

Typologies of Early Pregnancy: Assessing the Diversity of Adolescent Needs

Overview

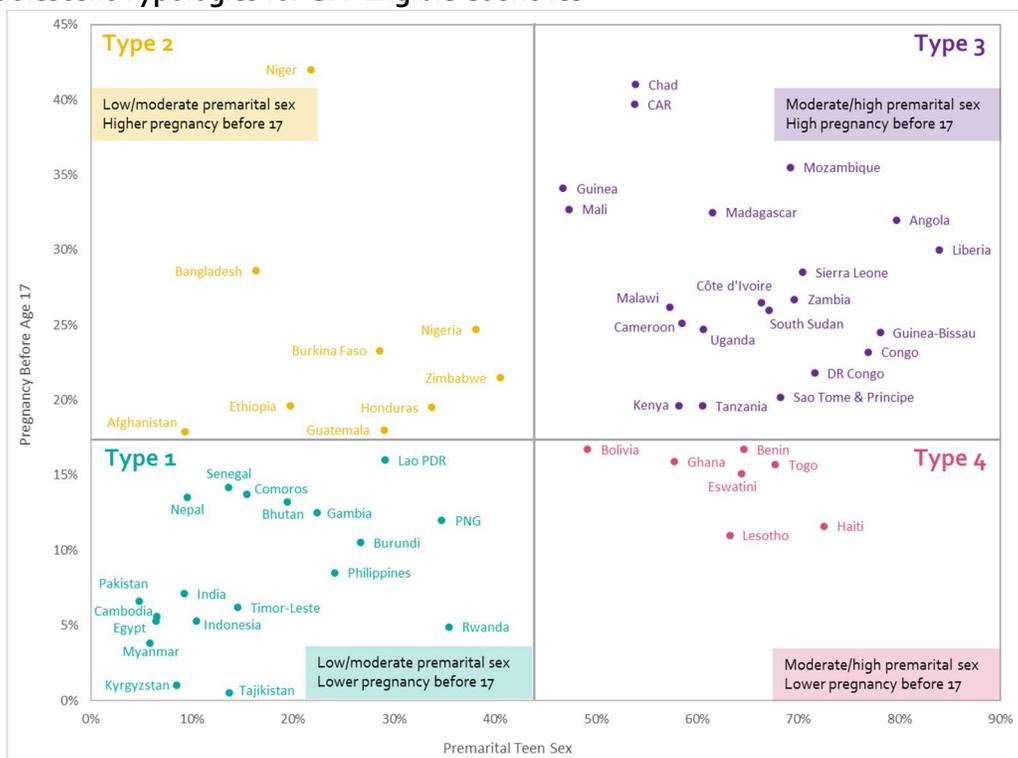
The sexual and reproductive health and rights (SRHR) needs of adolescents are often overlooked or responses are not well tailored to adolescent needs, which vary greatly by context. Understanding this heterogeneity is important for advancing policies that are responsive to the needs of this population. Factors such as the prevalence and timing of adolescent marriage and pregnancy (if pregnancy happens before, near, or after marriage, and levels of premarital sex) are critical for formulating effective policy responses. While this complexity cannot be fully distilled, four adolescent typologies are presented below in an attempt to provide a simple framework to inform investment planning. The typologies should be supplemented with detailed country analysis and stakeholder consultation, including with adolescents themselves, to further explore variations and contextual factors. Additionally, there is recognition that this focus on early fertility fails to capture broader SRHR issues including the needs of boys and others based on their sexual orientation or gender identity.

The four typologies are formed from a matrix based on two indicators, the median value for each indicator across all countries with available data is used to establish the cutoff between categories:

- The share of 20–24-year-olds who experienced a pregnancy before age 17¹
- The share of 20–24-year-olds who had premarital sex as teens (before age 20)²

Both indicators are based on retrospective reporting among 20–24-year-olds survey to account for the full teenage experience while also reflecting recent patterns in the country. Analysis was done on the most recent DHS or MICS for all GFF eligible countries with available data (see Annex 1).

Figure 1. GFF Adolescent Typologies for GFF Eligible Countries



¹ Pregnancy before age of 17 was selected due to the health and human capital risks associated with beginning childbearing in early adolescents.

² Age at first sex is reported in a full year (e.g. 17); when marriage and sex occur at the same age it is not possible to know which happened first, therefore for this analysis these women are *not* considered to have had premarital sex. While the typologies are based on any having any premarital teen sex, countries should look into additional data to better understand the timing and experience of pre-marital teen sex as the agency of girls may vary widely across contexts.

