of qualitative impact evaluation evidence, often required in order to address the 'whys' that are left after the quantitative 'whats', makes explication even more challenging.

Building on a growing body of evidence from the Global South, our framework posits that change strategies must facilitate other actors coming together to construct an environment that enables and supports girls to become the women they would like to become. It weaves together approaches that focus on girls with those that engage boys as well as families, schools, communities and broader services and systems. We are interested in exploring the relative contribution of diverse interventions, including those that emphasise (i) human capital development – such as cash transfers incentivising girls' education and vocational training for girls; (ii) gender empowerment approaches – such as clubs that provide girls with access to safe spaces, life skills tuition and mentors; (iii) social norm change approaches – including programming that offers boys and men opportunities to explore new masculinities as well as parents' groups, community conversations and media campaigns aimed at re-valuing girls; and (iv) legal reform and awareness tactics that enhance local to national-level capacity for the protection of girls' rights.

It is worth noting here that at a conceptual level, this separation of different types of interventions is critical to opening space for thinking about how to effect change in girls' capabilities. On a more pragmatic level, however, we acknowledge that interventions may frequently be inter-linked and that separation could be artificial. For example, while we have separated out schools as a critical venue for creating change for girls – many of the school-based interventions likely to impact girls' capabilities also require

strengthening the educational system and supporting policy change in the educational arena. Individual schools need toilets; teachers need training on gender responsiveness. District-level systems need to better monitor teacher absenteeism, while regional- and national-level systems need to create curricula for girls' clubs. National policy needs to address teachers' sexual abuse of girls.

Similarly, while we have addressed the importance of shifting social norms in the context of family- and community-based interventions, we understand that it is also important to address the ways in which broader institutions sanction and perpetuate inequitable norms. For example, individual health care providers can shame adolescents seeking SRH care, dissuading all but the bravest. Thus in contexts where laws and policies prohibit unmarried girls from receiving care without parental permission or require married girls to have their husbands' consent, sensitivity training must be paired with wider reform in order to improve girls' access to contraception. Similarly, although educating priests and imams about the dangers of child marriage is a useful and necessary step, to protect girls from child marriage, there is a critical need to complement such interventions with efforts to strengthen legal and child protective systems as well as buy-in from the leadership of religious institutions.

Finally, we also recognise that diverse local understandings of adolescence will shape the resonance of particular approaches in different national and subnational contexts but here present a broad brush strokes overview of different clusters of programme intervention approaches.

GAGE's conceptual model recognises five key change strategy outcomes:

1. More confident, empowered girls who have age-appropriate knowledge, skills and voice;
2. More gender-sensitive boys;
3. More supportive and egalitarian parents;
4. More supportive and egalitarian communities (including school communities);
5. More accessible, higher-quality girl-friendly services and systems.

To achieve these outcomes, GAGE's conceptual model envisions assessing the efficacy of inter-linked interventions focusing on:

Empowering girls

Building off their strengths and supporting their access to programming, centred around safe places where they can socialise, explore age-appropriate curricula and develop voice and agency

Our model recognises that safe spaces for girls to congregate, socialise and learn are central to their broader well-being. However, as it also acknowledges that they have different needs depending on their age and the context in which they live, it defines 'safe space' broadly and includes under its rubric school-based (e.g. Girls Education and Mentoring Services in India) and community-based (e.g. 12+ in Rwanda) clubs, sports opportunities (e.g. CARE's Power to Lead and Innovation through Sport) and savings groups (e.g. Save the Children's Kishoree Kontha), as well as the informal spaces under staircases or in doorways that girls carve out for themselves (UNFPA, 2015; Chakravarty et al., 2015; Bandiera, 2015; Brown and Oddsottir, 2013; Girl Effect, 2013; Baldwin, 2011). While we understand that, from girls' perspective, the largest value of these spaces often lies in the opportunities they afford to socialise, we also see these spaces as venues through which to deliver a gender-transformative curriculum that teaches age-appropriate information and skills, fosters awareness of shared gender interests and supports girls to develop aspirations, self-efficacy and voice.

The majority of recent girl-focused programming, regardless of what other content it delivers, includes some sort of safe space programming. As Girl Effect (2013) notes, this is because research has identified a wide variety of ways in which safe spaces help girls reach their potential. First and foremost, they help girls develop the supportive peer networks that reduce the social isolation that all too often accompanies puberty in Southern countries. This not only gives girls a chance to simply be adolescents and have fun with their friends, but also helps them learn to trust themselves and others – critical if they are to learn to speak up and out. Safe spaces also, depending on the content they deliver and the role models with whom they link girls, help girls broaden their horizons and aspire to different futures. They also encourage independence, at the very least through improving girls' mobility, and can enhance girls' safety, by encouraging them to move about together, teaching them about their rights and providing

them with trusted adults who can serve as sounding boards and safety nets for the many opportunities, threats and decisions girls face as they move through adolescence (e.g. how to handle peer pressure, set limits around romantic relationships or negotiate with parents to stay in school).

Existent interventions have linked a wide variety of content with safe spaces, including basic education and tutorial support, livelihoods training and financial literacy, sexual and reproductive health programming and rights awareness programming on issues including gender-based violence, child marriage and harmful traditional practices. Results have overall been quite positive – albeit not always replicable and often dependent on selection effects (Baird and Özler, 2016). BRAC's Empowerment and Livelihood for Adolescents, for example, offered Ugandan girls safe spaces combined with livelihoods and life skills training. Participant girls not only increased their incomes but also reduced their exposure to forced sex and their odds of child marriage and adolescent pregnancy (Bandiera, 2015). Egypt's Ishraq combined social support with informal education for out-of-school adolescent girls. Assessment found participant girls more literate and knowledgeable about sexual and reproductive health (Sieverding and Elbadawy, 2016). CARE's Tesfa offered Ethiopian girls financial education, sexual and reproductive health education or a combination package – again in conjunction with safe spaces. The evaluation found that, while there appears to be trade-off between the broadest and the largest impacts, with the combined package delivering more but smaller magnitude effects, the most transformative aspect of programming may well have been via reductions in girls' social isolation (Edmeades et al., 2014, 2016). Indeed, married girls were so empowered by having the opportunity to come together and discuss how marriage had impacted their lives that, even though the programme was not aimed at preventing child marriage, girls took it upon themselves to work in their communities to end the practice (Edmeades et al., 2014; Jones et al., 2016b). Recognising the power of this sort of collective action, some safe space interventions (e.g. Rwanda's 12+) are now including action practicums, which offer girls opportunities to develop leadership skills and become involved with community campaigns that impact their lives.

In addition to safe space programming, other interventions aimed at girls have included providing them with other types of access to information, such as through radio dramas (e.g. Kenya's Chakruok, which was aimed at

married girls unreachable through other mechanisms), magazines (e.g. Girl Effect's Ni Nyam Pinga in Rwanda), hotlines or social media. Programming has linked girls with in-kind or financial transfers – such as cash transfers, school uniforms or sanitary supplies – to help the poorest girls offset their economic disadvantage.

Engaging with boys and men

Engaging them in gender-transformative programming that will help them exercise positive masculinities critical to opening space for their sisters and female peers' growing capabilities

While recognising that adolescent boys face a wide variety of gender-specific threats of their own – and as such deserve programming that helps them reach their own capabilities (Kato-Wallace et al., 2016) – GAGE's focus on adolescent girls means boys' inclusion is viewed through more focused lens that explores the relative effectiveness of approaches that target them as brothers, peers and future husbands (and fathers) in order to achieve gender-transformative outcomes for girls. Recent approaches aimed at encouraging more egalitarian gender attitudes and behaviours include helping them share chores so their sisters and wives can study and rest, using their more favoured social status to advocate for girls' aspirations – especially where families and communities are less supportive of change – and working against sexual harassment and violence rather than perpetrating it. In addition to broader social media campaigns, there is growing evidence that adolescent boys can be effectively reached through arts and sports opportunities, particularly where they can be combined with positive male role models (Berents, 2016; Jejeebhoy et al., 2016; Das et al., 2015; Berkowitz, 2004).

Supporting families

Supporting them through programming including economic support, positive parenting and norm change interventions – to help them support their daughters to achieve new futures

Recognising that today's families are effectively parenting their adolescent girls in a brave new world, given rapid transformations in the educational, economic and social landscapes of most Southern countries, our conceptual model underscores the importance of directly targeting parents and extended family members with programming that simultaneously promotes normative change and encourages positive parenting. To help families see all

children through a more gender- equitable lens that recognises them as individuals with their own unique abilities and aspirations, there are a range of emerging interventions. These include parents' groups (e.g. guided mothers' support groups or parent teacher associations), home-based curricula (e.g. via health extension workers) and positive masculinities programming (e.g. MenCare, 2016; GEC, 2016; Jones et al., 2016b; MenEngage, 2016; Abuya et al., 2016). Critical for the longer-term well-being of both girls and boys is that interventions help parents and other caregivers find the fine line in increasingly required for modern parenting, especially in more urban environments, which requires that they avoid the instrumentalism and gender discrimination of the past while actively managing their children's adolescence (Jones et al., 2016a; Plan Nepal, 2012; UNICEF, 2011b). In some contexts, this will mean helping parents simultaneously encourage their daughters' aspirations and support them to negotiate the hard realities of the world safely and responsibly. In other contexts, where adolescents are claiming more independence than is safe, it will mean helping parents set more rigid boundaries around their children's behaviour, even where their children are literate and they are not. In addition to supporting such norm change within families, there is a robust evidence base that suggests that, where parents' ability to practically support their daughters is constrained by a lack of resources, financial and in-kind transfers can be powerful levers to help incentivise girls' education (de Groot et al., 2015; UNGEI, 2014; Nanda et al., 2014; Baird et al., 2011; Erulkar and Muthengi, 2009).

Promoting community social norm change

Working with gatekeepers who have the potential to accelerate social norm change and then cascading messaging to the broader public

Given that social norms are held in place by expectations – and that community environments become increasingly important to shaping girls capabilities as they progress through adolescence – targeting broader communities is crucial to building the support girls need to optimally progress through the second decade of life. It is particularly important in environments where adolescents look for emotional support from non- related adults (Bray and Dawes, 2016). Community- level interventions increasingly begin by focusing on the community and religious leaders who typically uphold local customs and traditions (e.g. World Vision's Channels of Hope and

CARE's Social Action and Analysis Groups) (Edmeades et al., 2014). While there are a range of approaches, including both informal conversations in tea shops and other masculine spaces aimed specifically at men, and more formal presentations hosted by NGOs at local schools, emerging evaluation evidence suggests that more effective models encourage dialogue between a range of community norms-holders and foster ownership of change based on local realities and positive outliers (Jones et al., 2016b; Edmeades et al., 2014; Erulkar and Muthengi, 2009; Abuya et al., 2016). Other pathways for community engagement might include, depending on context, mobilisation around the safety of public spaces or the creation of girl-friendly recreation zones. HarrassMap, for example, has helped bring sexual and gender-based violence into the open in a handful of countries with the worst rates of sexual harassment, giving women a simple way to publicly report harassment and encouraging community members to mobilise to make spaces safer (HarrassMap, 2016). Media campaigns designed to boost the value of girls, such as Ethiopia's Yegna or Uganda's GREAT, have also been found to be helpful, particularly when they are paired with face-to-face discussion groups that give community members an opportunity to discuss the new ideas introduced by programming (Jones et al., 2015a; Kerner, 2016).

Strengthening school systems

Supporting them to become more adolescent- friendly and gender-responsive spaces

Schools are a critical locus for adolescent development, especially as children throughout the developing world become more likely to transition into secondary school rather than leaving education after they complete primary school. As the locations where adolescents often spend the bulk of their non-home time, and the primary venue for peer interaction, schools are critical to empowering adolescent girls, especially those marginalised by complex webs of contextual, economic, social and lifecycle factors (GEC, 2016; Achyut et al., 2016).