In all settings, a substantial share of adolescents are sexually active and it is important for policy makers to ask questions about their access to a [comprehensive package of SRHR](#) interventions. For each typology, we've put emphasis on three additional questions for policy makers while understanding that these should be augmented with context specific analysis to best inform investments to improve adolescent SRHR outcomes.

- In **Type 1** settings there are low to moderate levels of premarital teen sex and lower levels of pregnancy before age 17. These countries tend to have low levels of early teen marriage coupled with lower levels of pre-marital sex. This means that girls spend a large share of their teen years both unmarried and not sexually active.

Three Key Questions for Investment Planning: 1) Are there pockets of need that would require a targeted response? 2) During the delay in marriage and fertility, are girls able to accumulate sufficient human capital to provide the foundation for longer-term well-being? 3) Are there scalable interventions that can be used to promote safer sex practices amongst sexually active unmarried adolescents (comprehensive sexuality education (CSE); cash transfers; interventions to improve school attendance; SBCC interventions to delay very early sexual activity, partner concurrence, and inter-generational sexual activity; access to adolescent-friendly contraceptive services)?

- In **Type 2** settings there are low to moderate levels of premarital teen sex with high levels pregnancy before age 17. This is largely happening in the context of high levels of early teen marriage, meaning girls spend more of their teen years married and beginning to have children within marriage.

Three Key Questions for Investment Planning in Type 2 settings: 1) Are there scalable ways to change the opportunity cost of early marriage and fertility (e.g. cash transfers, reducing barriers to educations, increasing labor market opportunities)? 2) Are pregnant girls able to access nutrition (IFA supplementation), maternal health services, and interventions (like post-partum FP) that reduce rapid repeat pregnancy? 3) Are there structural and normative interventions that have been considered to change practices around early marriage (e.g. legislation, engagement with religious and cultural leaders, husbands schools, social and behavior change communication efforts)?

- In **Type 3** settings there are moderate to high levels of both pre-marital sex and pregnancy before age 17. Early teen marriage is less prevalent in Type 3 than Type 2 settings, but still fairly high, meaning girls spend their teenage years both having premarital sex as well as having sex (and pregnancies) within marriage.

Three Key Questions for Investment Planning in Type 3 settings: 1) Are there barriers for married and unmarried adolescents to access contraceptives (including condoms for dual protection) and maternal health services? 2) Is pre-marital fertility directly linked to marriage (e.g. proving fertility before marriage) and addressable through norms-based interventions? 3) Are there scalable interventions that can be used to promote safer sex practices amongst unmarried adolescents (e.g. access to adolescent-friendly contraceptive services; comprehensive sexuality education (CSE); cash transfers; interventions to improve school attendance; SBCC interventions to delay very early sexual activity, partner concurrence, and inter-generational sexual activity)?

- In **Type 4** settings there are moderate to high levels of premarital sex but lower levels pregnancy before age 17. Early (and any) teen marriage is less prevalent in these settings, and initiation of pre-marital sexual activity occurs later than in Type 3 settings. This means that girls spend more of their teenage years both unmarried and non-sexually active, with these events generally occurring later in their teenage years.

Three Key Questions for Policy and Planning in Type 4 settings: 1) During the delay in marriage and fertility, are girls able to accumulate sufficient human capital to provide the foundation for longer-term well-being? 2) Are there pockets of need that would require a targeted response to address early marriage or early fertility? 3) Can unmarried adolescents gain access to contraceptives and interventions like CSE to promote safer sex practices?

The table below provides some additional summary indicators for each typology. These values are the averages for countries that fall into each typology. These indicators are also available to individual countries to help inform country specific discussions (see Annex 2).

Table 1. Contextual Indicators by Type

	Type 1	Type 2	Type 3	Type 4
Average age of marriage	18.3	16.9	17.2	18.3
% who experienced early teen marriage (<17)	13%	33%	27%	13%
% who experienced a teen marriage (<20)	40%	62%	54%	35%
% who experience an early pregnancy (<17)	8%	24%	28%	15%
Among girls with early teen pregnancy, % in/near marriage*	82%	83%	57%	44%
% who have premarital teen sex	16%	26%	65%	63%
Among girls who had premarital teen sex, % that was early (<17)	32%	52%	61%	44%

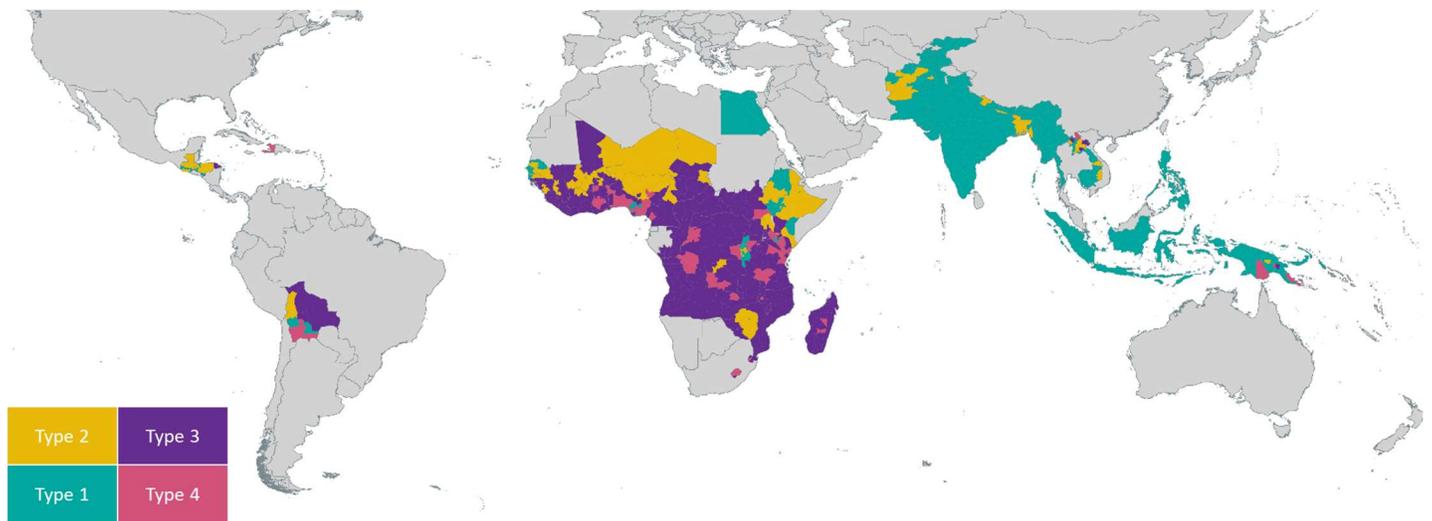
The values in this table represent averages for GFF Eligible Countries that fall within each type (not weighted by country population); data based on the retrospective experience of 20-24-year-olds.

*age of first pregnancy >= age of first marriage; age defined by full years so could be before but at the same age (e.g. both happen at age 17 but don't know precise timing)

Sub-National Variation

The figure above shows wide variation across GFF eligible countries. In some contexts, there is also wide variation within a single country. Figure 2 below shows subnational variation in typologies. In some countries, like India, a single typology dominates across the entire country. In others, much more sub-national variation can be seen. In Nigeria for example, all four types are found across States, with type 2 dominating the north of the country and type 4 largely dominating in the south. In addition, interesting patterns can be seen carrying across country borders. For example, there is a clustering of Type 1 geographies that encompasses Rwanda and Burundi but also extends into the Western regions of Tanzania and south-west of Uganda.

Figure 2. Subnational Typologies in GFF Eligible Countries



Behind the Numbers

The two indicators were calculated from household survey datasets for each country (using the individual women dataset). Analysis was limited to women who were 20-24 at the time of the survey to capture the full teenage experience while also representing recent trends within each county. For countries with ever-married samples (Afghanistan, Bangladesh, Egypt, and Pakistan) questions are not asked of never married women; analysis assumes no experience of sex or pregnancy among these women.

For pregnancy before age 17: The month and year of first birth is reported by respondents in both MICS and DHS. This date was adjusted back by 9 months to calculate the date of first pregnancy. The first pregnancy date was then compared to the month and year of birth of the mother to calculate their age at first pregnancy. Because this analysis was only capturing women who had a pregnancy *before* age 17, it did not need to include women pregnant with their first child as a 20-year-old who is pregnant with their first child would not have been pregnant at age 17.