Our framework envisions a variety of change strategies that work through schools. For example, in countries where evidence suggests gender-segregated toilets would improve girls' school attendance – or simple adaptations would allow girls with disabilities to attend school – our model supports infrastructure improvements. Where, on the other hand, girls leave school because teachers are poorly trained in the more active teaching methods that engage

adolescents, see girls as less able students than boys or fall back on violent discipline to manage classroom behaviour, it calls for helping strengthen the capacity of teachers and school management (e.g. through increased training or anonymous reporting 'mail boxes'). Emerging evidence suggests other promising change strategies working through schools might include, depending on context, programming that helps girls develop the soft skills they can use to optimise academic skill sets; helping schools develop school councils that foster adolescent engagement on more political issues or improve parent– school communication; linking teachers and schools into reporting chains that can help girls address immediate threats of child marriage; instituting enforcement mechanisms to ensure teachers' absenteeism is reduced, etc. (GEC, 2016; Chinen and Coombes, 2016; Achyut et al., 2016; Jones et al., 2015a, 2016a, 2016b; Transparency International, 2013). Critically, the GAGE model recognises that, by positioning themselves as more gender-equitable spaces with zero tolerance for sexual and gender-based violence, schools also offer a unique opportunity to nurture change in whole cohorts of children at once (Vaughan, 2016).

Strengthening adolescents services and systems

Strengthening the services and systems with which girls interact

While there is considerable focus on demand-level change in current programming for adolescent girls, it is also key to work on strengthening the services and systems on which the development of girls' capabilities depends. In most low-income countries – and especially those that are fragile and conflict-affected – these services, which include (in addition to schools above) health care, child protection, social work, gender-based violence services and legal aid, have very limited institutional, financial and human resources and struggle to meet existent need. In some contexts, human resources lag. In much of sub-Saharan Africa, for example, youth-friendly sexual and reproductive health services are largely unavailable (Pathfinder, 2012). This has had devastating impacts on adolescent pregnancy rates in countries where pre-marital sex has become more common, such as Uganda (Kyomuhendo Bantebya et al., 2013, 2014). In other contexts, financial resources lag. In Ethiopia, for instance, even where district (woreda)-level commitment to preventing child marriage is high, officials often lack the staff and transport that would

enable them to regularly monitor more rural communities (Jones et al., 2016a).

Legal frameworks also need attention. In some countries there are strong legal frameworks, but only limited awareness of those frameworks – suggesting a high need for legal education. In other countries, frameworks themselves need refocusing. In Viet Nam, for example, where Hmong adolescent girls regularly witness alcohol-fuelled domestic violence among their parents, current laws emphasise family reconciliation rather than child protection or violence prevention. This means women and children's well-being is sacrificed for the notion of familial harmony (Jones et al., 2013). System-level shortcomings are further exacerbated by a dearth of social workers in general and of those with a specific child protection and gender-based violence case management mandate in particular.

In order to grow capacity to meet newly created demand among adolescent girls, government systems need to be supported to develop not only a stronger

adolescent-friendly lens but also more and better-qualified human resources; better reporting and management information systems; and better monitoring and evaluation capacities. In many contexts, they also need assistance developing linkages and referrals, making and monitoring budgets and sharing lessons they have learnt.

As with girls, however, there is no one size fits all approach to strengthening systems and services. Not only do laws and policies vary between countries, but even within countries some sectoral policies are much stronger than others (e.g. education tends to be much stronger than domestic violence). Government buy-in and capacity also varies—with the areas seeing the most resistance from conservative social and religious actors (e.g. changing practices such as child marriage or FGM) often seeing the largest capability deficits and the most significant coordination issues, especially at the subnational level, but at times also at the national level.

Box 21: Taking account of non-linear change processes

Given the complexities of the contexts adolescents inhabit, it is critical to also think through not only the ways in which change strategies can most effectively be woven together in order to support change—but also better understand how they can unintendedly slow or undermine change. For example, early research found that Ethiopia's public works programme, the Productive Safety Net Programme (Hoddinott et al., 2009; Kebede, 2012), resulted in some girls being pulled out of school as their own domestic labour was substituted for that of their mothers. Similarly, despite decades of global research that has identified education as central to reducing child marriage, recent research in Viet Nam's Hmong communities found that improvements in lower-secondary enrolments may be driving an increase in child marriage, with young adolescents choosing to marry for “love” as soon as they complete the 9th grade and are forced into the more solitary lives in subsistence agriculture (Jones et al., 2014a)

GAGE is well positioned to explore these non-linear change processes. Our quantitative work will help us to identify patterns, find relationships, and measure change. Our qualitative work, especially the annual cohort through which we will track the same girls over time, will facilitate the in-depth exploration that speaks to how and why change happens. This will not only allow us to disentangle impact pathways, but also to thoroughly investigate—from girls', boys' and parents' perspectives—unexpected outcomes and drivers.

Context dependency

GAGE's conceptual framework recognises that both adolescent girls' capabilities and the change strategies aimed at supporting them are deeply dependent on the contexts in which they are situated. As noted by Harper et al. (2018), the interplay of diverse context factors plays an important role in shaping the vulnerabilities and opportunities facing adolescent girls, including the uptake and resonance of specific programming and services. Local variation in socio- cultural and religious traditions, geographic location and employment opportunities combined with broader patterns in population dynamics, conflict, governance and climate change are likely to have a profound effect on development trajectories.

How to disentangle the effects of these different and inter-related context layers is challenging, compounded by the fact that the global evidence base on the relationship between adolescent trajectories and diverse context variables is especially thin (Sheehan et al., 2017). Through its cross-country comparative research design, GAGE will pay particular attention to a range of context factors which remain under-researched in the global evidence on adolescent development experiences, including contexts of fragility, urban versus rural settings, settings with distinct socio-cultural and religious traditions, as well divergent governance and state-civil society relations.

To facilitate analysis the GAGE framework's ecological approach distinguishes between family, community, state and global context spaces and factors, whilst recognising that in reality context factors may manifest as a web of influences with multiple sites of overlap and inter-connectedness.

Family contexts

As discussed in the section on Change Strategies above, an adolescent's family context is likely to play a critical role in terms of her access to economic, social and emotional resources, exposure to educational opportunities, female role models and development of positive aspirations for her future, among others. Families – including in-laws in the case of married girls - can also play a more negative role in terms of demands for domestic and care work support, de-prioritisation of girls in terms of the allocation

of economic resources, the practice of age- and gender-based violence either by parents or siblings, and pressures to undergo child marriage and/or other harmful traditional practices. Critically families often constitute the site in which age- and gender-related norms play out most intimately and concretely – parents, and in many cultural contexts also older brothers, seek to ensure conformity with dominantly held social norms, and enact sanctions in the case of non-compliance.

Community contexts

The community space in which adolescents live also plays a critical role in shaping both the vulnerabilities they face, as well as the opportunities – including programming and services – they are able to enjoy. And as discussed in the Change Strategies section above, as adolescents become older, community dynamics – including the availability of spaces to congregate with peers in a safe and supportive environment, and access to guidance from non-family adults – become increasingly important.

Rural versus urban

The geographical location where an adolescent resides constitutes an important mediating factor in shaping what community-level challenges and opportunities are present. Because rural poverty and disadvantage has been a critical focus of development interventions in recent decades, we tend to know more about the types of challenges adolescents face in rural settings – including lack of transport, long distances to schools, markets and other services, the time intensity of water and fuelwood collection, and the dearth of economic opportunities for young people in particular (e.g. Harper et al., 2018). In Viet Nam, for example, Hmong girls residing in remote mountainous communities have seen remarkable transformation in their access to and uptake of formal education in recent years, with most now graduating from lower secondary school. However, the complete absence of employment options in their local environment – combined with the reality that restrictive gender norms are central to Hmong identity – has meant that very few have been able to translate schooling into employment

or broader empowerment (Jones et al., 2014a, 2015b; see also Vaughan, 2016). In Ethiopia, on the other hand, rural girls' growing access to domestic and international migration and the cash economy is pulling many out of school, sometimes even before the end of primary school, albeit with considerable social and emotional costs given the divide between their rural natal communities and their urban destinies (Jones et al., 2014c, 2015a, 2015b).

More recently there has also been greater attention on the emerging and unequal gendered effects of climate change in agrarian and pastoralist settings. While adolescent girls only rarely enjoy access to resources – land, water, energy, etc. – equal to their male peers, when those resources are stressed girls are especially likely to lose out. For instance, in times of drought in Ethiopia, Plan found that the time girls spend fetching water for their families can rise from two hours a day to six – effectively preventing them from attending school.⁴⁰ Similarly, because few girls and women have legal title to the land they farm – even though they have primary responsibility for producing own-consumption food stuffs around the world – their access to the training and inputs that would enable them to adapt to environmental change is minimal (Masson, Norton and Wilkinson, 2015).

By contrast, we know relatively little about the specific challenges and opportunities available to adolescents in urban settings (Chant et al., 2017). Urban girls have many diverse needs, which are growing exponentially and fracturing as urban areas themselves further diversify into informal settlements, peri-urban areas, enclaves for migrants, etc. For example, while girls and women are overrepresented in informal settlements around the world, slum areas rarely have lighting and separate toilets, vital for improving girls' physical safety. Even when services are available, urban girls can find it difficult to access them, either because of their responsibility for time-consuming household chores and caring for relatives, or (in the case of access to contraception, for example) embarrassment and fear of being found out (UN Habitat, 2010).

Socio-cultural and religious traditions and norms

Another critical community-level context variable involves the religious and moral context in which adolescents find themselves. While family members are often those who police compliance with social norms, community leaders and opinion leaders, including religious and traditional leaders often play a critical role in either championing or challenging restrictive gender norms (see also Box 22).

Box 22: The role of religion in shaping gender norms

Religion plays a very important role in reinforcing and emphasising social and gender norms that often restrict and control girls' lives. Religious groups influence adolescents in diverse ways in different contexts: through their teachings and, in some cases, through specific programmes imparting religious and moral teachings to adolescents. While religious institutions often have a national presence, the ways in which teachings are interpreted and communicated can vary considerably at community level where in many contexts religious leaders often enjoy significant social status. However, although young people often self-identify with their religious community, and express interest in participating religious institutions our formative qualitative research has highlighted that, in Ethiopia, in particular adolescent girls often do not have any voice or agency within religious institutions and may even be excluded from attendance at religious services – whether they be Orthodox Christian or Muslim.

Cognisant of these complexities, the GAGE qualitative and survey-based research will strive to unpack and understand the influence of religion and socio-cultural traditions and norms on girls' choices and capabilities. While there is increasing attention to the role of social norms in shaping capability outcomes for adolescent girls (e.g. Harper et al., 2018), experts increasingly recognise that a norms lens risks being applied somewhat mechanistically, lacking a nuanced and contextualised understanding of broader power relations and politics (Harper et al., 2018). Accordingly, we will also engage with local leaders and key faith-based organisations through stakeholder workshops for our Policy and Legal Analysis work-stream to understand potential entry-points and challenges to shape the discourse within religious communities. Finally, the interventions that we will evaluate take an ecological approach to adolescent girls programming and in several countries including Nepal and Ethiopia we will assess the relative effectiveness of community dialogues, which typically also interface with traditional leaders and faith-based organisations.

Female genital mutilation or cutting (FGM/C) and child marriage in particular are often driven by perceived religious strictures surrounding purity. Similarly, conservative norms when embodied by teachers and healthcare providers regarding, for example, unmarried girls' sexuality can make it difficult for adolescent girls to seek effective information and care in their community (Chandra-Mouli, 2014). Such stigma, and a dearth of adolescent-friendly services, increases girls' risk of a host of negative outcomes including HIV, gender-based violence and pregnancy.