For premarital teen sex: Women report their age at first sex, providing a numeric answer or saying at the time of marriage/cohabitation (which is then converted to a numeric response based on reported age of first marriage). Women who reported having sex before age 20 and who have never been married or were married at an age that was greater than the age of reported first sex were considered to have had premarital teen sex. Because age of first sex is reported only in full years, within an age it is not possible to know the exact ordering of the two events. For this analysis if age of sex = age of marriage a woman was not classified as having premarital sex, though in some instances the sex may have happened before the marriage. For example, if a women reported she had sex at age 17 and got married at age 17, then this woman is *not* considered to have premarital sex. However, if a woman reports she had sex at age 16 and got married at age 17 she would be counted as having premarital sex. For this analysis, only those who had premarital sex before the age of 20 were counted towards this indicator.

For each of the two indicators the median value among available data (GFF eligible countries with a DHS or MICS³) was used to determine the cut offs between the four categories⁴. The median and inter-quartile range for the two indicators is shown below in Table 2. The median was chosen as there was no existing standard in the literature to determine what level of premarital sex or teen pregnancy is considered 'high' vs 'low'.

Table 2. Summary Values of Indicators

	Premarital sex	Pregnancy before age 17⁵
Q1	18.7%	11.6%
Median	43.6%	17.9%
Q3	64.5%	24.7%

Before landing on these two indicators, a range of possible approaches were explored capturing different dimensions related to the level and timing of sexual activity, pregnancy, childbearing, and marriage. The matrix described in this work was selected for its relative simplicity (creating just 4 typologies) while still being able to capture differences related to multiple dimensions. The typologies work is not intended to provide all the information needed to make investment decisions in a country but rather is a starting point for policy dialogue by providing a simple way to classify and compare across countries and between regions within a country.

³ Some surveys do not include the variables needed to construct these two indicators, so some countries with data have not been included, see Annex 1 for details.

⁴ For pregnancy before age 17, the median was calculated excluding several high outliers to better reflect an average among the majority of countries.

⁵ For pregnancy before age 17, the median was calculated excluding several high outliers to better reflect an average among the majority of countries.

Annex 1: Surveys Used

Country	Survey Used or Exclusion Notes
Afghanistan	2015 DHS (ever married sample)
Angola	2015-16 DHS
Bangladesh	2017-18 DHS (ever married sample)
Benin	2017-18 DHS
Bhutan	2010 MICS
Bolivia (Plurinational State of)	2008 DHS
Burkina Faso	2010 DHS
Burundi	2016-17 DHS
Cambodia	2014 DHS
Cameroon	2018 DHS
Central African Republic	2018-2019 MICS
Chad	2019 MICS
Comoros	2012 DHS
Congo	2014-2015 MICS
Côte d'Ivoire	2011-12 DHS
Democratic Republic of the Congo	2017-2018 MICS
Djibouti	No data (2006 MICS does not include needed variables)
Egypt	2014 DHS (ever married sample)
Eritrea	No data
Eswatini	2014 MICS
Ethiopia	2016 DHS
Gambia	2019-2020 DHS
Ghana	2017-2018 MICS
Guatemala	2014-15 DHS
Guinea	2018 DHS
Guinea-Bissau	2018-2019 MICS
Haiti	2016-17 DHS
Honduras	2011-12 DHS
India	2015-16 DHS
Indonesia	2017 DHS
Kenya	2014 DHS
Kyrgyzstan	2012 DHS
Lao People's Democratic Republic	2017 MICS
Lesotho	2014 DHS
Liberia	2019-2020 DHS
Madagascar	2018 MICS
Malawi	2015-16 DHS
Mali	2018 DHS
Mauritania	No data (2015 MICS does not include needed variables)
Morocco	No data
Mozambique	2011 DHS
Myanmar	2015-16 DHS
Nepal	2016 DHS
Nicaragua	No data (NDHS dataset not available)

Niger	2012 DHS
Nigeria	2018 DHS
Pakistan	2017-18 DHS (ever married sample)
Papua New Guinea	2016-2018
Philippines	2017 DHS
Rwanda	2019-2020 DHS
Sao Tome and Principe	2019 MICS
Senegal	2019 DHS
Sierra Leone	2019 DHS
Solomon Islands	No data (2015 DHS dataset not available)
Somalia	No data (2006 MICS does not include needed variables)
South Sudan	2010 MICS-HHS
Sudan	No data (2014 MICS does not include needed variables)
Tajikistan	2017 DHS
Timor-Leste	2016 DHS
Togo	2017 MICS
Uganda	2016 DHS
United Republic of Tanzania	2015-16 DHS
Uzbekistan	No data (2006 MICS does not include needed variables)
Viet Nam	No data (2013-14 MICS does not include needed variables))
Yemen	No data (2013 DHS does not include needed variables)
Zambia	2018 DHS
Zimbabwe	2019 MICS