State-level context factors

Our ecological approach pays particular attention to variation at the state level and the extent to which governance dynamics and institutions take into account local need and diversity. Differences in resourcing, both financial and human, and the politics surrounding commitments to the implementation of policies and legal frameworks, from national to subnational levels, play a large role in the extent to which adolescent girls' needs are rendered visible and prioritised. Nepal's gender budget initiative, for example, has resulted in significant reallocation of spending priorities. The proportion of government spending considered (by the government) directly gender-responsive grew from just over 11% in 2007 to nearly 22% in 2014 (Poudel, 2014). Similarly, the push to educate Hmong girls has resulted from a national commitment to universal lower secondary education, while recent declines in child marriage in Ethiopia are in part driven by the government's federal to state level commitment to end child marriage by 2025 (Jones et al., 2016a, 2016b).

Contexts of fragility

However, in areas characterised by what Gough (2013) terms 'insecurity regimes', including conflict-affected geographies and camps for displaced people or refugees, adolescents will face distinct and overlapping risks and vulnerabilities and therefore require different and highly tailored programming, especially when state and social institutions are non-functional or severely compromised. In the case of adolescent girls from Syrian refugee communities in Jordan, due to experiences of extreme violence and trauma, and the perceived level of risks of sexual and gender-based harassment and violence within host communities, means that many adolescent girls remain almost completely home-bound without access

to education, peer networks or psychosocial support services (Abu Hamad et al, 2017).

Civil society-state dynamics

Variations in the space allocated to civil society are also important to girls' outcomes because of the way in which greater freedoms for CSOs can translate into deeper engagement with the government and more opportunities to hold leaders accountable (Tembo and Chapman, 2014). Where CSOs face a more restrictive environment, it becomes more difficult to deliver innovative programming to girls. Sometimes this is because NGOs are largely shut out from direct service delivery or prohibited from engaging in advocacy around certain issues; other times it is because they must rely on existent rubrics for identifying beneficiaries that effectively exclude the most vulnerable (Jones et al., 2016a). On the other hand, where there is already a vibrant women's movement (e.g. India, parts of Latin America), there may be more space to engage on broader gender equality issues – though recent experience suggests that, as movements have fragmented to variously focus on employment, food security, maternal health, etc., they have almost entirely abandoned adolescent girls' issues, which tend to require more attention to intersecting vulnerabilities. More vibrant women's movements may also encourage informal conservative backlash, especially with regard to sexual and reproductive health rights. GAGE's policy and legal analysis work-streams will explore some of these tensions. Critical in all countries, regardless of the space allocated to CSOs, is that attention be paid to how girls' voices are embedded in and interact with CSOs and broader movements. Where there are strict age hierarchies, for example, girls may have little voice even in women's organisations.

Global context factors

The final set of context factors that our framework considers are global, including the role of international conventions and frameworks; the related advocacy and programming work of international NGOs and global rights movements; the relative influence of bilateral and multi-lateral donor funding, policies and programmes; the pull and push of migration opportunities, the effects of an increasingly globalised economy on local employment markets; as well as the influence of digital technologies in shaping adolescents' ability to communicate and be connected with people and dialogues that transcend state borders (see Box 23). As part of the political

economy analysis that GAGE will include in its mixed methods research approach, we will explore the relative importance of international conventions and discourses on adolescence and gender in shaping national level policy and programming behaviours, including the programming and advocacy approaches adopted by INGOs and by the donor community, and the ways in which international

trends intersect with state-level political and institutional dynamics. As the GAGE cohort of adolescents that we will track longitudinally reach mid- and older adolescence, we will also explore the effects of migration opportunities on adolescent girls' decision-making around investments in education and employment, as well as the effects of globalisation on gendered labour market opportunities.

Box 23: Girls and the rapidly evolving digital media landscape

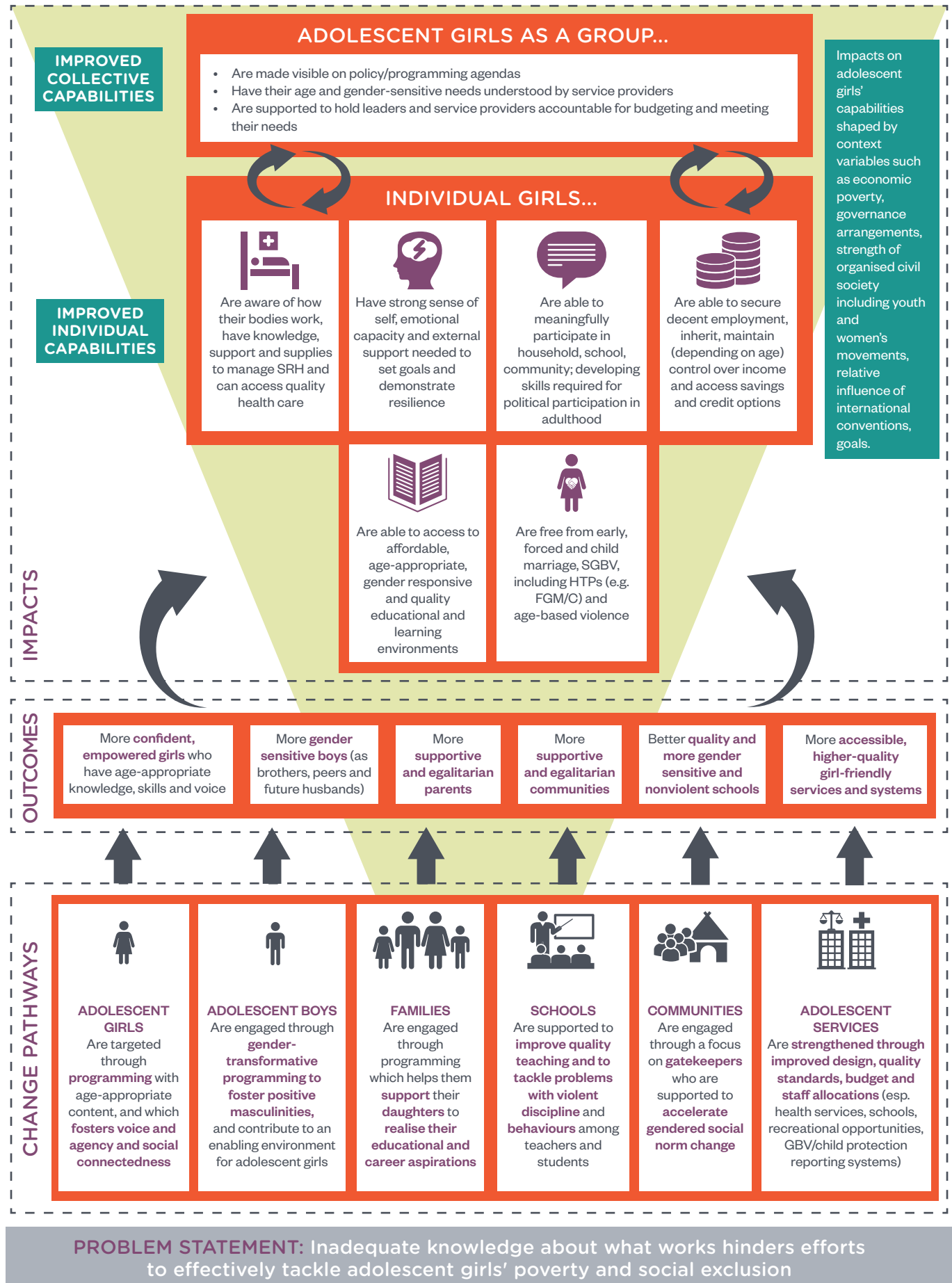
Driven by the size and youthfulness of the developing world, adolescents in the global South are one of the fastest growing populations of internet users. Access can be a double-edged sword. It offers potential for education and recreation, including a channel through which girls can 'meet' new ideas and safely build the voice that may be constrained in real life by social norms dictating silence and subservience but some content available online is grossly inappropriate for young people, and the internet provides a mechanism for predatory men. One challenge is to ensure that the internet is equally available to girls and boys. Current evidence suggests that it is not. This is because parents are less likely to fund mobile access for daughters than for sons and girls often report feeling unsafe in "public" access spots such as internet cafes. Another challenge is how to keep girls safe in the digital world. While children in the global North have parents and teachers who can guide them through safety and privacy issues, young people in the global South are not only more likely to be online than their elders – they are more likely to be literate.

Indeed, understanding and building programming around even the most subtle differences in girls' geographical locations can be critical to whether programming helps or hinders progress. While text messaging and social media are transforming many (though not the poorest) girls' lives across the world – from reminding them to seek healthcare to helping bank the unbanked – they can also be risky if adequate guidance is not available. Among girls in Viet Nam, for example, report that traffickers often rely on text messaging to tempt potential victims and then make plans with them once they are "hooked".

Balancing these concerns, and maximising the internet's potential for introducing transformative change, especially in the light of governments who all too often respond by restricting access entirely, is one that will require care and forethought.

Source: Kleine et al. (2014), De Pauw (2011)

Figure 8: How the 3 Cs at the heart of the GAGE conceptual framework interact



GAGE's core research questions

Stemming from our conceptual framework, GAGE will seek to address two core sets of questions. The first is framed around adolescent perspectives and experiences and based on the capabilities narrative presented above. The second set, around the relative efficacy of different types of change strategies in diverse contexts, begins with the evidence presented above but is further nuanced below. More specifically, these questions are as follows:

Research questions on understanding adolescent experiences and perspectives

- What is the patterning of adolescent outcomes across each capability domain? (see specific questions that GAGE will explore under each capability domain above)
- What factors – including gender roles and responsibilities, familial support, discriminatory social norms, urban/rural residence, access to quality schooling and other adolescent-friendly services – shape adolescent well-being at different stages in the second decade of life? (see also Box 24 for emerging debates which GAGE's cross-country comparative

research will be able to speak to regarding a global convergence of core adolescence experiences).

- How do adolescent girls and boys themselves understand their worlds as gendered? And how does this vary by context – within and across countries?
- How much do adolescent girls' and boys' experiences, attitudes and identities in early adolescence shape their subsequent behaviours and world views across the second decade of life and into early adulthood?
- How do adolescent girls and boys understand the wider macro-level context, and their place in the changing social and political order?

Research questions on programme effectiveness

Timing

When is the best time to intervene in adolescence, using what types of change strategies in what contexts?

Evidence from existent girl-focused development programming suggests that different interventions are

Box 24: Converging adolescent experiences versus context specificities

While the experience of adolescence varies by both individual and culture, with the line between childhood and adulthood blurred where adolescents do not live with their parents and must work to meet their own basic needs and contribute to the household economy (Bray and Dawes, 2016), there is a widely recognised arc to development that largely transcends particularities. Indeed, although 'marked variabilities in family forms, in the relevance of school systems to cultural norms and economic opportunities, in access to health care and leisure activities, in religious orientations and values... can create deep fissures in the experiences of adolescents from one nation to the next... or among different economic or social groups within a nation' (Brown et al., 2002: 19; see also Hart et al., 2004; Lloyd, 2005; Breinbauer and Maddaleno, 2005), there is growing evidence that the global 'experience' of adolescence is slowly converging as children spend more years in the age-segregated environment of school (Bray and Dawes, 2016; Hammack and Toolis, 2015; Jensen and Arnett, 2012; Casey et al., 2011; Brown et al., 2002; Schlegel and Hewlett, 2011; Schlegel and Barry, 1991). Indeed, even as the notion of adolescence as the transition between childhood and adulthood begins to fray, as 'emergent adults' are unable to assume traditional adult roles because rapid socioeconomic change has narrowed older pathways faster than it has opened new ones – trapping many, especially young men, in decades of 'youth' or 'waithood' – global similarities in the developmental milestones through which young people in the second decade of life progress are striking (Jensen and Arnett, 2012; Arnett, 2011, 2000; Honwana, 2012; Galambos et al., 2007).

best timed differently and that in most contexts girls benefit from a more integrated approach that bundles modalities (Yount et al., 2016; Gordon et al., 2019; Catalano et al., 2019; Nanda et al., 2013). Some types of programming appear particularly suited for younger teens. For example, as gender gaps in learning tend to emerge in early adolescence (Krutikova and Singh, 2016) and as once girls fall 'off track' educationally it become far more difficult for them to complete their schooling, most research has found that educational interventions return greater benefits when they are targeted to younger girls. This is especially when they are mindful of nationally determined transition points (such as exam schedules and between primary and lower-secondary school) (Edwards et al., 2014; Erulkar and Muthengi, 2009; Abuya et al., 2016). Similarly, evidence on early adolescence as a 'sensitive period' for social processing (Blakemore and Mills, 2014; Crone and Dahl, 2012; Fuhrmann et al., 2015) and the adoption of gender norms (Kågesten et al., 2016; Basu and Acharya, 2016; John et al., 2016; Mmari et al., 2016) suggests that programming aimed at girls' psychosocial well-being and notions of gender empowerment should start with younger girls.

By contrast, some interventions appear better targeted to older girls. Growing evidence suggests, for example, that, while sexuality and financial education should begin laying formative rights-based groundwork in childhood (UNESCO, 2009; Aflatoun International, 2016), the most intensive interventions are probably best delivered when girls are older. In-depth sexual and reproductive health curricula, for example, are rarely appropriate for the youngest adolescents, given that most are more embarrassed than interested – and that their parents and teachers are largely uncomfortable with the notion of their exposure to 'adult' content (Erulkar and Medhin, 2014; Laterite and Plan, 2014). Similarly, vocational training and economic empowerment programming seems best suited to older girls, who are more likely to have a reason for saving and budgeting and to be working outside the home (Austrian and Muthengi, 2013; UNICEF, 2012a).

Given that most evaluated programmes target adolescent girls aged 10–19 without clear differentiation of age groups, it is critical that GAGE direct attention to age disaggregation and the ways in which it impacts uptake and outcomes of programming. The limited evidence that exists suggests that, when programmes are open to a wide range of girls (e.g. 10–19 or even 10–24), the youngest are often effectively shut out. For example, the endline report of BALIKA in Bangladesh found that participation was highest

among girls aged 14–15 (Amin et al., 2016). Data from Biruh Tesfa in Ethiopia showed that girls aged 15–19 accounted for the majority, whereas those aged 11–14 comprised only 18% of participants (Erulkar et al., 2011). In particular, those aged 10–12 tend to benefit less in all types of interventions, with the exception of programmes aiming to improve girls' primary school enrolment and attendance. This said, the quest to specify optimal intervention packages for relatively small age cohorts may be misplaced – in part because optimal intervention packages will be so context-specific and in part because precise age is not always a defining issue. Life stage, such as being in primary school, secondary school or out of school, being married/in union and having a child or being single and childless may be more meaningful differences. At the same time, there is a danger in over-segmenting interventions, as this may end up excluding vulnerable groups of girls and producing backlash. GAGE can help in exploring these issues.

Which programmes must be delivered in early adolescence in order to see significant returns on investment?

Overall, given that girl-focused programming rarely disaggregates between adolescent girls of different ages, there is little evaluation evidence that speaks to whether it can ever be 'too late' to intervene with girls in most regards. As noted above, however, current evidence suggests that early adolescence is likely to be a better intervention point for many types of programming (McCarthy et al., 2016). Given the rapid growth girls experience just prior to and immediately after menarche, for example, nutritional interventions would be unlikely to result in permanent impacts on girls' body stature or brain development if they were delivered later in adolescence (Prentice et al., 2013; Francis et al., 2002). Similarly, evidence from Ethiopia's Berhane Hewan (Erulkar and Muthengi, 2009) and Egypt's Ishraq (Sieverding and Elbadawy, 2016) suggests educational programming is best delivered to younger girls. The former found programming did not improve older girls' school enrolment and the latter found they were less likely to join and more likely to drop out, perhaps because of child marriage. The most conclusive evidence regarding whether programming can be 'too late' comes from Malawi's Zomba cash transfer programme. A legacy impact study conducted five years after the intervention ended concluded that aiming the programme at girls eligible to attend the final years of primary school might have indeed been 'too late' (Baird et al., 2015).

Duration and intensity of programming

Are current interventions too short and/or lack intensity?

There is little evidence that speaks to intensity or duration. Indeed, what little evidence there is likely says more about which girls select into longer-term or more intense programming than it does about programming itself. That said, programmes do appear to be more efficacious for girls who participate the most intensively. For example, Acharya et al. (2009) found in the Better Life Options Programme (India) that comprehensive awareness of HIV transmission routes had increased by from 21% to 50% among all intervention participants and from 26% to 63% among all regular participants (those who had attended more than half the sessions). Similarly, in the DISHA programme in India, depth of exposure was a significant factor in changing gender norms and attitudes, with the degree of change between 1.5 and four times higher for girls and young women who took part in the targeted (high-intensity) intervention, as opposed to the mass intervention (Kanesathasan et al., 2008). There is, however, little evidence systematically testing a range of intensity options. For example, while girls in India's Kishoree Kontha programme preferred shorter, more frequent, meetings (Glennester, 2013), we do not know whether there are thresholds above which greater frequency of meetings or longer meetings is counterproductive because it is too time-intensive. Furthermore, although most evaluations indicate the number of life skills or vocational training sessions, there is no comparative material examining whether a different design might have been more effective.

While again noting a dearth of evidence with regard to duration, there is some evidence that impacts from longer duration programmes may be stronger. The strongest evidence comes from Egypt's Ishraq. Girls who participated for the full 30 months consistently demonstrated greater increases in academic skills in reading, writing and mathematics than those who participated for shorter periods (Brady et al., 2007). The duration of participation in the Ishraq project was also associated with changes in the rate of child marriage. On the other hand, one study of a programme working to promote alternative masculinities in Ethiopia found that attending around a third of scheduled sessions was sufficient to lead to attitude and practice change (Pulerwitz et al., 2014).

It is important to guard against the temptation to assume more (i.e. longer or more frequent activities) necessarily equates to better-quality programming and it is vital to take into account other demands on adolescents' time. However, as with programme intensity, there is no evidence concerning thresholds, above which returns from a programme diminish. Likewise, although there are often data on the length of programmes, there is an absence of experimental analysis of the effectiveness of different designs. If we are to reach the Sustainable Development Goals with available resources, it is critical to understand what sorts of programmes are catalytic and scalable.

Combination of programme components/ (de)bundling

How do investments in girl-focused programmes compare with more proven approaches such as cash transfers?

There is a slowly growing evidence base on the relative impact of different programme components, as a result of a growing number of experimental and quasi-experimental evaluations with different programme arms (e.g. the Population Council's Adolescent Girls Empowerment Programme and BRAC's Empowerment and Livelihood for Adolescents programme). Overall, this suggests that, while cash and in-kind transfers can be critical to some outcomes for some girls, with the Transfer Project showing impacts on sexual debut, pregnancy, child marriage and transactional sex (Palermo, 2016), other types of programming can be even more effective for most girls and the synergies between transfers and other modalities can be large and worth pursuing.

Apni Beti Apni Dhan cash transfer is a case in point. The programme, which provided mothers with a small amount of cash after the birth of a daughter, and then girls with a larger amount of cash when they turned 18 if they were unmarried, increased the probability of girls' completing Grade 8 and improved the number of hours they were allowed for homework. It did not, on the other hand, reduce their odds of child marriage, change the probability that they would complete Grade 12, alter their mothers' aspirations for them or change the gender-equitable attitudes of either mothers or girls – because the programme did not pair cash with even minimal messaging aimed directly at norms (Nanda et al., 2014, 2015). Indeed, beneficiaries indicated that even improvements in girls' education were related to their marriageability. An

ongoing evaluation of Kishoree Kontha in Bangladesh also speaks to the power of combining cash with other types of programming. Initial results suggest impacts on girls' schooling are the largest when a financial incentive is combined with a 'basic package' that includes safe spaces and gender empowerment programming³ (Bakhtiar, 2013; Glennerster, 2013).⁴ Finally, while an evaluation of Morocco's cash transfer programme found cash helped girls – but not boys – progress through school on time, it also found cash was insufficient to reduce girls' unpaid care and suggested pairing subsidies with community norm interventions (Pesando, 2016). GAGE will explore the extent to which tailored girl-focused interventions are more genuinely transformational than other more general human capital development approaches, and in which capability domains.

How effective is a minimum package approach targeting girls versus a more ecological model? Are there gains from (un) bundling programme components?

There is a growing consensus that multi-component interventions are more effective than single-component interventions for achieving a number of adolescent girl outcomes, with Nanda et al. (2013) concluding that comprehensive programmes should be the 'new norm' (p.45; see also Yount et al., 2016; Gordon et al., 2019; Catalano et al., 2019). For example, Yount et al.'s (2016) systematic review of violence prevention (defined broadly to also include child marriage) for adolescent girls found single-component intervention studies had the least favourable outcomes, with four of five single-component intervention studies having no impact or mixed results. By contrast, four of six bundled interventions had positive outcomes. There is also some evidence that financial interventions should not be delivered on their own. Austrian and Muthengi (2014), for example, found that, when adolescent girls received only a savings account – and not the larger health and social skills intervention – they increased their economic assets, but also their odds of sexual harassment (see also Dunbar et al., 2010; Lautze and Raven-Robert, 2006).

Notably, however, there is some evidence that care must be taken when bundling programming. Education and livelihood interventions can be forced into competition with one another, for example when young people are encouraged to drop out of school to work in the family business or after they have been helped to develop

business skills through livelihood interventions (Brown, 2001; Nanda et al., 2013).

Moreover, while multi-pronged interventions are increasingly recognised as more effective than single-pronged interventions, the multi-pronged nature of interventions makes it difficult to tease apart which components are central and which are more ancillary – or whether different prongs foster valuable synergies (Alcott et al., 2016a; Rushdy, 2010). There has also been little attention to whether more complex interventions are best targeted to a single level (e.g. provide girls with several forms of intervention at once) or whether effects grow when programming simultaneously pursues several change strategies at once (e.g. holistically target girls, families and communities). GAGE is uniquely positioned to explore, for example, whether bundling girl-focused and community-focused interventions together fosters important synergies. There is particularly little evidence regarding how systems-level change interacts with other types of programming. GAGE is positioned to help address these issues.

What sorts of programmes can catalyse change for girls?

Taken together, emerging evidence concerning what types of programmes can catalyse change for girls suggests programming aimed at education and psychosocial well-being is likely to have significant spill-over impacts – perhaps especially for younger girls. Decades of research has found, for example, that girls' schooling has a 'multiplier effect' and is related to a host of other positive impacts – including not only eventual employment and poverty reduction but also decreased odds of child marriage and gender-based violence (UNICEF, 2004; King and Hill, 1997; Floro and Wolf, 1990). Other research has found that psychosocial well-being and a sense of agency are crucial to girls' longer-term outcomes, with impacts on more concrete outcomes such as school attainment and employment but also on harder-to-measure empowerment outcomes, such as the ability to negotiate contraception (Gordon et al., 2019; Calder and Marcus, 2014; 2016). Given the great variation in existent educational and psychosocial programming, GAGE is poised to add to debates by exploring which programmes appear to have the most powerful impacts.

For older girls there is some evidence that economic empowerment programmes can catalyse change. As noted earlier, evaluation of Uganda's Empowerment and Livelihood for Adolescents, for example, found impacts

not only on income generation but also on rates of child marriage, adolescent pregnancy and sexual and gender-based violence (Bandiera et al., 2012; Bandiera, 2015). Similarly, economic empowerment programming in Bangladesh has been found to improve not only financial literacy and days spent on income generation but also school enrolment, parent–child communication and the respect husbands show their young wives (UNICEF, 2012a). However, it is unclear what specific interventions lead to the greatest change and how they should be targeted in terms of timing or population.