Annex 2: Indicator Values by Country

Country	Premarital Sex	Preg before 17	Type	Avg Age Marriage	Teen marriage before 17	Any Teen Marriage	Among pregnancy before 17, % in/near marriage	Among premarital sex, % before 17
Afghanistan	9%	18%	2	17.3	25%	54%	92%	52%
Angola	80%	32%	3	17.5	21%	43%	38%	64%
Bangladesh	16%	29%	2	16.4	45%	76%	85%	66%
Benin	65%	17%	4	17.6	21%	52%	67%	52%
Bhutan	19%	13%	1	17.9	18%	47%	73%	32%
Bolivia	49%	17%	4	18.2	14%	35%	48%	47%
Burkina Faso	29%	23%	2	17.0	33%	73%	87%	46%
Burundi	27%	11%	1	18.2	10%	39%	64%	35%
Cambodia	6%	5%	1	18.7	11%	40%	97%	21%
Cameroon	59%	25%	3	17.2	23%	44%	61%	51%
CAR	54%	40%	3	15.8	50%	75%	64%	77%
Chad	54%	41%	3	15.9	50%	74%	88%	76%
Comoros	15%	14%	1	17.2	21%	44%	83%	49%
Congo	77%	23%	3	17.7	19%	43%	43%	55%
Côte d'Ivoire	66%	27%	3	17.2	24%	47%	59%	61%
DR Congo	72%	22%	3	17.4	21%	46%	66%	66%
Egypt	7%	6%	1	18.6	10%	40%	99%	16%
Eswatini	64%	15%	4	19.6	3%	14%	10%	23%
Ethiopia	20%	20%	2	16.8	32%	58%	89%	51%
Gambia	22%	13%	1	18.0	16%	37%	71%	43%
Ghana	58%	16%	4	17.8	14%	31%	43%	43%
Guatemala	29%	18%	2	17.5	21%	45%	80%	41%
Guinea	47%	34%	3	16.4	37%	60%	74%	69%
Guinea-Bissau	78%	25%	3	17.1	19%	40%	44%	62%
Haiti	73%	12%	4	18.4	10%	26%	43%	53%
Honduras	34%	20%	2	17.4	24%	50%	79%	46%
India	9%	7%	1	18.1	16%	47%	95%	31%
Indonesia	10%	5%	1	18.6	9%	33%	88%	28%
Kenya	58%	20%	3	18.3	15%	40%	49%	51%
Kyrgyzstan	9%	1%	1	19.4	2%	33%	88%	8%
Lao PDR	29%	16%	1	17.7	24%	50%	81%	43%
Lesotho	63%	11%	4	18.7	9%	39%	43%	35%
Liberia	84%	30%	3	17.4	17%	37%	31%	66%
Madagascar	62%	33%	3	17.1	30%	60%	58%	55%
Malawi	57%	26%	3	17.4	28%	66%	68%	56%
Mali	47%	33%	3	16.8	39%	71%	74%	66%
Mozambique	69%	36%	3	17.0	37%	70%	61%	71%
Myanmar	6%	4%	1	18.6	9%	30%	91%	26%
Nepal	10%	14%	1	17.6	26%	59%	98%	43%
Niger	22%	42%	2	15.6	64%	89%	83%	73%
Nigeria	38%	25%	2	16.6	34%	56%	85%	55%
Pakistan	5%	7%	1	18.3	12%	33%	91%	45%
PNG	35%	12%	1	17.9	19%	45%	74%	45%
Philippines	24%	9%	1	18.3	10%	30%	70%	34%

Rwanda	35%	5%	1	19.5	3%	17%	32%	32%
Sao Tome & Principe	68%	20%	3	17.7	19%	45%	61%	45%
Senegal	14%	14%	1	17.5	21%	43%	88%	46%
Sierra Leone	70%	29%	3	16.7	28%	51%	57%	65%
South Sudan	67%	26%	3	17.6	39%	77%	34%	59%
Tajikistan	14%	1%	1	18.9	2%	56%	94%	5%
Timor-Leste	15%	6%	1	18.6	9%	31%	87%	37%
Togo	68%	16%	4	17.8	16%	47%	58%	53%
Uganda	61%	25%	3	17.8	22%	56%	57%	52%
Tanzania	61%	20%	3	17.9	18%	53%	58%	57%
Zambia	70%	27%	3	17.7	19%	46%	46%	61%
Zimbabwe	41%	22%	2	17.8	21%	54%	69%	35%