There is also evidence that strengthening systems can lead to cascading change for girls. The DFID-funded Finote Hiwot programme, for example, provided crucial learning and support that contributed to encouraging the Ethiopian government to call for ending child marriage and female genital mutilation/cutting by 2025. Partnerships the programme helped develop with Girl Hub, UNICEF and UNFPA have supported a ‘crowding-in’ of new actors and resulted in growing support for programming aimed at improving girls’ outcomes (IMC Worldwide, 2015).

Legacy effects

What are the cumulative benefits of interventions for adolescent girls’ individual and collective capabilities?

There is very little evidence on the long-term effects of particular interventions, primarily because evaluations are conducted within a relatively short timeframe after the end of a programme/individuals’ participation in it (Baird and Özler, 2016). Not only is there a major knowledge gap concerning legacy effects, but also such evidence as exists suggests changes are not necessarily sustained. For example, Baird et al.’s (2015) study of the legacy impacts of Malawi’s Zomba cash transfer concluded that the substantial impacts on adolescent education and sexual and reproductive health shown early on were ‘almost entirely transient’. However, the pool of studies that probes these issues is extremely small.

Going forward, we need not only to understand the longer-term positive effects of programming but also to explore the possibility of unintended consequences and even backlash. As a nine-year programme, GAGE is ideally placed to examine the effects of different interventions, and intervention bundles, in different economic and political contexts, and to examine the effects of ‘alumni’-type activities – those that aim to maintain links with and a degree of support to programme graduates (e.g. the Binti Pamoja Centre, BRAC’s Advancing BRAC Graduates programme and the Camfed Association’s Cama Girl Network) (Population Council, 2010; Kober, 2016).

Conclusions: bringing our core research questions to life

In sum, our 3Cs approach (Capabilities, Change strategies, Contexts) will allow us to combine different lenses, integrating the best of theories of economic investment, legal change, social norms approaches, and gender empowerment. This will enable us to focus attention on the dynamic interactions that shape adolescent outcomes and gendered experiences in the real world. In particular, GAGE will contribute to the global evidence on:

- the patterning and trends in girls' and boys' capability outcomes – as well as their subjective experiences and perceptions – over the course of adolescence, mindful that where and with whom they live affords them very different opportunities.
- the importance of inter-sectionality, digging beneath national aggregates and, in response to global calls for greater attention to principles of equity, shedding light on the lives of adolescent girls and boys who are facing multiple and interconnected sources of deprivation and disadvantage (e.g. disability, ethnic or caste minority status, migrant or refugee status, urban vs rural location etc.) and exploring the ways in which gender differences intersect with other sources of social difference.
- the interplay of different capabilities, including not only more quantifiable outcomes such as education, health and productive means – but also agency and voice, bodily integrity and psychosocial wellbeing – exploring how they intersect to achieve sustainable transformative change;
- the relative effectiveness and sustainability of different change strategy approaches on adolescent development trajectories at different junctures in adolescence, paying particular attention to the potential gains of longer-term investments.
- the mediating effects of global and local contexts (from rapid urbanisation to conflict to climate change), as well as the role of national policies, laws, institutions and politics in shaping change processes – accelerating progress in some capability domains but exposing adolescents to new risks and vulnerabilities in others.

We will operationalise these research questions through four broad strands of research as follows:

1. Evidence synthesis on what works where and why;
2. Mixed-methods longitudinal impact evaluations of programmes aimed at gender transformation for adolescent girls;
3. Participatory action research with adolescents living in conflict-affected contexts to understand programme legacy effects as they transition through adolescence and into early adulthood; and
4. Responsive research funding, including proposals developed through 'innovation lab' settings between researchers and practitioners, in what we are calling the GAGE Learning Exchange.

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Annex 1: Capability outcome sub-components

Table 1: Sub-components of the GAGE capability outcomes

Capability domains	Outcome sub-components	Sub-component outcomes for girls	Sub-component outcomes for boys	Brothers and male peers as change actors	Families as change actors	Communities as change actors	Systems and services as change actors
Education and Learning	1. Cultivation of aspirations whereby education is a critical component of future development trajectories	1.1 Girls recognise the importance of education to achieving their future aspirations	1.2 Boys recognise the importance of education to achieving their future aspirations	1.3 Brothers and male peers recognise girls' right to aspire to a future that requires educational achievement	1.4 Families shape and support male and female adolescents' right to aspire to a future that requires educational achievement	1.5 Communities actively support male and female adolescents' right to aspire to a future that requires educational achievement	1.6 Systems and service providers develop and enforce a coordinated inter-sectoral approach to actively support male and female adolescents' right to aspire to a future that requires educational achievement
	2. Access to affordable, age-appropriate, gender-responsive and quality educational and learning environments	2.1 Girls are able to access affordable, age-appropriate, gender-responsive and quality educational and learning environments	2.2 Boys are able to access affordable, age-appropriate, gender-responsive and quality educational and learning environments	2.3 Brothers and male peers recognise girls' right to access quality educational and learning environments	2.4 Families actively and equitably support, within their means, male and female adolescents' right to access quality educational and learning environments	2.5 Communities actively and equitably support male and female adolescents' right to access quality educational and learning environments	2.6 Systems and service providers develop and enforce a coordinated inter-sectoral approach (including education and social protection sectors) to equitably support access to quality educational and learning environments
	3. Support and resources to realise the right to education, including freedom from child work, domestic and care work responsibilities that preclude access to learning opportunities	3.1 Girls enjoy support and resources to realise the right to education, including freedom from child work, domestic and care work responsibilities that preclude access to learning opportunities	3.2 Boys enjoy support and resources to realise the right to education, including freedom from child work, domestic and care work responsibilities that preclude access to learning opportunities	3.3 Brothers and male peers recognise and where possible support girls' right to education, including freedom from child work, domestic and care work responsibilities that preclude access to learning opportunities	3.4 Families recognise and where possible support male and female adolescents' right to education, including countering discriminatory gender norms that hinder substantive access to education	3.5 Communities recognise and actively support male and female adolescents' right to education, including countering discriminatory gender norms that hinder substantive access to education	3.6 Systems and service providers develop and enforce a coordinated inter-sectoral approach (including education and social protection sectors) to ensure substantive access to education
	4. Support, skills and resources to transition to secondary and post-secondary educational and learning pathways	4.1 Girls are able to access the support, skills and resources to transition secondary and post-secondary educational learning pathways	4.2 Boys are able to access the support, skills and resources to transition to secondary and post-secondary educational learning pathways	4.3 Brothers and male peers recognise girls' right to transition to secondary and post-secondary educational learning pathways	4.4 Families actively and equitably support, within their means, male and female adolescent's right to transition to secondary and post-secondary educational and learning pathways	4.5 Communities actively and equitably support male and female adolescents' right to transition to secondary and post-secondary educational and learning pathways	4.6 Systems and service providers develop and enforce a coordinated inter-sectoral approach (including education and social protection sectors) to transition to secondary and post-secondary educational and learning pathways

Capability domains	Outcome sub-components	Sub-component outcomes for girls	Sub-component outcomes for boys	Brothers and male peers as change actors	Families as change actors	Communities as change actors	Systems and services as change actors
Education and Learning	5. Access to materials and resources in schools	5.1 Girls are able to access the materials and resources they need for school	5.2 Boys are able to access the materials and resources they need for school	5.3 Brothers and male peers recognize girls' right to access materials and resources they need for school	5.4 Families actively and equitably support, within their means, male and female adolescents' right to access materials and resources they need for school	5.5 Communities actively and equitably support male and female adolescents' rights to access materials and resources they need for school	5.6 Systems and service providers develop and enforce a coordinated inter-sectoral approach (including education and social protection sectors) to ensure access to materials and resources they need for school
	6. Support and guidance towards gaining technical and vocational skills, for employment, decent jobs and entrepreneurship	6.1 Girls are able to access support and guidance towards gaining technical and vocational skills, for employment, decent jobs and entrepreneurship	6.2 Boys are able to access support and guidance towards gaining technical and vocational skills, for employment, decent jobs and entrepreneurship	6.3 Brothers and male peers recognize girls' right to access support and guidance towards gaining technical and vocational skills, for employment, decent jobs and entrepreneurship	6.4 Families actively and equitably support, within their means, male and female adolescents' right to access support and guidance towards gaining technical and vocational skills, for employment, decent jobs and entrepreneurship	6.5 Communities actively and equitably support male and female adolescents' right to access support and guidance towards gaining technical and vocational skills, for employment, decent jobs and entrepreneurship	6.6 Systems and service providers develop and enforce a coordinated sectoral approach including education and social protection sectors) to ensure access to the support and guidance towards gaining technical and vocational skills, for employment, decent jobs and entrepreneurship
	7. Access to and provision of accountability mechanisms, parity indices and high-quality, timely and reliable data with full disaggregation	7.1 Girls are able to access accountability mechanisms, parity indices and high-quality, timely and reliable data with full disaggregation	7.2 Boys are able to access accountability mechanisms, parity indices and high-quality, timely and reliable data with full disaggregation	N/A	7.3 Families actively promote access to accountability mechanisms, parity indices and high-quality, timely and reliable data with full disaggregation	7.4 Communities pro- mote equitable access to accountability mechanisms, parity indices and high-quality, timely and reliable data with full disaggregation	7.5 Systems and service providers actively ensure provision of accountability mechanisms, parity indices and high-quality, timely and reliable data with full disaggregation
	8. Learning achievements including proficiency in literacy and numeracy skills	8.1 Girls achieve proficiency in literacy and numeracy skills	8.2 Boys achieve proficiency in literacy and numeracy skills	N/A	8.3 Families actively support male and female adolescents right to achieve proficiency in literacy and numeracy skills	8.4 Communities actively support male and female adolescents right to achieve proficiency in literacy and numeracy skills	8.5 Systems and service providers actively ensure male and female adolescents achieve proficiency in literacy and numeracy skills

Capability domains	Outcome sub-components	Sub-component outcomes for girls	Sub-component outcomes for boys	Brothers and male peers as change actors	Families as change actors	Communities as change actors	Systems and services as change actors
Bodily Autonomy, Integrity and Freedom from Violence	1. Access to knowledge, skills, re- sources and support to avoid early, forced and child marriage and to negotiate a marriage of one's choosing at an appropriate age	1.1 Girls are fully aware of and have the knowledge, skills, re- sources and support to avoid early, forced and child marriage and to negotiate a marriage of their choice at an appropriate age	1.2 Boys are fully aware of and have the knowledge, skills, resources and support to avoid early, forced and child marriage and to negotiate a marriage of their choice at an appropriate age	1.3 Brothers and male peers are aware of the risks to girls of early, forced and child marriage and actively support their right to a marriage of their choice at an appropriate age	1.4 Families actively prevent and do not perpetuate early, forced and child marriage and actively support an adolescent's right to a marriage of their choice at an appropriate age	1.5 Communities actively prevent early, forced and child marriage through social norm change efforts and the enforcement of sanctions against violators	1.6 Systems and service providers develop and enforce a coordinated inter-sectoral approach to the prevention and sanction of early, forced and child marriage
	2. Access to knowledge, skills, resources and sup- port to be protected and free from SGBV, including HTPs (e.g. FGM/C, dowry-based violence, abduction, trafficking, cyber-based GBV)	2.1 Girls are fully aware of and have the knowledge, skills, resources and support to be protected from the threat or perpetration of SGBV, including HTPs (e.g. FGM/C, dowry-based violence, abduction, trafficking, cyber-based GBV)	2.2 Boys are fully aware of and have the knowledge, skills, re- sources and support to be protected and free from SGBV	2.3 Brothers and male peers actively sup- port girls' right to be free from the threat or perpetration of SGBV and practise positive masculinities	2.4 Families actively support male and female adolescents' right to be free from the threat or perpetration of SGBV	2.5 Communities actively prevent SGBV through social norm change efforts and the enforcement of sanctions against perpetrators	2.6 Systems and service providers develop and enforce a coordinated inter-sectoral approach to the prevention and sanction of SGBV
	3. Access to knowledge, skills, re- sources and support to be protected and free from age-based violence, including corporal punishment, bullying and cyber bullying	3.1 Girls are fully aware of and have the knowledge, skills, resources and support to be protected and free from age-based violence, including corporal punishment, bullying and cyber bullying	3.2 Boys are fully aware of and have the knowledge, skills, re- sources and support to be protected and free from age-based violence, including corporal punishment, bullying and cyber bullying	3.3 Siblings support one another to gain the knowledge, skills and resources to be protected and free from age-based violence, including corporal punishment, bullying and cyber bullying	3.4 Families actively support male and female adolescents' right to be free from the threat or perpetration of age-based violence, including corporal punishment, bullying and cyber bullying	3.5 Communities actively prevent age- based violence through social norm change efforts	3.6 Systems and service providers develop and enforce a coordinated inter-sectoral approach to the prevention and sanction of age-based violence

Capability domains	Outcome sub-components	Sub-component outcomes for girls	Sub-component outcomes for boys	Brothers and male peers as change actors	Families as change actors	Communities as change actors	Systems and services as change actors
SRH, Health and Nutrition	1. Access to age-appropriate information and services to keep themselves healthy	1.1 Girls can access age-appropriate information and services to keep themselves healthy	1.2 Boys can access age-appropriate information and services to keep themselves healthy	N/A	1.3 Families actively ensure girls' access to health information and services	1.4 Communities promote equitable access to age-appropriate information and services, as well as take action to counter negative health behaviours	1.5 Systems and service providers actively ensure girls' access to health information, services and supplies, as well as take action to counter negative health behaviours
	2. Access to information about nutrition and equitable access to nutritious food	2.1 Girls have access to information about nutrition and equitable access to nutritious food	2.2 Boys have access to information about nutrition and equitable access to nutritious food	2.3 Brothers are supportive of girls' right to equitable access to nutritious food	2.4 Family actively ensure girls' right to equitable access to nutritious food and take action to counter gender discriminatory food taboos	2.5 Communities promote girls' right to equitable access to nutritious food and take action to counter gender discriminatory food taboos	2.6 Systems and service providers actively ensure girls' access to information about nutrition, as well as take action to counter gender discriminatory food taboos
	3. Access to age-appropriate and stigma free knowledge, supplies and support to manage menstruation	3.1 Girls have access to access age-appropriate and stigma free knowledge, supplies and support to manage menstruation	N/A	3.2 Brothers are supportive of girls' right to stigma-free menstrual management	3.3 Family actively ensure girls' access to age-appropriate and stigma-free supplies and support for menstrual management	3.4 Communities actively ensure girls' access to age-appropriate and stigma-free supplies and support for menstrual management	3.5 Systems and service providers ensure girls' access to age-appropriate and stigma-free supplies, support and infrastructure needed for menstrual management
	4. Access to age-appropriate, gender friendly and stigma-free sexual and reproductive health and puberty related information, services, supplies	4.1 Girls have access to age-appropriate, gender friendly and stigma-free sexual and reproductive health and puberty related information	4.2 Boys have access to age-appropriate, gender friendly and stigma-free sexual and reproductive health and puberty related information, services, supplies and support	4.3 Brothers and male peers are supportive of girls' right to access to age-appropriate, gender friendly and stigma-free sexual and reproductive health and puberty related information, services, supplies and support	4.4 Family actively ensure girls' access to sexual and reproductive health and puberty related information, services, supplies and support, and counter gender discriminatory family	4.5 Communities actively ensure girls' access to sexual and reproductive health and puberty related information, services, supplies and support, and gender discriminatory family planning taboos	4.6 Systems and service ensure girls' access to gender friendly and stigma-free sexual and reproductive health and puberty related infrastructure, information, services, supplies and support
	5. Access to age-appropriate information and services to engage in physical activity	5.1 Girls have access to age-appropriate information and services to engage in physical activity	5.2 Boys have access to age-appropriate information and services to engage in physical activity	5.3 Brothers and male peers are supportive of girls' right to engage in physical activity	5.4 Families actively ensure girls' access to age-appropriate information and services to engage in physical activity	5.5 Communities actively ensure girls' access age-appropriate information and services to engage in physical activity	5.6 Systems and service providers ensure girls' access to gender friendly and stigma-free information and services to engage in physical activity
	6. Access to adolescent-friendly services for HIV testing and access to information to protect against sexually transmitted diseases	6.1 Girls have access to adolescent-friendly services for HIV testing and access to information to protect against sexually transmitted diseases	6.2 Boys have access to age adolescent-friendly services for HIV testing and access to information to protect against sexually transmitted diseases	6.3 Brothers and male peers are supportive of girls' right to services for HIV testing and access to information to protect against sexually transmitted diseases	6.4 Families actively ensure girls' access to adolescent-friendly services for HIV testing and access to information to protect against sexually transmitted diseases	6.5 Communities actively ensure girls' access to adolescent-friendly services for HIV testing and access to information to protect against sexually transmitted diseases	6.6 Systems and service providers ensure girls' access to gender friendly and stigma-free

Psychosocial well-being

Capability domains	Outcome sub-components	Sub-component outcomes for girls	Sub-component outcomes for boys	Brothers and male peers as change actors	Families as change actors	Communities as change actors	Systems and services as change actors
Psychosocial well-being	1. Development of a strong sense of self with the internal emotional capacity to set independent aspirational goals, develop intrinsic motivation and demonstrate resilience in the face of setbacks	1.1 Girls explore their own interests, identities and build resilience	1.2 Boys explore their own interests, identities and build resilience	1.3 Brothers and male peers support girls and respect their right to explore their own interests, identities and build resilience	1.4 Families actively support and provide guidance so that adolescents can develop a strong sense of self and build resilience	1.5 Communities actively counter discriminatory gender norms around girls' submissiveness, self-sacrifice and actively encourage the development of self-esteem and resilience	1.6 Systems and service providers actively counter discriminatory gender norms around girls' submissiveness self-sacrifice, actively foster opportunities for the development of self-esteem and resilience
	2. Valued and emotionally supported within their families and personal relationships	2.1 Girls feel valued and emotionally supported within their families and personal relationships	2.2 Boys feel valued and emotionally supported within their families and personal relationships	2.3 Brothers and male peers value and emotionally support girls	2.4 Families value and emotionally support adolescents and provide guidance and age-appropriate boundaries	2.5 Community leaders and community members actively counter discriminatory gender norms undervaluing girls	2.6 Systems and service providers encourage positive parenting and community awareness so that adolescents and particularly girls feel valued and emotionally supported
	3. Acquisition of emotional intelligence and communications skills to overcome social isolation and foster positive relationships with peers	3.1 Girls develop emotional intelligence and communications skills to connect and foster positive relationships with peers	3.2 Boys develop emotional intelligence and communications skills to connect and foster positive relationships with peers	3.3 Brothers and male peers support girls' right to connect and foster positive relationships with peers	3.4 Families actively support adolescents and particularly girls with guidance to develop healthy relationships rooted in mutual respect and interdependence	3.5 Communities actively counter discriminatory gender norms around girls' docility and isolation, and encourage social connectedness among adolescents, and particularly among girls	3.6 Systems and service providers counter discriminatory gender norms around girls' docility and isolation and provide opportunities for adolescents and particularly girls to connect
	4. Access to and satisfaction with tailored, stigma-free and age- and gender-friendly psycho- social and/or mental health services	4.1 Girls access tailored, stigma-free and age- and gender-friendly psycho- social and/or mental health services	4.2 Boys access tailored, stigma-free and age- and gender-friendly psychosocial and/or mental health services	4.3 Brothers and male peers support girls' right to access tailored, stigma-free and age- and gender-friendly psychosocial and/or mental health services	4.4 Families actively support adolescents to access to tailored, stigma-free and age- and gender-friendly psychosocial and/or mental health services	4.5 Communities actively counter discriminatory gender norms around tailored, stigma-free and age- and gender-friendly psychosocial and/or mental health services for adolescents	4.6 Systems and service providers counter discriminatory gender norms around support tailored, stigma-free and age- and gender-friendly psycho- social and/or mental health services for adolescents
	5. Developing a strong sense of self as members of a community with availability of public space for peers to participate and interact	5.1 Girls explore their sense of self as members of a community and are able to interact in public in a safe and supportive environment	5.2 Boys explore their sense of self as members of a community and are able to interact in public in a safe and supportive environment	5.3 Brothers and male peers support girls and respect their right to be a member of community and interact and participate in public space and public life	5.4 Families actively support and provide guidance so adolescents develop into members of the community and interact and participate in public life	5.5 Communities actively counter discriminatory gender norms around girls' lack of participation in community and public life and actively encourage such participation and interaction with peers	5.6 Systems and service providers actively counter discriminatory gender norms around girls' lack of participation in community and public life and actively foster opportunities for the development of participation and interaction with peers

Capability domains	Outcome sub-components	Sub-component outcomes for girls	Sub-component outcomes for boys	Brothers and male peers as change actors	Families as change actors	Communities as change actors	Systems and services as change actors
Voice and Agency	1. Enhanced mobility (as a precondition for agency) to access public physical spaces, confidently and safely	1.1 Girls can access and move around public physical spaces confidently and safely	1.2 Boys can access and move around public physical spaces confidently and safely	1.3 Brothers and male peers are supportive of girls' right to access and equitably share public physical spaces	1.4 Families actively enable adolescents and particularly girls to move around their communities and access public and physical spaces	1.5 Communities actively enable adolescents and particularly girls' access to public physical spaces confidently and safely	1.6 Service providers and policy makers actively enable and promote adolescents' and particularly girls' access to public physical spaces through supportive infrastructure, policing transport, scheduling of services.
	2. Tailored and diverse means to safely access and use age-appropriate information	2.1 Girls can effectively access and safely navigate tailored and diverse age-appropriate information	2.2 Boys can effectively access and safely navigate tailored and diverse age-appropriate information	2.3 Brothers and male peers are supportive of girls' equal use of communication media and devices	2.4 Families support adolescents to access and use safe and age-appropriate information sources	2.5 Communities support adolescents to access and use safe and age-appropriate information sources	2.6 Schools, service providers actively enable and promote adolescent access to tailored and diverse age-appropriate information, and support parents to guide their adolescents in safe and age-appropriate use and access of communication
	3. Meaningful participation in activities and in decision-making in family, community and school life	3.1 Girls can confidently and independently participate in activities and in decision-making regarding family, community and school life	3.2 Boys can confidently and independently participate in activities and in decision-making regarding family, community and school life	3.3 Brothers and male peers are supportive of girls' right to meaningfully participate in activities and in decision-making in family, community and school life	3.4 Families actively encourage adolescents and particularly girls to confidently and independently participate in activities and in decision-making regarding family, school and community life	3.5 Communities actively counter discriminatory gender norms around girls' participation and actively encourage and provide opportunities for adolescents and particularly girls to participate in community life	3.6 Systems and service providers actively counter discriminatory gender norms around girls' participation and actively encourage and provide opportunities for adolescents and particularly girls to participate in family, school and community life
	4. Meaningful civic participation	4.1 Girls are able to acquire skills to develop and exercise an independent civic identity	4.2 Boys are able to acquire skills to develop and exercise an independent civic identity	4.3 Brothers and male peers are supportive of girls' right to develop and exercise an independent civic identity	4.4 Families actively encourage adolescents to develop and exercise an independent civic identity	4.5 Communities actively counter discriminatory gender norms around girls' civic participation and actively encourage and provide opportunities for adolescents	4.6 Systems and service providers actively counter discriminatory gender norms around girls' civic participation and actively encourage and provide opportunities for adolescents and particularly girls to exercise an independent civic identity
	5. Role models who can demonstrate alternative day-to-day pathways to restrictive gender roles	5.1 Girls have access to inspirational community and national role models who demonstrate alternative day-to-day pathways	5.2 Boys have access to inspirational community and national role models who demonstrate alternative day-to-day pathways	5.3 Brothers and male peers have access to role models who demonstrate gender equitable ways of being and doing	5.4 Families support girls and boys to emulate role models who demonstrate gender transformative ways of being and doing	5.5 Communities actively promote linkages with role models who demonstrate gender transformative ways of being and doing	5.6 Systems and service providers actively foster role models who demonstrate gender transformative ways of being and doing and link them to adolescents in the community
	6. Decision-making over time-use	6.1 Girls can engage in decision-making regarding their time-use	6.2 Boys can engage in decision-making regarding their time-use	6.3 Brothers and male peers are supportive of girls' right to engage in decision-making regarding their time-use	6.4 Families actively encourage adolescents and particularly girls to engage in decision-making regarding their time-use	6.5 Communities actively counter discriminatory gender norms around girl's decision-making over their time-use	6.6 Systems and service providers actively counter discriminatory gender norms around girls' decision making over their time-use

Capability domains	Outcome sub-components	Sub-component outcomes for girls	Sub-component outcomes for boys	Brothers and male peers as change actors	Families as change actors	Communities as change actors	Systems and services as change actors
Economic Empowerment	1. Aspirations about decent, rewarding and age-appropriate employment	1.1 Girls can aspire to decent, rewarding and age-appropriate economic opportunities	1.2 Boys can aspire to decent, rewarding and age-appropriate economic opportunities	1.3 Brothers and male peers actively support girls' right to aspire to decent and rewarding economic opportunities	1.4 Families actively nurture and support male and female adolescents' right to aspire to decent and rewarding economic opportunities	1.5 Community norms are supportive of adolescents' aspirations towards decent and rewarding economic opportunities	1.6 Schools and other service providers provide information and support to encourage adolescents' economic aspirations and raise parental and community awareness of adolescent economic participation
	2. Numeracy and financial literacy	2.1 Girls are numerate and financially literate	2.2 Boys are numerate and financially literate	N/A	2.3 Families actively encourage adolescents to acquire and practice numeracy and financial literacy	N/A	2.4 Schools and other service providers provide the opportunity for adolescents to acquire quality and age-appropriate numeracy and financial literacy
	3. Technical, vocational and business skills which are market appropriate and go beyond gender segregated occupations	3.1 Girls can acquire technical, vocational and business skills	3.2 Boys can acquire technical, vocational and business skills	N/A	3.3 Families actively encourage and support adolescents to acquire acquisition of TVET and other skills	3.4 Communities support adolescents to acquire TVET and other skills as well as local employment linkages	3.5 TVET and other skills training providers ensure opportunities for adolescents to avail themselves of market appropriate skills and linkages to employers
	4. Access to resource endowments including land and agricultural assets	4.1 Girls can access and control re- source endowments including land and agricultural/ physical assets	4.2 Boys can access and control resource endowments including land and agricultural/ physical assets	4.3 Brothers and male peers are supportive of girls' equal inheritance rights	4.4 Parent ensure their daughters and sons have equal inheritance shares	4.5 Communities are supportive of gender egalitarian inheritance practices	4.6 Service provider and systems enforce gender egalitarian inheritance practices
	5. Access to savings and credit options	5.1 Girls can access and control savings and credit that facilitate economic independence	5.2 Boys can access and control savings and credit that facilitate economic independence	N/A	5.3 Parents actively support adolescents' access to and control of savings and credit options	5.4 Communities actively support gender egalitarian savings and credit options	5.5 Financial providers and systems provide and facilitate gender egalitarian savings and credit options
	6. Access to appropriate social protection programming that is age- and gender-responsive	6.1 Girls have access to social protection programming that is age- and gender-responsive	6.2 Boys can access social protection programming that is age- and gender-responsive	N/A	6.3 Parents actively support adolescents' access to social protection programming that is age- and gender-responsive	6.4 Communities actively support gender egalitarian social protection programming that is age- and gender-responsive	6.5 Service and system providers facilitate and support gender egalitarian social protection programming that is age- and gender-responsive
	7. Safe and secure working environments particularly for those in precarious employment, including migrants	7.1 Girls can access income-generating opportunities in safe and secure working environments and have access to information and support to ensure safe migration as appropriate	7.2 Boys can access income-generating opportunities in safe and secure working environments, and have access to information and support to ensure safe migration as appropriate	7.3 Brothers and male peers actively support girls right to access income-generating opportunities in safe and secure working environments, and have access to information and support to ensure safe migration as appropriate	7.4 Parents actively support male and female adolescents' girls right to access income-generating opportunities in safe and secure working environments, and have access to information and support to ensure safe migration as appropriate	7.5 Communities actively promote safe and secure working environments for all workers, particularly for young people in precarious employment, including migrants	7.6 Service and system providers facilitate and support safe and secure working environments for all workers, particularly for young people in precarious employment, including migrants

Annex 2: GAGE and the Sustainable Development Goals (SDGs)

Table 2: Mapping the GAGE capability domains onto the SDG goals, targets and indicators

GAGE Capability Domain	Sustainable Development Goals (SDGs)	GAGE Capability sub-components	SDG targets	SDG indicators
Education and Learning	Goal 4. Quality education	Aspirations whereby education is a critical component	Not included	Not included
	Goal 5. Gender equality			
	Goal 8. Decent work and economic growth	Affordable, age-appropriate, gender-responsive and quality educational and learning environments	<p>Target 4.1 By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes</p> <p>Target 4.5 By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations</p> <p>Target 4.c By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing States</p>	<p>Indicator 4.1.1 Proportion of children and young people: (a) in grades 2/3; (b) at the end of primary; and (c) at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex</p> <p>Indicator 4.5 Parity indices (female/male, rural/urban, bottom/top wealth quintile and others such as disability status, indigenous peoples and conflict-affected, as data become available) for all education indicators on this list that can be disaggregated</p> <p>Indicator 4.c.1 Proportion of teachers in (a) pre-primary; (b) primary; (c) lower secondary; and (d) upper secondary education who have received at least the minimum organized teacher training (e.g. pedagogical training) pre-service or in-service required for teaching at the relevant level in a given country</p>
		The right to education, including freedom from child labour, domestic and care work responsibilities	<p>Target 5.4 Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate</p> <p>Target 8.7 Take immediate and effective measures to eradicate forced labour, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labour, including recruitment and use of child soldiers, and by 2025 end child labour in all its forms</p>	<p>Indicator 5.4.1 Proportion of time spent on unpaid domestic and care work, by sex, age and location</p> <p>Indicator 8.7.1 Proportion and number of children aged 5-17 years engaged in child labour, by sex and age</p>

GAGE Capability Domain	Sustainable Development Goals (SDGs)	GAGE Capability sub-components	SDG targets	SDG indicators
Education and Learning		Transitions to secondary and post-secondary educational and learning pathways	Target 4.3 By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university	Indicator 4.3.1 Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months, by sex
		School materials	Target 4.a Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all	Indicator 4.a.1 Proportion of schools with access to: (a) electricity; (b) the Internet for pedagogical purposes; (c) computers for pedagogical purposes; (d) adapted infrastructure and materials for students with disabilities; (e) basic drinking water; (f) singlesex basic sanitation facilities; and (g) basic handwashing facilities (as per the WASH indicator definitions)
		Learning achievements	Target 4.6 By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy Target 4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development	Indicator 4.6.1 Proportion of population in a given age group achieving at least a fixed level of proficiency in functional (a) literacy and (b) numeracy skills, by sex Indicator 4.7.1 Extent to which (i) global citizenship education and (ii) education for sustainable development, including gender equality and human rights, are mainstreamed at all levels in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment
		Vocational guidance	Target 4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship 4.5 By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations	Indicator 4.4.1 Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill Indicator 4.5.1 Parity indices (female/male, rural/urban, bottom/top wealth quintile and others such as disability status, indigenous peoples and conflict-affected, as data become available) for all education indicators on this list that can be disaggregated
		Accountability mechanisms	Target 17.18 By 2020, enhance capacity-building support to developing countries, including for least developed countries and small island developing States, to increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts	Indicator 17.18.1 Proportion of sustainable development indicators produced at the national level with full disaggregation when relevant to the target, in accordance with the Fundamental Principles of Official Statistics Indicator 17.18.2 Number of countries that have national statistical legislation that complies with the Fundamental Principles of Official Statistics Indicator 17.18.3 Number of countries with a national statistical plan that is fully funded and under implementation, by source of funding

Bodily Autonomy, Integrity and Freedom from Violence	GAGE Capability Domain	Sustainable Development Goals (SDGs)	GAGE Capability sub-components	SDG targets	SDG indicators
		Goal 5. Gender equality	Early, forced and child marriage	Target 5.3 Eliminate all harmful practices, such as child, early and forced marriage and female genital mutilation	Indicator 5.3.1 Proportion of women aged 20-24 years who were married or in a union before age 15 and before age 18
		Goal 8. Decent work and economic growth	Sexual and gender-based violence including HTPs	Target 5.2 Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation	Indicator 5.2.1 Proportion of ever-partnered women and girls aged 15 years and older subjected to physical, sexual or psychological violence by a current or former intimate partner in the previous 12 months, by form of violence and by age
		Goal 16. Peace, and justice and strong institutions		Target 5.3 Eliminate all harmful practices, such as child, early and forced marriage and female genital mutilation	Indicator 5.2.2 Proportion of women and girls aged 15 years and older subjected to sexual violence by persons other than an intimate partner in the previous 12 months, by age and place of occurrence Indicator 5.3.2 Proportion of girls and women aged 15-49 years who have undergone female genital mutilation/cutting, by age
			Age-based violence	Target 8.7 Take immediate and effective measures to eradicate forced labour, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labour, including recruitment and use of child soldiers, and by 2025 end child labour in all its forms Target 16.1 Significantly reduce all forms of violence and related death rates everywhere Target 16.2 End abuse, exploitation, trafficking and all forms of violence against and torture of children Target 16.3 Promote the rule of law at the national and inter- national levels and ensure equal access to justice for all.	Indicator 8.7.1 Proportion and number of children aged 5-17 years engaged in child labour, by sex and age Indicator 16.1.1 Number of victims of intentional homicide per 100,000 population, by sex and age Indicator 16.1.2 Conflict-related deaths per 100,000 population, by sex, age and cause Indicator 16.1.3 Proportion of population subjected to physical, psychological or sexual violence in the previous 12 months 16.1.4 Proportion of population that feel safe walking alone around the area they live Indicator 16.2.1 Proportion of children aged 1-17 years who experienced any physical punishment and/or psychological aggression by caregivers in the past month Indicator 16.2.2 Number of victims of human trafficking per 100,000 population, by sex, age and form of exploitation Indicator 16.2.3 Proportion of young women and men aged 18-29 years who experienced sexual violence by age 18 Indicator 16.3.1 Proportion of victims of violence in the previous 12 months who reported their victimization to competent authorities or other officially recognized conflict resolution mechanisms
			Corporal punishment	Target 16.2 End abuse, exploitation, trafficking and all forms of violence against and torture of children	Indicator 16.2.1 Proportion of children aged 1-17 years who experienced any physical punishment and/or psychological aggression by caregivers in the past month

GAGE Capability Domain	Sustainable Development Goals (SDGs)	GAGE Capability sub-components	SDG targets	SDG indicators
Bodily Autonomy, Integrity..	Goal 5. Gender equality	Violence and bullying	Target 4.a Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all	Indicator 4.a.1 Proportion of schools with access to (a) electricity; (b) the Internet for pedagogical purposes; (c) computers for pedagogical purposes; (d) adapted infrastructure and materials for students with disabilities; (e) basic drinking water; (f) single-sex basic sanitation facilities; and (g) basic handwashing facilities (as per the WASH indicator definitions)
	Goal 8. Decent work and economic growth		Target 10.2 10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status	Indicator 10.3.1 Proportion of population reporting having personally felt discriminated against or harassed in the previous 12 months on the basis of a ground of discrimination prohibited under international human rights law
	Goal 16. Peace, and justice and strong institutions	Cyberbullying	Not Included	Not Included
SRH, Health and Nutrition	Goal 2. Zero hunger	Health information and services	Target 3.1 By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births.	Indicator 3.2.2 Neonatal mortality rate
	Goal 3. Good health and well-being		Target 3.3 By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases	Indicator 3.3.1 Number of new HIV infections per 1,000 uninfected population, by sex, age and key populations
	Goal 5. Gender equality		Target 3.4 By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being	Indicator 3.3.2 Tuberculosis incidence per 100,000 population
	Goal 6. Clean water and sanitation		Target 3.5 Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol	Indicator 3.3.3 Malaria incidence per 1,000 population
			Target 3.6 By 2020, halve the number of global deaths and injuries from road traffic accidents	Indicator 3.3.4 Hepatitis B incidence per 100,000 population
			Target 3.8 Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all	Indicator 3.3.5 Number of people requiring interventions against neglected tropical diseases
			Target 3.b Support the research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration on the TRIPS Agreement and Public Health	Indicator 3.4.1 Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease
				Indicator 3.5.1 Coverage of treatment interventions (pharmacological, psychosocial and rehabilitation and aftercare services) for substance use disorders
				Indicator 3.5.2 Harmful use of alcohol, defined according to the national context as alcohol per capita consumption (aged 15 years and older) within a calendar year in litres of pure alcohol
				Indicator 3.6.1 Death rate due to road traffic injuries
				Indicator 3.8.1 Coverage of essential health services (defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, non-communicable diseases and service capacity and access, among the general and the most disadvantaged population)
				Indicator 3.8.2 Proportion of population with large household expenditures on health as a share of total household expenditure or income
				Indicator 3.b.1 Proportion of the target population covered by all vaccines included in their national programme

GAGE Capability Domain	Sustainable Development Goals (SDGs)	GAGE Capability sub-components	SDG targets	SDG indicators
SRH, Health and Nutrition	Goal 2. Zero hunger	Information and equitable access to nutritious food	Target 2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round	Indicator 2.1.1 Prevalence of undernourishment
	Goal 3. Good health and well-being		Target 2.2 By 2030 end all forms of malnutrition, including achieving by 2025 the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women, and older persons	Indicator 2.1.2 Prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES)
	Goal 5. Gender equality	Knowledge, supplies and support to manage menstruation	Target 6.2 By 2030, achieve adequate and equitable sanitation and hygiene for all, ending open defecation and paying special attention to the needs of women and girls and people in vulnerable situations	Indicator 2.2.1 Prevalence of stunting (height for age <-2 standard deviation from the median of the World Health Organization (WHO) Child Growth Standards) among children under 5 years of age
	Goal 6. Clean water and sanitation			Indicator 2.2.2 Prevalence of malnutrition (weight for height >+2 or <-2 standard deviation from the median of the WHO Child Growth Standards) among children under 5 years of age, by type (wasting and overweight)
		Sexual and reproductive health and puberty related information, services, supplies and support	Target 3.7 By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes Target 5.6 Ensure universal access to sexual and reproductive health as agreed in accordance with the Programme of Action of the International Conference on Population and Development and the Beijing Platform for Action and the outcome documents of their review conferences	Indicator 3.7.1 Proportion of women of reproductive age (aged 15-49 years) who have their need for family planning satisfied with modern methods Indicator 3.7.2 Adolescent birth rate (aged 10-14 years; aged 15-19 years) per 1,000 women in that age group Indicator 5.6.1 Proportion of women aged 15-49 years who make their own informed decisions regarding sexual relations, contraceptive use and reproductive health care Indicator 5.6.2 Number of countries with laws and regulations that guarantee full and equal access to women and men aged 15 years and older to sexual and reproductive health care, information and education
		Physical health	Not included	Not included
		HIV awareness and testing	Target 3.3 By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases	Indicator 3.3.1 Number of new HIV infections per 1,000 uninfected population, by sex, age and key populations

GAGE Capability Domain	Sustainable Development Goals (SDGs)	GAGE Capability sub-components	SDG targets	SDG indicators
Psychosocial well-being	Goal 3. Good health and well-being	Motivation and resilience	Not included	Not included
		Support networks	Not included	Not included
		Social connectedness with peers	Not included	Not included
		Psychosocial and mental health services	Target 3.4 By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being	Indicator 3.4.2 Suicide mortality rate
		Interactions with community	Not included	Not included
Voice and Agency	Goal 4. Quality education	Mobility and access to safe spaces	Target 11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons Target 11.7 By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities	Indicator 11.2.1 Proportion of population that has convenient access to public transport, by sex, age and persons with disabilities
	Goal 5. Gender equality			Indicator 11.7.1 Average share of the built-up area of cities that is open space for public use for all, by sex, age and persons with disabilities
	Goal 10. Reduced inequalities			Indicator 11.7.2 Proportion of persons victim of physical or sexual harassment, by sex, age, disability status and place of occurrence, in the previous 12 months
	Goal 9. Industrialization, innovation and infrastructure	Access to information	Target 5.b Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women Target 9.c Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020	Indicator 5.b.1 Proportion of individuals who own a mobile telephone, by sex Indicator 9.c.1 Proportion of population covered by a mobile network, by technology
	Goal 11. Sustainable cities and communities	Participation in decision-making in family, community and school life	Target 5.1 End all forms of discrimination against all women and girls everywhere Target 10.3 Ensure equal opportunity and reduce inequalities of outcome, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard	Indicator 5.1.1 Whether or not legal frameworks are in place to promote, enforce and monitor equality and non-discrimination on the basis of sex
	Goal 16. Peace, justice and strong institutions			Indicator 10.3.1 Proportion of population reporting having personally felt discriminated against or harassed in the previous 12 months on the basis of a ground of discrimination prohibited under international human rights law

GAGE Capability Domain	Sustainable Development Goals (SDGs)	GAGE Capability sub-components	SDG targets	SDG indicators
Voice and Agency		Civic participation	<p>Target 4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development</p> <p>Target 5c. Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels</p> <p>Target 16.7 Ensure responsive, inclusive, participatory and representative decision-making at all levels</p>	<p>Indicator 4.7.1 Extent to which (i) global citizenship education and (ii) education for sustainable development, including gender equality and human rights, are mainstreamed at all levels in: (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment</p> <p>Indicator 5.c.1 Proportion of countries with systems to track and make public allocations for gender equality and women's empowerment</p> <p>Indicator 16.7.1 Proportions of positions (by sex, age, persons with disabilities and population groups) in public institutions (national and local legislatures, public service, and judiciary) compared to national distributions</p> <p>Indicator 16.7.2 Proportion of population who believe decisionmaking is inclusive and responsive, by sex, age, disability and population group</p>
		Role models	Not included	Not included
		Time use	Target 5.4 Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate	Indicator 5.4.1 Proportion of time spent on unpaid domestic and care work, by sex, age and location
Economic Empowerment	Goal 1. No poverty	Economic aspirations about decent, rewarding and age-appropriate employment	Target 8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value	Indicator 8.5.1 Average hourly earnings of female and male employees, by occupation, age and persons with disabilities
	Goal 4. Quality education		Target 8.6 By 2020, substantially reduce the proportion of youth not in employment, education or training	Indicator 8.5.2 Unemployment rate, by sex, age and persons with disabilities
	Goal 5 Gender equality		Target 8.8 Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment	Indicator 8.6.1 Proportion of youth (aged 15-24 years) not in education, employment or training
	Goal 8. Decent work and economic growth		Target 8.b By 2020, develop and operationalize a global strategy for youth employment and implement the Global Jobs Pact of the International Labour Organization	Indicator 8.8.1 Frequency rates of fatal and non-fatal occupational injuries, by sex and migrant status
	Goal 10. Reduced inequality		Target 10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status	Indicator 8.b.1 Existence of a developed and operationalized national strategy for youth employment, as a distinct strategy or as part of a national employment strategy
			Target 10.3 Ensure equal opportunity and reduce inequalities of outcome, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard	Indicator 10.2.1 Proportion of people living below 50 per cent of median income, by sex, age and persons with disabilities
				Indicator 10.3.1 Proportion of population reporting having personally felt discriminated against or harassed in the previous 12 months on the basis of a ground of discrimination prohibited under international human rights law

GAGE Capability Domain	Sustainable Development Goals (SDGs)	GAGE Capability sub-components	SDG targets	SDG indicators
Economic Empowerment	Goal 1. No poverty	Numeracy and financial literacy	Target 4.6 By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy	Indicator 4.6.1 Proportion of population in a given age group achieving at least a fixed level of proficiency in functional (a) literacy and (b) numeracy skills, by sex
	Goal 4. Quality education		Target 4.3 By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university	Indicator 4.3.1 Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months, by sex
	Goal 5 Gender equality	Technical, vocational and business skills	Target 4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship	Indicator 4.4.1 Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill
	Goal 8. Decent work and economic growth			
	Goal 10. Reduced inequality	Access to resource endowments, including land and agricultural assets	Target 1.4 By 2030 ensure that all men and women, particularly the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership, and control over land and other forms of property, inheritance, natural resources, appropriate new technology, and financial services including microfinance	Indicator 1.4.1 Proportion of population living in households with access to basic services
			Target 5.1 End all forms of discrimination against all women and girls everywhere	Indicator 1.4.2 Proportion of total adult population with secure tenure rights to land, with legally recognized documentation and who perceive their rights to land as secure, by sex and by type of tenure
			Target 5a. Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws	Indicator 5.1.1 Whether or not legal frameworks are in place to promote, enforce and monitor equality and non-discrimination on the basis of sex
				Indicator 5.a.1 (a) Proportion of total agricultural population with ownership or secure rights over agricultural land, by sex; and (b) share of women among owners or rights-bearers of agricultural land, by type of tenure
		Access to savings and credit	Target 8.10 Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all	Indicator 5.a.2 Proportion of countries where the legal framework (including customary law) guarantees women's equal rights to land ownership and/or control
				Indicator 8.10.1 (a) Number of commercial bank branches per 100,000 adults and (b) number of automated teller machines (ATMs) per 100,000 adults
		Social protection	Target 1.3 Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable	Indicator 8.10.2 Proportion of adults (15 years and older) with an account at a bank or other financial institution or with a mobile-money-service provider
			Target 10.4 Adopt policies, especially fiscal, wage and social protection policies, and progressively achieve greater equality	Indicator 1.3.1 Proportion of population covered by social protection floors/ systems, by sex, distinguishing children, unemployed persons, older persons, persons with disabilities, pregnant women, newborns, work-injury victims and the poor and the vulnerable
		Migration	Target 10.7 Facilitate orderly, safe, regular and responsible migration and mobility of people, including through the implementation of planned and well-managed migration policies	Indicator 10.4.1 Labour share of GDP, comprising wages and social protection transfers
				Indicator 10.7.1 Recruitment cost borne by employee as a proportion of monthly income earned in country of destination 10.7.2 Number of countries with migration policies that facilitate orderly, safe, regular and responsible migration and mobility of people



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About GAGE

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Front cover: Young adolescent girls in Afar, Ethiopia © Nathalie Bertrams/
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